

# Post-conflict stabilization in Africa

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## Abstract

Peace is fragile, about half of all peace episodes break down within the first eight post-conflict years. In Sub-Saharan Africa this risk is even higher. Using survival analysis this paper suggests that while it is difficult to find correlates of peace stabilization, there are some policy relevant results. How a conflict ends is important. Negotiated settlements are fragile but the chances of peace surviving can be significantly improved through the deployment of UN peace-keeping operations. This also appears to be the case for Sub-Saharan Africa but case study evidence suggests that peacekeepers face particularly complex situations in the region and should therefore be well resourced in order to increase their chance of success

## KEYWORDS

civil war, fragility, internal armed conflict, peace keeping, Sub-Saharan Africa

## JEL CLASSIFICATION

H56; O43; O55; P16

## 1 | INTRODUCTION

Most of the world's armed conflicts are internal to a country and since the end of the Cold War about a third of all these conflicts took place in African countries. The region is still characterized by comparatively high poverty rates, high infant and maternal mortality rates, low life expectancy and low school attainment. According to the Human Development Indicator almost all of the countries in the bottom quintile are in Africa. Poverty is a cause as well as a consequence of armed conflict, or to put it in Kofi Annan's words "development and security are inextricably linked" (United Nations, 2004, p. viii). Without peace and stability African countries are unlikely to achieve the development goals that they set themselves in

the New Partnership for Africa's Development (NEPAD) framework . Previous research shows that armed conflicts do not only lead to further poverty, they also make societies very unstable, because they have a particularly high risk of conflict recidivism (e.g., Collier, Hoeffler, & Söderbom, 2008; Walter, 2014). Given the high number of post-conflict countries in Africa and the high probability of peace breaking down, the central question that this article seeks to address is “what makes peace last in Africa?”.

The paper is structured as follows. The second section provides an overview of the theory and evidence of why peace breaks down and armed conflict resumes. Section 3 offers a discussion of the conceptualization of peace. As is typical for the quantitative literature, the absence of armed conflict is defined as peace and the advantages and limitations of this typology are discussed. The same section also provides a first glance of the data, which are based on Caplan and Hoeffler (2017). Although the focus is on Africa, there are two reasons to use this global sample. First, the sample of post-conflict peace observations is small and would be even smaller if it were reduced to African countries only. Second, the estimations provide little evidence for the hypothesis that Africa is different from other regions and thus it appears justified to use a global sample. Section 4 discusses the statistical method employed, namely survival analysis and the results are presented in Section 5. In line with the extant literature it appears to be difficult to explain the duration of peace. However, the variables that are statistically significant in all specifications are conflict termination variables. Settlements are more likely to break down than military victories but the deployment of United Nations Peacekeeping Operations (UNPKOs) strengthens peace settlements considerably. Settlements buttressed by UN peacekeepers are about 15% less likely to break down than military victories. This appears to hold for post-conflict societies within and outside Africa. This is of particular importance for Africa because most of the UN's peacekeeping efforts are taking place in the region. The last section concludes.

## 2 | CONFLICT RECURRENCE: THEORY AND EVIDENCE

One main characteristic of post-conflict societies is that they face a high risk of conflict recurrence, they seem to be stuck in a “conflict trap” (Collier et al., 2003). This section presents the main theories of armed conflict onset as well as recurrence and discusses the evidence.

### 2.1 | Motive and opportunity

By now there is a large literature on the causes of conflict onset in which much of the discussion has juxtaposed the arguments of “greed” vs. “grievance” as the driving forces of armed conflict. Focusing on opportunities and motivation, rather than greed and grievance, provides a less emotive terminology for social science explanations. The organization of large armed conflicts requires opportunity as well as motivation (Hoeffler, 2011). Motivation can stem from relative deprivation, where individuals perceive a discrepancy between their expectations and their capabilities, and this can lead to frustration and aggression (Gurr, 1970). When societal groups are economically and/or politically disadvantaged, the resulting horizontal (or between group) inequality can become a cause of armed conflict onset (Cederman, Gleditsch, & Buhaug, 2013; Stewart, 2013; Østby, 2008). However, collective action does not only require a joint motivation but also private rewards to incentivize individual participation (Olson, 1965). Thus, leaders of armed groups have to be able to provide material incentives to their followers. Some leaders have greater opportunities to provide material incentives, for example, through their connections with foreign governments, or access to natural resources or the diaspora community.

Repeat conflicts could thus be due to grievances, either old ones that remained unresolved or were exacerbated during the conflict. Alternatively new grievances that arose during the last armed conflict

can motivate the recurrence. Poverty, inequality, absence of democracy, ethnic and religious polarization have been used to proxy relative deprivation in quantitative studies. Hegre and Nygård (2015) argue that using these proxies is problematic because they may not be directly related to the concept of relative deprivation. The government's decision making and implementation are the source of relative deprivation and as such measures of governance are a better proxy of relative deprivation. There is some evidence to support the hypothesis that poor governance increases the risk of conflict recurrence (Hegre & Nygård, 2015; Walter, 2014). However, these studies provide no evidence whether unresolved or new grievances are the motivation for conflict. It is very difficult to obtain good quality household data in (post-) conflict societies and although more data on societal groups are now available, there is little information on changes over time, thus making it impossible to examine whether grievances intensified or not. Therefore, there are time of writing no statistical studies that examine whether old rather than new grievances are likely to be responsible for the recurrence of the conflict.

Conflict recurrence may also be driven by country specific opportunities. Landlocked countries provide fewer opportunities to their citizens, thus potentially making warfare more lucrative. Countries rich in natural resources tend to have volatile macroeconomic outcomes, moreover, the resources provide rent seeking opportunities and enable dysfunctional governance (Collier, 2008). In addition the income from natural resources can provide a direct incentive for looting. There is some evidence that natural resources increase the recurrence of conflict (Rustad & Binningsbø, 2012). Other geographic characteristics such as forests, mountains, and dispersed populations make it easier to rebel and may therefore also contribute to a higher risk of conflict recurrence but there do not appear to be any specific studies on these geographic characteristics.

## 2.2 | Bargaining and commitment

In addition to explanations based on opportunity and motivation, bargaining theory has been applied to understand the processes causing an armed conflict, their termination and possible recurrence (Walter, 2009). Whether or not the former combatants remain peaceful depends to a large extent on the information they have gained during the conflict and how the conflict ends. A military victory provides the clearest information signal regarding the relative strength of the parties. The defeated party is unlikely to start another military challenge and the winner has no incentive to restart the conflict. In contrast, negotiated settlements do not provide the same definitive information regarding the relative strength of the parties and either party may resume the conflict in the hope of winning this time. Negotiated settlements are also less likely to provide lasting peace because in these situations there is a problem of credible commitment. Settlements require that the rebel party demobilizes as to reinstate the government's monopoly on violence. It is difficult for the government to signal credibly that they will not renege on the settlement. The rebels are thus unwilling to demobilize (completely) to retain the opportunity to challenge the government should it renege. Third parties can help to overcome this commitment problem, peacekeeping operations can support and enforce the terms of settlement agreements. However, they have to be designed and implemented in such a fashion so that they provide a credible enforcement mechanism.

Another mechanism to overcome bargaining problems is to come to an arrangement of power sharing within the post-conflict government. Power sharing in principle can address the issues of information as well as commitment. The former rebels now have information on the relative military strength and because they are part of the decision-making process, reneging on the settlement agreement becomes more likely.

## 2.3 | Principal agent problems

The microfoundations of rebellion have been modeled using principal–agent analysis of participation to understand patterns of recruitment and allegiance (Gates, 2002). Conflict recurrence can also

be analyzed using this theoretical framework. Kreutz (2018) suggests that bargaining theory cannot fully account for all the factors once the fighting has stopped. The recurrence of conflict may be due to the elites of the warring groups losing the ability to exert authority over former group members, which can lead to conflict recurrence. While it is an interesting theoretical approach, it is difficult to test the implications. Whether a conflict is a recurrence of the same conflict but with new leaders or an entirely new insurgency is difficult to determine empirically.

## 2.4 | Evidence from survival analysis

Quantitative studies of conflict recurrence require panel data on episodes of terminated armed conflict. A commonly used statistical method to examine conflict recurrence is either logit or probit analysis but this does not allow taking into account when the peace broke down (see, e.g., Toft, 2010a, 2010b). The length of the post-conflict peace can be examined by applying survival analysis. This is the method of choice for this article because the central research question is “Which factors make peace last?” It appears to be very difficult to provide support for a number of the hypotheses discussed above because previous analyses have found most variables to be statistically insignificant (e.g., Walter, 2014; Kreutz, 2018, p. 229). One result that is supported in a number of studies is that the type of conflict termination matters, giving credence to the hypothesis that the information problem is important but that the type of conflict termination helps to address this issue. Conflicts that ended in military victories and negotiated settlements are much less likely to recur than conflicts that were neither won, nor formally settled, that is, just fester at lower violence levels (e.g., Caplan & Hoeffler, 2017). There is also support for the hypothesis that credible commitments are associated with longer peace duration. Fortna (2004, 2008), Collier et al. (2008), Mason, Gurses, Brandt, and Quinn (2011) find that the peace lasts longer when UN Peacekeeping Operations (UNPKOs) are deployed. However, this result is not supported by Walter (2014) and Kreutz (2010). For Africa, Hultman et al. (2016) find that increasing the number of UN peacekeeping troops significantly increases the duration of peace, while observers and police do not have the same effect.

Like the effects of UNPKOs on the duration of peace, the statistical significance of a number of other variables is not robust either. These include the severity of the armed conflict (duration and number of fatalities), democratic regime, elections, the size, number and cohesion within the combatant groups and power sharing.

## 3 | CONCEPTS AND DATA

Throughout, this analysis only considers post-conflict cases, that is, it excludes all cases that are at peace or at conflict all the time. This section first introduces a definition of post-conflict peace and then presents a first glance of the data. This includes a description of the preceding armed conflict (duration, battle deaths, termination) and the characteristics of the subsequent peace spell (duration, peacekeeping operations, income).

### 3.1 | Definition of post-conflict peace

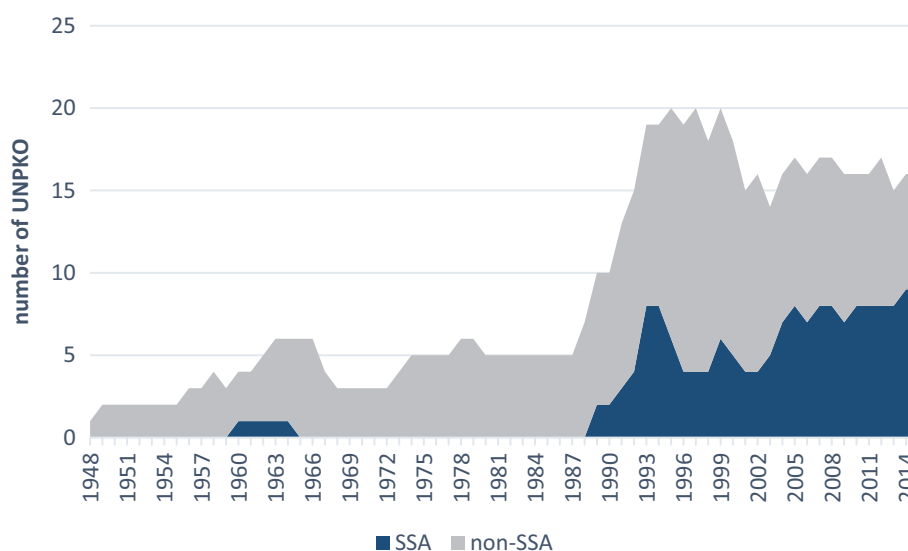
For the purpose of this study “post-conflict” is defined as the period after an armed conflict, that is, when armed conflict is absent. This typology only allows two mutually exclusive states, armed conflict and peace—each observation can only belong to one category. Thus, armed conflict and peace are understood as symmetric inverses (Goertz & Mahoney, 2012, ch. 13) and this definition makes it

possible to measure the two categories. However, many scholars in peace research would argue that the negated concept is not the same as the opposite concept. More specifically, the absence of armed conflict is not the same as peace. In his theoretical work Johan Galtung discusses the concepts in great detail and coins the definition of “negative” peace. Even when violent events are absent, there may be structural violence, which is rooted in the unequal distribution of power and resources. Only when there is an egalitarian distribution, social justice can be achieved. Peace defined in this way, based on a positive definition (achievement of social justice), is referred to as “positive” peace. According to Galtung the study of peace should therefore not only include the study of violence but also the study of social justice and development (Galtung, 1969). However, the concept of social justice or “positive” peace does not lend itself to quantification, the focus of this quantitative study is on “negative” peace, that is, the absence of violent events.

The data on armed conflict is taken from the Armed Conflict Dataset (ACD), this is the most commonly used dataset in conflict research and is a collaboration between the Uppsala Conflict Data Program (UCDP) and the Peace Research Institute Oslo (PRIO). The most recent version of the ACD that includes information on how armed conflicts ended spans 1946 to 2014. Only very few armed conflicts are international conflicts between states and for the purpose of this article these conflicts are disregarded. The focus is on conflicts that are state-based but internal to a country: these conflicts may or may not receive support from beyond the national borders. Armed conflicts are defined by an absolute threshold, when they cause at least 25 battle-related deaths a year it is recorded as an armed conflict. Military as well as civilian deaths are counted as “battle related.” A further important part of the definition is that there is organized effective violent opposition to the government in order to distinguish this state violence from nonstate violence (e.g., communal violence) and one-sided violence (e.g., massacres, pogroms, and genocides). Thus, although all years after a state-based armed conflict are coded as “at peace,” it is important to understand that some societies may experience other violence during this peace period.

To gain a more detailed understanding of the data, it is instructive to look at some specific state-based conflicts. One straightforward example is the civil war in Sierra Leone that started on April 1, 1991 and ended on December 20, 2001, which is recorded as one conflict episode. For Burundi the Palipehutu rebellion against the government is listed as one conflict with four distinct episodes (1965, 1991–1992, 1994–2006, 2008) because there have been either few or no battle deaths in the intervening periods. Meanwhile, other countries have experienced a number of distinct armed conflicts with one or more episodes each, for example, Nigeria (Biafra, 1967–1970; Niger Delta, 2004; Boko Haram, 2009, 2011–ongoing). Other countries, such as Ethiopia, have experienced a number of distinct conflicts at the same time (for example the regional rebellions in Ogaden, Oromiya, Afar, Sidamaland, and Eritrea). For this study the unit of observation could be the individual country but it is then unclear how to deal with different armed conflicts ongoing at the same time. They could be treated as one conflict period but the characteristics of the individual conflicts, such as severity or termination, can then not be assigned to this “country in conflict” episode. Therefore the focus is on the conflict episode, and the unit of observation is the post-conflict episode (peace), which starts when the conflict episode ends.

Only conflicts that ended after 1989 are considered in this study because the geopolitical changes as a result of the end of the Cold War had a considerable impact on armed conflicts. The international community's engagement with post-conflict societies changed greatly, this is, for example, evidenced by the large increase in the number of UNPKOs as shown in Figure 1. The darker shade represents operations in Sub-Saharan Africa, with the sole exception of one operation in the Democratic Republic of the Congo in the early 1960s, the UN only began to deploy peacekeepers to the region after the end of the Cold War.



**FIGURE 1** Number of UN peacekeeping operations [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]  
*Source:* UN List of Peacekeeping Operations, [https://peacekeeping.un.org/sites/default/files/unpeacekeeping-operationlist\\_1.pdf](https://peacekeeping.un.org/sites/default/files/unpeacekeeping-operationlist_1.pdf)

## 3.2 | Explanatory variables

### 3.2.1 | Conflict intensity

The intensity of the conflict can be measured in different ways, for example in terms of geographic spread, economic damage, duration, and human costs. The ACD provides information on the duration and the battle-related fatalities that can be used in a relatively straightforward manner in statistical analysis.

A conflict episode is defined as armed conflict with continuous activity and to determine the duration of a conflict episode a start and an end date are required. The start of a conflict episode is often connected to a particular event. For example, when the plane carrying the presidents of Burundi and Rwanda was shot down on April 6, 1994, armed conflict activity rapidly escalated and the ACD start date for the armed conflict in Burundi is given as October 18, 1994. When it is unclear when the episode reached the threshold, the start date is set to December 31, 1994. Some armed conflicts end in formal peace agreements, making it simple to date the end, for example the peace agreement between the government of the Republic of Congo and six factions on December 29, 1999 also defines the end of the armed conflict. However, sometimes the killing does not immediately stop when an agreement is signed and it does take time for the conflict to end. Examples include the signing of the peace agreement between the Mozambican National Resistance (Renamo) and the government of Mozambique and the peace process in Sierra Leone. In other cases the conflict end predates the peace agreement, one example is Somalia. However, sometimes the end of the activities cannot be dated precisely, mainly when the fatalities are fewer than 25, in which case the end is dated as December 31.

The number of battle-related deaths was obtained from two sources. The ACD only provides data from 1989 and using only this data source would limit the analysis to conflict years from 1989 onwards. Thus, in order to include conflicts that started before this date, the data from Lacina and Gleditsch (2005) were used. While battle death data include military as well as civilian victims, they only include deaths from the use of direct force. Deaths owing to hunger and disease are not counted in these estimates but it is important to keep in mind that battle deaths only make up a small fraction of the total war deaths, in many armed conflicts battle deaths are only about 10% of the total fatalities (Lacina & Gleditsch, 2005). The data

collection on battle deaths is based on reported evidence and the resulting numbers appear conservative, in particular when they are compared with the survey based methods used in public health studies.

Some of the descriptive statistics of the previous armed conflicts are presented in Table 1. About half of all previous conflicts were minor armed conflicts (25–999 battle deaths), the others were wars (more than 1,000 battle deaths). For Africa this ratio is slightly different—there were more minor conflicts than wars. However, these armed conflicts caused more battle-related deaths on average—over 10,000 deaths in Africa while those outside the region caused fewer than 6,000. On average these armed conflict episodes did not last as long in Africa (about 940 days) as elsewhere (about 1,280 days).

### 3.2.2 | Conflict termination

For this study, the end of the armed conflict is the beginning of the post-conflict period or peace spell and as discussed above, defining the end of an armed conflict can be difficult. The termination of an armed conflict is categorized by Kreutz (2010) and this dataset has been updated until December 31, 2014. He distinguishes between military victory, peace agreements, ceasefires, and “other outcomes.” Victory is the result of the defeat, elimination, capitulation or surrender of one side. Peace agreements are defined as an agreement between the main actors concerned with the resolution of the conflict. In many cases the actors negotiate and agree while armed activity is ongoing but conflicts are only coded as having been terminated by peace agreement when there is no military activity after the agreement. By contrast, ceasefires are agreements that terminate military operations but do not entail a resolution of the conflict. However, it is important to stress that a large number of armed conflicts do not end in either victory or settlement but fester without producing the required 25 battle-related deaths. This category makes up about 42% of all observations and is termed “low or no activity”. The remaining category involves cases in which other criteria are not met, for example, one side in a conflict ceases to exist or is defeated in another simultaneous conflict. For the 211 conflict episodes that ended after 1989, Table 2 presents the frequencies for the various outcomes in Africa and elsewhere.

Peace agreements are more common in Africa but ceasefires are less common. Military victories end 16% of all conflict episodes and the rebels are almost as likely to win as the government. However, rebels are less likely to win outside Africa. Just as in the total sample a large proportion of conflicts are not formally terminated but fester—this is the case for about 42% of all conflicts.

### 3.2.3 | UN Peacekeeping operations

As discussed in Section 2, one important question in the context of peace stabilization is whether the deployment of UNPKOs improves the chances of maintaining peace. A number of UNPKOs failed to secure the peace (e.g., in Somalia 1992–1993) and did not prevent genocide (e.g., Rwanda 1993–1996).

**TABLE 1** Armed conflicts (1990–2013)

	Sample $n = 211$	SSA $n = 74$	Non-SSA $n = 137$
Minor conflict/major conflict (total)	105/106	41/33	64/73
Battle deaths (mean)	7,398	10,609	5,725
Duration (mean in days)	1,160	944	1,276

*Note:* SSA denotes Sub-Saharan Africa, World Bank definition. Minor conflicts: 25–999 battle deaths per annum; major conflicts: 1,000 or more battle deaths per annum.

*Source:* UCDP Termination Dataset version 2.0-2015.

**TABLE 2** Armed conflict outcomes (1990–2013)

Outcome	Count (%)		
	Sample	SSA	Non-SSA
1 Peace agreement	31 (15%)	16 (22%)	15 (11%)
2 Ceasefire	42 (20%)	10 (14%)	32 (23%)
3 Government victory	30 (14%)	6 (8%)	24 (18%)
4 Rebel victory	9 (4%)	6 (8%)	3 (2%)
5 No or low activity	88 (42%)	31 (42%)	57 (42%)
6 Actor ceases to exist	6 (3%)	3 (4%)	3 (2%)
No information	5 (2%)	2 (3%)	3 (2%)
Total	211 (100%)	74(100%)	137(100%)

Note: SSA denotes Sub-Saharan Africa, World Bank definition.

Source: UCDP Termination Dataset version 2.0-2015 and Kreutz (2010).

A UNPKO is defined as an operation led by the UN Department of Peacekeeping Operations (DPKO) and the Appendix lists all of the operations. As Figure 1 shows, at the end of the Cold War the number of operations increased significantly and Angola and Namibia were among the first countries to receive a UNPKO in 1989. Since then Africa has been the site of most UN peacekeepers (Williams, 2017), and if UNPKOs stabilize the peace, this of particular importance for Africa.

Table 3 lists the until UNPKOs, about 83% of all blue helmets are deployed in Africa and 86% of the entire UNPKOs' budget is spent in the region.

### 3.3 | A first look at the survival of peace

Using the ACD war termination data provides 211 peace spells between 1989 and 2013. Before turning to the regression analysis, the nonparametric Kaplan–Meier estimator provides a description of the data (Figure 2). Time is not measured as calendar time but instead as time in days since conflict termination. In the beginning, all of the observations are at peace and as time passes, some peace spells come to an end (fail) and some continue (survive). More than half of the peace spells failed and in only 110 cases did the peace survive until the end of the time under observation. According to the survivor function in Figure 2 after about 8 years only half of the peace spells had survived.

A second exploratory step investigates whether peace episodes are more likely to endure in Africa. Figure 2 shows two lines, the top line shows the survival estimates for non-African peace spells, while the lower line represents the estimates for Africa. Lower lying lines mean that those peace spells are more likely to break down. The survival rates are statistically significantly different from each other ( $\chi^2 = 4.78, p = 0.0288$ ), thus peace appears less stable in Africa.

## 4 | METHOD

The aim of the statistical analysis is to examine which factors stabilize post-conflict peace. Survival analysis allows the estimation of a hazard function  $h(t)$ , which gives the probability that the event (end of peace) will occur, given that the peace has lasted up to a specified time.

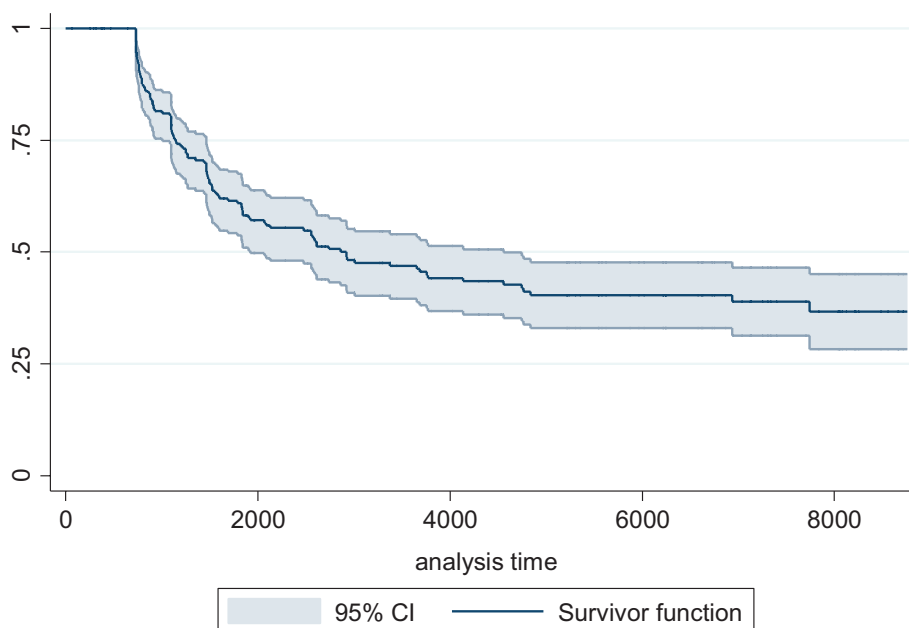


**TABLE 3** Current UNPKOs (August 31, 2017)

Operation	Host country/region	Established	Troops	Military observers	Police	Budget in U.S.\$ millions
UNTSO	Middle East	May 1948	0	149	0	68.9
UNMOGIP	India/Pakistan	January 1949	0	44	0	21.1
UNFICYP	Cyprus	March 1964	833	0	69	54.7
UNDOF	Syria	June 1974	776	0	0	57.7
UNIFIL	Lebanon	March 1978	10,340	0	0	483
UNMIK	Kosovo	June 1999	0	8	9	37.9
MINUSTAH	Haiti	June 2004	1,189	0	1,543	90
MINURSO	Western Sahara	April 1991	20	206	0	52.5
UNMIL	Liberia	Sept. 2003	404	14	308	110.1
UNAMID	Darfur	July 2007	12,563	147	2,956	486
MONUSCO	DRC	July 2010	15,899	449	1,369	1141.8
UNISFA	Abayei	June 2011	4,287	119	22	266.7
UNMISS	South Sudan	July 2011	12,241	186	1,587	1071
MINUSMA	Mali	March 2013	10,891	35	1,679	1048
MINUSCA	CAR	April 2014	9,732	139	1,985	882.8
Total:			79,175	1,496	11,527	5,872
SSA			66,017	1,089	9,906	5,058
SSA (% of total)			83.38	72.79	85.94	86.15

*Note:* Peacekeeping Operations July 1, 2017 to June 30, 2018. The last column only includes the budget for the maintenance of the mission, it does not include contributions to the UN Logistics Base, Regional Services or support accounts. The total approved budget was U.S.\$6.8 billion.

*Source:* UN <https://www.un.org/press/en/2017/ga11927.doc.htm>, [www.un.org/en/peacekeeping/documents/bnotelatest.pdf](http://www.un.org/en/peacekeeping/documents/bnotelatest.pdf).



**FIGURE 2** Peace spell survival estimates [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

*Note:* Analysis time is provided in days since conflict termination

The hazard function can include a number of explanatory variables and there are different options when modeling the hazard of an event occurring. If the survival times follow a known distribution, for example, if the risk of the peace ending falls over time, we may want to use a distribution function that accounts for such a relationship. When social scientists have a theoretical expectation regarding the shape of this hazard they can parameterize the hazard function and formulate a parametric model. However, in the absence of such theory, Box-Steffensmeier and Jones (2004) recommend the use of a semi-parametric model, the Cox proportional hazards model. Here, a particular distributional form of the duration times is left unspecified but the assumption is made that the explanatory variables shift the hazard rate proportionately. Thus, the appropriateness of the application of the Cox proportional hazard model rests on the assumption of proportionality. The Cox proportional hazard model is the model of choice in the research of peace duration (e.g., Walter, 2014; Fortna, 2004; Hultman et al., 2016). More formally the hazard function,  $h(t)$ , can be written as follows:

$$h(t) = h_0(t) \exp(x_j \beta_0)$$

where  $h_0(t)$  denotes the baseline hazard, the hazard common to all peace spells,  $j$ . The function  $\exp(\cdot)$  multiplies this baseline hazard, that is, models how the explanatory variables,  $x$ , shift the baseline hazard. The function  $\exp(\cdot)$  prevents the hazard  $h(t)$  from taking negative values. Cleves, Guitierrez, Gould, and Marchenko (2010, ch. 3) provide a clear and detailed discussion of the modeling choices. In the sample there are multiple peace spells, that is, spells that ended because the conflicts recurred, then the conflict ended, and a new peace episode was recorded. In order to account for possible interdependence between these peace spells the standard errors are clustered by the conflict identifier.

The main aim of the article is to explain peace survival and obtain recommendations that stabilize the peace. However, one should be careful in the design and interpretation of the statistical analysis owing to simultaneity and endogeneity issues (see Box-Steffensmeier and Jones, 2010, ch. 7). The characteristics of the conflict, such as the outcome (victory, settlement or other), duration, fatalities,

the contestation (territory or government) or ethnic recruitment, occurred before the start of the peace spell. Thus, it is more straightforward to make claims regarding these predetermined variables. In contrast, income and peace are measured at the same time and causality can run either way. Peace is more likely to endure if incomes are higher but incomes are also likely to be higher if the country is at peace, hence there is a problem of endogeneity. In order to guard somewhat against this endogeneity problem, lagged income is included as an explanatory variable.

The inclusion of UNPKOs in the model raises a number of potential problems. One issue is a problem of selection—troop contributing countries want to minimize the risk of casualties and may therefore prefer to deploy to easier peace situations. For example, in the early 1990s a number of highly controversial UNPKOs in Somalia, Bosnia, and Rwanda made subsequent deployment much more difficult (Koops et al. 2015). Selection would introduce a bias, however, Fortna (2004) finds no evidence that UNPKOs are systematically deployed to the easier cases. Furthermore, the process that affects the changes in the UNPKOs may be influenced by the duration of peace, for example, operations will be scaled down or ended if the peace appears to hold. These endogeneity issues introduce bias and make a causal interpretation of the results problematic. One solution would be to exclude such a problematic variable. However, if these excluded variables are theoretically relevant this would result in a misspecified model, that is, potentially larger problems. Furthermore, a study of only strictly exogenous variables may make the analysis irrelevant for policy advice because it does not allow for a number of important policy issues to be addressed. One statistical solution to the problem of endogeneity and simultaneity issues is the use of instrumental variables, but it is difficult to find instrumental variables for UNPKOs. For this study I simply flag these statistical problems and proceed with them in mind.

## 5 | RESULTS

The study by Caplan and Hoeffler (2017) forms the departure point for the statistical analysis. The duration of peace spells is investigated by examining the impact of a number of key variables, namely conflict outcome, severity of the armed conflict, deployment of UNPKOs and a number of socioeconomic characteristics. The model presented in the first column of Table 4 only includes explanatory variables that predate the start of the peace spell: the outcome of the conflict, the duration of the conflict, and the total number of battle deaths. This has two advantages: it maximizes the estimation sample and limits problems caused by endogeneity and simultaneity. The regression tables report hazard ratios, not coefficients. A hazard ratio greater than one suggests that this variable increases the hazard (or risk) of peace ending. The interpretation of hazard ratios is straightforward: a ratio of 1.3 suggests that a one unit change of the explanatory variable increases the hazard of the peace breaking down by 30% ( $1 - 1.3 = -0.3$ ). A hazard ratio of less than one suggests a decrease of the hazard ratio, that is, making peace more durable. A hazard ratio of 0.3 suggests a 70% reduction when the explanatory variable changes by one unit ( $1 - 0.3 = 0.7$ ).

The first model in Table 4 includes dummy variables for the conflict outcome. “Victory” is the omitted category and the category “settlement” includes peace agreements as well as ceasefires. The category “other” includes cases of no activity or activity that falls below the 25 battle-death threshold. This category also includes cases that do not meet other ACD criteria, for example, one side ceased to exist. The model suggests that the hazard of a peace spell breaking down is significantly higher for the categories “other” and settlement. The hazard ratios indicate that if the outcome is “other”, the hazard of peace breaking down is 417% higher than in the case of victory. Peace spells that ended with a settlement are 197% more likely to break down than the comparison category, victory. Neither the duration of the conflict, nor the intensity of the conflict (measured by the total number of battle

**TABLE 4** The survival of post-conflict peace—globally and in Africa

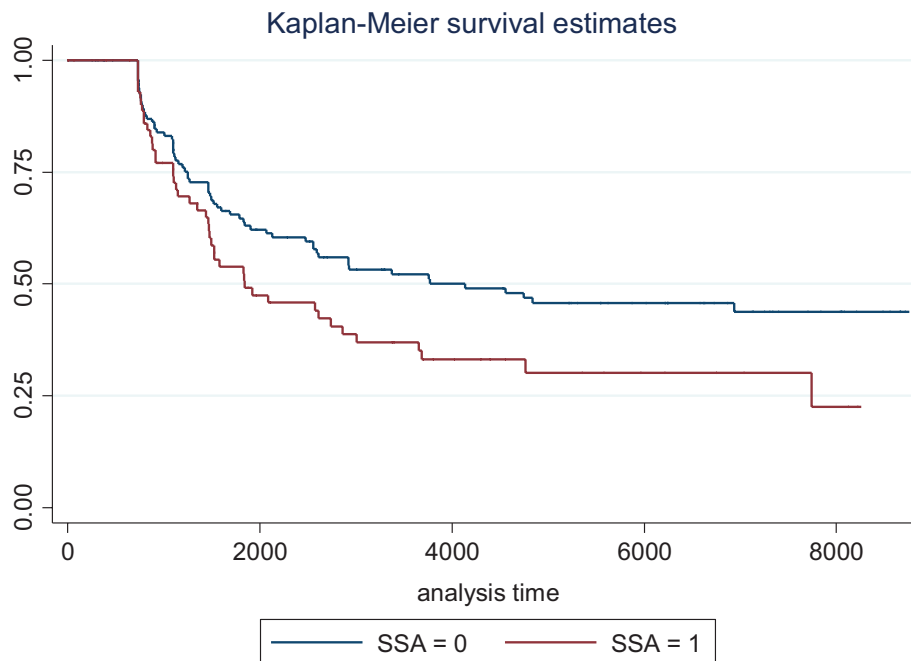
	(1)	(2)	(3)	(4)
Outcome = other	5.167*** (0.000)	5.0675*** (0.000)	4.435*** (0.000)	4.258*** (0.000)
Settlement	2.971*** (0.006)	2.833*** (0.009)	2.319** (0.034)	2.324** (0.038)
Conflict duration	1.000 (0.218)	1.000 (0.078)*	1.000 (0.344)	1.000 (0.165)
Conflict battle deaths	0.999 (0.714)	0.999 (0.443)	0.999 (0.221)	0.999 (0.123)
Sub-Saharan Africa (dummy)		1.544* (0.061)		1.610 (0.194)
Income (GDP) per capita			0.847* (0.089)	0.975 (0.854)
Peace episodes	206	206	179	179
Number of observations	1,842	1,842	1,585	1,585
Number of failures	108	108	89	89

Note: Dependent variable: Peace duration; hazard ratios reported;  $p$  values in parentheses; clustered standard errors by conflict. Test of proportionality of hazards (1):  $\chi^2 = 2.25$ ,  $p = 0.6905$ . \*, \*\*, \*\*\* Denote significance at 10%, 5%, and 1% levels, respectfully. When (2) is run on the same sample as (3) and (4) SSA remains significant.

deaths) are statistically significant. Furthermore, the Cox proportional hazard model appears to be appropriate, because the null hypothesis that the hazards are proportional cannot be rejected ( $\chi^2 = 2.25$ ,  $p = 0.6905$ ).

The second model adds a dummy for the peace spells in Sub-Saharan Africa. As indicated in Figure 3, African peace spells are more likely to break down than the peace spells outside the region. In column (2) the hazard ratio of the Africa dummy is significant and greater than one—peace spells in Africa are 54% more likely to break down.

The model in column (3) investigates the effect of income, which is added to the model presented in column (1). Income per capita is measured in purchasing power parity constant U.S. dollars, measured with a lag of 2 years and logged. The inclusion of income reduces the sample size to 179 peace episodes (corresponding to 1,585 observations). The main reason is that data collection is difficult during armed conflict and periods of instability. Thus, there are fewer socioeconomic variables available than political variables. Social scientists can determine that a country is at armed conflict (e.g., Somalia) but they are not able to collect data on population size, income, or other development indicators. The reduction in sample size is unlikely to be random, and data availability from countries with long and particularly deadly conflicts are more likely to be absent. One potential solution is the use of algorithms to fill in missing data. This was not an option chosen for this study but one simple check is whether the main empirical results are qualitatively similar when the sample size is reduced. Running the first model on the reduced sample of column (3) suggests that the main results still hold and all further models include income per capita. Income has a positive effect on the duration of peace: societies with higher per capita income have a higher chance of lasting peace. The hazard ratio is significantly below one, and an evaluation of the effect suggests that only large income changes are associated with a considerable reduction in the hazard of conflict recurrence. If a country with the minimum income (U.S.\$142 p.a.) increases its income to the average income (U.S.\$3,643) the hazard decreases by



**FIGURE 3** Are peace spells in Sub-Saharan Africa less likely to survive? [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

*Note:* Analysis time is provided in days since conflict termination. Test that Sub-Saharan African peace spells are significantly different:  $\chi^2(1) = 4.78$ ,  $\text{Pr} > \chi^2 = 0.0288$

18.3%. If a country increases its income from the average to the maximum income (U.S.\$37,113) the hazard decreases by 8.2%.

An Africa dummy is added to this model and the results are presented in column (4). The hazard ratio of the Africa dummy is no longer statistically significant at the conventional levels ( $p = 0.194$ ) and income is also no longer statistically significant. This suggests that in Africa peace spells are less likely to endure because the countries are on average much poorer. African income is on average U.S.\$1,221, but if it increased to the average non-African income of U.S.\$6,193 the hazard of peace failing would decrease by 7.26%. Thus, accounting for income goes some way towards explaining why African peace is more likely to fail. Peace is less likely to endure in Africa because the region is less wealthy, not because it is intrinsically more violent. Another factor that contributes to making peace less stable in Africa is the fact that there are slightly fewer conflicts that end in military victories.

The empirical model is parsimonious because as discussed in Section 2, previous studies suggest that very few variables are consistently correlated with the duration of peace. Here, the focus is on UNPKOs because Africa has received a high number of operations and an important question is whether these operations have a positive impact on the survival of peace and whether this effect is different in Africa.

The investigation begins with a model that includes a dummy variable for the presence of a UNPKO (Table 5, column 1). The UNPKO presence appears to reduce the risk of conflict recurrence but the hazard ratio is not significant at conventional levels ( $p = 0.167$ ). In column (2) an Africa dummy is included but the results from the previous model are qualitatively unchanged. Column (3) replicates the Caplan and Hoeffler (2017) main result: UNPKOs significantly reduce the hazard of peace failing when they are deployed in cases where the armed conflict was settled. The interaction term of peace settlements and UNPKOs has a hazard ratio of less than 1, suggesting that UNPKOs support peace settlements. The effect is considerable, for peace settlements without UNPKOs the hazard of peace ending is 180% higher but for peace settlements that are supported by UNPKOs the hazard of peace ending is about 15 percent lower. However, the reader should keep in mind that this result rests on a

**TABLE 5** Post-conflict peace survival and UNPKOs—globally and in Africa

	(1)	(2)	(3)	(4)	(5)
Outcome = other	4.488*** (0.000)	4.315*** (0.000)	4.436*** (0.000)	4.265*** (0.000)	4.249*** (0.001)
Settlement	2.526** (0.026)	2.516** (0.030)	2.804*** (0.010)	2.785*** (0.012)	2.367** (0.036)
Conflict duration	1.000 (0.381)	1.000 (0.184)	1.000 (0.416)	1.000 (0.207)	1.000 (0.156)
Conflict battle deaths	0.999 (0.277)	0.999 (0.174)	0.999 (0.240)	0.999 (0.133)	0.999 (0.131)
Sub-Saharan Africa (dummy)		1.571 (0.208)		1.558 (0.209)	1.643 (0.183)
Income (GDP) per capita	0.848* (0.103)	0.971 (0.835)	0.834* (0.075)	0.952 (0.723)	0.972 (0.837)
UNPKO (dummy)	0.597 (0.167)	0.6161 (0.184)			
Settlement*UNPKO			0.302* (0.082)	0.302* (0.082)	
SSAfrica*UNPKO					0.797 (0.685)
Peace episodes	179	179	179	179	179
Number of observations	1,585	1,585	1,585	1,585	1,585
Number of failures	89	89	89	89	89

Note: Dependent variable: Peace duration; hazard ratios reported; *p* values in parentheses, clustered standard errors by conflict.

\*, \*\*, \*\*\*Denote significance at 10%, 5%, and 1% levels, respectively.

relatively small number of observations. Only 32 out of 206 peace episodes had a UNPKO, of which 20 were deployed when the conflict episode ended in a settlement. Column (4) investigates whether the inclusion of an Africa dummy has a significant impact on this result, but this does not appear to be the case. The question whether UNPKOs have a differential effect in Africa is examined in the last column. The interaction effect between the Africa and UNPKOs dummies is insignificant, that is, there is no evidence that UN peacekeepers have a differential impact in Africa.

A logical next step in the investigation is to examine whether UNPKOs are more or less likely to stabilize peace settlements in Africa. However, including a triple interaction term of Africa, UNPKOs and settlement indicators are problematic because the number of cases in this category is very small. It is therefore more informative to look at the individual cases. Twelve non-African countries received UNPKOs in conjunction with settlements, and in eleven cases the peace endured. In contrast, in Africa eight settlements were supported by UNPKOs and out of these only two succeeded: The United Nations Mission in Sierra Leone (UNAMSIL) the United Nations Mission in Liberia (UNMIL).

The operation in Sierra Leone was tied to the Lomé Peace Agreement and in October 1999 peacekeepers were deployed to support the already existing African peacekeeping effort by the Economic Community of West African States (ECOMOG). The mission quickly turned into a disaster when, in 2000, almost 500 UN peacekeepers were kidnapped by opposition forces. Britain came to the rescue by authorizing a military intervention that resulted in freeing the kidnapped soldiers and the

disarmament of the opposition forces. In the aftermath of the debacle the UN deployed up to 17,000 troops, making UNAMSIL the largest and most expensive UN operation at the time, enabling it to provide security, carry out a comprehensive disarmament program and organize elections. The operation ended in 2005 and total cost was U.S.\$2.8 billion. The operation in Liberia (UNMIL) followed the signing of the Comprehensive Peace Agreement and lasted from 2003 until 2018. The mandate was broad and included the provision of security, a disarmament, demobilization, repatriation and a reintegration program, support for elections as well as safeguarding human rights, and humanitarian assistance. Up to 15,000 UN personnel were deployed at any one time, costing a total of U.S.\$7.5 billion for the duration of the operation.

Not only were the costs of both of these operations high, there were a number of other parallels. Both of these UN operations were deployed under Chapter VII, which enables the enforcement of peace, while traditionally most operations were deployed under Chapter VI, where conflicts should be settled by peaceful means, through negotiation, mediation, and confidence-building measures. Although both operations had this stronger emphasis on force, they maintained a very good relationship with the regimes of President Kabbah (Sierra Leone) and President Johnson-Sirleaf (Liberia). Both presidents had excellent international connections and had previously worked for the United Nations Development Programme. Both operations also collaborated closely with existing African peacekeepers and integrated some of the existing ECOMOG soldiers by “rehatting” them.

## 6 | CONCLUSION

The focus of this paper is on the analysis of peace stabilization in post-conflict countries. This is a pertinent topic because the risk of conflict recidivism is high, after about 8 years of peace half of the peace spells have broken down and societies have reverted to armed conflict. The data suggest that peace in African countries is even more fragile. In order to examine what makes peace endure in Africa and beyond, survival analysis is employed. Military victories, and to some extent peace settlements, make the peace last longer. However, 42% of conflicts are neither won nor formally settled, they continue to fester. These peace spells are most likely to break down. Higher per capita income stabilizes the peace.

The inclusion of dummy variable for Africa in the survival analysis shows that peace spells in Africa are about 60% more likely to break down. As always when an Africa dummy is included in a cross-country regression model, the question is whether it is due to an African exceptionalism. Is Africa simply more violent owing to her history and culture? This does not appear to be the case. When the model accounts for income per capita the Africa effect becomes insignificant. African peace episodes are more likely to break down because African post-conflict societies are poor. It is therefore of particular importance to the research and development community to find specific strategies to encourage income growth in post-conflict states in Africa. Increased incomes will not only improve consumption and investment in physical and human capital but will also have the side effect of stabilizing the peace.

Since the end of the Cold War the international community has put considerable resources into supporting peace in Africa. Currently 86% of the UN peacekeeping budget is spent in the region and it hosts about 83% of all blue helmets. The survival analysis suggests that UN peacekeeping operations on their own do not appear to stabilize the peace but that they do have a peace enhancing effect in conjunction with peace settlements. There is no evidence that the impact of UNPKOs in Africa is systematically different from the rest of the world. Given the small number of observations, the question whether UNPKO supported settlements are more or less likely to endure in Africa could not

be addressed. Peace settlements are as common in Africa as in the rest of the world and in order to support peace, African combatants should receive assistance to come to negotiated settlements and UN peacekeepers should support these settlements to overcome the inherent commitment problems. Two cases in Africa, the UNPKOs in Sierra Leone (UNAMSIL) and Liberia (UNMIL), suggest that some key factors can considerably contribute to peace stabilization. UN peacekeeping has to be well resourced, there should be a strong mutually supportive relationship with the host government and peacekeeping should be pursued in partnership with other regional organizations (e.g. ECOMOG). Peacekeepers in Africa have to tackle particularly difficult problems owing to the complexity of local power relationships (Williams, 2016, ch. 10). These are rooted in the colonial and post-colonial history of state formation (Herbst, 2014; Reid, 2011). These historical processes enabled a high concentration of political power in some African states, supporting the formation of a neopatrimonial system where powerful patrons use state resources to buy the loyalty of individuals (Bratton & Van de Walle, 1994). In addition, global political power shifts and economic shocks contributed to state failure in Africa (Bates, 2015). While none of this history can be undone, it is important to be mindful of this complexity and not be overly optimistic that one measure (e.g., negotiated settlements, UNPKOs, power sharing or elections) can stabilize the peace.

Internal armed conflict remains a challenge for many African countries and after the end of a conflict they face the twin challenge of development and an increased risk of renewed armed conflict. While this article uses quantitative methods, we should be mindful of the limitations of this approach. Defining peace is problematic and here it is simply defined as the absence of state-based armed conflict. This disregards other forms of violence such as inter-group violence and one-sided violence. Furthermore, the absence of violent events does not equate to positive peace, or social justice (Galtung, 1969). This would require a more equal distribution of political power and economic resources. Although the present quantitative study cannot examine positive peace, the analysis is carried out in this spirit. Development and security are mutually reinforcing and a more detailed understanding can be used in processes of peace stabilization. Because of the conceptual problems future research should combine the methods from quantitative and qualitative approaches. This is also important because the different contexts can never be fully quantified (e.g. leadership, history) and case studies can provide analysis when the sample size is too small to provide reliable statistical evidence. A stronger collaboration between quantitative and qualitative research should enable the research community to provide more reliable evidence to provide policy advice on matters of global importance.

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## ENDNOTES

<sup>1</sup> Based on the Armed Conflict Database, 34% of all armed conflicts took place in Africa (available at <http://ucdp.uu.se/downloads/>, author's calculations). Further discussion of the data appears in Section 3. Following others in the development literature “Africa” refers to Sub-Saharan Africa only (e.g., Easterly & Levine, 1997; Hoeffler, 2002; Addison, 2003).



- <sup>2</sup> The Human Development Indicator is available for 2015 for 188 countries, in the bottom quintile (38 countries) only five countries are not Sub-Saharan African countries. Author's calculations.
- <sup>3</sup> See Department for International Development (DFID, 2005, p. 7). The assumption of a strong nexus between peace and development in Africa has also been criticized (see, e.g., Willett, 2005).
- <sup>4</sup> Seminal articles include Collier and Hoeffler (2004), Fearon and Laitin (2003), Hegre, Ellingsen, Gates, and Gleditsch (2001) and overviews of this literature are provided by Blattman and Miguel (2010) and Hoeffler (2012).
- <sup>5</sup> On ethnic groups the Ethnic Power Relation Datasets provide detailed information (retrieved from <https://icr.ethz.ch/data/epr/>).
- <sup>6</sup> The following discussion is based on Walter (2009).
- <sup>7</sup> Hegre, Hultman, and Nygård (2019) also find support for the hypothesis that UNPKOs stabilize the peace. However, they do not employ survival analysis but analyze the likelihood of transitions between peace, minor conflict, and war. Their results suggest that UNPKOs make an “upward” transition out of peace less likely.
- <sup>8</sup> For democratic regimes, see Hegre and Fjelde (2010), for elections see Flores and Nooruddin (2012) and Collier et al. (2008), for characteristics of the combatant group(s) see Zeigler (2016), Rudloff and Findley (2016), and Kreutz (2018), and for power sharing see Hartzell and Hoddie (2003), Mukherjee (2006), Cammett and Malesky (2012), and Martin (2013).
- <sup>9</sup> Galtung (1990) makes the distinction between three types of violence: direct violent events, the process of structural violence (e.g., exploitation, marginalization, fragmentation), and cultural violence. The latter is a permanence given the slow transformation of basic culture—examples include religion, ideology, and language. For further discussion of positive and negative peace, see Galtung (2008), and for criticism of Galtung's theory, see, for example, Boulding (1977).
- <sup>10</sup> For more discussion, see Gleditsch, Wallensteen, Eriksson, Sollenberg, and Strand (2002).
- <sup>11</sup> The version used for this research is the UCDP Conflict Termination Dataset, version 2015.
- <sup>12</sup> For further discussion, see Pettersson and Eck (2018).
- <sup>13</sup> For example, Nigeria had no state-based conflict during 1999, but 2,704 people were killed owing to one-sided violence, many of them were victims of a massacre committed by the Nigerian army in the village of Odi in the Niger Delta. A further 1,014 fatalities arose from nine separate nonstate violent conflicts in the same year. (Source: UCDP One-sided Violence Dataset and UCDP Non-state Violence Dataset, retrieved from <http://ucdp.uu.se/downloads/>.)
- <sup>14</sup> Organisation des Nations Unies au Congo (OONUC), 1960 to 1964.
- <sup>15</sup> The agreement was signed on October 4, 1992, but the end of the conflict episode is coded for October 19, 1992.
- <sup>16</sup> A ceasefire started on November 10, 2000, the signing of the peace agreement followed on May 15, 2001 and the end of the conflict is dated as December 20, 2001.
- <sup>17</sup> The end of a conflict episode in Somalia is dated as December 20, 1996 and the signing of the peace agreement took place on December 22, 1997 (this peace episode broke down in 2001).
- <sup>18</sup> UCDP Battle-Related Deaths Dataset v.5-2015 (retrieved from <https://pcr.uu.se/research/ucdp/ucdp-data/>).
- <sup>19</sup> For a critical discussion of these estimates see Fazal (2014), Spagat, Mack, Cooper, and Kreutz (2009), and Spagat (2010).
- <sup>20</sup> For the period 1989 to 2013 the ACD lists 241 different conflicts, 27 were ongoing at the end of 2013, three were judged to have terminated on December 31, 2013 because the violence was below the threshold of 25 battle deaths during 2014. This leaves 211 conflicts that terminated during 1989 to 2013.
- <sup>21</sup> Other UNPKOs have been accused of misconduct, for example, of sexual violence against women and children in the former Yugoslavia, Haiti, Dafur, and the DRC. More information available from <http://www.codebluecampaign.com>. The Code Blue Campaign is a pressure group with the aim to end immunity for sexual exploitation and abuse by UN peace-keeping personnel.
- <sup>22</sup> This excludes special political missions that are headed by the Department of Political Affairs (DPA). Examples include the United Nations Assistance Mission in Afghanistan (UNAMA, 2002–ongoing) and the United Nations Support Mission in Libya (UNSMIL, 2011–ongoing).
- <sup>23</sup> United Nations Angola Verification Mission (UNAVEM), 1989 to 1997, and United Nations Transition Assistance Group (UNTAG), 1989 to 1990.

- <sup>24</sup>To be specific, the survivor function takes a value of 0.5 at 2,920 days (7.99 years).
- <sup>25</sup>The outcome was not coded for five conflicts, reducing the the number of conflicts included in the regression analysis to 206. The number of observations is not exactly the same as in Caplan and Hoeffler (2017) as a result of correcting some coding problems stemming partly from Kreutz (2010) and partly from Caplan and Hoeffler (2017). These corrections do not cause a qualitative change in the main results.
- <sup>26</sup>In the macroeconomic literature the comparison of outcomes across regions typically starts by including regional dummies (see, e.g., Easterly & Levine, 1997; Hoeffler, 2002).
- <sup>27</sup>See, for example, Walter (2014) and Kreutz (2018). Caplan and Hoeffler (2017) investigate the impact of territorial conflict, ethnic conflict, growth, remittances, aid, polity indicators, regional autonomy, elections, as well as measures of vertical and horizontal inequality. None of these variables were found to be robustly correlated with the duration of peace.
- <sup>28</sup>In addition to a UNPKO dummy Caplan and Hoeffler (2017) also examine the impact of all uniformed personnel, the impact of troops, police, observers, their mandate, the nature of the mission (e.g., disarmament demobilization, and reintegration), and the number of contributors. However, they find mainly insignificant relationships.
- <sup>29</sup>Cleves et al. (2010) provide a guide to the interpretation of interaction terms (see pp. 186–189). They stress that the inclusion of interaction terms does not necessitate the inclusion of the corresponding main effects. The shift of the baseline hazard is calculated in the following way: the coefficient estimates are simply the natural logarithms of the hazard ratios. For settlement the coefficient is  $\ln(2.6714) = 1.0310$  and for the interaction term UNPKO\*settlement the coefficient is  $\ln(0.3017) = -1.1982$ . The hazard ratio for observations that experienced a settlement and a UNPKO is thus  $\exp(1.0310 - 1.1982) = 0.846$ .
- <sup>30</sup>Discussion of UNAMSIL is based on Olonisakin (2015).
- <sup>31</sup>Discussion of UNMIL is based on Jennings (2015).
- <sup>32</sup>For a critical discussion of Nigeria's contribution to ECOMOG, see Olonisakin (2015). According to her account, Nigeria's contribution to ECOMOG decreased dramatically after President Obasanjos' election and there were also serious concerns regarding the Nigerian soldiers' involvement in illegal diamond mining and payments that propped up the opposition forces of the Revolutionary United Front (RUF).

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## APPENDIX

TABLE A1 UN peacekeeping operations (1948–2017)<sup>a</sup>

Host country/region	Mission abbreviation	Start date	End date	SSA
Middle East	UNTSO	01/05/1948	31/12/2017	0
India/Pakistan	UNMOGIP	01/01/1949	31/12/2017	0
Egypt/Israel	UNEF I	01/11/1956	01/06/1967	0
Lebanon	UNOGIL	01/06/1958	01/12/1958	0
Congo	ONUC	01/07/1960	01/06/1964	1
West New Guinea	UNSF	01/10/1962	01/04/1963	0
Yemen	UNYOM	01/07/1963	01/09/1964	0
Cyprus	UNFICYP	01/03/1964	31/12/2017	0
Dominican Republic	DOMREP	01/05/1965	01/10/1966	0
India/Pak	UNIPOM	01/09/1965	01/03/1966	0
Egypt/Israel	UNEF II	01/10/1973	01/07/1979	0
Syria/Israel	UNDOF	01/06/1974	31/12/2017	0
Lebanon/Israel	UNIFIL	01/03/1978	31/12/2017	0
Afghanistan	UNGOMAP	01/05/1988	01/02/1990	0
Iran/Iraq	UNIIMOG	01/08/1988	01/02/1991	0
Angola	UNAVEM I	01/01/1989	01/06/1991	1
Namibia	UNTAG	01/04/1989	01/05/1990	1
Central America	ONUCA	01/11/1989	01/01/1992	0
Angola	UNAVEM II	01/03/1991	01/02/1995	1
W. Sahara	MINURSO	01/04/1991	31/12/2017	0
Iraq/Kuwait	UNIKOM	01/04/1991	01/10/2003	0
El Salvador	ONUSAL	01/07/1991	01/04/1995	0
Cambodia	UNAMIC	01/11/1991	01/03/1992	0
Bosnia/Croatia	UNPROFOR	01/02/1992	01/05/1995	0
Cambodia	UNTAC	01/02/1992	01/09/1993	0
Somalia	UNOSOM I	01/04/1992	01/05/1993	1
Mozambique	UNOMOZ	01/12/1992	01/12/1994	1
Somalia	UNOSOM II	01/05/1993	01/05/1995	1
Uganda/Rwanda	UNOMUR	01/06/1993	01/09/1994	1
Georgia	UNOMIG	01/08/1993	01/06/2009	0
Haiti	UNMIH	01/09/1993	01/06/1996	0
Liberia	UNOMIL	01/09/1993	01/09/1997	1
Rwanda	UNAMIR	01/10/1993	01/05/1996	1
Chad/Libya	UNASOG	01/05/1994	01/06/1994	1
Tajikistan	UNMOT	01/12/1994	01/05/2000	0
Angola	UNAVEM III	01/02/1995	01/06/1997	1

(Continues)

TABLE A1 (Continued)

Host country/region	Mission abbreviation	Start date	End date	SSA
Croatia	UNCRO	01/05/1995	01/01/1996	0
Bosnia	UNMIBH	01/05/1995	01/12/2002	0
Macedonia	UNPREDEP	01/05/1995	01/02/1999	0
Croatia (Prevl.)	UNMOP	01/01/1996	01/12/2002	0
Croatia (E. Slavonia)	UNTAES	01/01/1996	01/01/1998	0
Haiti	UNSMIH	01/07/1996	01/07/1997	0
Guatemala	MINUGUA	01/01/1997	01/05/1997	0
Angola	MONUA	01/07/1997	01/02/1999	1
Haiti	UNTMIH	01/08/1997	01/12/1997	0
Haiti	MIPONUH	01/12/1997	01/03/2000	0
Croatia (E. Slavonia)	UNPSG	01/01/1998	01/10/1998	0
C. African Rep.	MINURCA	01/04/1998	01/02/2000	1
Sierra Leone	UNOMSIL	01/07/1998	01/10/1999	1
Kosovo	UNMIK	01/06/1999	31/12/2017	0
Sierra Leone	UNAMSIL	01/10/1999	01/12/2005	1
E. Timor	UNTAET	01/10/1999	01/05/2002	0
Dem. Rep. of Congo	MONUC	01/11/1999	01/06/2010	1
Ethiopia/Eritrea	UNMEE	01/07/2000	01/07/2008	1
E. Timor	UNMISSET	01/05/2002	01/05/2005	0
Liberia	UNMIL	10/03/2003	31/12/2017	1
Cote D'Ivoire	UNOCI	01/04/2004	01/06/2017	1
Burundi	ONUB	01/05/2004	01/12/2006	1
Haiti	MINUSTAH	01/06/2004	01/10/2017	0
Sudan	UNMIS	01/05/2005	01/07/2012	1
E. Timor	UNMIT	01/08/2006	01/12/2012	0
Sudan (Darfur)	UNAMID	01/07/2007	31/12/2017	1
CAR/Chad	MINURCAT	01/09/2007	01/12/2010	1
Dem. Rep. of Congo	MONUSCO	01/07/2010	31/12/2017	1
Sudan (Abyei)	UNISFA	01/06/2011	31/12/2017	1
South Sudan	UNMISS	01/07/2011	31/12/2017	1
Syria	UNSMIS	01/04/2012	01/08/2012	0
Mali	MINUSMA	01/07/2013	31/12/2017	1
Central African Republic	MINUSCA	01/04/2014	31/12/2017	1

Note: All UNPKOs between 1948 and 2017. An end date of December 31, 2017 indicates that the operation was ongoing at the end of 2017. <sup>a</sup>All data are available from the authors upon request.

Source: UN. [https://peacekeeping.un.org/sites/default/files/unpeacekeeping-operationlist\\_1.pdf](https://peacekeeping.un.org/sites/default/files/unpeacekeeping-operationlist_1.pdf).