

### **Open Access Repository**

www.ssoar.info

# The dataset on post-civil war power and compromise, 1990-2012

Gromes, Thorsten; Ranft, Florian

Veröffentlichungsversion / Published Version Arbeitspapier / working paper

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

Hessische Stiftung Friedens- und Konfliktforschung (HSFK)

#### **Empfohlene Zitierung / Suggested Citation:**

Gromes, T., & Ranft, F. (2016). *The dataset on post-civil war power and compromise, 1990-2012.* (PRIF Working Papers, 33). Frankfurt am Main: Hessische Stiftung Friedens- und Konfliktforschung. <a href="https://nbn-resolving.org/urn:nbn:de:0168-ssoar-49037-7">https://nbn-resolving.org/urn:nbn:de:0168-ssoar-49037-7</a>

#### Nutzungsbedingungen:

Dieser Text wird unter einer Deposit-Lizenz (Keine Weiterverbreitung - keine Bearbeitung) zur Verfügung gestellt. Gewährt wird ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht-kommerziellen Gebrauch bestimmt. Auf sämtlichen Kopien dieses Dokuments müssen alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten werden. Sie dürfen dieses Dokument nicht in irgendeiner Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.



#### Terms of use:

This document is made available under Deposit Licence (No Redistribution - no modifications). We grant a non-exclusive, non-transferable, individual and limited right to using this document. This document is solely intended for your personal, non-commercial use. All of the copies of this documents must retain all copyright information and other information regarding legal protection. You are not allowed to alter this document in any way, to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public.

By using this particular document, you accept the above-stated conditions of use.



# The Dataset on Post-civil War Power and Compromise, 1990–2012

Thorsten Gromes and Florian Ranft

October 2016





## The dataset on post-civil war power and compromise, 1990–2012

#### Thorsten Gromes and Florian Ranft<sup>1</sup>

#### **ABSTRACT**

Debates about the onset, termination, and recurrence of civil wars commonly address power relations and political arrangements between adversaries. The dataset presented here contributes to these debates by introducing novel variables on military balances and political compromises after 48 civil wars that ended between 1990 and 2009. It is structured as a time series in which each observation represents one post-conflict year in a government-rebel dyad between 1990 and 2012. Overall, the dataset covers 554 post-conflict years in 33 countries and includes in-depth case descriptions that document and substantiate all coding decisions made. An initial application suggests that greater divergences between political compromise and military balance contribute to the recurrence of civil war.<sup>2</sup>

#### INTRODUCTION: THE ROLE OF MILITARY BALANCE AND POLITICAL COMPROMISE

For some time, civil wars have been the predominant type of armed conflict and many of them have been recurring wars (World Bank, 2011: 57–58). The dataset introduced here serves to investigate the causes of stable peace and civil war recurrence. As well-established research on the onset, termination, and recurrence of civil wars has already addressed the relation between the distribution of military capacities and the ways in which competing political demands are settled, our dataset focuses on military balance and political compromise following 48 civil wars that ended between 1990 and 2009.<sup>3</sup>

In its consideration of the onset of civil wars, Ted Robert Gurr's classic Why Men Rebel (1970) highlights the role of relative deprivation. Studies succeeding Gurr's work supplanted the notion of relative deprivation with that of 'grievances' or 'exclusion' (e.g. Cederman, Weidmann and Gleditsch, 2011; Wimmer, Cederman and Min, 2009). We address this issue by focusing on compromise, as it can serve to alleviate grievances and eliminate exclusion by granting both sides a portion of that to which they feel entitled. Apart from relative deprivation, Gurr also refers to the military balance and argues that rebellion is more likely to arise under the condition of power asymmetry than it is under equilibrium (Gurr, 1970: 235). This idea is also reflected in current studies on the onset and duration of (civil) wars. They highlight how information asymmetries about the distribution of military capacities affect decisions of warring parties to begin or continue war or, alternatively, explore the ranges of compromise to avoid the costs of fighting (Fearon, 1995). Robert Harrison Wagner, building on Blainey (1973: 56, 111-123), posits that the more apparent a military imbalance is, the more likely the parties to the conflict are to have concordant assessments of who would win in (another) war, which reduces the likelihood of war (Wagner, 1993: 242-246). These claims, again, underline the need to investigate the military balance as a determining factor for the survival of peace.

The termination of civil war is addressed through the concept of the so-called 'ripe moment', which encompasses three elements (Zartman, 1995: 18–23): 1) both warring parties perceive the existence of a mutually hurting military stalemate – military asymmetry precludes such a percep-

\_

<sup>1</sup> Dr. Florian Ranft is a political scientist and conducted the quantitative analysis for this paper on behalf of Prof. Dr. Margit Bussmann, University of Greifswald. He is a senior policy researcher at Policy Network, London.

<sup>2</sup> The project has been funded by a grant from the German Research Foundation (GR 3357/2-1, BR 878/24-1, and BU 2289/3-1)

<sup>3</sup> The dataset is available at www.prif.org.

tion. 2) A concept for a political settlement is in place, providing an alternative to continued war. According to Zartman, the parties to the conflict will only comply with the terms of a settlement if they derive benefit from them, which directly affirms the necessity of compromise. 3) Negotiators recognized by both parties are able to ensure that the settlement is accepted by their respective party to the conflict.

Upon terminating a war through a negotiated settlement, the issue arises as to whether civil war will recur should the military balance shift or should political compromise in the post-war period only achieve partial implementation. This is a central concern within the literature on power-sharing. Power-sharing provisions intend to prevent one side from monopolizing state power, reducing its ability to attack or to subdue the other. As such, power-sharing serves to stabilize peace (cf. Hartzell and Hoddie, 2007: 23–28; Walter, 2002: 30–31). Though power-sharing obviously constitutes a prominent form of compromise, other forms of compromise must also be addressed.

A strong line of research on the recurrence of civil wars argues that victories are more likely to achieve sustainable peace than peace agreements. Victories abolish the organizational capabilities of the defeated side (Licklider, 1995: 684–685), they lay bare and reinforce military asymmetries (Toft, 2010: 33–34), and they deter potential challengers, aware that they would be faced with a strong adversary in case of rebellion (Walter, 2004: 374). Moreover, this line of literature highlights that compromises stemming from negotiated settlements inhibit the structural change that is desperately needed in post-civil war societies (Licklider, 1995: 685).

In sum, this brief literature review identifies military balance, political compromise and the interaction between them as important factors in the onset and resolution of conflict. When studying the recurrence of civil wars, it is therefore crucial to draw from data representing these determinants. The time-series dataset presented here introduces indicators for the relative military power and political compromise between conflicting parties. It does not boil down the military balance to the war outcome and the number of combatants on each side. Nor is political compromise understood only in terms of elections and power-sharing. Instead, political compromise can relate to all prominent conflict items including, for example, land reform or the return of refugees and internally displaced persons. A compromise is given when neither side can fully implement its demands.

Our dataset covers 48 civil wars that ended between 1990 and 2009. It is confined to this period since the dynamics of war termination and peace processes drastically changed after the Cold War (Call, 2012: 184–185; Hironaka, 2008: 49). The dataset is accompanied by case descriptions, each about 10 pages in length, which explain all coding decisions made and identify sources. Transparency, as recommended by Salehyan (2015: 106), is of particular concern for the data collection. Post-war developments are covered until the recurrence of civil war or until the end of the period under investigation in December 2012.

The following sections outline the added value of the dataset on post-civil war power and compromise, introduce the variables, elaborate on the process of data collection, discuss issues related to validity, and describe the data. Using survival analysis and Qualitative Comparative Analysis, the paper then examines how the interaction between military balance and political compromises influences the durability of peace.

#### 2. OTHER DATASETS ON POST-CIVIL WAR SOCIETIES

While other datasets have reported on specific aspects of post-civil war societies, none of them has yet addressed all the relevant aspects of military balance and political compromise. Even when combined, existing datasets fail to close the gap with respect to military balances and political compromises. One reason for this is that they are confined to developments following a peace agreement. However, as Peter Wallensteen (2015: 3–4) stresses, post-settlement peacebuilding is

only one path for post-war societies. For developments following the military defeat of one side, he coins the term 'victory consolidation'. One must also consider ceasefires and other types of war termination in order to grasp the entire picture. Most importantly, existing datasets, in contrast to our compilation, have not systematically ascertained the demands voiced by conflicting parties prior to, during, and after a given civil war. In providing comprehensive data on military balances and political compromises following all types of war termination, our compilation can prove useful for further studies on civil war recurrence.

The yearbook *The Military Balance*, published by the International Institute for Strategic Studies, presents information on the number of soldiers, the military equipment, and the deployment of foreign forces for most of the states examined. Rebel groups and other non-state armed forces are not, however, comprehensively covered by the compilations. For data on the latter, the Non-State Actors in Armed Conflict Dataset (Cunningham, Gleditsch and Salehyan, 2013) systematically reports on the size of around 200 rebel forces in the period from 1946 to 2011, along with their fighting capacity relative to the strength of the government, rebel control of territory, and external support for rebel or government forces. However, in contrast to our dataset, this compilation does not consider developments following the termination of armed conflicts.

One of the most impressive data collections in the field of post-war developments is the Peace Accords Matrix Implementation Dataset by the Kroc Institute for International Peace Studies (Joshi, Quinn and Regan, 2015). It documents 34 comprehensive peace agreements for civil wars and armed conflicts negotiated between 1989 and 2012. It collects data on the implementation of 51 different types of provisions, ranging from military issues such as demobilization, to political aspects such as constitutional reform, and particular questions such as natural resource management. The data covers implementation for up to 10 years after the signing of a given peace agreement. In contrast to this, rather than focusing on the implementation of peace agreements, our dataset considers the implementation of compromises. Peace agreements do not necessarily respond to all the central demands held by the conflicting parties. Moreover, some issues related to the conflict may first emerge in the post-war period. In Bosnia and Herzegovina, for instance, the former warring parties held conflicting opinions regarding the mandate assumed by the High Representative. According to the Dayton Peace Agreement, the High Representative was to act as a coordinator and facilitator. However, two years after the signing of the peace accords, an international conference granted him sweeping executive and legislative powers. Another difference between the Peace Accords Matrix Implementation Dataset and our compilation is that our dataset on post-civil war power and compromise is not limited to developments following peace agreements: we also investigate the stability of peace after ceasefires, victories, and continued violent struggles that do not surpass the threshold of 25 fatalities per calendar year. Merely one-third of the wars covered by our dataset ended in a peace agreement.

The Implementation of Pacts Dataset (IMPACT) by Jarstad, Nilsson and Sundberg (2012) and the Power-Sharing Event Dataset (PSED) by Ottmann and Vüllers (2015) only partly overlap with our data. Both trace the implementation of power-sharing provisions for a period of up to five years in around 80 peace agreements signed between 1989 and 2004 (for IMPACT), between 1989 and 2006 (for PSED), respectively. However, military power-sharing understood as the integration of former rebels into the national security forces does not cover all aspects of military balance. Moreover, political compromise cannot be reduced to political, territorial, and economic power-sharing. For instance, the struggle over implementing the agreed-upon land reform in Nepal is not covered by power-sharing. Our compilation also considers issues that go beyond power-sharing.

In sum, existing datasets on peace agreements and power-sharing only consider a subset of the pertinent issues. Moreover, they have tended to overlook situations in which the interests of one side have clearly prevailed. This holds true for wars ended by a peace agreement as well as for those with a different type of termination. The value that our dataset adds is that it takes the competing demands among former warring parties as a starting point and it also identifies the extent to which these demands were fulfilled following all types of war termination. As such, our compilation over-

comes the common practice of using abstract concepts such as inequality or exclusion for identifying what a potential party to the conflict possibly judges to be a grievance so serious that it intends to rectify militarily. Instead, the protagonists of the terminated war themselves define the crucial questions underlying the conflict.

#### 3. DATASET CONSTRUCTION

The dataset on post-civil war power and compromise includes two types of data. The first builds on established datasets but uses case-specific literature to cross-check and, if necessary, to revise the information provided. This first type is primarily used in the dataset sections on the characteristics of the terminated war and its recurrence. The second type of data is based on case-specific texts, e.g. books or articles on the respective conflict or primary sources such as peace agreements or declarations by the warring parties. This second type is primarily used in the sections on military balances and the implementation of political compromise.

#### 3.1 Terminated civil wars and their recurrence

In order to identify terminated civil wars, our project draws on data provided by the Uppsala Conflict Data Program (UCDP). According to the UCDP, the definition of an armed conflict is met when three parameters are present. First, two parties fight over territory and/or governmental power and the design of a political system. Second, at least one of the conflict parties is the government of that state. Third, there are at least 25 battle-related deaths per calendar year.<sup>4</sup> We make use of the dyadic version of the UCDP Conflict Termination Dataset v.2010-1, 1946-2009 (Kreutz, 2010), since a focus on dyads assists in determining the military balance and the scale of compromise between warring parties. According to this compilation, several hundred armed conflicts ended between 1990 and 2009. We focus on intrastate conflict that constitutes a civil war, and we define an intrastate conflict as a civil war if at least 1,000 lives have been lost in battles or assaults for the entire period of fighting. Apart from the number of battle-related deaths in an armed conflict, we take into consideration the victims of one-sided violence and non-state conflicts, granted that they are related to the armed conflict. The act of genocide committed by Serb forces in Srebrenica 1995 may exemplify one-sided violence that was directly connected to an armed conflict, here the war between the internationally recognized government of the Republic of Bosnia and Herzegovina and Serb units from the proclaimed Serb Republic and from Yugoslavia.

Based on the UCDP data, we arrive at a list of 48 civil war dyads that were terminated between 1990 and 2009 (see Table 1). To ensure compatibility, our dataset cites the Correlates of War country codes and conflict and rebel identifications as defined by the UCDP.

\_

<sup>4</sup> For all UCDP definitions see www.pcr.uu.se/research/ucdp/definitions.

Table 1. Post-war developments documented by the dataset

Civil war: state (rebels or rebel region)	Duration	Post-war period
Angola (National Union for the Total Independence of Angola)	1975–1995	1996–1998
Angola (National Union for the Total Independence of Angola)	1998-2002	2002-2012
Azerbaijan (Nagorno-Karabakh)	1988–1994	1994-2012
Bosnia-Herzegovina (Serb Republic)	1992–1995	1996-2012
Bosnia-Herzegovina (Croat Republic Herceg-Bosna)	1993–1994	1994–2012
Burundi (National Council for Defense of Democracy-Forces for the		
Defence of Democracy)	1994-2004	2004–2012
Burundi (Party for the Liberation of the Hutu People-National Liberation Forces)	1997–2008	2009–2012
Cambodia (Khmer Rouge)	1979-1998	1999-2012
Chad (Mouvement pour le Salut/Mouvement pour un Développement Démocratique)	1990–1993	1993–1996
Chad (Mouvement pour la Démocratie et la Justice au Tchad)	1999-2002	2003-2012
Congo-Brazzaville (Cobras/Cocoyes, Ninjas, Ntsiloulous)	1997-1999	2000-2012
Democratic Republic of the Congo (Rassemblement Congolais pour la Démocratie du Peuple)	1998-2004	2005–2006
Democratic Republic of the Congo (Mouvement de Libération du Congo)	1998-2002	2003-2012
Democratic Republic of the Congo (Congrès national pour la défense du peuple)	2006–2009	2010–2012
El Salvador (Frente Farabundo Marti para la Liberación Nacional)	1980-1991	1992-2012
Ethiopia (Eritrean People's Liberation Front et al.)	1964-1991	1991-1998
Ethiopia (Ethiopian People's Revolutionary Democratic Front et al.)	1976-1991	1991-2012
Ethiopia (Oromo Liberation Front)	1983-1992	1993-1997
Georgia (Abkhazia)	1992-1993	1994-2012
Guatemala (Guatemalan National Revolutionary Union et al.)	1965-1995	1996-2012
India (Punjab)	1983-1993	1994-2012
Indonesia (Aceh)	1999-2005	2005-2012
Iraq (Patriotic Union of Kurdistan)	1985-1997	1998-2003
Iraq (Kurdish Democratic Party)	1986-1997	1998-2003
Iraq (Supreme Council for the Islamic Revolution in Iraq)	1991-1996	1997-2003
Liberia (National Patriotic Front of Liberia)	1989-1996	1996-2000
Liberia (Liberians United for Reconciliation and Democracy, Movement for Democracy in Liberia)	2000-2003	2003–2012
Mozambique (Resistência Nacional Moçambicana)	1977-1992	1993-2012
Myanmar (Kachin Independence Organization)	1961-1992	1993-2011
Nepal (Communist Party of Nepal (Maoist))	1996-2007	2007-2012
Nicaragua (Contras)	1982-1990	1991-2012
Peru (Sendero Luminoso)	1982-1999	2000-2012
Philippines (Moro National Liberation Front)	1972-1990	1991–1995
Russia (Chechnya)	1994-1996	1996-1999
Rwanda (Rwandan Patriotic Front/Party of the Liberation of Rwanda, Democratic Liberation Forces of Rwanda)	1990–2002	2002–2008
Sierra Leone (Revolutionary United Front, Armed Forces Revolutionary Council)	1991–2000	2001–2012
Sri Lanka (Liberation Tigers of Tamil Eelam)	1983-2001	2002-2005
Sri Lanka (People's Liberation Front)	1987-1990	1991-2012
Sri Lanka (Liberation Tigers of Tamil Eelam)	2005-2009	2009-2012
Sudan (Sudan People's Liberation Army, National Democratic Alliance)	1983-2004	2005-2011
Tajikistan (United Tajik Opposition)	1992–1996	1997–2012
Uganda (Lord's Resistance Army)	1986–1991	1992-1994
Uganda (Allied Democratic Forces)	1996-2002	2003-2012
United Kingdom (Northern Ireland)	1970-1994	1995–2012
Yemen (South Yemen)	1994	1994-2012
Yugoslavia (Croatia)/Croatia (Serbs)	199111993	1994-2012
Yugoslavia (Kosovo)	1998–1999	1999-2012
Zaire/Democratic Republic of the Congo (Alliance des Forces Démocratiques pour la Libération du Congo)	1996–1997	1997–1998

As some entries in our case list deviate from the data provided by the UCDP, we lay out the guidelines for these adjustments. Details are given in the project's codebook. Though we generally rely on the data provided by UCDP, in some cases, classifications as an intrastate armed conflict by UCDP is open for debate, e.g. the conflict between the USA and al-Qaeda or the war between Israel and Hezbollah on Lebanese territory. In Somalia, violence has not ended since 1986.<sup>5</sup> These are cases that we did not consider.

Following the UCDP data, 'The Troubles' in Northern Ireland would not constitute a civil war. Nevertheless, as the Index of Deaths from the Conflict in Northern Ireland by Malcolm Sutton shows, there were at least 25 battle-related deaths in each year between 1970 and 1994 and more than 3,000 fatalities during the entire period.<sup>6</sup> We therefore included this conflict in Northern Ireland.

The UCDP does not consider one-sided violence and non-state violence when calculating the duration of armed conflicts, even when a clear relation to the armed conflict exists. For Liberia, for example, it identifies a civil war from 1989 to 1990. From 1991 until 1996, however, there were approximately 10,000 people killed in acts of one-sided violence, incurred by either the government or its adversaries. Applying a case-oriented logic, it would be counter-intuitive to speak of a post-war period, considering such a high degree of violence. We therefore deem a civil war to only be terminated if neither an armed conflict nor related one-sided violence or non-state conflicts kills 25 people or more in one calendar year. According to this adjustment, the first civil war in Liberia lasted until 1996. The duration of the civil wars in Nepal and Burundi is also affected. If we include related non-state conflicts and one-sided violence, several civil wars merge into one conflict in Iraq, Rwanda, and Uganda. The wars in Afghanistan and Sudan-Darfur were not terminated before 2009 and are therefore excluded from our list of terminated civil wars.

We did not consider the seizure of a government by rebels to constitute a termination of civil war if fighting continued with reversed roles. This affects the wars in Rwanda, Chad, and Congo-Brazzaville.

Finally, we deem some dyads distinguished by UCDP as only *one* civil war. This holds for Yugoslavia/Croatia, Bosnia-Herzegovina, Azerbaijan, and Russia (Chechnya).

For all the wars covered, we confront the UCDP's information on the type of termination with a respective assessment based on the case literature. While UCDP reports that 22 of our 48 civil war dyads ended with a peace agreement, case-specific sources indicate that only 15 wars were terminated by peace accords.

Moreover, our dataset covers the total number of fatalities ascertained by UCDP and the case literature. The intensity of a terminated war is calculated by relating the number of fatalities to the size of the pre-war population in (the affected part of) the country.

When examining the duration of peace, many studies concentrate on wars that recur in a strict sense, i.e. on wars that involve the former warring parties and concern the same issues. Other analyses examine whether the same society relapses into a new civil war, irrespective of the conflict constellation. Our dataset documents the duration of peace with respect to both types of civil war recurrence. A renewed war is given when another armed conflict kills at least 1,000 people. Again, we consider one-sided violence and non-state conflicts related to the armed conflict as reported by the UCDP.

7 www.ucdp.uu.se/gpdatabase/gpcountry.php?id=94&regionSelect=2-Southern\_Africa#.

<sup>5</sup> www.ucdp.uu.se/gpdatabase/gpcountry.php?id=141&regionSelect=1-Northern\_Africa#.

 $<sup>6 \</sup>quad http://cain.ulst.ac.uk/sutton/tables/Year.html.\\$ 

<sup>8</sup> On average, the number of fatalities gathered by most of the reliable case-specific sources is seven times higher than UCDP estimates. One may assume that this huge difference emerges, as UCDP only considers fatalities that are directly related to battles or assaults, while the case-specific literature also includes victims due to hunger and diseases caused by the conflict. However, in most cases we were able to get information confined to 'direct fatalities'. Nevertheless, a significant discrepancy between the UCDP figures and the case specific data remained in most instances.

In roughly one-third of all cases, the original civil war recurred in the same or a similar constellation by the end of 2012. If we consider all further wars in the same country, the relapse rate rises to 40%.

#### 3.2 Military balance

The military balance at the end of a war is not necessarily stable in the succeeding years. That being the case, the dataset documents the situation both at the end of the war and throughout the postwar period. 'Adequately capturing relative power has been a consistent problem for civil war researchers' (Hultquist, 2013: 627). In our view, simply considering the way in which a war was terminated does not adequately reflect the military balance, as such balances are prone to change in the post-war years. For instance, in the years after Liberia's first civil war, the military imbalance to the advantage of Charles Taylor and his faction reinforced.

We have sought out variables that represent large contrasts as well as gradual differences among the cases. This proves necessary considering that not all victories are invariably the same. Some victories are more outright than others: in some cases, the defeated side may forfeit a large part of its fighting capacity, lose most of the territory formerly under its control, or may see its political leadership killed or arrested. One example here would be the Sri Lankan government's total victory over the Liberation Tiger of Tamil Eelam in 2009. Compare this to the more limited victory achieved by Yemen's government in 1994. In a similar vein, wars that end in a negotiated settlement do not necessarily exhibit the same military balance. In the two dyads in Bosnia-Herzegovina, military power was much more balanced at the end of the war than in the cases of Aceh, Guatemala or Kosovo.

Having completed an incremental process of trial and error based on the in-depth study of 10 cases with different conflict types and outcomes, <sup>10</sup> we have arrived at a set of variables that reflect the military achievements of the warring parties. Here, we give priority to presenting each case in relation to the others. This approach has, however, forced us to deal with covariance in some of the variables. <sup>11</sup>

The selected variables identify (1) which side is considered to be the military victor, (2) whether the rebels were in control of territory up until fighting ended, (3) which side controlled more of the disputed territory at that time, (4) what the relative fighting capacity of the rebels was, (5) which side was unable to continue the fighting with the same intensity as before, and (6) whether one side killed or captured its opponent's political leader in the last phase of the war.

For the second (control of territory) and the fourth variable (relative fighting capacity), we use the aforementioned Non-State Actors in Armed Conflict Dataset whenever possible and verify the information presented there by consulting case-specific sources. For cases in which the assessments contradict one another, we opt for using the case literature. For example, according to the Non-State Actors in Armed Conflict Dataset, the relative fighting capacity of the Armenian rebels in the conflict over Karabakh was 'low', suggesting an advantage for Azerbaijan's government. Nevertheless, Azerbaijani troops were completely expelled from Karabakh and surrounding areas.

With regard to each variable, our coding decisions consider which of the two sides enjoyed a favourable position, or whether one of the parties to the conflict had any advantage over the other.

PRIF Working Paper No. 33

<sup>9</sup> In total, we count 17 recurrences (35%). Note that the Iraq war of 2003 constituted a relapse of three previous wars, of two dyads related to the conflict between the government and Kurdish rebels and of the dyad related to the Shiite uprising following the Gulf War in 1991. If one considers the Iraq war of 2003 only once, 15 civil wars recurred (31%).

<sup>10</sup> The two cases in Angola, the two cases in Bosnia-Herzegovina, Croatia, Karabakh, Mozambique, Nepal, Kosovo, and the later deleted case of Colombia (National Liberation Army).

<sup>11</sup> We illustrate such covariance with the nine cases of war termination through a government victory (as reported by the case-specific literature). In eight of these nine cases, only the government would have been able to continue the fighting with the same intensity as before at the end of the war. In seven cases, the rebels lost the majority of the territory they had previously controlled. Also, the rebels' political leaders were arrested or killed in seven cases.

We assign a value of -1 for cases in which the side comprising the government at the beginning of war enjoyed a favourable position. For the case that the former rebels drew greater benefit from the situation, we assign a value of 1. The value 0 represents a lack of advantage for either side. The values -1, 0 and 1 are neither a normative judgment nor an expression of sympathy for any of the former warring parties. A seventh variable summarizes the overall military balance at the end of the war. For a lack of better options, this value is calculated as the arithmetic mean of all other variables related to the military balance at the end of the war. Thus, the value can range from -1 to 1. The transparency in our compilation will allow other users to easily construct an alternative composite index or remove with any of the summarizing variables.

The operationalization of the post-war military balance should not only reflect the differences among the cases but also account for possible changes within the same dyad over time. We evaluate these changes on an annual basis. As such, we assess the military potential of both former warring parties and assume their capabilities to largely result from the possession of armed forces and control of territory. Again, we use a three-stage scale here (-1, 0, and 1). Once more, the set of variables were the result of a gradual process of finding the most appropriate indicators. The dataset documents: (1) whether both sides substantially participate in the state's military or police and (2) whether they have separate armed forces at their disposal. If the latter is the case, we compare (3) the amount of personnel of the former warring parties, and (4) their equipment. Moreover, our dataset identifies (5) which side is in control of important territory and (6) which party to the conflict expanded the territory under its control during the post-war period. Furthermore, it assesses (7) which of the former warring parties is strategically less vulnerable in its territory. Two variables cover the role of external actors: (8) whether and when an armed peacekeeping force was present in the post-war period and (9) whether one of the parties to the conflict could rely on the military intervention of a permanent member of the United Nations Security Council in the eventuality of a new war. Finally, (10) the total military balance in the post-war period sums up all values of the relevant variables, defined as their arithmetic mean. For the first variable (participation in the state forces), the datasets on military power-sharing do not suffice, as they are limited to post-agreement cases. For the third and fourth variables (relative amount of troops and equipment), we rely on the IISS Yearbook mentioned earlier. Virginia Page Fortna's compilation (2008) and other sources provide data on many peacekeeping missions in our cases. With respect to all other variables, we must analyze case-specific literature.

#### 3.3 Political compromise

The scale of political compromise between the parties to the conflict is also ascertained on an annual basis. A compromise is given when both parties to the conflict renounce their intention to assert their goals in full (Fumurescu, 2013: 4–6, 25–30). In a strict sense, a compromise is characterized through an active affirmation by both conflict parties. However, our project also considers other situations in which neither side can fully implement its demands, regardless of whether these constellations result from direct agreement. In order to identify compromises, we trace the maximum demands articulated by the conflict parties with regard to central conflict items. Such demands are accompanied by statements that demonstrate the importance of the item. Disputes about the location, host or participants in negotiations do not entail central items. The dataset reports the actual implementation of the compromise, not merely its formulation on paper. Here, we again apply the three-stage scale introduced earlier.

Compromises come in two basic forms: In the first variant, the conflict parties compromise on a single issue; in the second form, the compromise embraces several issues – while one side realizes its demand on one issue, its opponent prevails on another (cf. Lepora, 2012: 9–10). Our data encompasses both forms of compromise.

All civil wars amount to struggles for executive power. Beyond this commonality, however, they can greatly differ in terms of the issues that motivate the parties to the conflict. One does not do

justice to the wide variety of civil wars when limiting the study of compromise to a small number of issues that are relevant across all cases. We therefore need a flexible instrument that can represent the respective scale of political compromise for a given individual case in a certain post-war year. Following an initial in-depth analysis of 10 cases, we arrived at a set of variables that reflect differences among cases as well as within a case over time. As the number of relevant variables depends on the properties of a respective case, we do not enumerate a fixed set of variables on political compromise.

Three variables reflect the extent to which the former conflict parties have made concessions concerning their struggle for executive power. These struggles relate to the question of which side governs and also to regime type. The first variable indicates which former warring party participates in governing the country or the sub-national region directly affected by the conflict. The aforementioned datasets on power-sharing (IMPACT and PSED) do not report all relevant developments. For instance, in 1990, Sri Lanka's government defeated the Communist-nationalist People's Liberation Front (JVP), though the JVP came to become part of the coalition government from 2004 to 2012. In Croatia, the government defeated the Serb rebels in 1995, <sup>12</sup> and a party representing the Serb community took part in governing the country from 2004 to 2011. Neither IM-PACT nor PSED cover veto rights, despite the fact that such mechanisms are a constitutive element of consociational democracies - a type of power-sharing defined in the seminal book Democracy in Plural Societies by Arend Liphart (1977: 25-47). In our dataset, veto rights are indicated by the second variable on the struggle for executive power. Veto rights differing in scope were either temporary or consistently given in Aceh, Bosnia and Herzegovina, Burundi, Liberia, Nepal and Northern Ireland. The third variable indicates which organizations belonging to the former warring parties were allowed to participate in basically free and fair elections. Here, we rely on the Freedom House ratings and country reports, provided that the case-specific literature does not contradict them.13

30 out of the 48 civil war dyads documented in our dataset had a territorial dimension, with one side demanding a change in the state's external or internal borders. Considering this, one variable accounts for possible compromises related to the question of to which state territories should belong. Another variable covers such compromises with respect to struggles over the borders between federal or other sub-state units.

Following a number of secession conflicts, external borders remained unchanged but the state was decentralized. In order to account for such compromises, another variable considers the allocation of competences among different political levels (central state, regions or federal units, municipalities). In some cases, the allocation of competences among political levels was relevant, even though secession was not an issue.

In about a third of the 48 civil war dyads, the warring parties fought over the economic order. One variable accounts for which side prevailed or whether a compromise was implemented.<sup>14</sup>

In 20 cases, the warring parties fought over special programs aimed at promoting specific groups defined by ethnicity, class, caste, or habitation in certain regions. There is a variable devoted to such issues, but it does not consider the measures related to territorial order which are described by the indicators introduced above.

In order to better mirror the specificities of a case, two variables are reserved for further important objects in the conflict, such as, for instance, abolishing monarchy (Nepal) or control over revenues (Sudan). Two additional variables cover potential issues that specifically emerged in the post-war

<sup>12</sup> In Croatia, the ceasefire of 1993 only temporarily terminated the fighting. According to UCDP, however, the resumption of the armed conflict in 1995 did not surpass the threshold of war, set at 1,000 fatalities.

 $<sup>13 \</sup>quad https://freedomhouse.org/report-types/freedom-world\#.VWcduUaynXE.$ 

<sup>14</sup> As this variable and other variables are only relevant in a subset of cases, we have the coding "not relevant" in many cells of the dataset.

period, such as the return of refugees (Croatia) or of exiled politicians (Congo-Brazzaville). In forming a compromise, the parties to the conflict do not necessarily meet exactly half-way; thus, additional variables indicate the extent to which one side benefits more from the implemented compromises compared to the other. The arithmetic mean of the values of all relevant variables summarizes the scale of political compromise.

As mentioned, each coding decision is laid out in a case description. In order to illustrate our approach, we cite from the case description on Northern Ireland. The bold text at the end of the extract includes the name of the variable, the years affected, and the coding.<sup>15</sup>

'A relevant issue was the discrimination of Catholics in the political and economic sphere. Grievances with respect to the election process, housing, and employment were being addressed in the 1970s (MacGinty/Darby 2002: 18). The Belfast Agreement requested equal rights, equal treatment, and freedom from discrimination for all citizens (The Agreement 1998: Constitutional Issues 1i and 1v). For that purpose, it established a new Northern Ireland Human Rights Commission that would review laws and practices and make recommendations to the government. Moreover, the Agreement called for an Equality Commission with a mandate to advise and monitor (The Agreement 1998: Rights, Safeguards, and Equality of Opportunity: para. 5, 6). Until 2012, the Roman Catholic share of the workforce increased to 46.6% (Equality Commission for Northern Ireland 2013: 2). The gap between the unemployment rates of Protestants and Catholics drastically narrowed between 1992 and 2011. In 2012, a report by the Northern Ireland Assembly concluded that discrimination ceased to be a significant factor in employment practice (for all cited data, see Nolan 2013: 96, 110–111) [SPECPRO<sup>16</sup> 1995–2012=1].'

#### 4. DATA COLLECTION PROCESS AND VALIDITY PROBLEMS

The data was compiled by Thorsten Gromes along with research assistants and interns at the Peace Research Institute Frankfurt and the participants of a research seminar at the Goethe-University in Frankfurt. Each case was analyzed by two independent coders. First, the coders drafted a preliminary version of a case description. After receiving feedback with regard to completeness and plausibility, the coders revised their drafts. Then, the coders of the same case discussed the assessments with which they disagreed.<sup>17</sup> Subsequently, a single, consolidated version of the case description was prepared and sent to a case expert for review. Critiques by the referees mostly pertained to the brief conflict overview and the UCDP's best estimates on the number of fatalities.

The project faces three general validity problems. First, in some countries with more than one concurrent civil war, the second or third conflict remains relatively underreported. As a consequence, less information can be cross-checked by other sources. This was the case for Ethiopia (Oromo Liberation Front), Myanmar (Kachin Independence Organization) and Sri Lanka (People's Liberation Front). For the war between Uganda's government and the Uganda People's Army, available sources were so scarce that we could not analyze this case.

The second problem relates to the focus on dyads. Our instrument of data collection can only ascertain the military balances and political compromises for conflicts that can be represented in a bi-polar structure. Indeed, most multi-polar conflicts, such as in Bosnia-Herzegovina, can analytically be divided into several dyads; however, the relation between these dyads is then necessarily

16 SPECPRO is the ID for the variable 'special programs for the promotion for specific groups or against their discrimination.'

<sup>15</sup> The sources presented in the extract are not included in the references for this paper.

<sup>17</sup> The inter-rater reliability proved good for most of the variables on a nominal scale. Cohen's Kappa varied between 0.33 and 0.95, with an average value of 0.68.

under-represented in the case descriptions. The civil war in Lebanon, with its high number of warring factions and shifting alliances, precludes a dyadic approach.

The third problem results from uncertainty about the actual termination of a civil war. For the cases in question, the UCDP reported that the intensity of fighting was close to the threshold of 25 fatalities per calendar year at the end of the war. In the following years, the fighting did not completely cease but oscillated between falling below the threshold and surpassing it anew. If we abide by the number of fatalities, a civil war for such a case would have to be regarded as terminated. However, in a number of cases, this assessment contradicts the perceptions of experts and of the parties to the conflict. In accordance with the recommendations by two experts per case, six cases were deleted: three in Philippines (Communist Party of the Philippines, Moro Islamic Liberation Front, Abu Sayyaf), two in Myanmar (Karen National Union, Mong Tay Army – Shan State Army-South), and one case in Colombia (National Liberation Army).

#### 5. DATA DESCRIPTION

This section presents descriptive statistics on the summarizing index variables for military balances and scales of political compromise, shows the degree to which they changed during the post-war period, reports on the scale of political compromise after peace agreements and victories, and, finally, points to the divergence between military balance and political compromises in a relevant subset of the documented dyads.

As indicated by the mean, minimum, and maximum values of the summarizing variables (see Table 2), the military balances and the scales of compromise tend to be in favour of the side governing at the beginning of the war. Remember that negative values indicate an advantage of the side that had governed at the beginning of the civil war, while positive values show an advantage of the former rebels. Values close to 0 represent a balanced situation.

Table 2. Descriptive statistics of independent variables

Variable	Observations	Mean	Standard deviation	Min.	Max.
Military balance at end of war (WARBAL)	554	-0.16	0.56	-1	0.83
Post-war military balance (POSTBAL)	554	-0.34	0.58	-1	1
Overall military balance (BALANCE)	554	-0.25	0.54	-1	0.92
Political compromises (COMPROM)	554	-0.19	0.71	-1	1

In two-thirds of the cases, the overall post-war military balance changed. The variables indicating possession of separate forces and gaining control of additional territory displayed the greatest change (in 16 and 14 dyads, respectively). In about 60% of the cases, the scale of compromise changed. Variables related to the struggle for executive power and regime form represented the greatest number of cases with changes. Table 3 relates the frequencies of change to the various types of war termination and shows that wars terminated through a peace agreement were clearly overrepresented in the groups with changes.

Table 3. Type of war termination and changes in the post-war period

Type of war termination	Post-war military balance		Political compromise		
	change	no change	change	no change	
Peace agreement	14	2	15	1	
Ceasefire	4	2	3	3	
Victory	8	6	7	7	
Low activity	6	6	3	9	
Total	32	16	28	20	

One might assume that peace agreements result in large-scale compromise. Considering the frequency of shifts, we deem it appropriate to focus on the last documented year in the post-war year, for the sake of simplicity. Interestingly, there are fewer cases with large-scale compromise (e.g. Bosnia and Herzegovina, El Salvador, Nepal) than there are dyads in which the demands of one side clearly prevailed (e.g. Guatemala, Sierra Leone, Tajikistan). Liberia, under the rule of Charles Taylor, constitutes one of the cases of post-agreement with an increasingly one-sided post-war order; civil war recurred in 2000. Burundi constitutes another case of post-agreement in which the interests of one of the former warring parties became dominant over the years. At the time of writing, the country was considered to be on the brink of a relapse into civil war. As might be expected, compromises that are smaller in scale are typical for wars terminated through the victory of one side. An exception is the dyad between Sri Lanka's government and the People's Liberation Front

One may assume that the scales of compromise mirror the overall military balances, i.e. the combined value of the military balance at the end of the war and in the post-war-period (cf. Gent, 2011). However, as Table 4 shows, for a substantial portion of the cases, the summary values for the scale of compromise and the military balance diverge.

Table 4. Descriptive statistics on the divergence of military balances and political compromises

Variable	Observations	Mean	Standard deviation	Min.	Max.
Divergence <sup>19</sup> between the scale of political compromises (COMPROM) and the military balance at end of war (WARBAL)	554	0.35	0.25	0	1.33
Divergence between COMPROM and the postwar military balance (POSTBAL)	554	0.33	0.27	0	1.14
Divergence between COMPROM and the overall military balance (BALANCE)	554	0.31	0.21	0	1.08

The largest possible difference is 2, with one side totally dominating militarily (indicated by the value -1) and the other side's political demands being completely implemented (indicated by the value 1), or vice versa. The highest divergence that occurred in our data was 1.08, with a mean divergence of 0.31. The next section presents an application of the dataset by analyzing the relationship between the stability of peace and divergence between the military balance and compromise.

<sup>18</sup> See the Crisis Watch Database: www.crisisgroup.org/en/publication-type/crisiswatch/crisiswatch-database.aspx? CountryIDs={AB6C96B1-CBF6-4E94-9B98-2031D4CD6EED}#results.

<sup>19</sup> The divergence is the absolute value of the respective difference considered.

#### 6. APPLICATION: CIVIL WAR RECURRENCE AND THE DIVERGENCE BETWEEN THE MILITARY BALANCE AND POLITICAL COMPROMISE

A divergence between military balance and the scale of political compromise can be assumed to shatter peace. First, imagine a divergence scenario in which a military imbalance is accompanied by extensive compromise. Under these conditions, the superior side has strong incentive to push the weaker side to make even more concessions. Such a situation does not necessarily lead to a renewed civil war since the conflict parties can agree to adjust the scale of compromise. Nonetheless, the probability of civil war recurring will increase. In a second divergence scenario, a post-civil war order predominantly realizes the demands of only one side, even though military capabilities are balanced. Here, the disadvantaged side is likely to insist on a revision. Again, such a situation does not necessarily result in the recurrence of civil war but does make it more likely.

In order to verify the assumed negative impact of divergence on peace, we conduct a survival analysis and a Qualitative Comparative Analysis (QCA) on the recurrence of war.

We employ limited dependent variable models for the statistical analysis (Hosmer and Lemeshow, 1999). The choice of these models best reflects the data structure that records the post-conflict episodes as the unit of analysis in the form of a time series. Limited dependent variable models allow researchers to estimate the probability of an event occurring for each post-conflict year in each episode. A binary variable indicates whether civil war recurred. A count variable measures the overall period of peace for each case.

To begin with, we infer a baseline model from studies that explore civil war recurrence. This model uses the gross domestic product (GDP) per capita, which serves as indicator for various concepts, e.g. opportunity for rebellion (Collier, Hoeffler and Söderbom, 2008). As there is much debate about whether some types of conflict are more prone to civil war recurrence than others, we create a binary variable for wars between ethnically defined parties to the conflict, based on data by Wimmer et al. (2009). Another predictor for civil war recurrence could be a regime's political openness (Walter, 2004), which we measure with the democracy index by Teorell et al. (2013). When calculating the expected utility of ongoing peace or a further war, the parties to the conflict consider the duration, the number of fatalities, and the outcome of the previous war (cf. e.g. Kreutz, 2010; Mattes and Savun, 2009; Quinn, Mason and Gurses, 2007). The baseline model also includes these variables.

Column 1 in Table 5 reports the estimated results under the baseline model.<sup>20</sup> Models 2 to 4 add variables regarding divergence between the military balance and political compromises in a step-by-step manner. Model 2 includes divergence between the compromise and the overall military balance; Model 3 includes divergence between compromise and the military balance in the postwar period; and Model 4 includes the divergence between compromise and the military balance at the end of the war.<sup>21</sup> Model 5 considers a combination of divergence variables.

<sup>20</sup> For all the statistical models, various tests were conducted to determine whether the proportional hazard assumption holds. First, the non-parametric Kaplan-Meier estimates were calculated and plotted for each predictor. In a second step, a variety of equality tests – namely the logrank, Tarone-Ware, Peto-Peto and Wilcoxon (Breslow), tests for equality of survivor functions – were calculated. Finally, Schoenfeld residuals for each variable and the overall model were estimated and plotted. Given the results of all tests, it is reasonable to assume that the proportional hazard assumption holds. Furthermore, we tested for multicollinearity and the overall suitability of the posited models with calculating Cox-Snell and martingale residuals (Box-Steffensmeier and Jones, 2004: 120).

<sup>21</sup> A factor analysis was conducted to test whether these findings are subject to the weight of one for an individual indicator. The estimations of this test do not suggest that one component of the composite variable biases the results.

Table 5. Determinants of peace survival

	Model 1	Model 2	Model 3	Model 4	Model 5
Divergence: COMPROM:BALANCE		5.123 (6.137)			
Divergence: COMPROM:POSTBAL			1.270 (1.116)		0.943 (0.835)
Divergence: COMPROM:WARBAL				10.288** (10.489)	10.420** (11.029)
Civil war duration (ln)	0.916 (0.286)	0.961 (0.303)	0.927 (0.301)	0.877 (0.224)	0.874 (0.233)
Civil war fatalities (ln)	1.294* (0.179)	1.234 (0.167)	1.283* (0.181)	1.245* (0.164)	1.247 (0.168)
Ethnic conflict	3.868 (3.538)	3.297 (2.855)	3.701 (3.351)	3.528 (3.292)	3.568 (3.402)
Peace agreement	0.212** (0.148)	0.213** (0.153)	0.214** (0.150)	0.159** (0.144)	0.159** (0.146)
Victory	0.377 (0.278)	0.312* (0.212)	0.357 (0.271)	0.392 (0.286)	0.397 (0.305)
GDP per capita (ln)	0.529 (0.210)	0.545 (0.230)	0.526 (0.211)	0.524 (0.246)	0.523 (0.245)
GDP per capita (ln)* ln(t)	1.032 (0.025)	1.029 (0.027)	1.032 (0.025)	1.036 (0.033)	1.036 (0.033)
Degree of democracy	0.952 (0.097)	0.936 (0.104)	0.953 (0.098)	0.914 (0.099)	0.914 (0.097)
Observations	541	541	541	541	541
Subjects	48	48	48	48	48
Number of failures	17	17	17	17	17
AIC	119.061	119.667	121.000	117.422	119.419
BIC Log likelihood	153.408	158.308	159.641	156.063	162.353
Log likelillood	-51.530	-50.834	-51.500	-49.711	-49.709

Note: Hazard ratios and robust standard errors in parentheses are reported, clustered on civil wars.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Hazard ratio values that are greater than 1 indicate a higher risk of civil war recurrence at any given point in time. In contrast, values less than 1 suggest that the risk of another civil war decreases.

The hazard ratio for the divergence between compromise and military balance at the end of war (column 4 & 5) is above 1 and statistically significant at p < 0.05. This result indicates that higher degrees of divergence increase the risk of another civil war.

For an appropriate interpretation of this continuous variable, we plotted the survival function for four values of the divergence between the compromise and the overall military balance. Figure 1 depicts the probability of peace survival (y-axis) for certain time periods (x-axis) given the minimum (dashed line), mean (long-dashed line), 90th percentile (dash-dotted line) and maximum value (short dash line).

Survival functions by Divergence COMPROM:WARBAL Probability of peace survival œ 9 Q 0 0 5 10 20 25 15 Peace duration (years) Divergence = 0 (min.) Divergence = 0.35 (mean) Divergence = 0.71 (90th) Divergence = 1.33 (max.)

Figure 1. Probability of peace survival

The probability of peace survival is higher when the difference between the military balance after the civil war and political compromises is smaller. More specifically, consider that the likelihood of peace prevailing five years after a civil war termination is over 70% smaller when comparing the minimum (dashed) and maximum (dotted) values of x or divergence. After the same period of time, the difference in probability of survival between the minimum and mean value, which is graphed as the long dashed survival function, constitutes about 10%.

In contrast to survival analysis, QCA does not explore probabilities but serves to identify necessary and sufficient conditions of the outcome under investigation (Ragin, 1987; Schneider and Wagemann, 2012). As QCA cannot handle right-censored data, the application only considers up to seven years after a war's end.<sup>22</sup> We ignore four out of our 48 cases, since less than seven years had passed by the end of the investigation period in December 2012.<sup>23</sup> Being that the outcome is dichotomous (lasting peace or civil war recurrence), we use a crisp-set QCA. Considering the number of cases, the QCA requires a leaner baseline model than the one used for the quantitative analysis. We include three dichotomized conditions that turned out to distinguish between cases with stable peace and civil war recurrence rather well: the number of *fatalities* in the previous war, the war's *duration*, and whether the war was an *ethnic conflict*. We add *divergence* between the scale of compromise and the overall military balance. The dichotomization is not based on the mean or median value but considers jumps in the values. Applying this principle, we set the threshold at 0.36, i.e. a divergence is given when the difference between the scale of compromise and the overall military balance equals at least 0.36.

None of these conditions turns out to be necessary for lasting peace or civil war recurrence. Table 6 presents the QCA's results with respect to sufficient conditions. Note that QCA has to examine the two outcomes separately. QCA identifies one path for civil war recurrence.<sup>24</sup> The asterisks in the

<sup>22</sup> Most studies examine the first five post-war years. However, with such a period under investigation, we would leave out eight of 17 recurrences. If we look at the first seven years, we cover 15 out of 17 relapses.

<sup>23</sup> Additionally, the two Kurdish dyads in Iraq were merged since their post-war variables have identical values.

<sup>24</sup> Logical remainders were not included in the minimization process.

paths combine the following conditions: divergence between the compromise and the overall military balance accompanied by a high number of fatalities and an ethnic conflict that results in civil war recurrence. This path covers six of the remaining 14 cases with civil war recurrence.

With respect to lasting peace, four paths are identified. Marked by a tilde, three of them include the negation of divergence (~divergence), i.e. convergence, and cover 17 of the 29 cases with lasting peace. The fourth path with divergence only covers two cases without a relapse.

Table 6. Summary of the QCA results

Paths to civil war recurrence	Raw coverage	Unique coverage	Consistency
divergence*fatalities*ethnic conflict	0.429	0.429	1.000
Solution coverage: 0.429			
Solution consistency 1.000			
Paths to lasting peace	Raw coverage	Unique coverage	Consistency
~divergence*~duration*~ethnic conflict	0.138	0.069	1.000
~divergence*~fatalities*ethnic conflict	0.310	0.310	0.900
~divergence*fatalities*~ethnic conflict	0.207	0.138	1.000
divergence*duration*~ethnic conflict	0.069	0.069	1.000
Solution coverage: 0.655			
Solution consistency: 0.950			

The single path to civil war recurrence includes divergence. For the paths to lasting peace, a convergence of both the scale of political compromise and the overall military balance prevails, and it is given in three out of four paths. Thus, the consideration of divergence appears to help in distinguishing among cases with lasting peace and instances of civil war recurrence. As the modest coverage with respect to civil war recurrence shows, the relationship is not particularly strong. However, the difference between divergence and convergence is much greater than the widely debated difference between military victories and peace agreements. Table 7 illustrates the respective explanatory power. Its first rows present a fictitious perfect relationship between two conditions and the two possible outcomes perfectly identified by QCA. While there is a maximum difference in the columns (1 vs. 0 and 0 vs. 1), there is no difference at all in the diagonals (1 vs. 1 and 0 vs. 0). The coverage values with respect to divergence/convergence better fit these patterns than do the values for the type of war termination. The same holds if one uses a threshold of 0.3 or 0.5 to discriminate between a convergence or divergence between the scale of political compromise and the overall military balance. In sum, the QCA results suggest that a mismatch between political compromises and military balances is a contributing factor to the recurrence of civil wars.

Table 7. The explanatory power of divergence in comparison

Paths including	Coverage of cases with lasting peace	Coverage of cases with civil war recurrence
condition A in a perfect relationship	0.000	1.000
condition B in a perfect relationship	1.000	0.000
divergence (divergence)	0.069	0.429
convergence (~divergence)	0.655	0.000
war terminated by a victory	0.172	0.000
war terminated by a peace agreement	0.172	0.000

As demonstrated, the military balance and the scale of political compromise do not converge across cases or across the entire post-war period. The findings of a quantitative survival analysis and of a Qualitative Comparative Analysis suggest that peace is less stable under the condition of divergence.

#### 7. CONCLUSION

The dataset introduced here helps to better understand why peace endures in some cases but collapses in others. By presenting annualized data on military balance and political compromise in 48

post-civil war dyads, the data provides important information for exploring civil war termination and post-civil war politics. It covers developments following all types of war termination and addresses the degree to which military balance and compromise can explain post-war stability. The compilation avoids identifying abstract concepts as drivers of conflict, rather focusing on the concrete demands stated by former warring parties. The scale of compromise shows the extent to which conflicting parties have been able to realize their political demands and thereby address their grievances. On account of its transparent documentation, complete with detailed case descriptions, other researchers can easily verify, adjust, or work with the data.

The compilation can provide a starting point for single case studies, in that it helps identify cases in terms of being extreme, typical, most-likely or least-likely. Moreover, it can assist in selecting cases for controlled comparisons. As demonstrated, the data is also suited for both quantitative studies and Qualitative Comparative Analysis.

An initial application indicates that divergence between the scale of political compromise and the military balance increases the chances of civil war recurrence. The dataset can be of use to a variety of other questions regarding military balance or political compromise in post-war societies. The added value of our compilation is to provide researchers with a straightforward, multifaceted, and transparent measurement of changes in the military balance and political compromise as they relate to the stability of peace.

Beyond the stability of peace, other dependent variables can be used; for example, the data could also serve to identify the conditions under which large-scale compromises have occurred.

#### **ACKNOWLEDGEMENTS**

The authors thank Lothar Brock and Margit Bussmann for their cooperation in the project and their helpful comments. We also thank Tanja Brühl, Matthias Dembinski, Charlotte Felbinger, Michael Fürstenberg, Konstanze Jüngling, Tongfi Kim, Julia Leib, Meike Pauletzki, Dirk Peters, Vera Rogova, Constantin Ruhe, Hans-Joachim Schmidt, Johanna Speyer, Jan-Philipp Vatthauer, and Jonas Wolff for commenting on previous versions. Thanks to Lasse Cronqvist for suggestions regarding QCA.

We are very grateful for the outstanding work of our research assistants and interns at PRIF: Julia Bieber, Charlotte Brandes, Ben Christian, Vera Dicke, Anna Emil, Philippa Fennes, Valerie Gebhard, Xenija Grusha, Aubrey Hamilton, Hanna Pehle, Hares Sarwary, Andrej Sbrisny, Johanna Speyer, Maike Träm, and Max C Weiß.

The project greatly benefitted from the involvement of participants of a research seminar at the University of Frankfurt: Annalinda Auth, Meike Bömmel, Lydia Both, Carolin Brandl, Lukas Brunnhölzl, Sarah Buch, Natasha Cherifi, Julian Demmer, Andrey Dolmov, Tarik El Bouyahyani, Jannis Gebken, Miriam Gerstendörfer, Nikolas Groß, Xenija Grusha, Sina Hartmann, Friedrich Hirler, Ai-Lin Jang, Ina Jeske, Rieke Jürgensen, Regina Kemmer, Lotta Laura Laloire, Manjana Pecht, Mogdeh Rahimi, Johannes Sauerland, Nico Schernbeck, Fabian Schorb, Sebastian Schwartz, Anna Schwarz, Christina Stobwasser, Jens Thalheimer, Jonathan Trautmann, Jana Wattenberg, Lisa Weis, Svenja Windisch, Luisa Wingerter, and Anne-Kathrin Winter.

We also thank the experts who commented on the case descriptions. Their names are given in case descriptions.

#### REFERENCES

- Blainey G (1973) The Causes of War. New York: Free Press.
- Box-Steffensmeier JM and Jones BS (2004) Event History Modeling. A Guide for Social Scientists. Cambridge: Cambridge University Press.
- Call CT (2012) Why Peace Fails. The Causes and Prevention of Civil War Recurrence. Washington: Georgetown University Press.
- Cederman LE, Weidmann NB and Gleditsch KS (2011) Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison. American Political Science Review 105(3): 478–495.
- Collier P, Hoeffler A and Söderbom M (2008) Post-Conflict Risks. Journal of Peace Research 45(4): 461-478.
- Cunningham DE, Gleditsch KS and Salehyan I (2013) Non-state actors in civil war: A new dataset. Conflict Management and Peace Science 30(5): 516–531.
- Fearon JD (1995) Rationalist explanations for war. International Organization 49(3): 379-414.
- Fortna VP (2008) Does Peacekeeping Work? Shaping Belligerents' Choices after Civil Wars. Princeton, NJ: Princeton University Press.
- Fumurescu A (2013) Compromise: A Political and Philosophical History. Cambridge: Cambridge University Press
- Gent SE (2011) Relative Rebel Strength and Power Sharing in Intrastate Conflicts. International Interactions 37(2): 215–228.
- Gurr TR (1970) Why Men Rebel. Princeton, NJ: Princeton University Press.
- International Institute for Strategic Studies (1990–2012) The Military Balance. The annual assessment of global military capabilities and defence economics. London: International Institute for Strategic Studies.
- Hartzell CA and Hoddie M (2007) Crafting Peace. Power-sharing Institutions and the Negotiated Settlement of Civil Wars. University Park, PA: Pennsylvania State University Press.
- Hironaka A (2008) Neverending Wars. The International Community, Weak States, and the Perpetuation of Civil War. Cambridge und London: Harvard University Press.
- Hosmer DW and Lemeshow S (1999) Applied Survival Analysis. New York: Wiley.
- Hultquist P (2013) Power parity and peace? The role of relative power in civil war settlement. Journal of Peace Research 50(5): 623–634.
- Jarstad A, Nilsson D and Sundberg R (2012) The IMPACT (Implementation of Pacts) Dataset Codebook, Version 2.0. Available at: www.pcr.uu.se/digitalAssets/153/153835\_1impact-codebook-final.pdf.
- Joshi M, Quinn JM and Regan PM (2015) Annualized Implementation data on comprehensive intrastate peace accords, 1989–2012. Journal of Peace Research 52(4): 551–562.
- Kreutz J (2010) How and when armed conflicts end: Introducing the UCDP Conflict Termination dataset. Journal of Peace Research 47(2): 243–250.
- Lepora C (2012) On Compromise and Being Compromised. Journal of Political Philosophy 20(1): 1–22.
- Licklider R (1995) The Consequences of Negotiated Settlement in Civil Wars, 1945-1993. American Political Science Review 89(3), 681–690.
- Lijphart A (1977) Democracy in Plural Societies. A Comparative Exploration. New Haven and London: Yale University Press.
- Mattes M and Savun B (2009) Fostering Peace After Civil War: Commitment Problems and Agreement Design. International Studies Quarterly 53(3): 737–759.
- Ottmann M and Vüllers J (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.
- Quinn JM, Mason TD and Gurses M (2007) Sustaining the Peace: Determinants of Civil War Recurrence. International Interactions 33(2): 167–193.
- Ragin CC (1987) The Comparative Method. Moving Beyond Qualitative and Quantitative Strategies. Berkeley, CA: University of California Press.
- Salehyan I (2015) Best practices in the collection of conflict data. Journal of Peace Research 52: 105-109.
- Schneider CQ and Wagemann C (2012) Set-Theoretic Methods for the Social Sciences. A Guide to Qualitative Comparative Analysis. Cambridge: Cambridge University Press.
- Teorell J, Charron N, Dahlberg S, Holmberg S, Rothstein B, Sundin P and Svensson R (2013) The Quality of Government Basic Dataset Made from The Quality of Government Dataset. Available at www.qog.pol.gu.se.
- Toft MD (2010) Securing the Peace. The Durable Settlement of Civil Wars. Princeton, NJ/Oxford: Princeton University Press.
- Wagner RH (1993) The Causes of Peace. In: Licklider R (ed.) Stopping the Killing. How Civil Wars End. New York: New York University Press, pp. 235–268.
- Wallensteen P (2015) Quality Peace. Peacebuilding, Victory, and World Order. New York: Oxford University Press
- Walter BF (2002) Committing to Peace. The Successful Settlement of Civil Wars. Princeton, NJ: Princeton University Press.
- Walter BF (2004) Does Conflict Beget Conflict? Explaining Recurring Civil War. Journal of Conflict Resolution 41(3): 371–388.

- World Bank (2011) World Development Report 2011. Conflict, Security, and Development. Available at: http://siteresources.worldbank.org/INTWDRS/Resources/WDR2011\_Full\_Text.pdf.
- Wimmer A, Cederman LE and Min B (2009) Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set. American Sociological Review 74(April): 316–337.
- Zartman IW (1995) Dynamics and Constraints in Negotiations in Internal Conflicts. In: Zartman IW (ed.) Elusive Peace. Negotiating an End to Civil Wars. Washington, DC: United States Institute of Peace Press, pp. 3–29.

Contact

Thorsten Gromes gromes@hsfk.de

Florian Ranft ranftflorian@gmail.com

Tel: +49 69 959 104-0

IMPRINT/DISCLAIMER

Peace Research Institute Frankfurt Baseler Straße 27–31 60329 Frankfurt am Main, Germany

The authors of this working paper are solely responsible for its content.