

Rebel Alliances and Civil Conflict Duration¹

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ABSTRACT

What effect do inter-rebel relationships have on multiparty civil war dynamics? Recent research concludes that civil wars tend to be shorter as individual rebel groups and the government approach power parity. However, previous work has overlooked the complexity of multiparty conflicts by failing to consider the effect of relationships among rebel organizations in studies of how and when civil conflicts end. I argue that rebel alliances tend to lengthen civil conflicts as they increase the groups' collective strength, promote more efficient and effective combat strategies and improve their (expected) probability of military success. As a result, these relationships impede conflict termination by encouraging the rebels either to hold out for better concessions or to continue fighting until a decisive victory. I provide empirical support for these claims, using original data on the presence of alliances among rebel organizations active in 329 civil conflict episodes during the period 1946-2009 and information on conflict episode terminations from the UCDP Conflict Termination Dataset. The findings indicate that, in the aggregate, multiparty conflicts tend to last longer when they involve at least one bilateral rebel alliance. More importantly, rebel alliances exert an effect on conflict duration that is distinct from the previously established lengthening effect associated with multiparty status. Additionally, the effect of a rebel alliance on conflict duration is appears to be conditional on the regime type of the rebels' government opponent.

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INTRODUCTION

How and when civil wars end is a topic of quickly growing interest and importance to scholars and policymakers alike. In recent years, there has been a commensurate increase in the amount of scholarship devoted to it. However, this research has failed to explicitly consider the impact of inter-rebel relationships on the duration of multiparty conflicts. Just as there is considerable variation across conflicts in terms of how many actors participate, the relationships among them are variable as well.

Though some have studied the effects of inter-group cooperation on conflict outcomes (Bond n.d.; also relevant is Fjelde and Nilsson 2012 on the effects of inter-group conflict on civil war outcomes) or the impact of networked relationships on the characteristics of individual violent groups (Asal and Rethemeyer 2008), the empirical question of whether inter-rebel alliances affect the duration of multiparty conflicts in a systematic way has been largely unaddressed in empirical civil war studies. In this paper I tackle this question directly. I argue that rebel alliances alter the balance of power within a given conflict, usually by bringing the rebels (collectively-speaking) and the government closer to power parity. Rebel alliances not only promote greater efficiency and effectiveness in the rebels' combat strategies, but also increase the allies' collective strength vis-à-vis the government. Through these mechanisms, I argue that rebel alliances tend to lengthen civil conflicts. I test my argument using original data on the presence of alliances among rebel organizations active in civil wars during the period 1946-2009 and information on conflict episode terminations from the UCDP Conflict Termination Dataset. While extant work has concluded that multiparty conflicts tend to be longer than single-party conflicts, the results here show that multiparty conflicts tend to last even longer when the rebels are working together.

Recent work aiming to “disaggregate civil wars” maintains that over-aggregation bias has presupposed a fuller understanding of many civil war dynamics (Cederman and Gleditsch 2009). This has led some to deconstruct the standard dyadic model of conflict – where a unitary Government Side and a unitary Rebel Side engage each other in active military contest – into distinct Government Side-Rebel Group pairings. In the context of multiparty conflicts, this approach has allowed us to look further into the specific, two-way relationships between a government and each of its individual opponents. This is an important advance in both how we theorize about civil war dynamics and in how we collect data about the same. However, to analyze multiparty conflicts as only a collection of dyadic government-rebel interactions overlooks the critical importance of relationships among the n rebel groups active in a multiparty conflict. In other words, to be true to the spirit of disaggregating civil wars scholars should acknowledge non-independence across government-rebel dyads that is due to inter-rebel relationships, as well as non-independence that derives from the existence of a shared opponent. With respect to understanding civil conflict duration, we may over- or under-emphasize certain explanations for when and how multiparty civil conflicts end by overlooking the role that relationships among actors involved in the conflict have amongst themselves.

Examination of the relationships among rebel organizations in civil wars is important for academic and practical reasons. Theoretically, the degree to which the characteristics of each individual actor in conflict can be estimated independently of the others – or the degree to which a government responds to changes in the opposition at large with responses that vary by organization – is a meaningful question. We know from history that inter-rebel interactions often appear to explain some of the variation in dyadic rebel-government relationships. For example, in early 2007 a key challenge to the re-opening of peace talks between rebel organizations in Darfur, Sudan and the Khartoum government was sentiment among many individual groups that they were unable to

provoke enough bilateral ceasefires to make laying down arms to negotiate worthwhile. However, with the development of the United Front for Liberation and Development (UFLD) as a common negotiating front, the participating organizations aimed to pressure others into changing their orientations toward negotiation. Though the efforts of the UFLD were not as successful as the participants expected, in January 2011 leaders from two of the dominant rebel groups – the Justice and Equality Movement (JEM) and the Liberation and Justice Movement (LJM) – put in place the framework for an alternative coordinating body that many consider a crucial incentive for other rebel groups to join the JEM and LJM at the negotiating table with the UN, African Union and Sudanese President Omar al-Bashir.² In both of these examples, the likelihood of settlement for each rebel-government dyad can be explained in part by the relationship between the rebels themselves. By conceptualizing multiparty civil conflicts as simply the sum of multiple dyadic non-state—government interactions however, we miss the intervening influence of inter-group relationships on each organization’s strategic positions and behaviors.

Practically, the options available to domestic governments and external actors for ending armed civil conflicts are also likely contingent on the degree to which rebel organizations can be divided and conquered, rather than treated as a cohesive unit which must be satisfied in total. In recent years, the international community has recognized the importance of strategic alliances among rebel and insurgent organizations active in civil conflicts. Intelligence, government, research and media sources have all noted the increases in strength, efficiency and bargaining leverage that violent organizations have enjoyed over time as a result of this cooperation. Some state leaders have

² For example news coverage, see Daniel Ooko, “Sudan: Darfur rebel factions struggle to unite,” 26 November, 2007, Norwegian Council for Africa <<http://www.afrika.no/Detailed/15505.html>>; PBS NewsHour, “Rebel Groups Boycott Darfur Peace Talks,” 29 October, 2007, <http://www.pbs.org/newshour/updates/africa/july-dec07/darfur_10-29.html>; Reuters Newswire, “Six Darfur rebel factions to boycott peace talks,” 23 October, 2007, <<http://www.sudantribune.com/Six-Darfur-rebel-factions-to,24385>>; or “Darfur rebel alliance says ready for talks,” 30 January 2011, <<http://www.thedailystar.net/newDesign/news-details.php?nid=172098>>.

even suggested that cooperation among rebels, insurgents, terrorists and other violent non-state actors constitutes one of the most significant current threats to international security.³

WHEN DO CIVIL CONFLICTS END?

A common conclusion about war duration is that when commitment problems are strong among combatant sides, civil conflicts tend to be longer. Walter (1997) contends that because the stakes of a civil conflict are so high, and the lack of trust between the belligerents is so pronounced, neither side will be willing to lay down their arms in order to come to the bargaining table. This makes it so that the parties involved in a civil war will prefer to duke it out until one side wins decisively, rather than invite the vulnerability that comes along with disarming. Fearon (2004) similarly argues that the civil wars that end faster are simply those for which the commitment problem is less severe.

Power parity between the government and rebels has also been associated with longer civil wars. As the combatant sides approach parity, each increases in its probability of success, thus making it harder for either to forgo the potential gains from a decisive victory. When the government and the rebels are at (or near) power parity, it becomes as difficult for the government to repress the rebels as it is for the rebels to batter the government. Whether parity conditions arise endogenously (i.e. in military stalemates) or exogenously (i.e. due to third-party intervention), they are thought to have a strong lengthening effect on the duration of civil conflicts (Balch-Lindsay and Enterline 2000; Regan 2002; Fearon 2004; Buhaug, Gates, and Lujala 2009).

³ Such sentiment was expressed by the United Nations High-Level Panel on Threats, Challenges and Change in a 2004 report titled "A more secure world: Our shared responsibility," and in the July 2007 National Intelligence Estimate produced by the U.S. Office of the Director of National Intelligence.

On the other hand, (large) power disparities and other conditions that favor decisive victory have been associated with shorter conflict duration. When civil conflicts are disaggregated into individual rebel group-versus-government dyads, Cunningham, et al. (2010) find that conflicts are shortest when the rebel group is militarily advantaged over the government forces; conflicts are at their second-shortest duration when the rebels are at parity with the government's ability to both target them and resist their efforts. However, not all strong rebels are expected to have the same effect on the duration of conflict. As Cunningham (2006) shows, particularly in multiparty conflicts it is the strength of the "veto players" – or those groups that have the ability to unilaterally block settlement or continue the conflict – that matters most for explaining conflict duration. Specifically, the author provides some evidence that stronger veto players are associated with longer conflicts (2006:888).

There have been comparatively fewer studies of the resolution dynamics of multiparty conflicts in particular. Though Cunningham (2006) concludes that adding veto players to a conflict likely lengthens it, the author gives no empirical evidence as to how the relationships *among* them may influence the conflict's duration. Walter (2006) provides evidence that the number of (future, potential) challenging organizations influences a government's willingness to accommodate present separatist demands. Again however, there is no discussion of the effects that any communication, resource transfers or even conflict among the various organizations may have on each one's likelihood of success. Cunningham, et al. (2009) show that governments can and do have significantly different relationships to each group in a multiparty conflict, and that these relationships are meaningful for explaining variation in how long civil wars last. However, previous research has almost completely overlooked relationships among the rebels themselves, and their implications for the conduct of contemporary civil wars.

ALLIANCES AND REBEL CAPACITY

Though many civil war scholars have acknowledged the effect of shifts in the within-conflict balance of power on duration, few have considered the role that alliances among rebel organizations can play in altering this distribution. Rebel alliances alter the costs and benefits associated with different conflict and conflict management strategies, often by providing critical boosts in both capabilities and efficiency for the participants. I argue that this, generally, renders longer conflicts more likely, particularly through its effect on the costs of continued fighting for both the allies and the government. With a reduction in the costs of war comes an increase in the probability of victory. This feeds each participating group's willingness to continue violence as well as its ability to do so, which often can extend the life of a given civil conflict.

A desire to increase material capabilities is of the central motivations for alliance formation among rebel groups. In fact, such relationships are only likely to emerge in multiparty conflicts when the expected material benefit from cooperation is expected to exceed the benefit of going it alone (Bapat and Bond 2012). Rebel alliances serve to increase the opposition's military capacity – relative to government capacity – through increasing each group's ability to both impose and absorb the costs of conflict.

Rebel groups often pursue alliances for the absolute strength gains to be generated through resource pooling. Finding ways to increase access to scarce and finite resources is paramount to rebels seeking to prolong their survival throughout a civil conflict. When there are only so many routes in and out of an area on which to transport goods, or so many unaffiliated individuals to mobilize to action, military success for a given organization is sometimes predicated on how easily it can use those roads or reach those individuals. Resource pooling within alliances is expected to have a net positive effect on each ally's military capacity, as each ally enjoys access to more intelligence, members or materiel than it would have were it still acting alone. In fact, some rebel leaders have

been explicit in their support for inter-group alliances, particularly as a means for increasing the allies' access to and enjoyment of critical war-fighting resources. For example, the June 1979 agreements that helped to consolidate the second iteration of the Frente Sandinista de Liberacion Nacional (FSLN) in Nicaragua explicitly invoked the joint gains in military capabilities as a key reason for the (re)alignment. According to Daniel Ortega, leader of the FSLN-Tendencia Insurreccional (also known as the 'Terceristas'), the FSLN was reconstituted as an umbrella organization meant to "combine [our] available political and military forces into an emergency plan designed to destroy or neutralize the plan of imperialism" attributed to the Somoza government and its supporters (Miranda, et al. 1979: 117). Similarly, leadership figures from the SLM and JEM rebel organizations in Darfur, Sudan have publicly described their cooperative effort – dubbed the Alliance of Revolutionary Forces of West Sudan – as a means to "double the combat capacity" for each of the two participating organizations.⁴

Absolute strength gains are not the only benefit that rebels expect from alliance formation. Resultant efficiency gains among the allies and an increased ability to exploit comparative advantages are also important by-products of these relationships. Explicit security ties among rebel organizations often promote the development of specializations among them.⁵ Tactical specialization can bring about a more efficient distribution of resources among the participating organizations, which, in turn, promotes greater joint and individual effectiveness for each of the allies. The development of the paramilitary Autodefensas Unidas de Colombia (AUC) illustrates this

⁴ "Darfur rebels unite as single group" 20 January 2006 Accessed from: <http://english.aljazeera.net/NR/exeres/751BE55E-F767-4A11-9405-9ADC2FE63401.htm>, Sept 2011.

⁵ Bond (2010: 119) notes that cooperation among violent non-state actors, such as rebel organizations, can take a variety of forms, each "requiring different levels of commitment, obedience, or coordination." While the question of how rebel groups decide on a particular distribution of the joint gains is beyond the scope of this study, it is nonetheless reasonable to assume that, on average, rebel organizations will not enter into an alliance that does not appear to them to be beneficial, at least in the short-term context of the immediate conflict.

point well. While the AUC was formed in part to allow local paramilitary forces to pool their resources in hopes of improving their ability to survive confrontations with Colombia's violent leftist organizations, the arrangement also allowed each participating 'bloc' to specialize both tactically and geographically (UNHCR 2005).

In the above paragraphs, I have argued that the benefits from rebel alliances are often significant enough to increase the allies' willingness to hold out for larger negotiated concessions, if not for outright victory. This logic should highlight the extant finding that stronger rebels are associated with shorter civil wars, and suggest that on average, rebel alliances should be associated with shorter conflicts. However, although inter-rebel cooperation creates individually stronger challengers, it rarely pushes the allies' capabilities beyond those held by the government. Instead, the average effect is more likely movement towards power parity between the rebel and government sides during a given civil conflict. In fact, it is perhaps most plausible that rebel alliances put multiparty conflicts on the fast track to a military stalemate, in which neither side is strong enough to defeat the other outright, though both sides are also too invested in the fighting to lay down arms and negotiate. Though some argue that "mutually-hurting" stalemates accelerate the opening of peace processes to end interstate conflicts (i.e. Zartman 2000), power parity between rebels and government 'sides' in the civil war context has been much more often associated with longer conflicts (Balch-Lindsay and Enterline 2000; Regan 2002; Fearon 2004). Therefore, I argue that alliances among rebel groups in have the counterintuitive average effect of prolonging conflict duration. In other words, **multiparty conflicts with allied rebels are likely to be longer than multiparty conflicts without a rebel alliance (Hypothesis 1).**

GOVERNMENT REACTIONS TO REBEL ALLIANCE

Even though alliances among rebel groups do help to create changes in the within-conflict power balance that suggest longer duration, the true effect of inter-rebel cooperation on the length of the conflict may be conditional on how the government responds to the new distribution of capabilities.

Based on the government's perception of the signal about rebel capabilities that is sent by an inter-group alliance, there are two plausible scenarios that can arise. On one hand, the government may concede quickly, in order to avoid losing even more bargaining leverage as the conflict continues. This is the scenario that a strict interpretation of the bargaining perspective on civil conflict would suggest: as the government recognizes the rebels' increased ability to impose costs, it should prefer to end the conflict sooner rather than later, to avoid incurring additional costs and exacerbating its disadvantage. On the other hand, the government may view an inter-rebel alliance as a signal of weakness on the allies' part. Bapat and Bond (2012) show that, in a given multiparty conflict, inter-group alliances are in fact most attractive for groups that have an *a priori* high likelihood of defeat. Governments that understand this dynamic may instead be encouraged by the alliance to revise its estimate of the rebels' capabilities downward, resist conceding, and continue fighting as though the capability balance had never changed.

We can easily cast the main difference between the above scenarios as the government's willingness to respond to internal threats offensively versus defensively. Regime type characterizations are a useful indicator of the government side's willingness to respond to internal threats with force. This is because regime types suggest at least basic information on the likely costs and benefits of backing down from challenges to domestic authority, both at the domestic and international levels. For example, scholars tend to agree that that governments vary in how they view threats to domestic authority, and consequently in their openness to the use of repressive force to deal with those threats. Specifically, Davenport (2007) and others have found that as countries

become more democratically-minded, they become less likely to respond to internal threats with force than are autocrats. The logic of the two above scenarios suggests that although conflicts with allied rebels are likely to last longer than those without, autocratic government opponents will tend to intensify that effect through their reticence to negotiate, while more democratic government opponents will attenuate it. In other words, **multiparty conflicts with allied rebels versus a democratic government are likely to be shorter than multiparty conflicts with allied rebels versus an autocratic government (Hypothesis 2).**

RESEARCH DESIGN

Empirical Domain

To test these hypotheses, I use the UCDP/PRIO Conflict Termination Dataset (Version 2010-1) to identify a sample of 389 civil conflict episodes from 1946 to 2009 (Kreutz 2010).⁶ Conflict episodes represent continuous periods of active conflict among combatants noted in the UCDP-PRIO Armed Conflict Data. Each episode begins when armed conflict between the government and some other armed actor generates 25 or more battle-related deaths, and ends when the violence dips below that threshold (Kreutz 2010: 244). A re-start of the violence is coded as a new episode, even if the belligerents remain the same.

⁶ The number of active rebel organizations ranges widely, going as high as 11 active groups in a given episode. Rebel organizations are only coded as participating in a given conflict/episode if their interaction with the government resulted in the accumulation of at least 25 battle-related deaths. While this coding rule may result in an undercounting of the actual number of conflicts in which there were multiple active parties, it is nonetheless reasonable. The option exists for me to recode the number of parties in each episode according to the coding notes for the UCDP/PRIO Armed Conflict Dataset (ACD). I am not sure how many more multiparty episodes this would yield, but it may be fruitful, given that, according to the ACD coding notes, some territorial conflict actually included upwards of 40 active organizations in any given year (though only a handful may be included in the list of SideB organizations).

Though episodes can be aggregated up into broader conflicts, the Kreutz data include no requirement that conflicts be defined by a continuity of actors on the rebel side. Given that there may be considerable variation within a broader conflict in terms of which actors may have the opportunity to ally over time, it is more theoretically suitable to consider each episode separately.

I code as multiparty all episodes involving two or more armed non-state actors.⁷ Chart 1 details the breakdown of single- versus multi-party conflict episodes in these data. It is evident that multi-party episodes are not that common, representing only about 23 percent of the total number (88/389). However, about 53 percent (48/88) of these multiparty episodes include at least one bilateral alliance among the active rebel groups.

<CHART 1 ABOUT HERE.>

Rebel Alliance

I rely on Bapat and Bond (2012) to identify rebel alliances. The authors examined each possible annual, dyadic combination of organizations fighting against a common government enemy in multiparty civil conflicts during the period 1946-2009, and coded each dyad for the existence of an alliance among the participants.⁸ In their study “[A]lliances were identified and coded as in existence when there was evidence of resource-sharing or tactical coordination among the groups at some time during that year (i.e. sharing weapons or personnel, joint attacks or communiqués)” (20-21). In many cases, there were more than two rebel organizations in conflict with some government actor in a given episode. This means that there could be multiple alliances recorded for a single

⁷ These actors only enter the Kreutz data (by way of the original ACD) if they have generated 25 or more battle-related deaths apiece in their interaction with the government. This introduces the unfortunate yet familiar truncation which eliminates all actors which, though active, may not generate any battle-deaths with the government, let alone 25. Practically, this rule may eliminate episodes that conventional wisdom would qualify as multiparty (i.e. **give an example here...UNITA episodes?**) **What sorts of problems does this create for my analyses?**

⁸ The civil wars, as well as the lists of rebel organizations active in each conflict year, were drawn from the UCDP/PRIO Armed Conflict Data, Version 4-2009.

conflict, or conflict episode. For the present analysis, I code only for the formation of at least one alliance dyad during any year of the episode. In other words, *Allied Rebels* is a dummy variable coded as 1 when there was at least one alliance formed between at least two rebel organizations during a given episode and 0 otherwise.⁹

Rebel organizations only have an opportunity to collaborate with another in only the multiparty conflicts in this study. With the previous inclusion rule in mind, this means that the only alliances under consideration here are those that involve rebel organizations with the capacity to generate or sustain 25 battle-related deaths in their interaction with government, given the presence of other organizations that are active to a similar degree.

Episode Duration

I constructed my duration variable using the episode start and end dates included in the Kreutz data. I measure duration in months rather than years to take advantage of the detail with which the original start and end dates were coded.¹⁰ The average episode lasted about 4 years (49 months). My sample includes 74 multiparty episodes that terminate by December 31, 2009 along with 14 censored observations. This variable is further described in Table 1.

<TABLE 1 ABOUT HERE.>

⁹ The codebook to the dyad-level version of the Conflict Termination dataset indicates that there is a termination category in which the rebel side could continue fighting under the auspices of a new, joint organization (Joining Alliance) (Kreutz 2010b: 4). This variable is not included in the copy of the data that I was able to obtain from the web. However, I suspect that all instances of inter-group cooperation that they indicate as ending an episode are included in the Bapat and Bond data, given that the authors considered the creation of an umbrella organization to be evidence of an alliance. Once the umbrella had been formed, all subsequent years of its existence were considered to be evidence of an alliance among the participating groups, until the umbrella itself ceased to exist (either through defeat, concession or self-destruction).

¹⁰ I rounded all partial months up to the nearest full month, thus making the minimum duration 1 month rather than zero.

REBEL ALLIANCES & CONFLICT DURATION

Bivariate Analyses

Given the relative rarity with which rebel alliances are observed in these data, I first use conduct two sets of bivariate analyses to ascertain any general relationship between the number of rebel organizations involved in an episode, the presence of a rebel alliance and conflict duration. In general, these bivariate results suggest support for my claim that multiparty conflict episodes are likely to last longer when they are characterized by at least one alliance among the active rebel organizations.

The Kaplan-Meier survivor distributions shown in Figure 1 highlight three facts. First, the graph on the left corroborates extant findings suggesting that multiparty conflicts generally last longer than single-party conflicts. Second, the graph on the right indicates that among multiparty conflicts, those involving allied rebels tend to last longer than those with independent rebels. Third, to eyeball both sets of curves suggests that both predictors satisfy the proportional hazards assumption.¹¹

<FIGURE 1 ABOUT HERE.>

Next, I use a Wilcoxon rank-sum test to determine whether there is a difference in the underlying distribution of conflict duration between two groups: multiparty episodes with allied rebels and multiparty conflicts with independent rebels. The Wilcoxon rank-sum test is a non-parametric version of the independent two-sample t-test (Hollander and Wolfe 1999). A non-parametric test is preferable here given that *Episode Months* is not normally distributed. The rank sum test compares two populations based on independent random samples, and tests whether one sample tends to have larger values than the other. In this test, the observations from both samples

¹¹ This assumption is corroborated by the results of two log-rank tests comparing each of the two categories on each predictor: logrank test χ^2 for *Multiparty* = 53.62 ($p < 0.001$); logrank test χ^2 for *Allied Rebels* = 33.42 ($p < 0.001$).

are combined, and then the values on the dependent variable are ranked from 1 to n . The ranks are then summed within each sample. If the underlying distribution of conflict duration was identical for both types of MP conflicts, then the rank-sums should be nearly equal. However, if the duration of multiparty conflicts with allied rebels tends to be longer than that of multiparty conflicts with independent rebels, then observations in the first group would have a larger rank sum.

Table 2 shows the difference in rank-sums among multiparty conflicts alone. Once all single-party episodes have been excluded from the analysis, we see clearly the lengthening effect of rebel alliances on conflict duration. Not only is the calculated rank-sum higher for the allied rebels sample than the independent rebels sample, but the allied rebels sum also is clearly higher than its expected value, while the independent rebels sum is lower than its expected value. Furthermore, the difference in rank sums is highly statistically significant. These results are strong preliminary support for my hypothesis that rebel alliances are associated with increased conflict duration.

<TABLE 2 ABOUT HERE.>

To highlight the importance of comparing only apples to apples, Table 3 displays the results of a Wilcoxon test conducted on the full sample of conflict episodes. In contrast with the previous test results, the finding here is that episodes with independent rebels are generally longer than episodes with allied rebels. However, this test includes all episodes, and does not discriminate between multiparty episodes with independent rebels and single-party episodes, which by definition involve independent rebels, given that there is only one active group and thus no opportunity for an alliance to form, within the confines of the conflict. This dynamic suggests that when looking for an effect of rebel alliances on conflict duration, it is critical to control for the number of parties involved in the conflict, at least in a general sense.

<TABLE 3 ABOUT HERE.>

Multivariate Analyses

While the bivariate analyses strongly suggested supported for my core hypothesis, it is nonetheless useful to examine whether this result is robust to multivariate specifications. I have already shown that the true effect of rebel alliances on conflict duration can be obscured by comparing multiparty episodes with alliances to all multi- and single-party episodes without alliances. However, it would be unreasonable to conduct a multivariate duration analysis on only the multiparty cases, given that their number is so small ($n=88$). Therefore, I perform the following tests on the full sample of episodes in order to take advantage of a larger number of observations. This decision is not inconsequential, since by including the single-party episodes I set up a much tougher environment within which the tests may find statistically significant relationships. I do this by not only including control variables that can account for more unexplained variance than is possible in the bivariate analyses, but also by adding back in all of the cases where a rebel alliance is technically impossible, given my coding rules.

I specify a Cox Proportional Hazards duration model that includes only those variables that represent the key features of my argument, given my limited degrees of freedom. Before discussing the model results, I first describe the variables.

The key independent variables in the duration model indicate whether an episode is *Multiparty* and whether there is are *Allied Rebels* present. Both take the value of 1 in the affirmative. To test my hypothesis that the effect of a rebel alliance on conflict duration is conditional on the government's regime type, I create an additional variable using the Polity IV (Marshall and Jaggers 2004) democracy-autocracy scores. Since my data are organized as a cross-section of episodes, I am unable to assign a single, yearly government Polity score to each observation. Instead I use a variable

indicating a government's general democratic tendency during the episode. To do this, I subtracted the government's maximum autocracy score over the episode years from its maximum democracy score to determine its democratic deficit. From this value, I created a dummy variable *Democratic Regime* that indicates whether, over the course of the episode, the government was generally autocratic (-10 to -1), equally autocratic and democratic (0), or generally democratic (1 to 10).

Given my argument about the impact that alliances can have on rebel strength, it is reasonable to consider that episode duration might be better explained by the overall strength of the rebel side. To control for the overall power of the rebels (or government's overall capability advantage), I rely on the Cunningham, et al. (2009) yearly estimates of individual rebel groups' strength vis-a-vis their government opponents to create a variable, *Maximum Rebel Strength*, indicating the strength of the strongest rebel on the challenging side. This variable takes on the value of 1 when the strongest organization is much weaker than the government, 2 when it is weaker, 3 when it is at parity, 4 when it is stronger, and 5 when it is much stronger.¹² Table 4 highlights the distribution of this variable across all conflict episodes, while Table 5 does the same for only the multiparty episodes. Notice that the majority of rebel groups in these data were at best only weaker than the government, in both single- and multi-party conflicts. This includes all of the groups that participated in alliances.

<TABLE 4 ABOUT HERE.>

<TABLE 5 ABOUT HERE.>

<TABLE 6 ABOUT HERE.>

¹² To illustrate my coding, take the conflict episode involving Portugal versus the MPLA, FLNA and UNITA as an example. In the Cunningham, et al. data, the FNLA is coded as much weaker, while the MPLA and UNITA are both listed as weaker than the Portuguese government. In my analysis, *Maximum Rebel Strength* for this case is coded as 2, reflecting the fact that the strongest of the three organizations is only weaker than the government side.

Table 6 shows the empirical results from the Cox model. They provide quite strong support for my core hypothesis that rebel alliances are associated with increased conflict duration (Hypothesis 1). The base model (Model 1) including just *Multiparty* and *Allied Rebels* shows clearly that the presence of a rebel alliance in a conflict has a statistically significant negative effect on the hazard of episode termination, even when I control for multiparty conflict status. In other words, conflict episodes are likely to be longer when at least two rebel organizations are working together in some way. This result is extremely robust to the inclusion of additional variables to the base model, and strongly corroborates the results of the bivariate analyses. Both sets of results make it clear that the statistical effect of collaboration among rebel organizations is separate from the effect of simply having multiple organizations that could interact.

The results of Models 4 and 5 corroborate the extant finding that, from a dyadic standpoint, stronger rebels are associated with shorter conflicts: measuring the strength of the strongest rebel group vis-a-vis the government in a given conflict, the coefficient on *Maximum Rebel Strength* is positive and statistically significant. However, *Allied Rebels* does not lose any of its statistical significance, nor does it change its sign. By graphing the estimated survival functions, we see clearly that multiparty conflicts with allied rebels have a probability of survival that, at almost all points in time, is higher than the survival probabilities of multiparty conflicts with independent rebels and single-party conflicts. This finding is presented in Figure 2.

<FIGURE 2 ABOUT HERE.>

Examination of the associated hazard ratios shows that the impact of rebel alliances on conflict duration is also substantively significant. I estimate that the presence of a rebel alliance in a multiparty conflict decreases the hazard of termination by 32 to almost 50 percent. Moving a

conflict from involving a single rebel group to multiple rebel groups reduces the hazard of termination by 62 percent when other variables are not considered (based on Model 1 results). Once rebel alliances are accounted for, multiparty status declines in its importance, while the presence of an alliance itself produces a reduction in the hazard of about 32 percent (based on Model 2 results). Given the results of the fully specified Model 5, we see that rebel alliances can actually outperform multiparty conflict status in their hazard-reducing properties: here rebel alliances are associated with a 50 percent reduction in the risk of conflict termination, while multiparty conflicts have a hazard of termination that is 45% lower than that of single-party conflicts. This is in stark contrast to the substantive effect of increases in rebel strength vis-à-vis the government. Specifically, as the strongest active rebel group increases in its overall strength, the hazard of termination increases by only about 17 percent.

These data do not support my hypothesis that conflicts between a democratic government and an allied opposition will be shorter than those involving an autocratic government facing allied rebels (Hypothesis 2). The coefficient on *Democratic Regime* is consistently negative and statistically significant, suggesting that regardless of any interactions among rebel groups, conflict episodes are likely to be longer when the government can be characterized as more democratic than autocratic. Once interacted with the *Allied Rebels* variable, the negative effect of democracy on the hazard of conflict termination remains. Although this effect is statistically insignificant in the multivariate test, Table 7 shows that in the bivariate setting, multiparty conflicts with allied rebel organizations do have a statistically significantly longer average duration when the government has strong democratic tendencies.¹³

<TABLE 7 ABOUT HERE.>

¹³ The lack of statistical significance in the multivariate model for the interaction variable is likely due to the small number of cases for which that variable could possibly be equal to one.

CONCLUSION

Civil conflict duration has been of incredible interest to academics and policymakers, resulting in a myriad of studies investigating its correlates. However, the complex nature of multiparty civil conflict still leaves unanswered a number of questions about why some conflicts last longer than others. In this study I have shown that the simple presence of a cooperative relationship among two rebel groups in a multiparty conflict can have important implications for the duration of that conflict. This analysis is just a first step towards examining the effect of inter-rebel relationships on civil conflict dynamics. Moving forward, there are a number of additional questions that can be examined under the same general heading. First, in this paper I only examine how long it may take for a conflict with allied rebels to end. However, an interesting extension of this work would involve examining how rebel alliances impact the likelihood of different civil conflict outcomes. Second, I focus only on how the incidence of a single rebel alliance impacts conflict duration, regardless of its place in the constellation of active rebel groups. Future research might also extend to investigating how the number of rebel alliances is related to civil conflict dynamics. Nonetheless, this paper represents an important contribution to the growing body of literature concerned with unpacking the complex dynamics of multiparty civil conflicts.

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Table 1. Summary Statistics for Duration Variable (*Episode Months*).

Episode Months

Minimum	1
Maximum	564
Mean	49
Standard Deviation	81.18
N	388
Total Failures	353
Total Time at Risk	19014
Overall Incidence Rate	0.019

Table 2. Two-Sample Wilcoxon Rank-Sum Test, Multi-Party Episodes Only

	n	Rank Sum	Expected
Independent Rebels	37	1348.5	1591
Allied Rebels	48	2306.5	2064
Combined	85	3655	3655
Variance (tie-adjusted)	12724.89		
Z-score	-2.150***		

Significance (two-tailed): * = 0.1; ** = .05; *** = .01.

Table 3. Two-Sample Wilcoxon Rank-Sum Test, Full Sample

	n	Rank Sum	Expected
Independent Rebels	337	60334	65041
Allied Rebels	48	13971	9264
Combined	385	74305	74305
Variance (tie-adjusted)	518459.78		
Z-score	-6.537***		

Significance (two-tailed): * = 0.1; ** = .05; *** = .01.

Table 4. Distribution of All Episodes by Maximum Rebel Strength.

Rebel Strength (vs. Government)	Frequency	Percent	Cumulative Percent
Much weaker	114	29.31	29.31
Weaker	164	42.16	71.47
At parity	29	7.46	78.93
Stronger	19	4.88	83.81
Much stronger	5	1.29	85.10
Unclear/Missing	58	14.90	100.00
Total	389	100.00	100.00

Table 5. Distribution of Multi-Party Episodes by Maximum Rebel Strength.

Rebel Strength (vs. Government)	Frequency	Percent	Cumulative Percent
Much weaker	20	22.73	22.73
Weaker	39	44.32	67.05
At parity	9	10.23	77.27
Stronger	3	3.41	80.68
Much stronger	2	2.27	82.95
Unclear/Missing	15	17.05	100.00
Total	88	100.00	100.00

Table 6. Cox Proportional Hazards Regression Results

	(1)	(2)	(3)	(4)	(5)
Multiparty	-0.963*** (0.138)	-0.692*** (0.198)	-0.686*** (0.193)	-0.654*** (0.204)	-0.658*** (0.204)
Allied Rebels		-0.380* (0.237)	-0.462** (0.244)	-0.519** (0.258)	-0.595** (0.271)
Democratic Regime			-0.130** (0.058)	-0.151*** (0.062)	-0.126* (0.066)
Maximum Rebel Strength				0.164** (0.076)	0.163** (0.076)
Democratic Regime* Allied Rebels					-0.249 (0.210)
Episodes	388	385	368	318	318
Episode failures	353	352	337	302	302
Total time at risk	19014	18405	18122	16129	16129
LR Chi ²	56.34***	53.37***	59.74***	60.23***	61.70***

Significance (two-tailed): * = 0.1; ** = .05; *** = .01.

Table 7. Two-Sample Wilcoxon Rank-Sum Test: Multiparty Conflicts with Allied Rebels, by Government Type

	n	Rank Sum	Expected
Democratic Government	27	1438	2422.5
Autocratic Government	57	2132	1147.5
Combined	84	3570	3570
Variance (tie-adjusted)	10898.71		
Z-score	-2.783***		

Significance (two-tailed): * = 0.1; ** = .05; *** = .01.

Chart 1. Percent Distribution of Single- and Multi-Party Conflict Episodes.

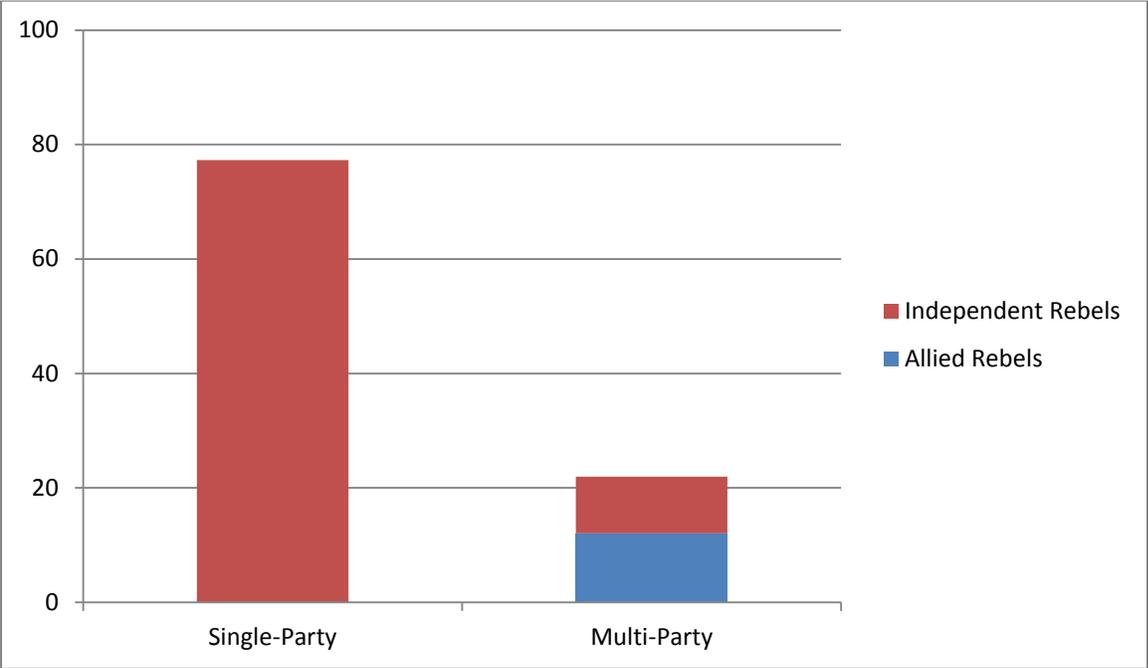


Figure 1. Kaplan-Meier Survivor Distributions

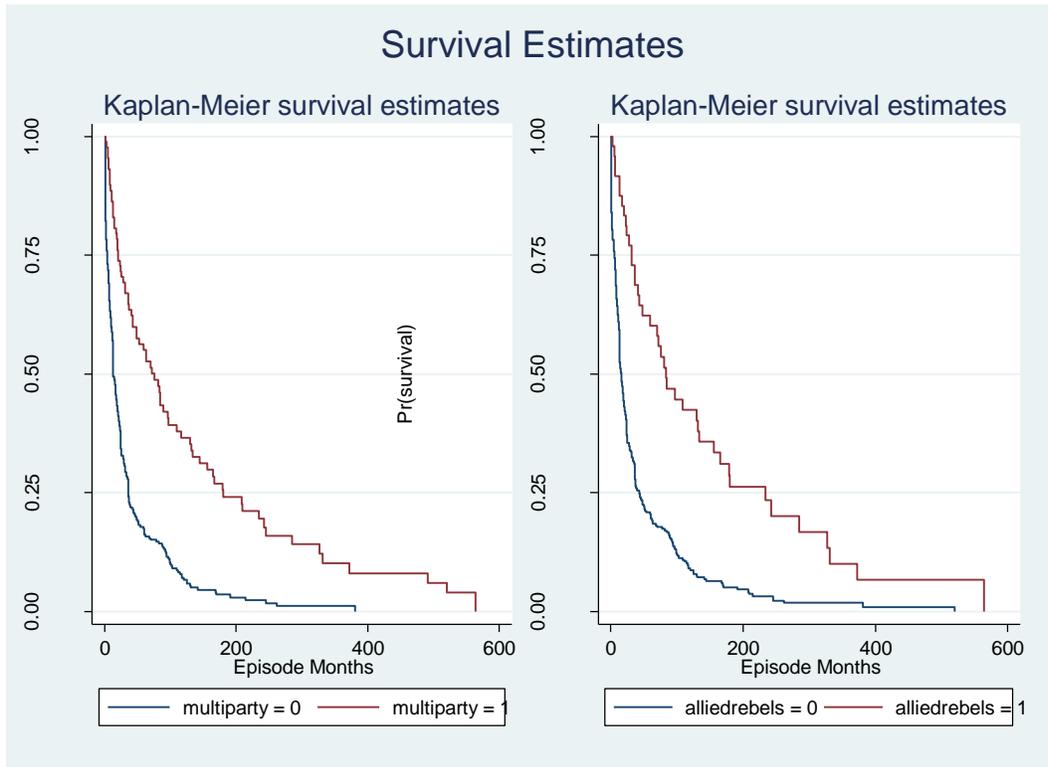


Figure 2. Estimated Survival Functions.

