UNIVERSITY^{OF} BIRMINGHAM

Peace for our time? Examining the effect of power-sharing on post-war rebellions

Ottmann, Martin

Document Version
Peer reviewed version

[Link to publication on Research at Birmingham portal](#)

Peace for our time? Examining the effect of power-sharing on post-war rebellions

Martin Ottmann[*]

Abstract

Does power-sharing promote peace? Relying on credible commitment theory, past research has predominantly focused on one aspect of this question. Namely, whether power-sharing prevents the recurrence of battle violence between agreement signatories. However, this disregards a phenomenon that plagues post-war countries across the globe: battle violence perpetrated by armed groups outside of the negotiated settlement against the post-war order. To explain this violence, I argue that we have to focus on how power-sharing redistributes power and access to resources across elites in a post-war country. By determining who gets what, when, and how, power-sharing determines the state's counter-insurgency capabilities and thus shapes incentives and constrains for extra-agreement battle violence. Personalized power-sharing, for instance, gives elites privileged access to state resources, facilitates effective counter-insurgency strategies, and thus decreases extra-agreement violence. In contrast, structural power-sharing limits elites' access to resources and their ability to prevent armed challenges resulting in higher levels of violence. To empirically test these propositions. I combine data from the Power-Sharing Event Dataset (PSED) with the UCDP Georeferenced Event Dataset (GED) for peace agreements in Africa and Asia signed between 1989 and 2006. I analyze this data using count models, matching procedures and correlated random effects models. The empirical results support my expectation that personalized power-sharing is associated with fewer extra-agreement battle deaths while structural arrangement facilitates post-war rebellions. This study contributes to an improved understanding of power-sharing as a conflict resolution tool and highlights its divergent effects on actors inside and outside of peace agreements.

Keywords— civil war, power-sharing, post-war peace, extra-agreement battle violence

Word count: ca. 9,944

---

[*]International Development Department, University of Birmingham; m.ottmann@bham.ac.uk

Introduction

On 9 January 2005, one of Africa's longest running civil wars was concluded with the Comprehensive Peace Agreement (CPA) between the Sudanese government and the Sudan People's Liberation Army (SPLA). Its central element was a power-sharing deal involving a transitional government and territorial autonomy. It was another instance of what scholars and practitioners alike regard as an effective way to resolve civil wars: the extensive sharing of power between former combatants on as many dimensions of power as possible. But peace in Sudan was short-lived. In 2005, the Khartoum regime escalated its counter-insurgency campaign in Darfur. In South Kordofan and Blue Nile states, continued fighting between government forces and former SPLA allies also reached new heights. Finally, simmering tensions between the Government of South Sudan and regional militias escalated into armed violence resulting in a bloody civil war just a few years after South Sudan gained its independence.

Sudan is not the only country in which a power-sharing arrangement was followed by a series of post-war rebellions and their violent suppression. Similar developments also took place in the Democratic Republic of Congo, the Philippines or Tajikistan. Thus, the central question of the power-sharing research program remains unanswered: Does the sharing of power after civil war promote peace?

To answer this question, we first have to revisit the concept of peace. Power-sharing often prevents renewed large-scale violence between the government and rebel signatories to a peace agreement (Binningsbø, 2013). But the absence of fighting between these signatories rarely translates in all-encompassing peace in a post-war society. On the contrary, we often find peace in these countries to be partial, regional, or even contested (Höglund & Söderberg Kovacs, 2010). Armed groups excluded from the peace agreement continue their fighting, splinter factions turn against their former comrades-in-arms, and new rebel movements emerge (Stedman, 1997; Themnér, 2011). In this article, I consequently broaden our understanding of post-war peace by focusing on extra-agreement violence—that is, violent challenges by armed groups outside of the settlement against the post-war order (Diehl, 2016).

Second, we have to revisit the existing approaches explaining the relationship between power-sharing and peace. Current scholarship struggles to explain if and how power-sharing

contributes to the outbreak of these post-war rebellions. The literature's dominant framework—credible commitment theory—misses the fact that the violence-reducing impact of power-sharing does not reach beyond the small circle of agreement signatories (Walter, 2002). It cannot explain the violent behavior of armed groups excluded from the settlement. Moreover, conflict actors—be they government and rebels or ethnic groups—are still seen as unitary (Cederman et al., 2015; Hartzell & Hoddie, 2007). This prevents us from investigating how disputes over the distribution of power within broader rebel movements leads to fragmentation processes and, ultimately, to post-war rebellions (Bakke, Cunningham & Seymour, 2012). In response to this limitation, this article proposes a political economy framework of power-sharing and peace.

My starting point is the conceptualization of any peace agreement between government and rebels in a civil war as an elite pact. It regulates which political elites gain access to state resources and which are excluded from them (North, Wallis & Weingast, 2009). To keep themselves in power, elites inside the settlement use their privileged access to resources to generate rents which they invest in 'carrot-and-stick' counter-insurgency strategies (Grossman, 1995; Lichbach, 1995). Ideally, these strategies offer citizens incentives for peaceful behavior while also increasing individuals' cost of soldiering for political elites outside the settlement. When these two conditions are met, agreement signatories can successfully suppress post-war rebellions and maintain their supreme position in the post-war country.

But power-sharing can differ considerably across cases (Ottmann & Vüllers, 2015) and with these differences come variation in the extent to which agreement signatories can access resources and invest them in counter-insurgency. Executive power-sharing in the national government, for example, is highly personalized and gives elites direct access to resources in order to maintain their armed forces and reward their constituencies. This substantially reduces the political space for extra-agreement violence. In contrast, structural power-sharing—for instance, territorial autonomy arrangements—only give elites very limited access to resources for their counter-insurgency efforts. Excluded elites can then successfully mobilize armed groups and extra-agreement violence is likely to increase.

I test these predictions with a statistical analysis of the effect of power-sharing on extra-agreement violence in African and Asian countries emerging from civil war between 1989

and 2006. I capture the practices of power-sharing using the temporally disaggregated data of the Power-Sharing Event Dataset (PSED) (Ottmann & Vüllers, 2015). Extra-agreement violence is measured using monthly fatality data from the Uppsala Conflict Data Program (UCDP) (Sundberg & Melander, 2013). The empirical analysis provides empirical support for my argument. The findings are also consistent across various model specifications and robust to alternative estimation approaches.

My contribution to power-sharing scholarship is twofold. First, I complement existing approaches on power-sharing and peace with a political economy framework detailing how government and rebel elites inside peace agreements use their access to state resources to suppress violent challenges posed by elites outside of these settlements. In doing so, I link the burgeoning literature on resource redistribution and rebellions to existing theories of power-sharing and civil war recurrence (e.g., Arriola, 2009; Francois et al., 2015; Weinstein, 2007). Second, my study contributes to the ongoing discussion among scholars and policy-makers on whether power-sharing is a 'best practice' for conflict management and resolution. In line with recent studies (e.g., Cederman et al., 2015; Gates et al., 2016; Hartzell & Hoddie, 2015), I find that power-sharing can have diverging effects on post-war peace. Extending this research, I show that distinct types of power-sharing affect political actors inside and outside of settlements in very different ways.

Does power-sharing promote peace?

Negotiated settlements address one of the root causes of civil wars: the distribution of power between government and rebels. They reaffirm the incumbent government's control over the state apparatus while granting rebels some access to state power. These arrangements manifest themselves in power-sharing institutions which 'define how decisions will be made by collectivities within the postwar polity as well as to allocate decision-making rights among competing groups' (Hartzell & Hoddie, 2007: 13).

Power-sharing is often seen as an effective tool to resolve armed conflict (Hartzell & Hoddie, 2007; Walter, 2002). It does not only address the distribution of power as one of the root causes of civil war but also acts as an institutional safeguard and commitment device. Both sides fear
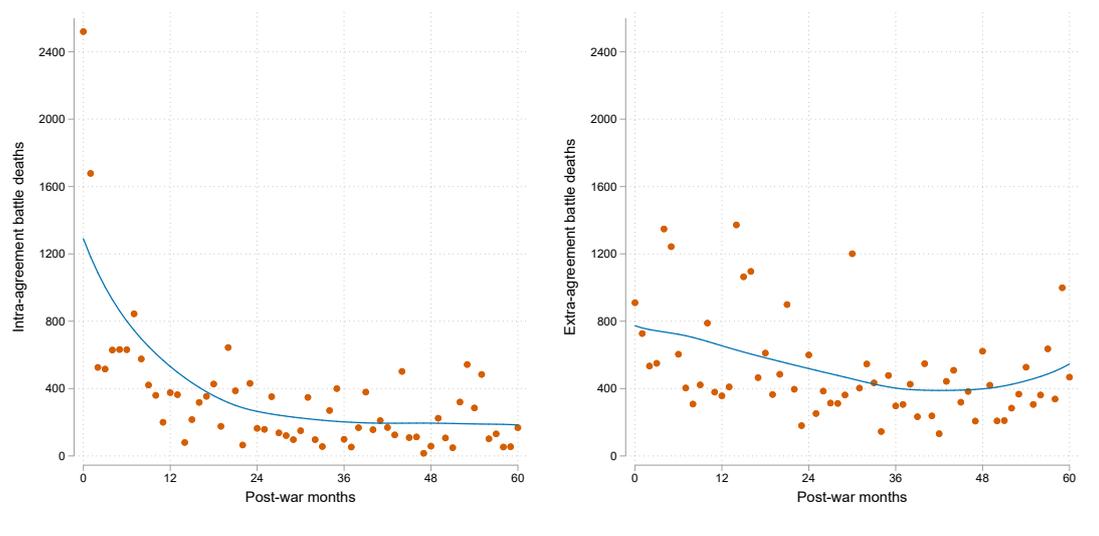
Figure 1. Temporal trends in violence in the first five years after peace agreements, 1989–2006

The scatter plots show the monthly averages of battle deaths due to intra-agreement violence (left panel) and extra-agreement violence (right panel). LOESS smoother lines highlight the overall temporal trend.

that their opponent might defect from the negotiated settlement at any time. The joint control of state institutions addresses these concerns of government and rebels and alleviates their fear of survival. The definition and allocation of decision-making rights also establishes a set of institutional checks and balances on each side's political and military power.

However, power-sharing rarely pacifies post-war countries in their entirety. Even when a peace agreement is honored by government and rebel signatories, post-war violence abounds. Figure 1 illustrates this for Africa and Asia. The left panel plots the temporal trend in monthly averages of intra-agreement violence—that is, battle violence between government and rebel signatories to a negotiated settlement. One can see a distinct downward trend in the number of battle deaths. It decreases from over 1,200 fatalities in the first post-war month to a monthly number of roughly 200 fatalities five years after a peace agreement. In contrast, monthly data on extra-agreement violence—that is, battle violence between agreement signatories and armed political groups excluded from the settlement—show no similar reduction. The trendline plotted in the right panel barely halves from an average of 800 fatalities in the immediate aftermath of a peace agreement to about 500 fatalities after five years.

Existing theories of power-sharing and peace struggle to link power-sharing arrangements to this extra-agreement violence for a number of reasons. First, post-war rebellions are often

5

caused by armed groups outside of the negotiated settlement. These actors are not bound by the terms of the peace agreement. Credible commitments created through power-sharing therefore do not apply to them (Ottmann & Vüllers, 2015). Credible commitment theory also disregards that power-sharing arrangements often demonstrate to excluded elites the benefits of using violence to achieve political goals (Tull & Mehler, 2005). Finally, power-sharing is almost exclusively seen as a mechanism to realign the distribution of power between unitary actors: governments, rebel groups, and their constituent ethnic groups (e.g., Cederman et al., 2015; Hartzell & Hoddie, 2007). Whether power-sharing also affects the distribution of power within these groups—between political elites, rank and file fighters, and their civilian constituencies—is left unexplored.

Fortunately, we can draw on the 'spoiler' literature to address this gap. 'Spoilers' are commonly defined as political elites and armed groups that either threaten to challenge the post-war order or already engage in post-war rebellions (Stedman, 1997). The reasons for 'spoiling' can be manifold: elites excluded from the post-war order mobilize for war to get back into power, disaffected and neglected former combatants are willing recruits, and civilians bereft of a peace dividend are eager to finally turn their fortunes around (Cunningham, Bakke & Seymour, 2012; Daly, 2014; Stedman, 1997; Themnér, 2011).[1] What runs like a common thread through these explanations is that many instances of extra-agreement violence and post-war rebellions can be traced back to power imbalances within the post-war state created through power-sharing (Nilsson & Söderberg Kovacs, 2011).

Taken together, this discussion reveals that a narrow focus on agreement signatories and how they can credibly commit to peace obfuscates our understanding of post-war violence. Understanding the relationship between power-sharing and peace requires us to examine how power-sharing redistributes power and resources across the whole post-war order. In the next section, I therefore introduce a political economy framework in order to complement existing explanations of power-sharing and peace.

---

[1]According to Toft (2010), this propensity for post-war fragmentation among peace agreement signatories might be due to their weak institutional capacity and lack of popular legitimacy. These factors frequently prevent conflict actors from achieving military victory and, in turn, forces them to consider a negotiated settlement.

The political economy of power-sharing

A civil war is the violent competition between organized political groups over the control of state resources such as tax income, land or mineral resources (Hirshleifer, 1995). Negotiated settlements attempt to resolve these violent conflicts by incorporating some of the challenging armed groups into the political order (Hartzell & Hoddie, 2007). However, this rarely ends competition over resources altogether and rebellions against the post-war order remain possible. Political economy models—as, for example, the one put forward by North, Wallis & Weingast (2009)—help us understand under which conditions these post-war rebellions are likely to occur. In contrast to credible commitment theory, these models consider the movitations, incentives, and constraints of a wider set of elite and grassroots actors in the post-war state.

In this article, I identify violence specialists and a population of producers as the key actors in a post-war state (North, Wallis & Weingast, 2009). Violence specialists are political elites with the capacity to organize large-scale violence. They head organizations composed of mid-level commanders, fighters, and their political and military support networks. In a civil war context, these elites are the state government and any armed opposition groups as, for example, rebel groups or militias. The remainder of the population in a post-war state is made up of civilians. These are individuals which have no capacity for large-scale violence themselves. They engage either in production or soldiering for the elites.

Modelling post-war rebellions

Political elites and producers interact with each other in three stages (Grossman, 1995). In the first stage, the government and some rebel elites come together under the umbrella of the peace agreement. In the second stage, political elites excluded from the peace agreement attempt to organize an armed challenge to the agreement signatories. The main interest of all elites is to maximize the expected wealth for themselves and their clientele. In the final stage, producers decide whether and to what extent they engage in production and soldiering for either the agreement signatories or excluded elites. The choice between these two options is guided by the producers' main interest to maximize their expected income.[2]

---

[2]In the following, I assume that actors' strategic chocies are not constrained by ideology. Obviously, this assumption can be challenged (Sanín & Wood, 2014). Political ideas or normative commitments might lead

7

When agreeing to a negotiated settlement, government elites share and divide their power with some of the challenging rebel elites. The ensuing peace agreement serves two purposes (North, Wallis & Weingast, 2009). First, it divides land, labor, capital, and trade among the elites in the settlement and excludes other elites from accessing these resources and productive activities. In doing so, the peace agreement enables the former to follow their individual interests without interference. As long as the benefits derived from the peace agreement exceed the benefits which government and rebel signatories could possibly acquire through a return to a civil war, they will credibly believe that the other side will not resort to arms again.[3]

The second purpose of a peace agreement is to commit government and rebel signatories to defend their agreement if excluded elites should challenge them. Only then can both sides continuously enforce each other's privileged access to state resources. The peace agreement endows elites with the means to accomplish this. They use their privileged access to resources to generate rents which they can spend on a 'carrot-and-stick' counter-insurgency strategy (Grossman, 1995). Agreement signatories use rents to maintain their armed organizations. They deploy these armed forces to deter potential insurgents from organizing or suppress actual armed challenges to their rule (Lichbach, 1995). Elites also redistribute rents across their support networks to strengthen the patron-client relationships between themselves and the population (Haass & Ottmann, 2017). This incentivizes citizens to engage in production and increases the costs of excluded elites to mobilize them.

In the second stage, elites excluded from the peace agreement try to insert themselves into the ruling elite coalition (Roessler, 2016). Excluded elites are not given any access to the resources of the post-war state. But they are also not bound by the terms of the negotiated settlement and the security commitment created through its power-sharing institutions. They therefore resort to violence to break up the peace agreement and either insert themselves into the arrangement as additional actors or replace the ruling elites altogether. To have any chance of success, excluded elites need to arm and build up their own organizations and support

excluded political elites or civilian producers to discount the costs of violent action. However, the empirical analysis accounts for any potential bias this assumption might introduce. The correlated random effects model discussed below controls for time-invariant differences across civil wars as, for example, variation in the political ideologies of conflict actors.

[3]This understanding of peace agreements adds economic commitments to existing explanations focusing on security commitments (e.g. Hartzell & Hoddie, 2007; Walter, 2002).

networks to a level that poses a credible threat to government and rebel signatories (Grossman, 1995). They need a sufficient number of fighters willing to fight for them, political and material support to arm and equip them, and support from civilians (Kalyvas, 2006; Weinstein, 2007). Central to this endeavor is the compensation they offer to their fighters and supporters if they should defeat the signatories.

The final stage of interactions focuses on the civilian population (Grossman, 1995). They face the choice to either engage in production or in soldiering for either the agreement signatories or excluded elites. As it is their main objective to maximize their expected income, civilians consider the costs and benefits of each option. As explained above, these costs and benefits are determined by the counter-insurgency strategies of the agreement signatories and the compensation offered to them by excluded elites.

Existing theories of rebellions assume that elites choose the type and extent of counter-insurgency strategies while taking into account how their choices will affect excluded elites and the population (Grossman, 1995). In the present context, this assumption would imply that the content of peace agreements—and especially the type and extent of their power-sharing provisions—are solely chosen to ward off any potential armed challenges and minimize disruptions due to extra-agreement violence. But past research shows that peace agreements and power-sharing vary widely and are often determined by the nature of the civil war and other contextual factors (Cammett & Malesky, 2012; Hartzell & Hoddie, 2015; Joshi & Darby, 2013; Ottmann & Vüllers, 2015). Therefore, some power-sharing arrangements might actually limit elites' abilities to prevent post-war rebellions. In the following, I examine in greater detail how this variation in power-sharing across post-war countries affects elites inside and outside of the peace agreement. I focus on two types: personalized and structural power-sharing arrangements.[4]

---

[4]With these two types of power-sharing, I explicitly depart from the common categorization of power-sharing along political, military, economic, or territorial dimensions (Hartzell & Hoddie, 2007). As I show in the following discussion, power-sharing in these dimensions frequently follow a similar logic and thus not necessarily warrant a separate analysis. For a similar argument, see Gates et al. (2016).

The impact of power-sharing

Personalized power-sharing usually comes in the form of executive power-sharing: government and rebel elites divide up the positions in the national government (Ottmann & Vüllers, 2015). Among the most prized positions are obviously the high-profile portfolios of the foreign or defence ministry or the portfolios controlling the exploitation of natural resources. But even smaller and seemingly unimportant positions like the tourism or health ministries are still offering rebel elites unprecedented access to political and material resources (Arriola, 2009; Francois, Rainer & Trebbi, 2015).

Thus, personalized power-sharing grants the involved government and rebel elites unfettered access to resources for their own private political and economic benefits. At the same time, it prevents excluded elites from directly accessing these resources. This enables agreement signatories to implement an effective 'carrot-and-stick' counter-insurgency strategy (Daly, 2014; Themnér, 2011). They can reward their commanders and fighters and, in doing so, retain tight control over their armed forces. In Sierra Leone, for instance, military reforms integrated large numbers of ex-combatants into the army which reduced the pool of battle-hardened recruits for any potential post-war rebellion (Nilsson & Söderberg Kovacs, 2013). Elites can also use their rents to channel resources towards their support networks and reward them for their war-time and post-war support. Agreement signatories in the Democratic Republic of Congo have used these strategies very effectively to maintain their regional strongholds (Tull, 2003).

Conversely, personalized power-sharing restricts the ability of excluded elites to organize a post-war rebellion (Lichbach, 1995). The counter-insurgency 'stick' means excluded elites have to muster considerable political and material resources if they want to credibly challenge the agreement signatories. The counter-insurgency 'carrot' means that excluded elites also need more resources to compensate civilians for their soldiering and support. Given that agreement signatories redistribute resources to the population, civilians will see production—and not soldierung—as the preferred way to maximize their income. Events in South Sudan nicely illustrate this. At least for the time of the national power-sharing government, SPLA elites were able to subdue simmering ethnic tensions within their ranks through extensive redistribution (de Waal, 2014).[5]

---

[5]Admittedly, this logic might not apply to all cases of personalized power-sharing. In Somaliland, for example,

Structural power-sharing includes the introduction of proportional representation, quotas guaranteeing specific amounts of parliamentary seats for particular groups and territorial decentralization or even federalism. These arrangements diffuse power held by agreement signatories across a wide range of political elites outside of the settlement (Hartzell & Hoddie, 2007). Electoral systems based on proportional representation and parliamentary quotas, for example, facilitate the sharing of power on the basis of demographic criteria or political affiliations. Ethnic groups and political parties are given limited but guaranteed access to power (Cammett & Malesky, 2012). Ultimately, a political space opens up which is quickly occupied by former mid-level commanders of government and rebel forces, party politicians, and local strongmen. Territorial decentralization follows a similar logic by shifting power from the capital to sub-national political entities and their political elites (Bakke, 2015; Brancati, 2009).

Admittedly, government elites are still occupying their seats in the national executive. Rebel elites also enjoy an improved political standing as agreement signatory and partner to the government. But elites do not have the unchecked and exclusive access to state resources given to them under personalized power-sharing (North, Wallis & Weingast, 2009). Instead, they now have to compete with elites initially excluded from the peace agreement which exploit the political space offered to them by structural power-sharing for their mobilization efforts. In the Philippines, for example, the limited powers and ineffective bureaucracy of the Autonomous Region in Muslim Mindanao (ARMM) severely restricted efforts by Nur Misuari and his MNLF to exert regional control and contributed to the emergence of the competing MILF rebels (Bertrand, 2000).

This has considerable implications on the 'carrot-and-stick' counter-insurgency strategy available to agreement signatories (Daly, 2014; Grossman, 1995; Themnér, 2011). Reduced privileged access to state resources results in fewer rents and, ultimately, fewer opportunities for government and rebel elites to reward their commanders and fighters. This weakens the control over their armed forces making defections more likely. It also translates into reduced resource redistribution towards civilians. Abstention from violence will not necessarily be

---

the local political elites had a strong incentive to sustain a unified front against Mogadishu's attempts to reclaim the breakaway region (Spears, 2002). Likewise, personalized power-sharing in non-civil war contexts sometimes follows entirely different mechanisms. In Kenya and Zimbabwe, for instance, power-sharing also served the purpose to placate international actors (Cheeseman & Tendi, 2010).

rewarded anymore. Structural power-sharing thus creates a situation in which agreement signatories are less able to suppress a post-war rebellion.

Structural power-sharing consequently favors excluded elites and their attempts to organize post-war rebellions (Choi & Raleigh, 2015). Given less effective counter-insurgency strategies, they need fewer recruits and resources for their armed organizations in order to credibly challenge agreement signatories. The compensations excluded elites need to give to civilians are also lower as limited resource redistribution by agreement signatories towards civilians means that soldiering for excluded elites becomes a more attractive activity for civilians. At the same time, the introduction of new electoral laws, parliamentary quotas or territorial decentralization opens up political space for excluded elites (Brancati, 2009; Lijphart, 1977). As we can see in the Indonesian provice of Aceh or the Democratic Republic of Congo, these features of post-war orders facilitate the mobilization and recruiting of civilians into armed organizations and support networks and subsequent armed struggles over resource redistribution (Barron, Jaffrey & Varshney, 2016; Reyntjens, 2007).

Empirical implications

Two observable implications follow. First, we should see less extra-agreement battle violence in the presence of personalized power-sharing. These arrangements facilitate effective counter-insurgency strategies which increase the costs for excluded elites to organize post-war rebellions and reduce civilians' expected income from soldiering for these elites.

Hypothesis 1: *Personalized power-sharing between government and rebels decreases the amount of extra-agreement battle violence.*

The second implication is that extra-agreement battle violence increases when a peace agreement sets up structural power-sharing arrangements. These institutions limit the effectiveness of counter-insurgency strategies while opening up political space for political mobilization. In turn, organizing rebellions is less costly for excluded elites and potentially more profitable for civilians.

Hypothesis 2: *Structural power-sharing between government and rebels increases the amount of extra-agreement battle violence.*

Data and research design

To test my argument, I need to identify a sample of post-war situations in which extra-agreement violence can conceivably be influenced by power-sharing between government and rebels. I therefore rely on PSED (Ottmann & Vüllers, 2015) and its list of peace agreements signed between 1989 and 2006. The sample covers 65 settlements in 29 African and Asian countries. 48 of them resolved African conflicts and 17 ended Asian wars. The unit of analysis is the peace agreement month.

I exclusively focus on the first five years after each peace agreement. During this volatile period, many of the factors which drove the civil war are still present and power-sharing is likely to have an immediate effect on the calculus of political actors. A post-war situation in PSED is removed from the sample in the month the civil war *between* government and rebel signatories recurs. Such civil war recurrence results in the collapse of the negotiated post-war order.[6]

The regional focus on Africa and Asia ensures that the empirical implications of my theory are tested in—relatively—controlled circumstances which minimizes the risk of omitted variable bias (Rosenbaum, 1999). Post-war situations in these world regions most closely resemble the previously described post-war orders. That is, the settlement restructures political order and signatories face the potential of post-war rebellions by excluded violence specialists. In Europe, in contrast, we either observe so-called 'frozen conflicts' or cases in which international organization almost replace state authorities (Cornell, 2005; Perry, 2009). Finally, peace agreements in the Americas rarely rely on the kind of redistribution of political power embodied by power-sharing (Ottmann & Vüllers, 2015).

Dependent variable

Extra-agreement violence is defined as any instance of armed violence resulting in battle-related deaths between the actors having signed the peace agreement and any other armed non-state

---

[6]About half of the peace agreements (32) experienced a civil war recurrence. However, almost three quarters occurred within the first post-war year. The large majority (87%) of the 2,319 post-war months under observation represent post-war periods which did not return to civil war. In a robustness check, I explore whether increasing levels of intra-agreement violence—that is, battle violence between government and rebel signatories—affect extra-agreement violence. I do not find any supportive evidence for such a relationship.

group. Such violence comes in two forms. First, battle violence between the government of a state and a non-signatory armed group; and, second, battle violence between rebel signatories and non-signatory armed groups.[7] Extra-agreement violence does—by definition—exclude renewed battle violence between government and rebel signatories (i.e., intra-agreement violence).[8] Examples for extra-agreement violence include the aforementioned fighting between government forces and Darfur rebels in the wake of the 2005 CPA in Sudan and the infighting among MNLF factions in the Philippines after the 1996 peace agreement.

I operationalize this dependent variable as the monthly number of battlefield fatalities due to extra-agreement violence after a settlement. I use data from the UCDP Georeferenced Event Dataset (GED) (Sundberg & Melander, 2013). Its battlefield fatality measure includes military personnel from the armed groups as well as civilians and unknown victims killed in the crossfire of battle violence.

The advantage of using GED lies in its strict definition of its actor categories and their temporally disaggregated fatality counts.[9] Its data structure can be easily matched to PSED data on power-sharing practices. Using GED also ensures that my extra-agreement violence measure captures all relevant instances of armed clashes between agreement signatories and non-signatory groups while excluding non-political violence due to criminal activities. Finally, GED identifies all instances of battle violence perpetrated by a actor throughout their existence irrespective of a minimum number of fatalities as long as the actor caused 25 battle-related deaths at least once. This tracing of violence events in previous and subsequent years ensures a relatively comprehensive picture of extra-agreement violence.

Explanatory variables

I rely on PSED to capture personalized and structural power-sharing. PSED records the type, extent, and timing of power-sharing practices in the first five years after a peace agreement. In

---

[7]Government and rebel signatories in PSED are operationalized in line with UCDP definitions (Gleditsch et al., 2002). I similarly rely on UCDP to operationalize all non-signatory armed groups.

[8]The focus on battle violence also excludes all instances of one-sided violence from the concept of extra-agreement violence. Consequently, the theory presented above does not make any predictions about the relationship between power-sharing and ethnic cleansing and genocidal violence.

[9]The actor definitions of the Armed Conflict and Location Event Dataset (ACLED) are much looser and a large proportion of their violence events cannot be linked to a specific actor (Raleigh et al., 2010). It would be very difficult to determine whether instances of battle violence after the peace agreement would actually fulfil the criteria for extra-agreement violence outlined above.

doing so, it does not capture mere promises of power-sharing but records whether it has been actually put into practice. It also captures instances of power-sharing which have never been mentioned in a peace agreement. This focus on power-sharing practices is a main advantage of PSED to other data collections as, for example, the UCDP Peace Agreement Dataset (Harbom, Högbladh & Wallensteen, 2006). PSED also provides an exact temporal mapping of power-sharing practices. It records when power-sharing has been established and if and when it has been abolished. The data collection thus accounts for the fact that many power-sharing practices are only temporary.[10]

Personalized power-sharing is operationalized as the occurrence and extent of power-sharing on the national executive level. PSED records when representatives of a rebel signatory to a settlement join the national government by taking over a government portfolio. It also records when the rebel representatives leave these positions again. I summarize this information in the variable *Personalized power-sharing* which counts the number of portfolios held by rebel representatives in a post-war month. Personalized arrangements were established in 28 of the 65 peace agreements and recorded in 827 of all post-war months observations (35%). The average number of rebel-held portfolios per month is six and the maximum number is 21.

Structural power-sharing encompasses the introduction of territorial power-sharing, parliamentary quotas and proportional representation electoral systems. Territorial power-sharing means the passing of a law or decree enacting regional devolution or granting autonomy to a specific region of a country. Parliamentary quotas are understood as guaranteed seats for rebel groups in the national parliament. Finally, the establishment of a proportional representation electoral system is coded when a corresponding law or decree has been passed. The variable *Structural power-sharing* summarizes this information in a count variable ranging from zero to three capturing the number of arrangements in place in a post-war month. Structural power-sharing was present in 19 post-war periods and 845 observations (36%). I observe more than one structural arrangement in only 127 of these observations.

---

[10]While the Peace Accords Matrix (PAM) (Joshi & Darby, 2013) also includes data on the implementation status of peace agreement provisions, it does not record power-sharing practices which have never been agreed upon in the settlement. Data is also only collected yearly and the database itself focuses on a subset of settlements, so-called 'comprehensive peace agreements'.

Estimation strategy

The dependent variable is a count of the number of extra-agreement battle deaths. I rely on a negative binomial regression model (NBRM) as my dependent variable is overdispersed. I implement this NBRM using the following regression equation:

$$
\begin{aligned}
\textit{Extra-agreement violence}_{it} = \exp(\beta_0 &+ \beta_1 \textit{Personalized power-sharing}_{it} \\
&+ \beta_2 \textit{Structural power-sharing}_{it} \\
&+ \beta_3 \mathbf{X}_{it} + \epsilon_{it})
\end{aligned} \tag{1}
$$

where $\textit{Extra-agreement violence}_{it}$ captures the number of battle deaths between agreement signatories and excluded armed groups in country i in month t. β_0 is the intercept. $\textit{Personalized power-sharing}_{it}$ is a count variable measuring the number of rebel-held portfolios in the national government in country i in month t. $\textit{Structural power-sharing}_{it}$ is a count of the number of structural arrangements in country i in month t.[11] In line with my hypotheses, I expect β_1 to show a negative association between the extent of personalized power-sharing and the number of battle deaths. In contrast, I expect β_2 to reveal a positive association between the number of structural arrangements and battle deaths.

To warrant a meaningful interpretation of these associations, I have to account for the fact that power-sharing and extra-agreement violence are not randomly distributed across post-war countries. I address this by including the vector $\mathbf{X}_{it}$ which contains control variables capturing the selection process of both power-sharing and extra-agreement violence. $\mathbf{X}_{it}$ includes the natural log of population, measures of civil war characteristics (conflict incompatibility, presence of previous peace agreements, and civil war duration), natural log of GDP per capita to account for available resources in a post-war country, and features of the post-war situation (number of excluded rebel groups and relative share of rebels' ethnic support base).[12] All covariates in $\mathbf{X}_{it}$ are time-invariant and measured at the beginning of the post-war period to avoid post-treatment bias.

Finally, the term ϵ_{it} captures random error that is assumed to be uncorrelated with the

---

[11]Both power-sharing variables are lagged one month in order to ensure temporal order.

[12]I provide more information on the operationalization of the control variables, their data sources, and summary statistics in the online appendix.

independent variables. $\exp(\epsilon_{it})$ follows a gamma distribution with mean one and variance α. I use robust standard errors clustered on the peace agreement to address the possibility that observations within each post-war period are related with each other.

Results

Table I reports the NBRM results. Model 1 only includes the two main explanatory variables measuring personalized and structural power-sharing. I then include key control variables in a stepwise manner in Models 2 to 4. By comparing the minimal model specification of Model 1 with models including more covariates, I assess how potentially confounding variables affect the relationship between power-sharing and extra-agreement violence.

The coefficients of the two power-sharing variables behave as predicted. *Personalized power-sharing* has a negative sign and is statistically significant at $p < 0.01$ or lower in all models. With an increasing number of rebel-held seats in a national power-sharing government, the amount of extra-agreement battle deaths decreases. It appears that personalized power-sharing makes it less likely that armed groups emerge that are capable of mounting an armed challenge to the government, rebel group signatories or both. The coefficient of *Structural power-sharing* has a positive sign and is statistically significant at conventional levels in all estimated models. The level of extra-agreement battle deaths increases, the more structural arrangements are in place. Apparently, structural power-sharing encourages armed groups outside of the peace agreement to attack government and rebel signatories.

The control variables included in Models 2 to 4 address potential omitted variable bias and thus strengthen a more substantive interpretation of my estimates. *Population* is positive and highly statistically significant in all estimated models. *Territorial conflict* is the only statistically significant covariate of the set of control variables capturing the legacies of the past civil war. We are likely to see fewer post-war fatalities when the peace agreement concludes a—geographically rather limited—autonomy conflict. None of the covariates accounting for the characteristics of the post-war situtation reaches conventional levels of statistical significance.

I explore the robustness of these results in several ways.[13] First, I use the Poisson regression

---

[13]Detailed results of all robustness checks are presented in the online appendix.

Table I. Effects of power-sharing on extra-agreement battle deaths

	Model 1	Model 2	Model 3	Model 4
Personalized power-sharing, t-1	−0.12**	−0.12**	−0.15**	−0.16***
	(0.04)	(0.04)	(0.05)	(0.04)
Structural power-sharing, t-1	0.57+	0.57+	0.73**	0.83**
	(0.30)	(0.30)	(0.27)	(0.30)
Population (ln)		0.94***	1.20***	1.51***
		(0.28)	(0.17)	(0.44)
Previous peace agreement			0.20	0.67
			(0.48)	(0.62)
Civil war duration (ln)			−0.00	−0.00
			(0.00)	(0.00)
Territorial conflict			−2.32***	−1.84***
			(0.49)	(0.55)
GDP per capita (ln)				−0.39
				(0.43)
Rebels' ethnic support base				−1.01
				(0.88)
Excluded rebel groups				0.73+
				(0.40)
Constant	2.50***	−13.56**	−17.55***	−14.65***
	(0.35)	(4.54)	(2.74)	(3.01)
lnalpha	3.10***	2.92***	2.81***	2.75***
	(0.27)	(0.28)	(0.29)	(0.30)
Observations	2,319	2,319	2,319	2,287
Log pseudo-likelihood	-3,777	-3,705	-3,660	-3,544

The table reports NBRM estimates. The unit of observation is the post-war month. Robust standard errors are clustered on peace agreements.+, *, **, and *** indicate statistical significance at the 10, 5, 1, and 0.1% levels.

model as alternative statistical estimator and also employ robust standard errors clustered on countries. Second, I also estimate Model 4 on samples comprising post-war period of 12, 24, 36 and 48 months. Finally, I include the dependent variable lagged one month and the length of the post-war period to probe whether extra-agreement violence is a function of time. The main results presented above do not change substantially in any of these robustness checks.

Substantive effects

Next, I evaluate the substantive effects of power-sharing on extra-agreement violence. I use the observed-value approach by Hanmer & Kalkan (2013) to estimate the average effect in the sample under analysis. I hold the control variables at the observed value for each case in the sample and then average the estimated prediction for the explanatory variables of interest for each case over all of the cases in the sample.

Figure 2 plots the mean of the predicted extra-agreement battle deaths and 90% confidence
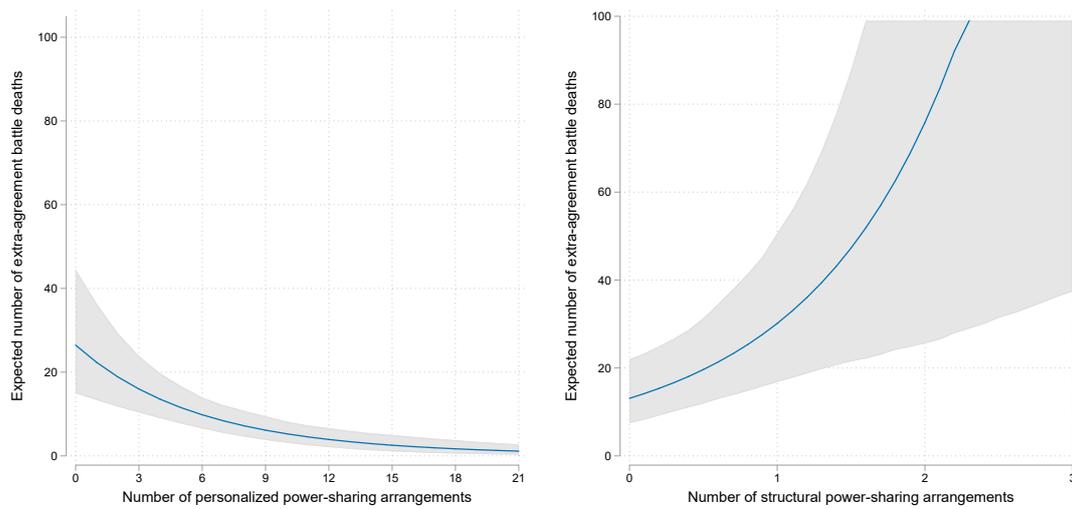
Figure 2. Substantive effects of power-sharing on extra-agreement battle deaths

Predicted extra-agreement battle deaths using the observed-value approach with 90% confidence intervals (Hanmer & Kalkan, 2013). Estimates are based on Model 4. To improve comparability, both plots use the same scale on the *y*-axis. The right-hand side plot is therefore truncated. I report the predictions over their full range in the online appendix.

intervals for each type of power-sharing under analysis. The average effect of *Personalized power-sharing* on *Extra-agreement battle deaths* ranges from 27 monthly fatalities for zero rebel-held government portfolios to one monthly fatality for the maximum number of 21 portfolios. But given the actual occurrences of personalized power-sharing in my sample, I focus on a more limited range: A change from zero rebel-held portfolios to the mean value of two already reduces the monthly fatality count by eight to an average of about 19 battle deaths. If the number of rebel portfolios is further increased by its standard deviation to six positions, we see an average effect of only ten fatalities per month. The number of battle deaths has been more than halved and pushed below the mean number of 13 extra-agreement battle deaths in the overall sample.

The opposite can be observed for the effect of structural power-sharing on extra-agreement battle violence. Figure 2 indicates that the number of battle deaths sharply increases the more of these arrangements are in place. The predicted counts range from 13 post-war fatalities for zero structural arrangements to 207 fatalities when three arrangements have been implemented. However, it is again important to consider the actual distribution of *Structural power-sharing* in the sample under analysis. In 718 of 845 post-war months with structural

power-sharing in place, there is only one of these arrangements in place. But even in these cases, the fatality count already more than doubles from 13 to 30. In the 108 observations with two arrangements, the fatality count jumps to 76 battle deaths. Obviously, we also observe sharply widening confidence intervals as only 127 observations feature two or three structural arrangements.

These results imply that power-sharing can have a substantial effect on the levels of extra-agreement battle violence. Personalized power-sharing enables government and rebel signatories to effectively suppress violent challenges to the post-war order. In contrast, structural power-sharing appears to facilitate the emergence of violent challenges to the ruling post-war elites.[14]

Matching analysis

To probe the robustness of my results, I conduct a matching analysis. Matching preprocesses the data under analysis so that untreated observations (months without any power-sharing) are as similar as possible to treated observations (months where power-sharing is in place). Regression estimates obtained from such a matched dataset are less dependent on the values of the control variables and their functional forms.

I rely on 'coarsened exact matching' (CEM) which sorts observations into coarsened strata and then prunes any observation whose stratum does not contain at least one treated and one control unit (Iacus, King & Porro, 2012). This reduces imbalance in the sample based on all properties of the covariate distributions and makes no assumptions about the underlying data generation process. To identify treatment and control groups, I summarize my two explanatory variables with a binary indicator measuring whether either personal and/or structural power-sharing is present in a post-war month.[15] Table II reports the regression results of re-estimating Model 4 using this matched dataset.[16] The coefficients of *Personalized power-sharing* and

---

[14]I also explore the effect of personalized arrangements on extra-agreement violence conditional on structural power-sharing and vice versa (see online appendix). There is tentative evidence that structural arrangements do not substantially dilute the conflict-reducing effect of personalized arrangements. Personalized power-sharing, in contrast, seems to moderately counteract the conflict-inducing effect of structural power-sharing. However, structural arrangements still seem to result in higher levels of extra-agreement violence to begin with.

[15]I explain this matching analysis in greater detail in the online appendix. I also present imbalance statistics and explore whether separate 'treatment' variables for personalized and structural power-sharing affect the results of the matching analysis.

[16]I include all control variables to account for any residual variation in the matched dataset. However, these

Table II. Robustness checks

	Model 5: Coarsened exact matching	Model 6: Intra-agreement violence	Model 7: Rebel-military integration	Model 8: Correlated random effects	
				Within Effects	Between Effects
Personalized power-sharing, t-1	−0.14***	−0.16***	−0.14**	−0.09***	−0.24***
	(0.04)	(0.05)	(0.05)	(0.02)	(0.03)
Structural power-sharing, t-1	1.34***	0.83**	0.86**	0.43***	0.33*
	(0.37)	(0.29)	(0.27)	(0.11)	(0.14)
Population (ln)	1.84***	1.52***	1.46***		1.86***
	(0.55)	(0.44)	(0.44)		(0.18)
Previous peace agreement	0.27	0.67	0.71		0.78***
	(0.63)	(0.62)	(0.64)		(0.20)
Civil war duration (ln)	0.00	−0.00	−0.00		0.00*
	(0.00)	(0.00)	(0.00)		(0.00)
Territorial conflict	−1.14+	−1.85***	−1.66**		−0.34
	(0.66)	(0.56)	(0.60)		(0.21)
GDP per capita (ln)	−1.11*	−0.40	−0.37		−0.85***
	(0.48)	(0.43)	(0.42)		(0.16)
Rebels' ethnic support base	0.97	−1.03	−0.92		0.07
	(2.28)	(0.92)	(0.88)		(0.46)
Excluded rebel groups	1.43+	0.69+	0.85+		0.65***
	(0.80)	(0.40)	(0.45)		(0.09)
Intra-agreement battle deaths, t-1		0.00			
		(0.00)			
Rebel-military integration, t-1			−0.39		
			(0.49)		
Constant	−5.57	−14.58***	−14.29***	-14.78***	
	(5.42)	(3.03)	(3.16)	(1.19)	
lnalpha	2.63***	2.76***	2.75***		
	(0.30)	(0.31)	(0.30)		
Observations	1,669	2,228	2,287	2,287	
Log pseudo-likelihood	-2,236	-3,459	-3,542	-2,970	

The table reports NBRM estimates. The unit of observation is the post-war month. Robust standard errors are clustered on peace agreements.+, *, **, and *** indicate statistical significance at the 10, 5, 1, and 0.1% levels.

Structural power-sharing in Model 5 are both statistically significant and their direction is in line with my hypotheses.[17]

Omitted variable bias

So far, all estimated models operate on the assumption that the control variables included in the vector $\mathbf{X}_{it}$ adequately account for the selection process of both power-sharing and extra-agreement violence. However, the possibility of omitted variable bias cannot be discounted.

---

coefficients should not be interpreted substantively.

[17]As CEM focuses on the sample average treatment effect on the treated as the quantity of interest (Iacus, King & Porro, 2012), the obtained coefficients only describe the effect of power-sharing on extra-agreement violence in the range of cases where power-sharing actually occurred.

For instance, it is conceivable that extra-agreement agreement violence is merely a by-product of a fragile peace settlement. If a peace agreement is failing and the commitment problem remains unresolved, government and rebel signatories are likely to turn to violence again. This might also cause an increase in extra-agreement violence for two reasons. First, either side might rely on officially unaffiliated armed groups to avoid responsibility for the ultimate breakdown of the settlement (Carey, Colaresi & Mitchell, 2015). Second, increasing tensions between government and rebels encourages previously inactive armed groups to position themselves in a new round of fighting. I therefore include the variable *Intra-agreement battle violence* in Model 6 as a proxy for failing peace agreements. The variable counts the number of fatalities due to intra-agreement battle violence up until the point a civil war recurs.[18] The results reported in Table II show the coefficient to be statistically not significant. There is no evidence that extra-agreement violence is connected to deteriorating relations between government and rebel signatories.[19]

It is also possible that other provisions of the peace agreement shape the level of extra-agreement violence. For example, it might matter whether the peace agreement mandates government and rebel forces to be integrated into a unified national army. Rebel-military integration rarely results in competent and well-equipped armed formes (Krebs & Licklider, 2016). Rather, it creates factionalized units with insufficient training, equipment, and low morale. This can lead to discontent among soldiers, desertions and even mutinies and new insurgencies (Baaz & Verweijen, 2013). This negatively affects the extent to which agreement signatories can police the post-war country and suppress challenges to their rule. Ultimately, this dynamic might dwarf the redistributive effects of personalized and structural power-sharing. To control for this, I include the variable *Rebel-military integration* into Model 7. This dummy variable indicates if a rebel-military integration process is under way in a post-war country (Ottmann & Vüllers, 2015). The coefficient is statistically insignificant and the main

---

[18]In all estimated models, a post-war situation is removed from the sample once a civil war recurs. In doing so, I exclude the possibility that extra-agreement violence might occur coincidentally after a peace agreement has failed.

[19]In a separate model reported in the appendix, I add a variable differentiating between peace agreement that remain stable for five years and those that fail within five years. Again, I do not find any evidence for a link between peace agreement fragility and extra-agreement violence.

results remain unchanged.[20][21]

In a final robustness check, I estimate a fixed effect specification. This allows me to account for ommitted variable bias as long as any potential confounders are time-invariant. As the conditional fixed effects NBRM cannot be seen as a true fixed effect model, I run a correlated random effects model (Allison, 2009). This model controls out any unobserved heterogeneity by averaging over time the time-varying observations for each post-war period and then subtracting these averages from the observed values of the variables. Obtained estimates for these 'within' effects are identical to fixed effects estimates. The model also includes additional terms capturing the post-war period mean of each time-varying covariate together with the time-invariant covariates to the model. These are the so-called 'between' effects of my covariates.

Table II reports the 'within' and 'between' effects of the two power-sharing variables. Their coefficients are statistically significant and point into the hypothesized directions. There does not seem to be any bias due to unobserved time-invariant confounders. Moreover, one can see that the hypothesized effect of power-sharing on extra-agreement violence is not solely driven by cross-sectional variation. A substantial component of the statistically significant effect of *Personalized power-sharing* and *Structural power-sharing* on extra-agreement violence is driven by variation within post-war periods. Crucially, this within-unit variation is still considerable. *Personalized power-sharing* has a standard deviation of 2.3 within post-war periods (overall standard deviation: 4.38). The same applies to *Structural power-sharing* which has a within-unit standard deviation of 0.34 (overall standard deviation: 0.62).

Discussion

In this article, I proposed a political economy framework to gain new insights on the relationship between power-sharing and peace. Power-sharing arrangements regulate the extent to which government and rebel agreement signatories can access state resources and use this privileged access to secure their rule throughout the post-war country. Especially personalized power-

---

[20]I also do not find any empirical evidence for an interactive relationship between power-sharing and rebel-military integration (see online appendix).

[21]In the appendix, I also report findings from two models exploring the effects of UN peacekeeping and post-war elections on extra-agreement violence. The main results remain unchanged.

sharing allows elites to maintain their violent capabilities and offer incentives for peaceful behavior to citizens of the post-war country. In contrast, structural power-sharing limits the privileged access to state resources of peace agreement signatories. They have fewer resources available for effective counter-insurgency strategies and excluded elites therefore face lower costs in mobilizing citizens for a post-war rebellion. I argue that the implications of this framework are observable through the amount of extra-agreement violence occurring between agreement signatories and any other armed organization. The empirical analysis of power-sharing and extra-agreement violence in African and Asian post-war countries lends support to this reasoning.

My findings reveal that power-sharing does not necessarily promote peace. It is only in the case of personalized power-sharing arrangements that we see fewer violent challenges to the post-war order. Future research should examine the underlying relationship between power-sharing, resource redistribution, and extra-agreement violence in greater detail. We need to better understand the micro-foundations of elites' and civilians' decision to rebel against the post-war order. Political ideologies and social preferences might play an important intervening role. Equally important is a refined understanding of the causal pathways linking specific personalized or structural power-sharing institutions to resource redistribution and, ultimately, post-war rebellion. For this, we require micro-level data on the design, implementation, and redistributive effects of power-sharing arrangements in carefully selected cases.

The findings of this study also speak to policy discussions on power-sharing as a commonly used tool of conflict resolution. In line with more recent studies (Cederman et al., 2015; Gates et al., 2016; Hartzell & Hoddie, 2015), I find that power-sharing is not the sine qua non of successfully promoting post-war peace. Different types of power-sharing and how they are combined with each other can have contradictory effects on post-war violence. There is no straightforward solution to this dilemma. Rather, policy makers have to be aware of these trade-offs and design their interventions with a view towards citizens on the ground and the broader post-war order.

References

Allison, Paul D (2009) *Fixed Effects Regression Models*. Thousand Oaks, CA: Sage.

Arriola, Leonardo R (2009) Patronage and political stability in Africa. *Comparative Political Studies* 42(10): 1339–1362.

Baaz, Maria E & Judith Verweijen (2013) The volatility of a half-cooked bouillabaisse: Rebel–military integration and conflict dynamics in the eastern DRC. *African Affairs* 112(449): 563–582.

Bakke, Kristin M (2015) *Decentralization and Intrastate Struggles. Chechnya, Punjab, and Quebec*. Cambridge: Cambridge University Press.

Bakke, Kristin M; Kathleen G Cunningham & Lee J. M Seymour (2012) A plague of initials: Fragmentation, cohesion, and infighting in civil wars. *Perspectives on Politics* 10(2): 265–283.

Barron, Patrick; Sana Jaffrey & Ashutosh Varshney (2016) When large conflicts subside: The ebbs and flows of violence in post-Suharto Indonesia. *Journal of East Asian Studies* 16(2): 191–217.

Bertrand, Jacques (2000) Peace and conflict in the Southern Philippines: Why the 1996 peace agreement is fragile. *Pacific Affairs* 73(1): 37–54.

Binningsbø, Helga M (2013) Power sharing, peace and democracy: Any obvious relationships? *International Area Studies Review* 16(1): 89–112.

Brancati, Dawn (2009) *Peace by Design. Managing Intrastate Conflict Through Decentralization*. Oxford: Oxford University Press.

Cammett, Melani & Edmund Malesky (2012) Power sharing in postconflict societies: Implications for peace and governance. *Journal of Conflict Resolution* 56(6): 982–1016.

Carey, Sabine C; Michael P Colaresi & Neil J Mitchell (2015) Governments, informal links to militias, and accountability. *Journal of Conflict Resolution* 59(5): 850–876.

Cederman, Lars E; Simon Hug; Andreas Schädel & Julian Wucherpfennig (2015) Territorial

autonomy in the shadow of conflict: Too little, too late? *American Political Science Review* 109(2): 354–370.

Cheeseman, Nic & Blessing M Tendi (2010) Power-sharing in comparative perspective: The dynamics of 'unity government' in Kenya and Zimbabwe. *The Journal of Modern African Studies* 48(2): 203–229.

Choi, Hyun J & Clionadh Raleigh (2015) Dominant forms of conflict in changing political systems. *International Studies Quarterly* 59(1): 158–171.

Cornell, Svante (2005) *Small Nations and Great Powers: A Study of Ethnopolitical Conflict in the Caucasus*. London: Routledge.

Cunningham, Kathleen G; Kristin M Bakke & Lee J. M Seymour (2012) Shirts today, skins tomorrow: Dual contests and the effects of fragmentation in self-determination disputes. *Journal of Conflict Resolution* 56(1): 67–93.

Daly, Sarah Z (2014) The dark side of power-sharing: Middle managers and civil war recurrence. *Comparative Politics* 46(3): 333–353.

de Waal, Alex (2014) When kleptocracy becomes insolvent: Brute causes of the civil war in South Sudan. *African Affairs* 113(452): 347–369.

Diehl, Paul F (2016) Exploring peace: Looking beyond war and negative peace. *International Studies Quarterly* 60(1): 1–10.

Francois, Patrick; Ilia Rainer & Francesco Trebbi (2015) How is power shared in Africa? *Econometrica* 83(2): 465–503.

Gates, Scott; Benjamin A. T Graham; Yonatan Lupu; Håvard Strand & Kaare W Strøm (2016) Power sharing, protection, and peace. *The Journal of Politics* 78(2): 512–526.

Gleditsch, Nils P; Peter Wallensteen; Mikael Eriksson; Margareta Sollenberg & Håvard Strand (2002) Armed conflict 1946-2001: A new dataset. *Journal of Peace Research* 39(5): 615–637.

Grossman, Herschel I (1995) Insurrections. In: Keith Hartley & Todd Sandler (eds.) *Handbook of Defense Economics*. Amsterdam: Elsevier , 191–212.

Haass, Felix & Martin Ottmann (2017) Profits from peace: The political economy of power-sharing and corruption. *World Development 99*: 60–74.

Hanmer, Michael J & Kerem O Kalkan (2013) Behind the curve: Clarifying the best approach to calculating predicted probabilities and marginal effects from limited dependent variable models. *American Journal of Political Science* 57(1): 263–277.

Harbom, Lotta; Stina Högbladh & Peter Wallensteen (2006) Armed conflict and peace agreements. *Journal of Peace Research* 43(5): 617–631.

Hartzell, Caroline A & Matthew Hoddie (2007) *Crafting Peace: Power-Sharing Institutions and the Negotiated Settlement of Civil Wars*. University Park, PA: Pennsylvania State University Press.

Hartzell, Caroline A & Matthew Hoddie (2015) The art of the possible: Power sharing and post-civil war democracy. *World Politics* 67(1): 37–71.

Hirshleifer, Jack (1995) Theorizing about conflict. In: Keith Hartley & Todd Sandler (eds.) *Handbook of Defense Economics*. Amsterdam: Elsevier , 165–189.

Höglund, Kristine & Mimmi S Kovacs (2010) Beyond the absence of war: The diversity of peace in post-settlement societies. *Review of International Studies* 36(2): 367–390.

Iacus, Stefano M; Gary King & Giuseppe Porro (2012) Causal inference without balance checking: Coarsened exact matching. *Political Analysis* 20(1): 1–24.

Joshi, Madhav & John Darby (2013) Introducing the Peace Accords Matrix (PAM): A database of comprehensive peace agreements and their implementation, 1989–2007. *Peacebuilding* 1(2): 256–274.

Kalyvas, Stathis N (2006) *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.

Krebs, Ronald R & Roy Licklider (2016) United they fall: Why the international community should not promote military integration after civil war. *International Security* 40(3): 93–138.

Lichbach, Mark I (1995) *The Rebel's Dilemma*. Ann Arbor, MI: University of Michigan Press.

Lijphart, Arend (1977) *Democracy in Plural Societies: A Comparative Exploration*. New Haven, CT: Yale University Press.

Nilsson, Desirée & Mimmi S Kovacs (2011) Revisiting an elusive concept: A review of the debate on spoilers in peace processes. *International Studies Review* 13(4): 606–626.

Nilsson, Desirée & Mimmi S Kovacs (2013) Different paths of reconstruction: Military reform in post-war Sierra Leone and Liberia. *International Peacekeeping* 20(1): 2–16.

North, Douglass C; John J Wallis & Barry R Weingast (2009) *Violence and Social Orders. A Conceptual Framework for Interpreting Recorded Human History*. Cambridge: Cambridge University Press.

Ottmann, Martin & Johannes Vüllers (2015) The Power-Sharing Event Dataset (PSED): A new dataset on the promises and practices of power-sharing in post-conflict countries. *Conflict Management and Peace Science* 32(3): 327–350.

Perry, Valery (2009) At cross purposes? Democratization and peace implementation strategies in Bosnia and Herzegovina's frozen conflict. *Human Rights Review* 10(1): 35–54.

Raleigh, Clionadh; Andrew Linke; Håvard Hegre & Joakim Karlsen (2010) Introducing ACLED: An armed conflict location and event dataset. *Journal of Peace Research* 47(5): 651–660.

Reyntjens, Filip (2007) Briefing: Democratic Republic of Congo: Political transition and beyond. *African Affairs* 106(423): 307–317.

Roessler, Philip (2016) *Ethnic Politics and State Power in Africa: The Logic of the Coup-Civil War Trap*. Cambridge: Cambridge University Press.

Rosenbaum, Paul R (1999) Choice as an alternative to control in observational studies. *Statistical Science* 14(3): 259–278.

Sanín, Francisco G & Elisabeth J Wood (2014) Ideology in civil war: Instrumental adoption and beyond. *Journal of Peace Research* 51(2): 213–226.

Spears, Ian S (2002) Africa: The limits of power-sharing. *Journal of Democracy* 13(3): 123–136.

Stedman, Stephen J (1997) Spoiler problems in peace processes. *International Security* 22(2): 5–53.

Sundberg, Ralph & Erik Melander (2013) Introducing the UCDP Georeferenced Event Dataset. *Journal of Peace Research* 50(4): 523–532.

Themnér, Anders (2011) *Violence in Post-Conflict Societies: Remarginalization, Remobilizers and Relationships*. London: Routledge.

Toft, Monica D (2010) Ending civil wars: A case for rebel victory? *International Security* 34(4): 7–36.

Tull, Denis M (2003) A reconfiguration of political order? The state of the state in North Kivu (DR Congo). *African Affairs* 102(408): 429–446.

Tull, Denis M & Andreas Mehler (2005) The hidden costs of power-sharing: Reproducing insurgent violence in Africa. *African Affairs* 104(416): 375–398.

Walter, Barbara F (2002) *Committing to Peace: The Successful Settlement of Civil Wars*. Princeton, NJ: Princeton University Press.

Weinstein, Jeremy M (2007) *Inside Rebellion: The Politics of Insurgent Violence*. Cambridge: Cambridge University Press.

Replication data

Acknowledgments

Funding

Bibliographical sketch

MARTIN OTTMANN, b. 1981, PhD in Politics (University of Nottingham, 2012); Lecturer and Birmingham Fellow in International Security, University of Birmingham (2015–); current research interests: power-sharing and the political economy of civil war and development; recent articles in *British Journal of Political Science*, *Conflict Management and Peace Science*, and *World Development*.