Competing for the Crown: Inter-rebel Competition and Civilian Targeting in Civil War

Reed M. Wood and Jacob D. Kathman

Abstract
What factors contribute to the victimization of civilians during civil war? Drawing on research from various disciplines, we argue that increasing competition within a civil conflict system brought on by the entrance of new factions contributes to an increase in civilian targeting by existing rebel groups. Specifically, we argue that existing groups are more likely to target civilians immediately upon the entrance of new rivals due to the perceived threat to control over resources and because the arrival of new groups diminishes the gains existing groups expect from either victory or successful conflict bargaining. We further argue that violence against civilians increases during periods in which rival factions engage in direct, violent conflict with one another. Our analysis diverges from existing studies by arguing and demonstrating that fluctuations in competition rather than the simple presence of competing groups produce spikes in civilian targeting by nonstate actors. We evaluate and find support for our argument using monthly data for African conflicts between 1989 and 2010.

Keywords
civil war, civilian victimization, competition, rebel factions

Contemporary civil conflicts are best characterized as complex systems in which a variety of nonstate actors (NSAs) engage in a violent competition with one another and the state over political outcomes. The range of NSAs present in civil conflicts commonly includes paramilitary groups, local militias, foreign fighters, and various allied or rival rebel factions. The diverse characteristics, ideologies, and preferences of these myriad actors influence their conflict strategies, behaviors, and, ultimately, conflict outcomes. The humanitarian disaster in Syria is an example. Syria currently hosts a number of competing insurgent groups, including the largely secular Free Syrian Army, local Islamist factions such as the Syrian Islamic Liberation Front and the Syrian Islamist Front, Al-Qaeda-linked groups like Jabhat al Nusra, and many smaller factions (Sowell 2013). Although similarly oriented in seeking to unseat Bashar al-Assad’s government, these groups commonly compete with one another, using violence to control territory, resources, and civilian support (Morris, Warrick, and Mekhennet 2013). Hezbollah’s entry in support of the Assad regime further complicates the war, pitting Islamist organizations against each other (Muir 2013).

Despite the complexity of civil conflicts, rebellions have traditionally been studied through a dyadic lens in which a single, unitary rebel group challenges the state. While some of these groups are indeed primarily oriented toward engaging the government’s forces, most devote as much, if not more, time to fighting one another for control finite pools of conflict resources. In recent years, however, scholars have increasingly recognized that this approach does not reflect conflict realities. Studies have thus begun to examine how factors such as the presence of multiple rebel groups, the fragmentation of insurgent organizations, and competition among factions influence civil war processes (Bakke, Cunningham, and Seymour 2012; D. Cunningham 2006; K. G. Cunningham 2013; Fjelde and Nilsson 2012; Nygard and Weintraub 2014). In particular, recent studies note a link between intergroup competition and the frequency of terror and other attacks on civilians (Bloom 2005; Chenoweth 2010; Nemeth 2013), suggesting that conflicts that host multiple competing actors are likely to produce greater human costs.

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Although these findings are important, we note that competition is a common feature of all multiactor systems. The presence of competing groups therefore provides only limited insight into temporal and spatial variations in violence within a conflict. We extend recent work in this area by investigating the manner in which variations in the level of competition among rival NSAs shapes their violence strategies. Specifically, we focus on two aspects of the civil conflict environment that influence the targeting of civilians by rebel factions: (1) the emergence of new rebel organizations and (2) the adversarial nature of the competition among actors within the same conflict system—that is, whether or not NSAs engage in direct combat with one another. Using insights from political science, criminology, and related fields, we argue that changes in the level of competition within a conflict system influence the violence strategies a faction adopts in war.

In the pages that follow, we first review a range of research that establishes intergroup competition as a motive for violent interactions in diverse contexts. We then develop our argument, highlighting the means by which acute increases in competition incentivize violence against civilians. We evaluate hypotheses drawn from this argument using monthly conflict events data for a sample of African civil conflicts between 1989 and 2010. The empirical results support these hypotheses. We conclude by discussing some of the implications of our research.

**Competition and Conflict**

Previous literature acknowledges the influence of political, social, and market competition on the behaviors of groups and individuals. Although competition is anticipated to foster innovation and efficiency in economic markets, research suggests that competition in social and political environments can be detrimental. For instance, electoral competition has been linked to political violence in developing and transitional democracies. Intense political contests over local offices contributed to ethnic riots in India (Wilkinson 2004). Similarly, increasing political competition has been linked to an increase in predatory crime and political violence in Mexico (Villarreal 2002). In the American South, populist challenges by immigrants and blacks to white Democratic political rule in the 1880s and 1890s led to an increase in lynching meant to terrorize political challengers and their supporters (Olzak 1990).

Criminology research also links violence to competition among rival organizations over lucrative resources. Similar to civil wars, a portion of drug-related violence is random or incidental (e.g., bystanders killed in drive by shootings), but a notable subset of it reflects intentional violence directed at enemy gang members, their families, and their customers. Like armed political organizations, criminal actors employ selective violence instrumentally in an effort to subordinate targeted populations, gain and protect market access, and control territory (e.g., Goldstein 1985; Jacques and Wright 2008). Such instrumental violence occurs most often in the context of disputes over lucrative distribution networks or profitable territory. Turf wars between gangs—whose casualties often include as many civilians as rival gang members—emerge as a product of intense competition over their share of black market resources (Block and Block 1993; Fagan and Chin 1990; Reuter 2009). Competition between criminal syndicates thus incentivizes violence against otherwise unaffiliated civilians.

Conflict scholars have similarly noted the role that competition among rival NSAs plays in shaping violence strategies. When rival extremist groups compete for a population’s loyalty, they may engage in a process of out-bidding by which they attempt to “one up” one another by using in increasingly spectacular, casualty intensive attacks (Bloom 2005; Kydd and Walter 2006). Recent studies suggest that such violence is most common where there is intense competition among groups with similar ideologies, particularly among nationalist and religious organizations (Nemeth 2013). Others suggest that terror attacks against civilians are more likely in increasingly competitive political systems (Chenoweth 2010). The common thread in these arguments is that competition over civilian loyalties and access to finite resource pools motivates violence. Yet, few studies have considered the fluid nature of competition. Although the presence of multiple competing groups may generate competition, the intensity of competition varies over time within conflicts. As we elaborate below, competition is likely to peak immediately upon the entry of a new actor into the conflict system and during periods in which NSAs confront one another directly. It is at these moments that we anticipate spikes in civilian targeting.

**Combatant Entry, Rivalry, and Victimization**

While previous studies offer insight into the manner in which competition promotes violence, the literature typically treats competition among rebel factions as a static feature of conflict systems, offering little explanation for variations in violence patterns over time. Most analyses view competition in terms of the number of groups present in a system or the proportion of military power they wield within it. Yet, conflict systems are fluid, and competition varies in response to the arrival or exit of violent combatant groups, gains and losses in actor capabilities, and the combative or peaceful interactions among these factions in the conflict system. We argue that rapid
changes in these factors—particularly those that produce acute increases in intergroup competition—contribute to the escalation of civilian abuse.

Criminology research provides some useful insights on this point. Research on gang violence suggests that slayings peak during periods of intense competition and volatility within the system and subside during periods in which competition becomes less acute (Block and Block 1993; Brownstein, Crimmings, and Spunt 2000). Related studies further demonstrate that violence among gangs is highest in areas in which control over distribution sites (e.g., street corners) frequently shifts and is lowest in areas of stable control (Taniguchi, Ratcliffe, and Taylor 2011). Thus, violence spikes in response to rapid changes in the distribution of power and intensity of competition within the system. Importantly, however, violence declines again once periods of acute competition recede. This suggests that violence is not only a product of overall market competition engendered by the existence of rival groups. Rather, violence rates are likely to vary over time in response to changes in the intensity of competition. Violence can be expected to remaining relatively stable when competition is constant and spike in response to rapid increases in intergroup competition.

Combatants likely respond similarly to spikes in intergroup competition in the context of civil war. While competition is inherent in all multiactor conflict systems, specific changes within the conflict environment strongly influence the level of competition. This should, in turn, shape the likelihood that actors resort to terror. The arrival of additional actors creates uncertainty about conflict outcomes, impedes bargaining between existing factions and the state, and increases competition over local resources. Barring information to the contrary, extant groups are likely to perceive emergent factions as direct threats to their control over both resources and the divisions of any spoils that may potentially result from bargaining with or victory over the regime. Recognizing that anticivilian violence offers an important means of securing civilian compliance and deterring civilian defections to rival factions (Kalyvas 2006; Wood 2010), we expect that civilian targeting increases during periods of intense competition, marked by the emergence of new combatant groups.

The entry of new, independent rebel factions exacerbates the threat perceived by existing groups at two distinct levels. At the macrolevel, the emergence of new factions complicates bargaining between existing rebel groups and the regime, diminishing both the likelihood of successful bargaining and reducing the share of any settlement that existing actors expect to receive from a potential bargain. New entrants complicate the ability of existing groups to successfully bargain with the regime over the distribution of disputed goods. Specifically, as the number of competitors in a conflict increases, the range of agreements mutually acceptable to all parties declines and information asymmetries increase, impeding the ability of factions to locate mutually acceptable deals (D. Cunningham 2006). Take, for example, the ongoing conflict and associated humanitarian disaster in the Democratic Republic of the Congo (DRC), which has been described as a “kaleidoscope” of violent actors (Doyle 2012). Indeed, the conflict systems in the DRC produce frequently changing images of overlapping conflicts. These groups range from local militias such as the various Mai Mai groups, to the Rwanda-backed Tutsi M23, the Hutu-dominated Democratic Forces for the Liberation of Rwanda, and the majority Hunde Alliance of the People for a Free and Sovereign Congo. All told, some two-dozen armed factions have entered and now operate in eastern DRC. With each new group’s entry into the conflict, the complexity of and competition within the system increased as the range of potential agreements that can satisfy each has shrunk.

Furthermore, states tend to offer fewer concessions when they face greater numbers of potential challengers (Walter 2006). Besieged regimes seek to cultivate a reputation for toughness in negotiations to dissuade future challengers. In an ongoing conflict, the entry of a new challenger is likely to reduce the value of any offer the regime makes to an existing group in the hopes of reducing the demands of the new entrant. Moreover, the addition of new factions reduces the total value of regime concessions because these goods must be divided among the active factions to satisfy the demands of each. The value of victory over the government is also devalued, as the arrival of new groups signals a conflict’s extension even if an extant group eventually topples the regime. Although independent factions may be united in their interest in unseating the regime, the fact that a new organization emerges indicates that its goals are not perfectly aligned with those of existing factions. Thus, the emergence of rebel groups reduces the value of the gains expected by existing groups.

The decline in expected gains increases the incentives for anticivilian violence by extant groups. Existing rebel groups are increasingly likely to rely on violence as a means of forcing concessions from the state. Previous studies demonstrate that rebel groups employ terrorism and intentional attacks on civilians to improve their bargaining position in a conflict (Hultman 2007; Kydd and Walter 2006). Moreover, such strategies often succeed, with more violent rebels achieving relatively greater concessions from the states they challenge compared with groups that refrain from terrorism and attacks on civilians (Thomas 2014; Wood and Kathman 2014). Consequently, existing rebel factions are likely to increase attacks on civilians to preserve their bargaining position in the wake of new entrants that threaten to diminish the concessions that they expect to receive from the state.
At the microlevel, the emergence of new conflict actors signals potential shifts in power away from existing insurgent groups and portends increasing competition over scarce local resources that could fundamentally reshape the conflict landscape. Maintaining and expanding the rebel group’s control over local resources is central to group survival and the likelihood that it can accomplish its longer term strategic goals. Problematically, the arrival of additional NSAs creates impediments to this control and induces competition over the existing groups’ ability to acquire necessary resources. This is because the resources necessary to maintain and expand an insurgency are typically rival in consumption, and the use of a resource by one group effectively eliminates the opportunity for its use by another. The zero-sum nature of conflict resources thus increases intergroup competition over the access to and exploitation of these resources.

This argument applies directly to intergroup competition over civilian support and loyalty. New competitors operating within the same conflict present civilians with alternative organizations to which they can offer loyalty and support in exchange for security, social order, and other benefits. New entrants to the conflict therefore immediately increase the (perceived) level of competition over civilian loyalty. These newly available opportunities for civilians place pressure on existing rebel organizations to deter civilian defections to rival groups. Extant rebel groups seek to protect their monopolistic control over civilian populations in an effort to maintain the resource streams that this control affords. Violence offers one effective means of securing this control (K. G. Cunningham, Bakke, and Seymour 2013; Fjelde and Nilsson 2012; Lilja and Hultman 2011). Civilian targeting acts as a form of deterrence and a method of controlling the behaviors of civilians (Kalyvas 2006; Wood 2010). In this sense, the threat and use of violence serves to deter civilian defections that extant groups would otherwise expect to become more likely with the arrival of a nascent NSA. Such violence signals the expected cost of disloyalty to local audiences who may otherwise be attracted to or influenced by the new conflict entrant.

In addition, civilian targeting can be used to undermine a new competitor’s ability to provide services to its local population and demonstrate the new group’s inability to provide basic security. Similar to gang violence, immediately employing violence in the new organization’s zone of control may succeed in reducing civilian perceptions of the new group’s ability to provide benefits to its supporters, thereby reducing the appeal of a new group to potential defectors and diminishing its ability to recruit from that population.

Even when new threats are geographically distant from new rebel entrants, existing groups may attempt to immediately mobilize additional resources from their populations to improve the odds of attaining their preferred political goals because conflict outcomes become increasingly uncertain with the arrival of new forces. Violence against civilians therefore emerges as a short-term strategy immediately upon the entrance of new rebel factions. In this way, violence serves to compel greater civilian compliance within existing (and possibly weakening) zones of control.

It is worth noting that we expect that the entry and exit of competitors produce opposite but largely symmetrical effects. That is, we expect violence to decline immediately following the defeat, collapse, or dissolution of rival NSAs. When rebel groups lose the ability to sustain their organization, they lose the concomitant ability to control territory, protect exclusive access to resource flows, and secure the continued loyalty of their civilian base. The departure of competitors and the collapse of their authority allow surviving actors to extend their influence and acquire greater resources without relying on coercive tactics. As a result, violence should decline with the departure of previously active groups.

The First Liberian Civil War deserves brief mention as a concrete illustration of the logic of our argument. The Liberian conflict began in late 1989 when Charles Taylor’s National Patriotic Front of Liberia (NPLF) invaded Liberia from neighboring Ivory Coast. By early-1990, the NPLF controlled nearly 90 percent of the country, fielded a force of more than ten thousand troops, and had advanced into the capital, Monrovia (Adebajo 2002, 58). While fighting was fierce during the conflict’s first year and the NPLF had intentionally killed scores of civilians in the first half of 1990, attacks on civilian targets spiked in July and August of that year. According to Uppsala Conflict Data Program (UCDP) figures (Sundberg and Melander 2013; Sundberg, Lindgren, and Padjakomaite 2010), the NPLF was responsible for more than four hundred civilian deaths in July and more than one thousand two hundred in August alone. This spike in violence coincided with the entry of a new rebel organization, the Independent National Patriotic Front of Liberia (INPLF), and the direct military challenge that this group posed to the existing NPLF.

The INPLF emerged as a major player in the Liberian conflict after disaffected NPLF officer Prince Johnson, along with three thousand to five thousand fighters, defected from the NPLF around June 1990 (Adebajo 2002, 58–59; Huband 1998, 116). This faction quickly formed a tacit alliance with the recently arrived Economic Community of West African States Ceasefire Monitoring Force (ECOMOG) and directly engaged in conflict with Taylor’s NPLF in and around Monrovia (Adebajo 2002, 75–76; Kieh 2008, 155). These actions significantly reduced the military capacity of the NPLF and increased competition for control over local territory, resources, and...
populations. It is in the context of the challenges brought on by the emergence of this faction that NPLF violence against civilians peaked. Importantly, while the NPLF’s violence against civilians remained relatively high throughout the conflict, NPLF attacks on civilians declined dramatically in the latter months of 1990 (Sundberg, Lindgren, and Paskocimaite 2010; UCDP 2014a). This decline corresponds to the rapid demise of the INPLF as a challenger to NPLF authority and their eventual exit from the conflict by the year’s end. The most dramatic swings in violence closely correspond to the arrival and exit of the INPLF. Indeed, in October 1990, when the INPLF signed a peace agreement, NPLF violence against civilians fell to only a few deaths.

These patterns concur with the logic outlined above: rising intergroup competition in civil conflict generated by the entry of new actors to the conflict system is likely to increase the incentives of existing actors to target civilians. This discussion leads to the following hypothesis:

**Hypothesis 1 (H1):** The entrance of new rebel groups to an existing conflict system increases the level of civilian victimization by existing rebel groups.

The context and character of competition should also shape the incentives for anticivilian violence. Principally, the likelihood of violence depends in large part on the relationships cultivated among rebel groups within the conflict system. Interactions among extant rebel factions may vary significantly across cases and over time. In some cases, rebel factions may have limited opportunities for interaction and may not necessarily find themselves confronting one another directly. For example, conflicts taking place over large territories may allow rebels to avoid direct interactions for long periods of time. However, as geographic space recedes or resource pools dwindle (a common consequence of conflict), rebel factions are increasingly likely to compete over the same resource pools. Specifically, greater proximity and increasing resource scarcity place rebel factions into direct conflict. Consequently, competition among rival groups often gives way to conflict, which we argue has implications for civilian targeting.

When independent rebel factions engage in direct intergroup conflict, we expect violence against civilians to rise. Direct military combat is indicative of intense rivalry and competition over scarce resources (Fjelde and Nilsson 2012). Battlefield engagements have been linked to concurrent anticivilian violence by rebel groups (Hultman 2007; Wood 2014). As intergroup combat changes the distribution of capabilities among groups and shifts territorial control, the outcomes of these confrontations can threaten groups’ ability to deter civilian defection and to acquire the resources needed for sustaining rebellion. Regardless of outcome, periods of direct, violent competition among rival actors suggest a challenge to the supremacy of at least one group in a given area. We expect that the volatility created by such challenges increases the incentive for civilian targeting by these rival groups. As seen in the NPLF-INPLF confrontations described above, we expect spikes in anticivilian violence during periods in which NSAs engage in direct military competition. This expectation is encapsulated in the following hypothesis:

**Hypothesis 2 (H2):** Direct military competition with other NSAs increases the level of civilian victimization by a rebel group.

**Research Design**

We test our hypotheses on a sample of post–Cold War African insurgencies using the list of civil conflicts provided by the UCDP’s Dyadic Dataset, which includes all rebel-government conflicts that yield at least twenty-five battle-related deaths in a given year (v.1-2013) (Harbom, Melander, and Wallensteen 2008). We expect that the arrival of a new rebel group to an existing conflict system temporarily introduces volatility and creates short-term spikes in the level of competition among actors. We further argue that civilian targeting increases during moments of intense intergroup competition. We therefore require fine-grained temporal data on conflict dynamics. Relying on the UCDP’s Georeferenced Events Dataset (GED), we construct a conflict dyad-month dataset for African civil conflicts between 1989 and 2010 (Sundberg and Melander 2013; Sundberg, Lindgren, and Paskocimaite 2010). This sample produces approximately 3,600 observations after accounting for missing observation in the covariates. Currently, the GED data are restricted to African cases. Yet, we choose to rely on it because it is one of the few existing datasets that provides group-level information on anticivilian violence at the events level, allowing us to aggregate to the group-month. We recognize that limiting our cases in this way potentially imposes some limits on the generalizability of the empirical results. However, given the diversity of conflicts within Africa over the period of analysis—including conflicts beginning both during and after the Cold War and those centered on both ethnic and political motives—as well as the frequency of conflicts on the continent, this sample represents a reasonable set of cases on which to conduct our analysis.

Our dependent variable is a count of rebel one-sided violence (OSV) taken from the events level data included in the GED. One-sided violence events are based on the operational definitions created for the UCDP One-sided Violence Dataset and include deaths resulting from...
intentional and direct violence against noncombatants (Eck and Hultman 2007). These data exclude collateral deaths or other unintentional costs imposed on civilians by war.

Our primary independent variables capture rapid changes in the intensity of competition among rebel groups within a conflict system. \( \Delta \text{Rebel Groups} \), which allows us to test H1, records the change in the number of rebel organizations actively challenging the government between \( t-1 \) and \( t \). This variable accounts for months in which an independent rebellion or autonomous splinter faction (re)enters the conflict to challenge the government or when a group exits the conflict through demise, inactivity, or negotiated resolution. Our measure therefore explicitly captures the impact of a new actor’s arrival or exit from the conflict system on the behaviors of existing actors within the system. Positive values reflect an increase in the number of rebel groups in a given month while negative values reflect the departure of rebel organizations. Information on active factions comes from the UCDP Dyadic Dataset.

We examine H2 by coding a dichotomous indicator accounting for the presence of active combat among NSAs, \( \text{NSA Conflict} \). This variable serves two purposes. First, it accounts for periods of direct combat, which is when we hypothesize that antiviolent violence is most likely to occur. Second, it distinguishes cases in which a rebel group actively competes with another NSA from cases in which a group peacefully coexists (at least nominally) with other NSAs. We expect that where coexistence is adversarial rather than nonthreatening the incentives to target civilians increase. As such, attacks on civilians are more likely during periods in which groups engage in active conflict. This variable is constructed based on the events data available in the GED. \( \text{NSA Conflict} \) takes on a value of 1 when a rebel group engages in direct, lethal hostilities with another NSA (including local militia groups) in a given month. Otherwise \( \text{NSA Conflict} \) takes a value of 0.

Control Variables

We include several controls that account for additional explanations of victimization levels committed by rebel groups. Because we argue that market volatility and changes in competition shape violence as opposed to the simple existence of competitors, we must also account for the general influence of competition within the system. We therefore create a variable that reflects more static intergroup competition. \( \text{Number of Rebel Groups} \) codes the total number of rebel groups engaged in hostilities with the government in a given month.

We also control for the duration of each rebel group’s ongoing challenge to the government. The variable \( \text{Conflict Dyad Duration} \) reflects the natural log of the number of months since the group first entered a conflict. We further include variables accounting for the number of monthly \( \text{Government Battle Deaths} \) and \( \text{Rebel Battle Deaths} \). Data for these variables are taken from the UCDP GED and are log transformed. We further control for one-sided violence committed by government forces and other NSAs operating in the same conflict. These variables are labeled \( \text{Government OSV} \) and \( \text{Rival NSA OSV} \), respectively. Both reflect a one-month lag of the logged monthly counts of one-sided violence as reported in the GED.

Past studies also find that rebel groups that finance their operations in ways that reduce their reliance on civilian support tend to be more brutal (Hovil and Werker 2005; Weinstein 2007). We, thus, include variables accounting for \( \text{Foreign Sponsorship} \) (D. Cunningham, Gleditsch, and Salehyan 2009) and \( \text{Resource Financing} \) (Rustad and Binningsbo 2012), both of which are dichotomous indicators demonstrating whether the group supported its rebellion in the respective manner. We also include a dummy variable for \( \text{Territorial Control} \), indicating whether an insurgent group controls territory outside the reach of the regime (D. Cunningham, Gleditsch, and Salehyan 2009). Finally, larger populations offer more opportunities for violence (e.g., more targets); we thus control for the state’s \( \text{Population size} \). We use the natural log of the state’s population, reported in the Composite Index of National Capability (Singer, Bremer, and Stuckey 1972). Table 1 reports the descriptive statistics for each variable.

Results and Discussion

The dependent variable is a monthly count of rebel one-sided violence against civilians. Because the measure reflects significant over-dispersion, we employ a negative binomial regression model, as is common in the literature. We report our results in Table 2. We begin with a model including the count of independent rebel groups participating in a conflict in a given month as the only competition measure. This variable reflects a very basic conceptualization of competition within a conflict system. As the results in Model 1 suggest, the simple presence of multiple groups within a conflict space does not appear to affect levels of one-sided violence. The coefficient is positive but fails to achieve statistical significance. This result is interesting given that recent studies suggest that factionalism and fragmentation increase the likelihood of civilian targeting. Instead, our findings indicate that the presence of additional independent organizations does not drive violence against civilians.

To account for the influence of the “shocks” to the conflict system created by a new violent actor, Models 2
Table 1. Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebel OSV</td>
<td>18.406</td>
<td>301.046</td>
<td>0</td>
<td>14,584</td>
</tr>
<tr>
<td>Δ Rebel groups</td>
<td>0.002</td>
<td>0.183</td>
<td>-2</td>
<td>1</td>
</tr>
<tr>
<td>Number of rebel groups</td>
<td>1.880</td>
<td>1.072</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>NSA conflict</td>
<td>0.438</td>
<td>0.496</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Conflict dyad duration</td>
<td>3.203</td>
<td>1.251</td>
<td>1</td>
<td>5.655</td>
</tr>
<tr>
<td>Government battle deaths</td>
<td>0.836</td>
<td>1.471</td>
<td>0</td>
<td>9.114</td>
</tr>
<tr>
<td>Rebel battle deaths</td>
<td>1.003</td>
<td>1.619</td>
<td>0</td>
<td>7.470</td>
</tr>
<tr>
<td>Government OSV</td>
<td>0.443</td>
<td>1.125</td>
<td>0</td>
<td>11,890</td>
</tr>
<tr>
<td>Rival NSA OSV</td>
<td>0.265</td>
<td>0.913</td>
<td>0</td>
<td>7.107</td>
</tr>
<tr>
<td>Population</td>
<td>9.641</td>
<td>1.024</td>
<td>6.229</td>
<td>11,870</td>
</tr>
<tr>
<td>Foreign sponsorship</td>
<td>0.509</td>
<td>0.500</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Resource financing</td>
<td>0.243</td>
<td>0.429</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Territorial control</td>
<td>0.391</td>
<td>0.488</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

NSA = nonstate actor; OSV = one-sided violence.

Table 2. Negative Binomial Results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of rebel groups</td>
<td>0.012 (0.195)</td>
<td>-0.092 (0.182)</td>
<td>0.047 (0.230)</td>
<td>-0.332 (0.257)</td>
</tr>
<tr>
<td>Δ Number of rebel groups</td>
<td>1.129 (0.417)**</td>
<td>1.410 (0.613)*</td>
<td>1.947 (0.666)**</td>
<td></td>
</tr>
<tr>
<td>NSA conflict</td>
<td>1.731 (0.276)**</td>
<td>1.353 (0.240)*</td>
<td>1.192 (0.269)**</td>
<td></td>
</tr>
<tr>
<td>Conflict dyad duration</td>
<td>0.264 (0.124)*</td>
<td>0.454 (0.154)**</td>
<td>0.407 (0.186)*</td>
<td></td>
</tr>
<tr>
<td>Government battle deaths</td>
<td>-0.122 (0.115)</td>
<td>-0.072 (0.109)</td>
<td>-0.211 (0.146)</td>
<td></td>
</tr>
<tr>
<td>Rebel battle deaths</td>
<td>0.360 (0.092)**</td>
<td>0.288 (0.077)**</td>
<td>0.270 (0.102)**</td>
<td></td>
</tr>
<tr>
<td>Government OSV</td>
<td>0.353 (0.143)*</td>
<td>0.231 (0.065)**</td>
<td>0.044 (0.149)</td>
<td></td>
</tr>
<tr>
<td>Rival NSA OSV</td>
<td>0.066 (0.116)</td>
<td>0.028 (0.130)</td>
<td>0.078 (0.140)</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.210 (0.260)</td>
<td>0.126 (0.299)</td>
<td>0.522 (0.379)</td>
<td></td>
</tr>
<tr>
<td>Foreign sponsorship</td>
<td>1.248 (0.536)*</td>
<td>0.874 (0.559)</td>
<td>0.235 (0.530)</td>
<td></td>
</tr>
<tr>
<td>Resource financing</td>
<td>1.977 (0.602)**</td>
<td>1.473 (0.593)*</td>
<td>2.474 (0.723)**</td>
<td></td>
</tr>
<tr>
<td>Territorial control</td>
<td>-1.612 (0.581)**</td>
<td>-1.231 (0.571)*</td>
<td>-1.631 (0.588)**</td>
<td></td>
</tr>
<tr>
<td>Previous rebel OSV</td>
<td>0.008 (0.005)</td>
<td>0.008 (0.007)</td>
<td>0.005 (0.004)</td>
<td>0.017 (0.010)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.436 (2.165)</td>
<td>0.978 (0.491)*</td>
<td>-2.864 (2.482)</td>
<td>-5.212 (3.613)</td>
</tr>
<tr>
<td>Observations</td>
<td>3.626</td>
<td>3.508</td>
<td>3.498</td>
<td>1.886</td>
</tr>
<tr>
<td>Wald χ²</td>
<td>309.40***</td>
<td>79.42***</td>
<td>184.49***</td>
<td>188.82***</td>
</tr>
</tbody>
</table>

Coefficients and standard errors clustered on conflict dyad. NSA = nonstate actor; OSV = one-sided violence.
*One period lag
*p < .05. **p < .01. (two-tailed)

and 3 include the monthly change in the number of rebel groups engaged in the conflict in addition to the count of groups active in a given month. Model 2 only includes our primary variables of interests and the lagged rebel violence variable, while Model 3 adds our battery of covariates. In both, we note Δ Rebel Groups returns a positive and significant coefficient, indicating that when a new rebel group enters an existing conflict system, or when a previously dormant actor re-emerges, existing groups escalate their abuse. We suggest that this effect stems from spikes in competition and the adverse shifts in relative power that new arrivals create.

We also argued that periods of intense, violent rivalry between competing rebel groups increase violence against civilians. Consistent with our expectations, the coefficient is positive and significant in Models 2 and 3. In Model 4, we constrain the sample to only cases in which more than one rebel group was active in the conflict system. This allows us to further isolate the influence of direct conflict between groups. Specifically, it permits us to assess conflict periods in which direct inter-rebel group confrontation is possible, thus excluding those observations in which a rebel group confronts the government alone. Again, the result
for the variable is positive and statistically significant. These results support Hypothesis 2.

To assess the substantive impact of our variables of interest, we calculated the predicted number of civilian deaths that result from changes in our variables of interest based on the results from Model 3. All else equal, in those conflict months in which no new insurgent organizations join the fight, existing rebel groups kill approximately three noncombatants per month. However, the entry of a single new rebel organization increases the expected level of one-sided violence to approximately fourteen. This reflects nearly a 370 percent increase in civilian deaths at the hands of existing rebel organizations in the month a new actor enters the system. The exit of insurgent groups from the conflict system produces the opposite effect. Our predictions suggest that when a single group exits a conflict, the rate of violence against civilians by existing groups falls to approximately one death per month—a decline of roughly 70 percent.

We also calculated the predicted differences between periods of violent conflict between NSAs and periods without such violent competition based on the results from Model 3. The predictions suggest that civilian killings rise from approximately five deaths when there is no inter-rebel conflict in a conflict month to about sixteen deaths during months experiencing direct combat between rebels. This represents a 220 percent increase in violence against civilians.

Consistent with our argument, these predictions suggest that destabilizing shifts within conflict systems produce significant upicks in intentional rebel attacks on civilian targets. Periods of new actor entry and of direct conflict between distinct groups are strongly correlated with increasing violence against the civilian population. It is perhaps important to highlight the substantive significance of these predictions. While the actual numeric changes predicted here might appear somewhat small, in each case the predicted effect of a plausible change in the independent variables more than triples the expected number of civilian deaths in a given month when new actors enter and more than double the number during month of inter-rebel conflict. Moreover, the predicted increase applies to each existing actor within a conflict system, which in our data reaches as many as seven active NSAs. Thus, the multiplicative effect of destabilizing changes in competitive conflict environments can wreak havoc on noncombatant populations.

Turning to the controls, we report a number of consistent results across the models. The positive and generally significant coefficients for Conflict Dyad Duration suggest that rebels become more brutal over time. Battlefield performance is also relevant to the severity of anticivilian violence, at least with regard to rebel combat losses. Although Government Battle Deaths is insignificant in each model, the positive and significant result for Rebel Battle Deaths indicates that insurgents respond to losses on the battlefield with civilian abuses. This provides some support for previous research that has linked victimization to the weakening of rebels that results from battlefield losses. Government OSV is likewise positive and significant in Models 1 and 3, suggesting that rebels and governments may engage in tit-for-tat killings. Surprisingly, however, Rival NSA OSV is not significantly related to rebel attacks on civilians. Also unexpected, previous levels of rebel one-sided violence are not significantly related to current levels.

Sources of foreign assistance also appear to influence violence. We find support for existing arguments that Foreign Sponsorship increases civilian targeting. However, this result is only statistically significant in Model 1. According to the results presented here, Resource Financing exerts a generally positive and significant effect on civilian targeting, suggesting that groups that rely on such resources are more abusive toward the population.

Control over territory appears to reduce the incentives for anticivilian violence. Theoretically, this occurs because civilian defection is less likely in areas under firm rebel control, and control reduces the opportunities for civilian defection (Kalyvas 2006). We note, however, that while this variable may capture an aspect of this relationship, it cannot account for the spatial variations in violence across areas of varying control. Consequently, we can only infer that groups that exert effective control over territory are generally less violent than those that do not. Finally, Population is insignificant, implying that greater opportunities for violence alone do not increase the use of brutal tactics by insurgents.

**Extending the Analysis**

In an effort to further probe our argument, we considered several additional specifications of our central model. The results of these tests are presented in Table 3. First, in addition to the simple entry and exit of rebel groups to/from the conflict system, it may be important to capture the fact that rebel groups enter the fray with varying military capabilities. Therefore, new entrants shift the market shares of existing actors to different degrees. Put simply, some emergent NSAs pose more robust challenges to existing groups than others. Consequently, the severity of violence may correlate with the magnitude of the shock created by the new arrival’s entry into the conflict system. We, therefore, generated additional variables to capture the share of troops across all rebel groups that each organization controls. First, relying on troop estimates taken from the UCDP Conflict Encyclopedia (UCDP 2014a), we determine each actor’s “share” of
Table 3. Negative Binomial Results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of rebel groups</td>
<td>0.026 (0.219)</td>
<td>0.051 (0.230)</td>
<td></td>
</tr>
<tr>
<td>Rebel troop share</td>
<td>0.033 (0.667)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Rebel troop share</td>
<td>-3.085 (1.425)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Number of rebel groups (decayed)</td>
<td></td>
<td>1.491 (0.610)*</td>
<td></td>
</tr>
<tr>
<td>Δ New rebel groups</td>
<td></td>
<td></td>
<td>1.318 (0.686)*</td>
</tr>
<tr>
<td>Δ Splinter groups</td>
<td></td>
<td></td>
<td>2.281 (1.206)*</td>
</tr>
<tr>
<td>NSA conflict</td>
<td>1.338 (0.235)**</td>
<td>1.490 (0.250)**</td>
<td>1.348 (0.240)**</td>
</tr>
<tr>
<td>Conflict dyad duration</td>
<td>0.338 (0.171)*</td>
<td>0.355 (0.130)**</td>
<td>0.453 (0.154)**</td>
</tr>
<tr>
<td>Government battle deaths</td>
<td>-0.069 (0.106)</td>
<td>-0.126 (0.102)</td>
<td>-0.074 (0.109)</td>
</tr>
<tr>
<td>Rebel battle deaths</td>
<td>0.298 (0.078)**</td>
<td>0.282 (0.087)</td>
<td>0.289 (0.077)**</td>
</tr>
<tr>
<td>Government OSV, a</td>
<td>0.215 (0.071)**</td>
<td>0.329 (0.143)*</td>
<td>0.230 (0.065)**</td>
</tr>
<tr>
<td>Rival NSA OSV,a</td>
<td>0.054 (0.137)</td>
<td>-0.032 (0.123)</td>
<td>0.230 (0.065)</td>
</tr>
<tr>
<td>Population</td>
<td>0.059 (0.300)</td>
<td>0.227 (0.276)</td>
<td>0.129 (0.299)</td>
</tr>
<tr>
<td>Foreign sponsorship</td>
<td>1.032 (0.591)†</td>
<td>0.988 (0.554)‡</td>
<td>0.877 (0.557)*</td>
</tr>
<tr>
<td>Resource financing</td>
<td>1.108 (0.581)†</td>
<td>1.662 (0.621)**</td>
<td>1.469 (0.591)*</td>
</tr>
<tr>
<td>Territorial control</td>
<td>-1.079 (0.556)†</td>
<td>-1.258 (0.610)*</td>
<td>-1.229 (0.570)*</td>
</tr>
<tr>
<td>Previous rebel OSV,a</td>
<td>0.005 (0.004)</td>
<td>0.006 (0.005)</td>
<td>0.006 (0.004)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.709 (3.003)</td>
<td>-3.575 (2.278)</td>
<td>-2.893 (2.482)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,102</td>
<td>3,626</td>
<td>3,498</td>
</tr>
<tr>
<td>Wald χ²</td>
<td>149.03**</td>
<td>320.15**</td>
<td>185.14**</td>
</tr>
</tbody>
</table>

Coefficients and standard errors clustered on conflict dyad. NSA = nonstate actor; OSV = one-sided violence.

*One period lag.
†p ≤ .10. *p ≤ .05. **p ≤ .01. (two-tailed)

Troops within the conflict system: Rebel Troop Share = Troops / (Troops + Troops + ... Troops). This value is theoretically bounded between 0 and 1. To determine how shocks to each group's share of troops are affected by the entry or exit of other rebel organizations from the conflict environment, we determine the change in the share of troops from the month prior to the entry/exit of the new actor to the month of entry/exit: Δ Rebel Troop Share = Troop Share t+1 - Troop Share t. 11

Model 5 uses these variables to assess the influence of the magnitude shifts in the distribution of capabilities on rebel violence against civilians. The results in Models 1 through 4 suggest that the presence of other actors is not significantly related to violence against civilians. Similarly, the results in Model 5 show that the distribution of power among actors in a system is not systematically related to victimization, as Rebel Troop Share is insignificant. However, in capturing the size of the competition shock, the result for Δ Rebel Troop Share indicates that the size of the power shift that occurs upon the arrival of a new rebel group increases use of violence against civilians by extant groups. 12 Thus, antipartisan violence increases in proportion to the magnitude of the loss in market share created by the arrival of a new challenger.

We also considered the possibility that spikes in competition with the entry of new actors may linger beyond the immediate time frame of their entry. In other words, the volatility caused by the emergence of a new rebel group may remain for some period beyond their immediate arrival. We therefore modified Δ Number of Rebel Groups using a temporal decay function which allowed the shock of a new rebel group’s entry to continue into subsequent conflict months, albeit at lower levels with each passing month. Using a one-month half-life decay rate, we re-estimated Model 3 and found consistent results: the entry of new, independent factions from the entry of splinters provokes spikes in rebel violence by existing groups. These results are presented in Model 6. 13

Finally, we considered the possibility that our results are driven by fragmentation among existing groups. As noted above, previous studies have argued that the process of group fragmentation or the emergence of splinter groups contributes to upticks in terrorism and violence against civilians. Our argument suggests that the introduction of additional groups—whether de novo or splinter factions—should contribute to rising violence. To determine whether splinters alone drive our analysis, we conducted an additional test that disaggregates the entry of new, independent factions from the entry of splinters born from the fragmentation of existing groups. 14 We report these results in Model 7. Both variables are positive and attain marginal levels of significance when included in the same model, suggesting that our results
are not driven by splinter groups alone. In fact, when the variables representing de novo groups achieves conventional levels of statistical significance ($p = .05$) while the variable representing the entry of splinter groups remains marginally significant ($p = .07$). Regardless, these results suggest that the entry of both splinter factions and new rebel groups contribute to immediate upticks in violence by existing groups.

**Conclusion**

We have addressed how an oft-overlooked aspect of civil wars affects rebel violence dynamics. Whereas many theoretical and empirical treatments of civil war processes assume that civil conflicts entail one government and one rebel group fighting over a range of issues, the reality is that civil conflicts are complex systems in which the actions of one faction often influences those of others within the system. Our analysis therefore adds to the growing literature that seeks to account for the complexity of civil wars by examining how intergroup interactions, competition, and rivalry shape specific conflict behaviors (Akcinaroglu 2012; Fjelde and Nilsson 2012).

Rather than simply focusing all of their attention and energy on their challenge to the government, the multiple nonstate combatant organizations that constitute civil conflict systems also engage in an implicit or explicit competition with one another. As we demonstrate, these intergroup dynamics are important to understanding civil war processes, including attacks on civilians. Our analysis suggests that competition and rivalry are important motivators for anticivilian violence. However, while competition is a component of every conflict system, volatility within the system—and particularly the spikes in competition between actors—explains rapid increases in the level of civilian targeting. We argue that such upticks in violence result because sudden increases in intergroup competition pose threats to groups’ access to resources, increase the likelihood of civilian defections, and endanger the achievement of conflict goals.

In addition to finding empirical support for our own hypotheses, our results also support related research that highlights the importance of shifts in power between groups in civil war as an explanation for anticivilian violence (Hultman 2007; Hultman 2012; Wood, Kathman, and Gent 2012; Wood 2014). Both the arrival of new groups to an ongoing conflict and the direct confrontation between rebel groups instigate destabilizing shifts in the relative strength of NSAs. Such power shifts may influence the ability or willingness of civilians to comply with rebel demands. Increased competition for resources between groups then incentivizes groups to use coercive measures to enforce continued support. In addition, as more rebel groups join the fray or challenge one another militarily, the opportunities for civilian defection increase, and this provides rebels the immediate incentive to use violence to demonstrate the high cost of defection.

Our results also dovetail with recent findings that link fragmentation within violent political movements to civilian abuse. Not only are groups increasingly violent as internal fragmentation worsens, but the relations among independent rebel groups are consequential to victimization strategies. As we have shown, our results are consistent across the different means by which organizations emerge. Whether groups enter the conflict environment de novo or as splinter factions of existing groups, the positive effect of conflict entry on civilian abuse is consistent. Our research thus links the somewhat narrower literature on splinter groups in civil conflict with more general work that points to the importance of accounting for the multiactor environments that characterize contemporary civil wars. Future research might consider several additional means of parsing rebel competition or fractionalization to determine how combatant interactions affect a variety of civil war processes beyond civilian victimization.

Along with other recent studies, our analysis additionally highlights the limitations of simple state-insurgent models of conflict dynamics. Rather, civil conflicts are complex systems in which multiple competing groups interact. Furthermore, multiple internal actors often compete for dominance and market share within individual organizations. That is, despite their common treatment to the contrary, rebels, terrorist groups, militias, and states are not unitary actors. Rather, meaningful differences exist among the various factions that comprise any given group (K. G. Cunningham 2013, 670). Identifying these factions and examining their patterns of interactions could lead to significant future insights into group conflict dynamics.

Finally, these insights have clear relevance to policymakers. As noted in the introduction, U.S. policymakers have been reluctant to engage Syrian rebels in part because of uncertainty regarding the expected behaviors of individual factions. Similarly, the United Nations had long been apprehensive about confronting the persistent humanitarian disaster in the DRC because of frequent shifts in the “kaleidoscope” of conflict actors. A better understanding of the interdependencies among these actors could benefit the formulation of policy responses that could ameliorate human suffering.

For instance, third parties pursuing negotiated settlements between the combatants should be wary of marginalizing internal factions of rebel organizations when promoting peace plans to satisfy both the government and insurgent sides (Greenhill and Major 2007). A provisional peace deal that disenfranchises an internal faction that
subsequently decides to splinter and form its own independent challenge to the government is likely to have violent and destabilizing consequences for the behavior of the extant rebel organization. Such violence may inhibit continued progress toward peace.

Our results also suggest that peacekeeping strategies are likely to pay positive dividends in these complex, multiactor environments. For instance, the territorial intercession of peacekeepers between the parties is likely to reduce their interaction opportunities, limit the ability to contest one another’s territory, and compete for civilian loyalty in overlapping zones of control (Hultman, Kathman, and Shannon 2013). Importantly, the physical barrier constructed by deployed peacekeepers between the factions could significantly limit their opportunities to engage in direct combat. It may, therefore, be the case that the greatest peace dividend can be achieved when peacekeeping and peacemaking operations are deployed to more complex and seemingly intractable conflicts (Hultman, Kathman, and Shannon 2014). Systematic work that more fully recognizes the inherently complex nature of civil conflict is likely to improve our ability to provide advice to policymakers on these issues.

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Authors’ Note

Replication data for this article can be viewed at prq.sagepub.com/supplemental. Author names are listed in reverse alphabetical order.

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Notes

1. In this article, we use the terms civil conflict and civil war interchangeably. However, the literature generally recognizes conflict as more inclusive than war as empirical measures of conflict have lower hostility thresholds for inclusion. The “Research Design” section defines our domains more completely.
2. See Thyne and Schroeder (2012) for a discussion of the overlap between criminology and political science research and the benefits for multidisciplinary research in these areas.
3. With few exceptions (see Aksoy and Carter 2014; Cunningham, Bakke, and Seymour 2013), assessments of dynamic competition within conflict has gone largely unaddressed. Even among these exceptions, our focus on competition between independent rebel groups is unique.
4. The “emergence” of new nonstate actors (NSAs) to existing conflicts often results from internal disputes, leading splinter factions to mount their own challenges to the state. Independent rebel groups may also emerge de novo. In both cases, new groups are likely to have distinct political preferences.
5. This discussion indicates that violence is a viable tool for use in targeting potential defectors within the extant group’s constituent population and against civilians in the nascent group’s zone of operation who may otherwise form the new group’s support base. Without direct information on which civilians are targeted and their particular affiliations, it is difficult to tease out which of these targeting practices operates more powerfully. However, our expectation is the same across these two logics, yielding a spike in civilian victimization by extant groups with the arrival of new organizations. In other words, escalating competition is similar to battle losses in the sense that competition temporarily limits the ability of rebel groups to use other, less violent means to ensure support, deter defection, and deter obedience to rival groups.
6. By the same logic, one might expect anticivilian violence to decline as insurgents form alliances because alliances should ameliorate intergroup competition. Little research on rebel alliances exists, making assessment difficult. For initial research on rebel alliances, see Bond (2010).
7. To our knowledge, the Armed Conflict Location and Events Data Project (ACLED) is the only dataset to include similar data that would fit our needs. We chose the Georeferenced Events Dataset (GED) because in most cases ACLED only includes events data occurring since 1997 and is similarly limited to Africa.
8. We rely on the Uppsala Conflict Data Program (UCDP)/Peace Research Institute, Oslo (PRIO) Armed Conflict Dataset coding of unique conflicts as our operationalization of conflict systems. According to this dataset, conflicts are unique if one or more actors challenge the state over the same issue incompatibility. Therefore, center-seeking and autonomy-seeking rebel factions would not be included within the same conflict systems.
9. In our sample, each conflict contained more than one rebel faction at some point. All of the conflict systems observed herein, therefore, reflect a competitive environment. In line with our argument, the level of competition among the groups within the system should vary over time—roughly 75 percent of the conflict systems in our sample experience entry by at least one new actor during the period included in the sample.
10. For example, imagine an extant insurgency of some five thousand rebels. The entrance of a small, independent force of a hundred revolutionaries introduces new competition for the existing group. Yet, the first group retains near dominance in the market for revolution. Its market share has declined by a mere 2 percent. Thus, the extant group remains the predominant rebel organization. However, if the rival group had emerged with a robust force equal
to that of the existing group, it would be a much greater source of competition. In this case, the initial group’s market share would decline by half. We therefore expect violence against civilians to be greater in the latter case as a form of social and territorial control because it reflects a higher level of competition and a greater loss of market share to the existing group.

11. In most months, no new actors enter a conflict. Thus, the mean change in troop share is nearly zero. On average, the entry of a new actor reduces the troop share of existing groups by 22 percent while the exit of an existing actor increases the troop share of remaining actors by about 24 percent.

12. The coefficient sign for $\Delta$ Rebel Troop Share is negative. To avoid confusion, note that this variable is coded differently than its counterpart from Table 2, $\Delta$ Number of Rebel Groups. Whereas $\Delta$ Number of Rebel Groups counts upward with the arrival of a new faction, $\Delta$ Rebel Troop Share concomitantly declines in value as new groups enter to reflect the loss of market share on the part of the existing group. Thus, the negative coefficient for $\Delta$ Rebel Troop Share supports our argument. As an additional check, we also reran this model replacing the continuous $\Delta$ Rebel Troop Share variable with one coded to reflect changes that were one standard deviation below the mean, above the mean, or no change. This variable was also negative and significant, providing additional support for our expectation.

13. We estimated the same decay rate for the NSA Conflict variable in replicating Model 6. Again our results matched those in Model 2 for both NSA Conflict and $\Delta$ Number of Rebel Groups.

14. We relied on information in the UCDP Actor Dataset (V.2.2-2014) (UCDP 2014b) to code splinter factions. It is important to note that our indicator for splinter groups only includes groups that meet the inclusion criteria for the UCDP conflict datasets. Specifically, they formally challenged the state and engaged in conflict that resulted in at least twenty-five battle deaths per year. In some cases, splinters existed that did not meet these criteria. Although these groups may influence the behavior of existing groups, we cannot account for them in this analysis because there is no systematic data on the dates of their entry or exit from the conflict system.

References


