

Transnational Linkages and Civil War Interactions*

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Abstract

Previous research has looked for factors explaining intrastate conflict within the country experiencing conflict. However, the fact that so many civil wars display transnational dimensions and often spur conflict between states suggests that the decisions actors make about the onset and settlement of conflict can be strongly influenced by international factors. In this paper, we extend our previous work on dyadic analyses of civil war interactions to how transnational linkages influence the prospects for settlement and conflict duration. We develop a series of hypotheses on how specific transnational linkages to actors in a civil conflict dyad can make conflict more or less difficult to resolve ***. We test our hypotheses using new data on transnational linkages of the state and insurgent actors for the intrastate conflicts in the Uppsala armed conflict dataset.

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Introduction

Civil conflict, or violence between states and non-state actors, is by far the most common form of conflict in the world. The increased salience of civil conflict after the end of the Cold War has given rise to a large body of literature on the causes and origins of civil wars.¹ Most of this literature has tended to look for the causes of civil conflict within the boundaries of the state experiencing conflict. However, looking at several civil conflicts reveals that many such wars display clear transnational dimensions. For example, civil wars frequently involve participants drawn from other states, insurgencies often draw on resources mobilized in transnational communities, and rebel movements often operate out of bases in neighboring countries. Moreover, civil conflicts within one state often give rise to conflict between the country experiencing conflict and other states. For example, governments in the country experiencing conflict often accuse neighboring states of aiding insurgent movements, and neighboring countries may retaliate militarily against governments pursuing rebels into the territory of neighboring countries. The salience of such transnational dimensions in many civil wars strongly suggests that international factors may influence the risk of civil war and the prospects for their settlement. In this paper, we examine how the transnational linkages between actors in war zones and those outside the conflict country influence the prospects for civil war settlement and the persistence of civil war.

We start with a brief overview of what we know about the transnational dimensions of civil war, and a discussion of the limitations inherent in country-level analyses of civil war. A number of cross-national studies have examined how various transnational factors may influence the prospects for civil war onset. Many have noted a tendency for civil conflicts, once underway in one state, to spread or diffuse to other states in a region (e.g., Gleditsch 2002;

¹ For overviews of the civil war literature, see for example Collier et al. (2003) and Sambanis (2002).

Lake and Rothchild 1998). Several empirical studies have shown that civil wars are likely in states that have neighboring countries experiencing conflict (see, e.g., Esty et al. 1995; Sambanis 2001; Ward and Gleditsch 2002). This clustering effect holds even when controlling for characteristics of the country itself, suggesting that bad neighborhoods and poor relations between states in a region can increase the risk of civil war. Other studies have identified specific transnational relationships associated with higher or lower risks of civil war onset. For example, Gleditsch (2006) shows that countries are more likely to experience a civil war if they encompass ethnic groups that are also present in other states, if their neighbors have generally undemocratic regimes facing fewer constraints against intervention, and if they have a low level of trade with their neighbors. Salehyan and Gleditsch (2006) furthermore find that countries that host a large number of refugees are more likely to become engulfed in civil war themselves.

These findings clearly suggest strong limitations to the “closed polity” model of civil war, where each state is treated as an isolated entity, disconnected from interactions with actors outside its boundaries or other states. However, although this body of work is clearly suggestive that transnational mechanisms can increase the risk of violence, such cross-national studies suffer from common problems of excessive aggregation that plague civil war studies using country-years as the principal unit of analysis. General theories of war emphasize how conflict is a dyadic phenomenon (see, e.g., Fearon 1995; Lake 2004; Most and Starr 1989), where resort to violence must be understood as the interaction between two (or more) parties. By contrast, cross-national empirical studies of civil war generally ignore the identity of the actors involved in a conflict. In particular, studies of civil war have focused almost exclusively on the government side and ignore the characteristics of the non-state actor involved in the conflict (see Cunningham, Gleditsch, and Salehyan 2006). For example, whether or not the presence of lootable resources in a state affects the risk of civil war will depend on how

these resources affect the relationship between a government and an insurgent group, which cannot be directly inferred from national level data (e.g., Buhaug and Lujala 2005; Ross 2006). Although Russia has considerable diamond deposits in Siberia, these are largely out of reach to insurgents in the Caucasus, and are therefore highly unlikely to influence the prospects for violence in the actual conflict zone. Similarly, country level studies of international factors in civil conflicts do not by themselves allow us to assess whether a particular mechanism, such as support from transnational ethnic kin, applies in particular cases, or if the observed associations in the aggregate data in fact do reflect theoretical underpinnings or are merely coincidental. Understanding how transnational linkages work requires us to disaggregate the study of conflict, both geographically and by applying a dyadic perspective to conflict studies.

Transnational linkages and dyadic conflict duration

In this paper, we extend the dyadic perspective on civil war developed in Cunningham et al. (2006) to look at how transnational linkages affect civil war interactions and the prospects for settlement. Cunningham et al. (2006) argue that understanding internal conflict requires us to look at the actual interactions between governments and insurgents. They start by noting a series of empirical regularities that an adequate model of civil war should be able to account for. In particular, civil wars appear to be generally more persistent than interstate wars, and are much less likely to result in formal or negotiated agreements (e.g., Pillar 1983; Walter 2002). Moreover, many central findings regarding the role of the relative strength of the actors in dyadic studies of interstate war do not appear to translate well to the domain of civil war. Interstate wars are more likely to start and endure when there is a situation of power parity between the two actors (Bennett and Stam 1996; Organski and Kugler 1980). However,

overwhelming preponderance on the part of the government does not appear to translate into shorter wars, even though strong rebels are more likely to be associated with shorter conflicts.

Cunningham et al. (2006) argue that there is an important distinction between a rebel group's power to target a government effectively by military means and its potential power to resist or evade government suppression. Rebels that have a high capacity to mobilize militarily and target governments pose a real political challenge to the state, and such groups are more likely to be offered sufficient concessions to meet their political demands, thereby decreasing the attractiveness of resorting to violence for political aims. By contrast, many rebels that lack strong capacity to target a government can have high capacity to resist suppression. Governments are often much weaker in the periphery; rebel groups that would seem weak in military terms are often able to evade government repression in their core areas, in particular in cases where they exercise de facto territorial control. Conflict is likely to be persistent in cases where rebels have high capacity to resist defeat, yet are not militarily strong enough to threaten the government, providing incentives to offer concessions. Cunningham et al. (2006) derive indicators of capacity of non-state actors to target a government militarily and their capacity to resist. Consistent with their expectations that stronger rebels should be better able to extract concessions, they find that indicators of greater military strength and better organization are associated with shorter conflicts and a greater likelihood of conflict termination. Moreover, conflicts where rebels exert territorial control are much more likely to persist.

Transnational linkages can similarly influence interactions between a government and an insurgent group in numerous ways. Before turning to the discussion of our arguments here, we first briefly review some of the existing work on how international factors may affect civil war duration, and what we see as some of its principal limitations. Most of the existing literature on transnational linkages and conflict duration has focused on intervention by third party states. The salience of civil wars in the 1990s led to many calls for outside intervention to stop

or limit human suffering, and many researchers have examined to what extent outside interventions can be successful in ending civil wars (e.g., Doyle and Sambanis 2006; Regan 2000; Snyder and Walter 1999). Many researchers have stressed that external intervention may be necessary to bring an end to civil wars where the parties find it difficult to reach agreement and maintain settlements. However, empirical studies actually suggest that interventions by other states generally tend to prolong civil wars (e.g., Balch-Lindsay and Enterline 2000; e.g., 2002) and make conflicts more severe (Salehyan and Heger forthcoming).

We believe that existing work on intervention suffers from a number of problems. First, it tends to assume that interventions are motivated exclusively by efforts to promote peace or ending conflict. This disregards the possibility that interventions may be motivated by the desire to influence outcomes in the conflict country in ways favorable to the intervener (Gartzke and Gleditsch 2005). Interventions that try to avoid or change outcomes that would have happened in the absence of intervention will often tend to have the effect of prolonging conflicts. The effects of intervention must be assessed relative to the motives of interveners and how their actors change the relationship between the non-state actors.

Second, looking at cases where states formally intervene militarily will understate a great deal of the support offered by outside actors during civil wars. On the one hand, states rarely go as far as committing troops for action in other states, but may provide political or material support to one of the sides in a civil war. Moreover, since support for the insurgent side in a civil war is likely to be considered a serious intrusion in the affairs of a sovereign state, it is often provided in more indirect and covert ways. Consider, for example, the case of Kashmir, where Pakistani authorities are known to be sympathetic to the Muslim insurgents and military aid is widely alleged, but not formally acknowledged by Pakistan.

Third, relevant third parties in civil war extend beyond the actions of states or central authorities. Sub-state actors in transnational communities may exert important influence on

civil conflicts, even if this is resisted by their home governments. In the following sections, we outline in more detail different avenues by which transnational linkages to conflict actors may influence interactions between insurgents and governments.

One important linkage pertains to the physical presence of rebels in another state. Many international borders are clearly porous and difficult to monitor. We know that civil wars are more likely to take place near international boundaries (Buhaug and Gates 2002), and rebels often operate out of the territory of another state, with or without the consent of the government of the territory (Salehyan 2006). Although borders may seem weak and insignificant in the sense that they do not pose a significant obstacle to military forces, operating out of border areas can afford rebels a strategic advantage vis-à-vis a government. Pursuing rebels across international boundaries constitute a violation of another state's sovereignty, and is likely to be met with resistance from the affected states and possible broader sanctions. Gleditsch and Salehyan (2007) show that many militarized interstate disputes appear to arise out of border violations that take place in the context of a civil war. As such, groups that can operate out of the territory of another state will be more difficult for governments to target effectively, affording these groups high capacity to resist in much the same ways as effective territorial control. Following the logic of Cunningham et al. (2006), we would therefore expect that conflict dyads involving insurgent groups present in other states should be more persistent.

The transnational dimensions of civil conflict do not arise merely out of the tactical advantages of operating out of the territory of other states. In many conflicts, the actors themselves are transnational. Ethnic groups, for example, often encompass individuals in more than one state, and efforts by a group to seek greater autonomy or secession will often receive support from members of the group in other states. Supports of insurgent groups in other states often contribute financially or participate militarily in an insurgency. Moreover, groups

are often located in the peripheral areas of states where central authorities are weaker, and often have core territories that are divided by international boundaries. Such transnational linkages to actors outside the conflict country could increase considerably the strength of insurgent groups, often considerably beyond what would be expected due to the size of the organization or influence of the rebel constituency in the conflict country by itself.

Although transnational communities and opportunities for raising funding abroad clearly can make insurgencies easier to initiate, the effects on conflict duration are more ambiguous. In general, since resources mobilized from transnational constituents should be reflected in indicators of the actual military capacity held by insurgent groups in the context of an ongoing war, it would in principle seem irrelevant whether resources emanate from at home or abroad. In practice, however, cases where insurgents draw heavily on resources garnered outside the conflict country are likely to entail some significant differences. First, it will in practice often be more difficult to determine the extent of resources that can be mobilized in the case of transnational communities, the specific demands of individuals or supporters in diaspora communities, and what they may deem acceptable settlements. Second, as we have alluded to before, it will often be more difficult to limit sources of rebel funding abroad. Bapat (2005) notes that a government's typical first response to insurgencies is to resort to repression and only in the event that an insurgency cannot be eradicated by an initial military response will they consider negotiating with rebels. Transnational support that is more difficult to eliminate may be critical to allow insurgent groups to survive the initial repression efforts by governments. Third, insurgent groups supported by actors outside the country where the conflict occurs are likely to display more heterogeneity than groups based entirely within the conflict country. Transnational linkages introduce additional actors that would need to be satisfied in a settlement. This will increase the extent of uncertainty about possible solutions and the severity of the commitment problems for maintaining settlements. Individuals in

transnational communities outside the conflict country are less likely to be targets of government repression, and typically less willing to lay down arms or support settlements in the absence of significant concessions on their objectives than domestic constituencies. Similarly, patron states supporting insurgencies often have an agenda of their own, which does not necessarily coincide with the key leaders of the insurgency. This in turn is likely to foster fractionalization within groups, and the emergence of break-away factions or splinter groups. Cunningham (2006) shows, consistent with the idea that a proliferation of multiple actors or potential veto players make civil wars more difficult to resolve, that civil wars with a greater number of veto players tend to last longer. Finally, insurgencies involving fighters from other states will need to address more complex reintegration issues in the wake of settlements, which can complicate reaching agreements further.

Understanding how transnational linkages influence the interactions in ongoing conflicts also require us to understand the origins of why these linkages become activated in the first place. Stated differently, why would an insurgent group seek external support in the first place, rather than go it alone, with the resources that it can garner at the domestic level? Relations between an insurgent group and external supporters share some of the characteristics of the security-autonomy trade off in alliances (Morrow 1991). When choosing whether to rely on external support, insurgent groups face a potential trade off between increasing its military strength and maintaining its autonomy. As we have mentioned above, there are many reasons to believe that resources derived from linkages to transnational actors such as patron states or diasporas can reduce the autonomy of the core insurgent leadership. Although more resources is always better, the potential gains in strength from relying on transnational links would need to be weighed against the costs in terms of loss of autonomy. Everything else being equal, insurgent groups would prefer to rely only on domestic resources that they have greater control over as opposed to internationally-derived resources, where the supply is subject to the whims

of other actors and may be fickle. However, maximizing autonomy will often be a luxury that rebel groups cannot afford. Many insurgents that cannot do well enough by its domestic resources will be forced to take what it can get from transnational sources, despite the problems entailed.

The trade-off between harnessing strength and maintaining autonomy suggests that transnational reliance often indicates weak independent ability to target the government. As such, we should expect that conflicts involving reliance on transnational actors may be more difficult to resolve than conflicts relying exclusively on resources garnered at the domestic scene. In practice, it will be difficult to determine what share of an insurgents group's capacity stems from transnational and domestic sources respectively. Moreover, there is no common metric to assess the relative contribution of X numbers of fighters and access to safe havens in other states. However, we can assess whether transnational linkages are mobilized. All else equal, we should expect that dyads where insurgents draw heavily on resources mobilized outside the conflict country itself should be more persistent and more difficult to resolve.

Transnational linkages in ongoing conflicts in the Middle East help illustrate our argument. Consider, for example, relations between the Hezbollah and Iran. Hezbollah was initially formed in response to the Israeli occupation of Southern Lebanon. The organization has benefited considerably from military assistance from other states, in particular Iran and Syria. Outside support has made Hezbollah a much stronger and more competent military force than would be expected from the size and position of the Shia population of Lebanon. However, these military gains have also come at the expense of undermining the autonomy of the Hezbollah to pursue their political aims relative to concerns of their patron states. Although Hezbollah is clearly hostile to Israel, their main concern is to stop Israeli activity within Lebanon rather than conduct actions against Israel for their own sake, and Hezbollah has indicated that would not necessarily oppose a two state solution and that this is essentially a "Palestinian

matter” (Shatz 2004). Hezbollah’s patron states, however, may have their own agenda and claims against Israel that they feel more strongly about than Hezbollah, for example with respect to the Golan Heights and return of the Palestinians. Even if an agreement may be acceptable to Hezbollah per se, their outside supporters can block peace by threatening to cut off aid to Hezbollah if they do not advance their external agenda as well as their own. One implication of this is that a weakening of the patron’s hold over a client and an increase in the autonomy of the latter can greatly increase its domestic influence: When Syria was forced to pull its troops out of Lebanon in the wake of the Rafik Hariri assassination in 2005, Hezbollah actually emerged as a much stronger force in Lebanese politics. However, the insurgent state is often in a weak position relative to its patron. Iran does not bear the costs of the current fighting and is likely to continue to pressure Hezbollah to stand firm. By contrast, Hezbollah would essentially become defenseless if Iran were to cut off support, and in this sense worse off than continuing to fight.

Our discussion so far has focused on the effects of transnational linkages to rebels. However, governments may of course also receive support from outside actors. Following Cunningham et al. (2006), we expect cases where governments receive outside assistance from other states to be associated with more persistent conflicts. Although outside aid could help shore up the government’s capacity and deter insurgent attacks, governments in conflict that receive outside support are likely to be a sample of governments already facing problems. Weak, inept governments are most likely to need external aid, and there may be a selection effect, with aid being allocated to fragile states. This in turn should be indicative of the government having less capacity to strike decisively against the insurgents, and be associated with lower prospects for conflict termination. To illustrate this point, consider the case of the current Iraqi government and the challenge from various insurgent groups. Despite massive American military support, the Iraqi government and security forces have been unable to sup-

press violence. Governments usually have a clear military advantage vis-à-vis insurgents; Saddam Hussein was able to successfully quash attempted rebellion among the Kurds and the Shia without any outside support. Outside support to the Iraqi governments is in this sense an indicator of the weakness and vulnerability of the government.

Characteristics of neighboring states other than support and territorial access are also likely to influence the duration of civil conflicts. Research has shown that civil war in a neighboring state can increase the risk of conflict in a country itself, even if there is not direct support for combatants; these studies stress mechanisms such as increased availability of weapons and demonstration effects of successful mobilization. However, if conflict can diffuse, then so may peace. In this case, the end of a conflict in neighboring county is likely to have a positive impact of the prospects for peace in a conflict dyad, and we would expect settlements to be more likely in the wake of conflict termination in connected states. Furthermore, linkages to actors other than those supporting insurgents or governments are likely to influence the prospects for settlements as well. Gleditsch (2006) argues that prevailing regimes in neighboring countries will affect the opportunities for states and groups to support insurgencies. Whereas autocracies face few formal limitations for supporting insurgents, democratic institutions impose constraints on leaders and are generally more transparent. We would therefore expect that civil war should be shorter in dyads where neighboring states are more democratic. Finally, greater interdependence among linkage states implies more actors that stand to lose from conflict and will have a vested interest in supporting peaceful settlements (e.g., Arad and Hirsch 1981). As such, we would expect transnational support for efforts to reach peaceful settlement to be higher for conflict dyads in states with more connections to their neighboring countries.

Empirical analysis

Previous work on how transnational linkages influence conflict onset or conflict duration have tended to rely on rather crude indirect proxies at the country level, or considered only a limited set of interventions by third parties. In this paper, we use new data identifying the specific linkages between outside actors and individual rebel groups and governments for the conflict dyads in the Uppsala Armed Conflict Data (hereafter ACD), entitled the Transnational Linkages data (hereafter TL).

We have argued that conflicts should be more persistent in cases where rebels are present in other states, when rebels have a transnational constituency, when rebels receive political or military support from foreign governments, and when governments receive outside aid. All of these claims can be assessed empirically using indicators from the TL data. We code several dummy variables indicating whether a specific transnational linkage condition is met from the ordinal indicators of support and the strength of ties in the TL data. We also distinguish between transnational military support and other forms of transnational support, since military support might differ qualitatively from other types of political support or endorsement of general goals. Moreover, we have argued that the prospects for peaceful settlement should be better in instance where a conflict terminates in a neighboring state, in cases where neighboring states are more democratic, and when there is greater interdependence between a conflict country and its neighbors. These can be identified using standard data sources.

Our hypotheses pertain to how our covariates influence the duration of a conflict dyad. In this, our dependent variable is the duration of the conflict dyad — i.e., how long conflict lasts between the government and a particular insurgent group.² Civil war is a broad and en-

² For reasons explained at greater length in Cunningham et al. (2006), the existing ACD cannot be used to create directly a measure of dyadic duration since they do provide separate dates for onset and termination of conflict between the government and each individual group and do not distinguish between different conflicts over some-

compassing category of internal conflict, including both efforts from peripheral groups to gain concessions from a center as well as efforts to take over the government that lead to a sufficient number of casualties, sometimes even carried out by people within the existing government. To avoid lumping together too disparate conflicts, we here exclude all conflicts considered coup d'états from the analysis here, since these are likely to be systematically shorter than other civil wars (see Cunningham, Gleditsch, and Salehyan 2006; Fearon 2004), and the transnational linkages of peripheral groups that we have discussed are unlikely to be relevant to coups.

Event history analyses allow testing hypotheses about how different features the likelihood of an event at some time t , conditional on a set of covariates \mathbf{X} and given prior trajectory or time elapsed. We use a semi-parametric Cox (1972) proportional hazard model to estimate the conditional effects of covariates on the likelihood of events happening within a time interval an interval $t + \Delta t$. The hazard rate $h(t)$ is the limiting probability that an event will occur as the interval goes toward 0, This is given by the ratio of the density function $f(t)$ to the survival function $S(t)$, or the likelihood that a random variable T will survive beyond t .³

thing deemed “the same” incompatibility, including control of the government. We address these problems by coding when each specific insurgent group entered and exited the conflict, which yields a measure of the duration for each dyad in days. For some of these cases, however, the exact dates of entry and exit for the conflict remain unclear. For unclear cases, we used January 1 as the start date and December 31 as the end date.

³ More formally,
$$h(t) = \lim_{\Delta t \rightarrow 0} \frac{\Pr(t + \Delta t > T > t | T > t)}{S(t)} = \frac{f(t)}{S(t)},$$
 where the survival function

$S(t) = 1 - F(t) = \Pr(T > t)$ gives the likelihood that a random variable T will survive beyond t , or the inverse of the cumulative distribution function $F(t) = \Pr(T \leq t)$. The density function can be derived from either the cumulative distribution function $F(t)$ or the survival $S(t)$, since
$$f(t) = \frac{dF(t)}{dt} = \frac{d\{1 - S(t)\}}{dt} = -S'(t).$$
 Unlike parametric models which assume a particular functional

Estimating how our indicators affect the hazard rates for conflict termination requires a reasonable baseline model, since other factors affecting the likelihood of conflict termination may be systematically associated with the features of interest here. Our model extends that proposed in Cunningham et al. (2006) on dyadic conflict interactions. The measures of the relations between insurgents and central governments are particularly relevant to consider here, since we argue that transnational linkages can change interactions between insurgents and governments. In particular, Cunningham et al. (2006) develop a series of measures of the capacity of non-state actors to target governments militarily from the Non-State Actor (NSA) data accompanying the TL data. For parsimony, we use in this paper the overall tripartite summary, indicating whether rebels are militarily stronger than governments, at parity, or weaker than the central government, rather than the separate components. Cunningham et al. (2006) use an indicator of whether insurgents exercise de facto territorial control as an indicator of high capacity to resist. Finally, cases where rebels have a legal political wing should facilitate substitution between violent and non-violent strategies, and should be associated with greater prospects for terminating conflicts.

We also include a number of additional variables based on the existing literature on civil war and conflict duration. These are included largely as control variables, and we refer to Cunningham et al. (2006) for further discussion and details on variable constructions. Several studies have considered a country's GDP per capita. GDP per capita has been suggested as a measure of state or government strength (Fearon and Laitin 2003) and could be associated with our measures of military strength, while Collier, Hoeffler, and Söderbom (2004) argue

form for the hazard function, the Cox model does not require the analyst to estimate the baseline hazard $h_0(t)$, since the hazard rate drops out of the model when we take the ratio of hazard rates in the event of a failure. The Cox model is particularly well suited for handling time varying covariates, since the hazard rates are only calculated at failures. We refer to Box-Steffensmeier and Jones (2003) and Kalbfleisch and Prentice (2002) for further details on the Cox proportional hazard model and its relationship to other event history analysis models.

that conflicts should be shorter when the opportunity costs for engaging in conflict are higher, which is proxied by a society's GDP per capita. We also include the natural log of GDP per capita, as well as the log of a country's population to test for the possible effects of country size on duration, both taken from Gleditsch (2002). Fearon (2004) also suggests that anti-colonial conflicts, fought in overseas territory, have tended to be shorter than other conflicts. We include a binary indicator of whether a conflict is fought on a country's territory to identify conflicts waged in colonies with the metropole as the government or state actor. Many researchers argue that ethnic conflicts display different mechanisms than other conflicts (see, e.g., Sambanis 2001). We include a dummy variable separating conflicts involving ethnically based groups seeking secession or autonomy based on the NSA data, and also include conventional measures of ethnic fractionalization as given by Fearon (2003).⁴ Duration may be influenced by the number of parties participating in a conflict. Cunningham (2006) demonstrates that civil wars tend to be longer when they involve a greater number of veto players that can block the implementation of an agreement. To control for whether duration increases with more separate actors, we include a measure of whether other dyads are active in the same conflict. Our data matrix contains time varying features since both our indicators as well as the control variables can change over the course of a conflict. As such, the N reported indicates the number of distinct rows in the matrix rather than the number of conflict dyads considered, which is 356.

Table 1 contains the empirical estimates for four alternative model specifications. The first column under each model heading displays the coefficient estimate. The second column reports robust standard error estimates, taking into account the nesting of observations in conflicts, based on the generalization of the Sandwich estimator developed by Lin and Wei

⁴ The EF index indicates the probability that two randomly selected individuals belong to the same ethnic group.

(1989). We start by considering Model 1, where indicators of rebel support are added to the baseline model in Cunningham et al (2006). The coefficient estimates β in a Cox model indicate the impact that a set of covariates \mathbf{X} exert on the baseline hazard. Hence, in our case, a positive coefficient estimate indicates that a covariate increases the hazard of a conflict terminating in a given time interval, while negative coefficients indicate that the hazard rate of a conflict termination decreases. Coefficient estimates in bold are statistically significant at the 0.05 level.

Table 1 : Estimates from a Cox proportional hazard regression of dyadic conflict termination

Variable	Model 1		Model 2		Model 3		Model 4	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Transnational constituency support	-0.425	0.161	-0.405	0.150	-0.534	0.164	-0.508	0.155
Rebel presence in other states	-0.974	0.157	-0.985	0.148	-0.976	0.161	-0.983	0.150
Rebels supported by other state	0.484	0.210	0.445	0.193	0.485	0.204	0.472	0.188
Reb. military support from other state	-0.519	0.174	-0.464	0.167	-0.490	0.173	-0.466	0.168
Government supported by other state			0.044	0.192			-0.071	0.198
Gov. military support from other state			-0.614	0.185			-0.490	0.192
Neighboring civil war termination					0.153	0.168	0.162	0.163
Proportion of democratic neighbors					0.520	0.345	0.442	0.334
Local trade to GDP ratio					0.487	0.106	0.440	0.106
Territorial control	-0.587	0.181	-0.534	0.168	-0.635	0.182	-0.582	0.171
Legal political wing	0.683	0.226	0.613	0.214	0.703	0.233	0.656	0.220
Insurgents stronger	0.686	0.346	0.466	0.375	0.650	0.346	0.508	0.374
Insurgents at party	0.023	0.245	0.028	0.226	0.128	0.244	0.123	0.235
Ethno-linguistic fractionalization	-0.490	0.396	-0.751	0.333	-0.630	0.391	-0.873	0.340
Ethnic conflict	0.267	0.192	0.285	0.193	0.224	0.189	0.232	0.191
Ln GDP per capita	0.185	0.075	0.175	0.073	0.060	0.082	0.061	0.082
Democracy	-1.082	0.193	-1.037	0.187	-1.137	0.195	-1.099	0.190
More than one conflict dyad	-0.264	0.154	-0.218	0.147	-0.231	0.156	-0.187	0.149
Ln Population	-0.167	0.060	-0.167	0.058	-0.174	0.060	-0.179	0.058
N	1805		1805		1778		1778	
Wald Chi-2	148.82		194.73		167.14		199.22	

As can be seen from the results for Model 1 in the upper left corner of Table 1, dyads where rebels have transnational linkages tend to have negative coefficient estimates, indicating that conflict dyads with these traits are less likely to terminate and will tend to have more persistent violence. This is the case for dyads where insurgents have transnational constituency support, presence in other states, as well as cases where rebels receive military support from other states. All the coefficient estimates are negative and statistically significant, and their magnitude is substantial. Consider, for example, the size of the coefficient for rebel presence in other states relative to that of territorial control, which suggests being able to operate from territory in other states can increase ability to resist suppression to an even greater extent than territorial control. The performance of the other variables is largely consistent with the results in Cunningham et al. (2006), in particular, stronger insurgents are associated with better prospects for conflict termination, as is the presence of a legal political wing.

One odd thing in the result for Model 1 is that although military support makes conflict termination less likely, we actually find a positive effect of outside state support in general once we distinguish between military forms of support. Without distinguishing military support, the results essentially suggest that outside state support has no significant impact on the hazard of conflict termination. We surmise that these differences between military support and support in general may pick up on differences in outside patrons interest in seeking to influence outcomes and contribute to settlement and less motivated by targeting the government in the conflict countries. States that are biased to insurgents yet motivated to avoid violence are more likely to encourage insurgents to settle with their antagonists, and “constructive” patrons could conceivably serve as guarantors that abide by agreements. Such patrons may be less likely to extend military aid to insurgents than “destructive” state supporters who seek to undermine or weaken the government in a state experiencing civil war. Although we believe that there are likely to be strong implications for conflict termination following the motivation

of outside governments supporting insurgents, this is a somewhat ad hoc explanation of the results since lack as a strong basis for taking military involvement as a litmus test of whether state motivation is constructive or destructive. We also considered possible interaction between support for both sides in a civil war, but found no evidence that the effect of intervention for one side depended on whether there is support to the other side.

Model 2 introduces indicators for support from other states to the government sides. Consistent with our idea of outside reliance as a sign of weakness, military support to the government in a conflict dyad is associated with a lower likelihood of conflict termination. Only military support to governments appears to exert any influence on the hazard rate, and the coefficient estimate for support in general is very close to 0 and not significant. Controlling for support to the government side, however, does not change any of the results for the support to the rebel side, although it weakens somewhat the positive effect of stronger insurgents.

Model 3 considers the characteristics of neighboring states other than support for rebels and the government side. The positive coefficient estimate suggests some support for the argument that neighboring war terminations can increase the prospects for conflict settlement, but the effect is not statistically significant. Likewise, the coefficient suggests that the proportion of neighboring democracies make termination more likely, but the effect is not statistically significant. However, conflict dyads where there is greater amount of trade between actors have a noticeably higher likelihood of conflict termination. This lends some support to the idea that greater linkages among actors other than combatants and vested interest in peace can influence and exert pressure for settlements. However, since the data here remain at a quite aggregate level, we obviously cannot assess to what extent non-state actors in neighboring states work towards fostering settlement.

Model 4 combines all the indicators from the sequential Models 1-3. The indicators from the previous paper hold up quite well. As can be seen, the results for the transnational linkage indicators do not appear particularly sensitive to model specification, and the sign or significance of the individual coefficient estimates do not change with the inclusion of others. Moreover, we find that the previous results of Cunningham et al. (2006) hold up well; Conflicts where insurgents have territorial control are more persistent, while a legal political wing facilitates conflict termination. Stronger rebels are generally associated with shorter conflicts, although the sign and significance for the coefficient depends on the inclusion of military support for the government side in a conflict dyad.

Conclusions

Civil war is a dyadic phenomenon: To understand why civil wars come about and evolve over time we need to understand why a government and a potential insurgent group would turn to violence in their interactions. Moreover, countries are not isolated entities, but influenced by actors outside the territorial boundaries of the state where the conflict physically takes place. In this paper, we have argued that transnational linkages can transform the relationship between a government and an insurgent group. We have argued that transnational linkages can lengthen conflicts through increasing the capacity of insurgents to resist government suppression. Although transnational funding and sources of support can increase the military strength of an insurgent group over what is available at the domestic level, reliance on transnational support involves an autonomy-strength trade-off for the rebels. Reliance on transnational linkages support moreover introduces additional actors with potentially separate interests to conflicts, and which make it more difficult to terminate conflict. Our analysis of conflict termination strongly suggests that transnational linkages can influence civil war interactions.

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