Deploying to Protect:

The Effect of Peacekeeping Troop Deployments on Violence Against Civilians

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Abstract

Do UN peacekeeping forces protect civilians from harm in post-war environments? Current evidence suggests that the answer to this question is yes. But extant research mostly examines this relationship at the country-level and consequently has logical difficulty tracing decreases in civilian fatalities to actual peacekeeper activities. We would have more confidence in the ability of peacekeepers to limit harm and protect non-combatants if the reduction in violence occurred locally where blue helmets were positioned. Using original geocoded data of yearly UN deployments in four Sub-Saharan African conflicts (Sudan, South Sudan, Democratic Republic of Congo, and Ivory Coast), we find that peacekeeping units go to violent post-war areas and reduce the level of civilian harm almost immediately. But, we find peacekeeping units more responsive to rebel violence against civilians than government violence, which indicates a reluctance among peacekeepers to confront government forces that target civilians. While host nation consent is crucial for the success of a peacekeeping mission, the findings from this study cautions against nurturing illiberal regimes by failing to check government atrocities. The failure to confront government abuse can jeopardize long-term peace and reconciliation.

Introduction

Political violence remains all too prevalent in many societies in Sub-Saharan Africa, South Asia, and the Middle East. Rebel groups in the Democratic Republic of Congo, for example continue to spar with Joseph Kabila's security forces, displacing millions of civilians and exposing them to violence, hunger, and disease. The South Sudan has also witnessed intense fighting despite a peace agreement signed in 2015, which led to the formation of a national unity government shortly thereafter. In the capital, Juba, civilians have been targeted by both government forces and rebel fighters, forcing thousands to flee their homes and stretching limited resources at UN refugee camps to the breaking point (Roth 2017).¹ Fifty-one armed conflicts were active in 2016, making it the second most conflictual year ever recorded in the post-WWII era and the extent of human suffering in many of these conflicts has increased significantly since 2011.² The United Nations has been tasked to resolve state-based conflict and stabilize post-war environments.³ In particular,

³ We use *post-conflict* cases to indicate to countries where peacekeepers have deployed after the end of civil wars. UN Peacekeeping in all four country-cases in this paper started after the end of major civil wars, and in some of these countries (like South Sudan), armed conflicts have raged even after the deployment of peacekeepers. But our unit of analysis in this paper is grid-cell year, not country year. We explore the effect of conflict intensity on civilian victimization by conceptualizing armed clash between rebels and government forces (with at least one fatalities). In appendix, we show the main results by changing the clash threshold to 10 and 50.

¹ See <u>https://www.hrw.org/world-report/2017/country-chapters/south-sudan</u>).

 $^{^{2}}$ The year 2015 tied the highest post-war conflict level (1991) with 52 active state-based conflicts. Battle deaths have also generally increased. From 2001 to 2010 the average number of battle deaths from all state-based conflicts was approximately 480. After 2010 the average jumped to near 1,500.

safeguarding civilians has become a core responsibility of UN peacekeeping operations, although a mandate the UN acknowledges remains difficult to implement. Still, the UN insists that peacekeeping forces are an essential tool for helping countries transition away from fighting, and despite intense criticism of peacekeepers and overall mission management,⁴ evidence supporting the efficacy of UN operations in building peace in post-war environments continues to grow.

Recent studies suggest that peacekeeping operations are indispensable for postwar development and peacebuilding. The presence of blue helmets on the ground appears to lengthen peace after civil war (Gilligan and Sergenti 2008), prevent the spatial spread of conflict (Beardsley and Gleditsch 2015), and reduce civilian targeting (Hultman, Kathman, and Shannon 2013). Further, the size of peacekeeping deployments may help limit postwar violence (Hultman 2013), although evidence also shows that symbolic displays of force restrain hostilities (Fortna 2004; Phayal 2018). Still, despite a growing sense that peacekeeping operations support conflict resolution and postwar peacebuilding, two important theoretical and empirical questions remain unanswered, which we address in this paper. First, evidence for UNPKO civilian protection looks persuasive when we examine the trend at the country level (Hultman, Kathman, and Shannon 2013). But we would have more confidence in the ability of peacekeepers to limit harm and protect non-combatants (and more confidence in the empirical results from the study) if the reduction in violence occurred locally around areas where blue helmets were positioned. Second, are peacekeepers equally effective in preventing violence against civilians by government and rebel forces alike? Or, are they better at stopping or deterring civilian violence by one actor rather than the other. Answers to these questions

⁴ See <u>http://www.nytimes.com/2013/10/11/world/un-questions-criticism-of-its-peacekeepers.html</u>.

have important implications for optimizing the role and contribution of military peacekeepers in UN peacekeeping.

We build on existing research by Ruggeri, Dorussen, and Gizelis (2017), Costalli (2014), and Hultman et al (2013) to develop our theoretical argument and design our empirical investigation. Ruggeri et. al, for example, model peacekeeping missions sub-nationally, but their study explores the duration of conflict rather than the amount of violence suffered or the harm inflicted on civilians. Hultman and colleagues, in contrast, specifically examine violence against civilians yet do so at the country level and consequently cannot determine whether peacekeepers are actively responsible for the observed decreases in civilian harm.⁵ Costalli's research design seemingly complements our own most closely. His disaggregated analysis of troop deployments and violence reduction in Bosnia is comparable to our investigation of peacekeeper effectiveness in four Sub-Saharan African conflicts. But where Costalli focuses on wartime conditions, we examine the post-war environment and where Costalli limits his study to a single case, we assess peacekeeping effectiveness in four separate conflicts (Darfur, South Sudan, Ivory Coast, and the Democratic Republic of Congo). Using original geocoded data of yearly UN troop deployments, we find that peacekeeping combat units go to violent post-war areas and reduce the level of civilian harm almost immediately. We also observe that peacekeeping units prevent violence against civilians inflicted by both government and rebel forces. But, we find that they are more responsive to violence against civilians by rebels than by government forces, which demonstrates a reluctance among peacekeepers to confront host-nation governments. Such hesitancy in challenging government violence can undermine efforts at building long-term and sustainable peace in countries transitioning out of civil war.

⁵ Hultman et al. (2013) also examine peacekeeping effectiveness *during* civil war, similar to Costalli but different from our focus on post-war conditions.

A recent study focuses on the effect of peacekeepers on civilian victimization (Fjelde, Hultman, and Nilsson 2019). It is reassuring that the findings of the studies are similar to ours and we certainly claim that our study complements theirs. But there are some key differences. The authors look at the case of African Peacekeeping deployments from 2001 to 2011, using grid-cell as the unit of analysis. They find that the presence of peacekeepers is more likely to reduce one-sided violence against civilians by the rebels, but not those perpetrated by the government. While our finding is similar, there are three key differences in our theoretical argument and methodological approach. First, we take into consideration the occurrences of armed clashes and how it can affect peacekeeping deployments and civilian targeting. Since UN peacekeepers are expected to act in response to high profile clashes, we expect they deployment is a function of civilian deaths conditioned by occurrences of such armed clashes. Once they are deployed, civilian atrocities peak during the armed clashes, but peacekeepers are less likely to intervene during active conflicts.6 It is therefore imperative to consider the conditional effect of clashes while hypothesizing how deployment might affect civilian targeting. Second, Fjelde, Hultman, and Nilsson (2019) use pooled logit model with monthly level data to estimate the effect of deployment on civilian killings. But one weakness of this approach is that it may not take into account time-invariant unobserved heterogeneity (Wooldridge 2012, 460). For our data, Hausmann test reveals that a fixed effects model is better compared to using a pooled model or random effects model. Finally, one of the key factors that tends to bias the result is the number of population in grid-cells, since both deployment and civilian killings are likely to be in more populated areas. The grid-cell population data that the

⁶ Research by ---- suggests that presence of peacekeepers can lower civilian fatalities in active conflicts. But when we compare heterogenous sample consisting of grid-cells with or without armed clashes, we expect armed clashes to have a much higher level of civilian targeting than in cases without clashes, with or without the presence of peacekeepers.

authors use are static. We use nightlights as a proxy to control for the population density of a gridcell.

The Efficacy of Peacekeeping Missions

The commitment concerns that inhibit civil war settlement pose significant challenges for peacemaking and peacebuilding after civil wars.⁷ Former rebels, in particular, fear that government forces will ignore ceasefire agreements and target former fighters that are now disarmed and defenseless. For example, Former Prime Minister of Rhodesia, Ian Smith, initially sought to retain control of critical security ministries in negotiations over future control of the state. Robert Mugabe and his Zimbabwe African National Union, however, feared Smith would use security forces to retain white control even if the Patriotic Front was given parliamentary authority. Mugabe is reported to have said: "it would be ridiculous for the settlers who were murdering the Zimbabweans to be entrusted with security during the crucial transitional period" (quoted in Walter 2002, 125). Only after Great Britain promised to supervise the political transition and place Commonwealth forces on the ground in Zimbabwe did the two sides finally agree to a deal.

Third party intervention was crucial to conflict resolution in Zimbabwe and increasingly evidence shows that the deployment of peacekeepers remains critical to durable peace. Walter (2002, 26) maintains that "third parties can guarantee that groups will be protected, violations detected, and promises kept." Such protection reduces fears of defection among former combatants and thus helps ensure that intended or unintended violence will not lead to settlement collapse. Studies by both

⁷ Quinn, Mason, and Gurses (2007) observe 41% of civil war cases return to conflict while Joshi (2013) finds the rate to be 48%.

Gilligan and Sergenti (2008) and Beardsley (2013) also show that UN interventions prolong peace following civil conflict and the effects are sizable. Gilligan and Sergenti (2008, 124) show an 85% reduction in the hazard rate of renewed war when peacekeepers are deployed in a country and Beardsley (2013) concludes that UN military units deployed in post-conflict environments help prevent a return to fighting in the long run.⁸ It appears that boots on the ground alleviate vulnerabilities and thus help build trust among former combatants that remain wary of being manipulated or exploited.

Still, both Gilligan and Sergenti and Beardsley use blunt measure of peacekeeping and it is not evident how peacekeepers directly affect the extent of one-sided violence against civilians. Their analyses remain aggregated to the country level and ignore the amount of political violence that occurs in post-war environments. Both studies, for example, conclude that peacekeepers help prevent renewed fighting, which implicitly suggests deployed military units actively stop and or deter fighting. However, without noting the location of both troop deployments and violence, it is difficult to conclude that peacekeepers are responsible for any changes observed. Further, by focusing on the return to war, both studies seemingly ignore lower level violence directed at noncombatants but meant to have political effect. The Democratic Republic of Congo was formally not at war in 2016. But nonetheless 163 deaths from political violence occurred (Allansson, Melander, and Themnér 2017). Neither study considers these human costs.

⁸ Beardsley (2013) also finds that peacekeeping missions deployed during conflict have little long-term effect in reducing the hazard of future conflict if troops do not remain on the ground during the post-war phase. Former combatants remain vulnerable after a conflict ends. Peacekeepers can shield groups from harm and facilitate cooperation. But this evidence also suggests that it remains difficult to transition away from peacekeeping and establish durable and inclusive political structures.

We consider disaggregation an important advance in peacekeeping research and propose that civilian protection at the local level is a more accurate measure of assessing effectiveness of peacekeepers. To be sure, separate components within a contemporary peacekeeping mission have different objectives and goals, all of which tend to converge towards the ultimate aim of maintaining peace in a post-conflict country (Diehl and Druckman 2010). Maintaining peace results from contributions by both military and non-military peacekeeping units. A number of non-military offices, such as the Office of Rule of Law, Electoral Assistance Division, DDR, or other non-DPKO bodies like the Office of Coordination of Humanitarian Affairs, are all important in achieving mission success, but their efforts often confound the contributions of military peacekeepers when it comes to the overall goal of achieving sustainable peace at the country level. For instance, larger peacekeeping deployments in a country suggests that the mission is a priority for the international community, and therefore a larger troop presence tends to occur simultaneously with diplomatic efforts by key actors, making it difficult to disentangle causal effects. Similarly, counting total UN personnel in the country ignores the distinction between combat forces and diplomatic and bureaucratic staff. Since our interests relate specifically to the presence of peacekeeping forces and their ability to reduce civilian harm, we get a more accurate estimate of the effectiveness of peacekeepers with disaggregated local level data on peacekeeping deployments and levels of civilian harm. Yet, while recent micro-level studies have focused on the efficacy of peacekeepers in the duration or containment of conflict, they do not specifically evaluate the role that peacekeepers play in protecting civilians from harm (Beardsley and Gleditsch 2015; Costalli 2014; Ruggeri, Dorussen, and Gizelis 2017). Our research seeks to fill this gap.

Anecdotal evidence suggests that deploying peacekeeping units is effective in protecting civilians from violence. The example of Shabunda territory in Eastern DRC is a case in point.

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Shabunda, roughly the size of Belgium, is one of the eight territories of South Kivu province. The region is remote but has abundant mineral resources. According to Weyns, Metthews and Hoex (2016), Shabunda had 61 artisanal mines as of 2015, out of which 45 were gold mines, 17 were cassiterite mines and 11 were coltan mines. Shabunda was frequently mentioned in the media due to the presence of violent groups in the region such as FDLR, Mai-Mai, or the more recent self-defense militias called the Raïa Mutomboki ('Outraged Citizens') (Stearns 2013). Reports from the region document rebel atrocities like sexual violence and civilian killings in the Shabunda territory.⁹

In early 2013, UN peacekeepers established an operating base in the Shabunda territory. Since there was no such base prior to this, we can compare the level of violence in the region before and the after the deployment in order to examine the impact of peacekeepers. There were 9 major incidents where 60 or more civilians were killed (63 in the years 2011 and 2012 alone).

From January 2013 to the end of 2016, after peacekeepers deployed in the region, only five civilian killings were reported. This abrupt decrease in violence against civilians is in sharp contrast to the overall trend of increasing violence levels elsewhere in the country. According to ACLED data, overall civilian fatalities due to rebel violence in the country increased fivefold from 2011 to 2016. This example suggests that the presence of peacekeepers positively contributes to civilian protection in post-war environments. In the following section, we characterize the logic of civilian protection by local peacekeeping units. From this discussion, we develop hypotheses that are systematically tested against data from four peacekeeping missions in Sub-Saharan Africa.

⁹ OXFAM has documented accounts of internally displaced people from Shabunda region, who also mention such atrocities (Dixon 2012). Also see 2012 report by MONUSCO's UN Joint Human Rights Office (UNJHRO), available: <u>http://www.ohchr.org/Documents/Countries/CD/UNJHRO_HRVMasisi_en.pdf</u> [Accessed March 7, 2018].

Are Peacekeepers Deployed in Response to Violence Against Civilians?

Studies show that peacekeepers get deployed to violent regions. At the cross-national level, Gilligan and Stedman (2003, 44) find that peacekeepers are more likely to intervene in countries with severe conflicts.¹⁰ Fortna (2004) argues similarly that the deployment of peacekeepers helps sustain the peace, especially when considering the fact that they are deployed in the most difficult cases. More recent micro-level studies by Costalli (2014) and Ruggeri et al (2016) also show peacekeepers deploying to violent areas (see also Gilligan and Stedman 2003). However, while deploying to violent areas suggests going to areas where two armed groups are fighting with each other, a more important concern in terms of policy and mission mandate is whether or not peacekeepers are getting deployed in response to violence against civilians. Are they going to regions where they are needed the most?

A substantive criticism laid against the UN in general and peacekeeping operations more specifically has been the inaction or delay of peacekeepers in responding to crises. Extreme examples include the failure of peacekeepers in Rwanda, Bosnia-Herzegovina and more recently the South Sudan.¹¹ According to Jett (2000, 50), peacekeepers on the ground neither have the incentive or the

¹⁰ Conflict severity is measured in terms of the number of people killed in conflict

¹¹ For instance, as cited in the Stimson report, "in August 2011, and again from December 2011 to January 2012, intercommunal violence between the Murle and Lou Nuer ethnic groups in Jonglei State led to the estimated deaths of hundreds of people. On the ground, UNMISS was criticized for its inadequate response to the violence. In 2012, the Security Council expressed "deep concern" regarding this violence" (Gorur and Vellturo 2017, 13).

commitment to fulfill the mission. Since a majority of the troops are from developing countries, economic incentives are often key for both troop-contributing countries and individual peacekeepers. Moreover, from a political standpoint, troop-contributing countries want to get their peacekeepers back home safely and this may imply shouldering less risk.¹² Still, while these incentive mechanisms encourage inaction, there are other reasons to think that peacekeepers take their civilian protection mandate seriously.

Peacekeepers are required to incorporate protection strategies in their mission plans and during the pre-deployment training, with the aim to ensure the effective safety for civilians under imminent threat of physical violence. The civilian protection mandate originated as a consequence of failures to respond effectively to the Rwandan and Bosnian crises, and was first introduced to address Sierra Leone's ongoing peacekeeping mission in 1999. The DPKO-DFS Operational Concept on the Protection of Civilians in UN Peacekeeping Operations was introduced in 2010, which provided a more concrete policy and clearer guideline for peacekeepers. As an indication of continued discussions on the topic, the operational concept has been superseded since 2015 by a more recent and refined policy.¹³ Today, after about a decade since it was first introduced, civilian protection is an important component of all peacekeeping missions (Nasu 2011).¹⁴ Accordingly, peacekeepers now are clearer than before on their role to protect civilian lives.

Failure to react against civilian atrocities can be costly, not only for the UN as an organization but also for a peacekeeping mission in the field. It can range anywhere from international

¹² See <u>https://www.theguardian.com/world/2015/sep/17/un-united-nations-peacekeepers-rwanda-bosnia</u>.

¹³ 2015-07 Policy on protection of civilians in peacekeeping operations \rightarrow citation?

¹⁴ Security Council's meeting record on Protection of Civilians available: <u>www.securitycouncilreport.org/protection-of-</u> <u>civilians/</u> [Accessed March 11, 2018]

condemnation of the UN to loss of funding for a particular mission. At the local level, the consequences due to such costs are more indirect, and they boil down to two reasons that propel peacekeepers into taking risks in saving civilian lives. First, the countries sending troops have their reputation at stake and they want their troops to accomplish the task. Since the mandate to protect civilians is a norm and the risk associated with deployment is commonly known, both the troop contributing countries and the peacekeepers are less likely to blatantly refuse to deploy when needed. Second, if peacekeepers fail in their duty to protect civilian lives, it may lead to local protests and animosity,¹⁵ creating significant challenges for carrying out daily peacekeeping-related tasks. In light of these costs, it is often in the best interest of the peacekeepers to get deployed in areas either as a pre-emptive measure or as a response to civilian atrocities. The discussion above leads to our first conjecture:

H1: Peacekeeping units at the local level are more likely to get deployed in areas where there are higher instances of violence against civilians.

Armed Clash and peacekeeping deployment

The task of protecting civilians is more challenging for peacekeepers when fighting erupts between government forces and former or active rebel groups. Peacekeeping mandates often restrain peacekeepers from intervening when there is an active combat between government forces and other political actors. But, such fighting often increases civilian death tolls and attracts media attention that helps foment political action among regional and international actors and puts pressure on

¹⁵ As mentioned above, when the rebel group M-23 captured Goma in Democratic Republic of Congo, there were widespread protests in the region, as the locals were angry because of UN peacekeeper inaction.

peacekeepers to respond to the violence and end civilian suffering. Macfarlane, Thielking and Weiss (2004, 988) discuss how media coverage of high profile crises can invoke responsibility to protect. International pressure urging UN action becomes more acute as more civilians suffer from such high profile clashes between former combatants. In November 2012, for instance, the rebel group M23, composed of mutineers from the Congolese Army, was advancing to seize the city of Goma but UN peacekeepers in the region failed to mount resistance, arguing that the responsibility to contest M23's advance lay with the DRC military.¹⁶ But, after the rebel group took control of the city, the peacekeepers faced intense criticism for their inaction.¹⁷ Amidst mounting international pressure to act against the rebel takeover, two major developments occurred over ensuing months. First, the key players in the region held several rounds of dialogue in Kampala, hosted by the Chair of the International Conference on the Great Lakes Region. As a result of this dialogue, neighboring countries Rwanda and Uganda, which had been supporting the M23 rebel groups initially,¹⁸ pledged to cooperate and support the Armed Forces of the Democratic Republic of the Congo (FARDC) in their fight against the rebels (S/2013/773).

Second, the UN for the first time authorized the launching of a Force Intervention Brigade (FIB) in support of the FARDC.¹⁹ FIB would operate under the MONUSCO Force Commander and

¹⁶ MONUSCO probably saved lives by not engaging M23 in Goma since urban fighting would have put thousands of civilians at risk (Rosen 2013, 90).

¹⁷ http://world.time.com/2012/11/26/defining-peacekeeping-downward-the-u-n-debacle-in-eastern-congo/

¹⁸ See Letter from the Group of Experts on the DRC to the Chair of the Security Council Committee, S/2012/843.

¹⁹ The FIB consisted of military units from three countries from Southern African Development Community: South Africa, Tanzania and Malawi. Under the direct operational command of the MONUSCO Force Commander, its role was mainly to carry out offensive actions on its own or jointly with FARDC (See Special Report of the Secretary General on the Democratic Republic of the Congo and the Great Lakes Region, S/2013/119).

assist the host nation army through training and direct support in combatting the rebel group. Nearly one year later, when M23 rebels advanced to re-capture Goma in August 2013, FARDC was able to contest the rebel advance, eventually leading to the disbandment of the M23 rebel group.²⁰ UN peacekeepers were also given authority to use any means necessary to ensure the safety of civilians (Ruggeri, Dorussen, and Gizelis 2016).²¹ More importantly, the number of civilians victimized by the rebels in the subsequent attack in August 2013 was nearly five times less than the earlier attack in November 2012. The formation of the FIB is unique in the history of peacekeeping, born out of necessity to deal with active conflict in a supposedly post-war environment. But there are numerous other examples like this, albeit at a smaller scale, that show how violence against civilians resulting from high profile clashes between belligerents can lead the UN to actively deploy units to prevent further fighting. This discussion leads to the following hypothesis.

H1a: Peacekeeping units are more likely to get deployed in response to civilian atrocities, following violent clashes between government forces and other political groups in the area.

Three circumstances pose a challenge for deploying peacekeeping units to violent areas: lack of resources, unclear mandates, and the need for host-nation consent.²² First, logistical constraints

²⁰ <u>http://www.nytimes.com/2013/11/06/world/africa/m23-rebels-democratic-republic-congo.html</u>

²¹ <u>https://www.news24.com/Africa/News/Monusco-to-protect-civilians-in-Goma-20130822.</u>

²² Note that our purpose here is to assess the deployment of peacekeeping units in response to civilian violence, mainly to prevent future atrocities. While assessing the immediate reaction is desirable, availability of data restricts our analysis to long-term deployments only. In other words, are peacekeepers likely to establish unit operating bases or increase the number of existing operational units in reaction to major instances of one-sided violence?

restrict the operational capability to project troops to save civilian lives. Lack of necessary equipment to maneuver, as suggested by numerous past cases, is one of the key factors that impedes timely action to prevent civilian killings. During the inter-tribal violence of South Sudan in December 2012, for instance, UN peacekeepers in the region had information about the pre-eminent inter-tribal violence in remote regions of Pibor. But they were unable to react effectively, mainly because they lacked an adequate number of transport helicopters.²³ When the problem of pervasive violence in multiple areas is compounded by resource constraints, the strategic deployment of peacekeepers to protect civilians becomes difficult, if not impossible.²⁴ But non-availability of resources is a systemic level challenge for any mission. As argued by Berdal and Ucko (2015), while this is problem in itself, it also has direct implication for another operational level question of how to optimally use force to serve the strategic objective of a mission. Moreover, this can also provide cover for inaction due to any other reasons.²⁵

Second, the mandate to protect civilians is often unclear (Jose and Medie 2015; Nasu 2009). While the Secretariat and OCHA uses the term to mean the broad protection aspect as guided by the human security approach, Department of Peacekeeping Operations tends to view it more narrowly, in saving human lives from physical violence (de Carvalho and Lie 2011, 344). Such confusion translates into a bigger problem when making or implementing policies. For instance, Holt and

²³Small Arms Survey Report, 2012 Available <u>http://www.smallarmssurveysudan.org/fileadmin/docs/issue-</u> briefs/HSBA-IB21-Inter-tribal_violence_in_Jonglei.pdf [Accessed March 11, 2018]

²⁴ As argued by Costalli (2014, 377), the best peacekeeping approach would be to prevent violence from occurring in the first place. But due to their small numbers, deploying peacekeeping units often become a reactionary measure.
²⁵ de Carvalho and Lie (2011, 349) indicate that Security Council leaves the decision to the field leadership to determine whether or not they have the capability to protect the civilians.

Taylor (2009) indicate that one problem that peacekeepers often encounter is the lack of coherent guidelines when the mandate to protect civilians gets codified for a peacekeeping mission. It is not entirely clear if peacekeepers are required to respond to each and every incident that involves violence against civilians (Nasu 2011, 368). Moreover, an important principle guiding the civilian protection mandate is that the primary responsibility to protect civilians is that of the host nation government.²⁶ In the event of armed crises between government troops and rebel groups, this clause in the mandate becomes confusing for peacekeepers. Technically, it seems to suggest that peacekeepers are not required to intervene when government troops are already present.

Third, consent and role of the host-nation government is crucial for a peacekeeping mission. Interventions violate sovereignty norms. Peacekeeping missions typically seek host-nation consent so that it empowers them to take required actions for carrying out their mandated tasks (Sebastian and Gorur 2018). For example, consent of the Sudanese government is key for UN operations in Darfur. But host-nation consent does not provide a blanket authorization and the host nation government can prevent UN Peacekeepers for carrying out tasks at the local level. In the past, Sudanese government has expelled high-ranking UN personnel from the country²⁷ and UN troops have been denied access to areas where government troops operated (S/2009/592, 4). This host-nation consent can become a source of confusion and can contradict the purpose of humanitarian intervention, when the government itself is responsible for violence against civilians. This suggests following hypothesis:

²⁶ See recent Security Council President's statement S/PRST/2015/23 on civilian protection.

²⁷ See "Sudan expels two UN officials, 2014" Available: <u>https://www.aljazeera.com/news/africa/2014/12/sudan-expels-</u>
<u>two-un-officials-20141225192742271467.html</u> [Accessed January 10, 2018]

H1b: Peacekeeping units at local level are less likely to get deployed to areas in response to violence against civilians committed by government forces when the region has clashes.

Effect of Peacekeeping Deployments on Violence Against Civilians

In conflict environments, civilians often become the targets of violence. Belligerents in intra-state armed conflicts draw resources from the population as they compete over territory and population support (Balcells 2010; Kalyvas 2006). Even when belligerents agree to stop fighting, hostility and competition over resources tend to spike during political bargaining, such as elections or the drafting of a new constitution. This uncertainty and competition among former belligerent parties give way to opportunistic and pre-emptive attacks on opponent group members and alleged supporters. Belligerents may also use coercive force against civilians in their bid to mobilize them against opponents (Wood, Kathman, and Gent 2012, 652).

Deploying peacekeeping units in such contexts can lower the likelihood of violence in three ways. First, the presence of a third party in a post-war environment tends to lower mutual uncertainty and mistrust among former belligerents. This comes from the belief that opponents are less likely to perpetrate unilateral violence under a third party's watchful eye (Garfinkel and Skaperdas 2007; Walter 1997). Peacekeepers also provide a forum to coordinate and exchange information among the actors (Ruggeri, Gizelis, and Dorussen 2013). Compared to regional or bilateral interventions, the UN's reputation as a neutral arbiter provides additional importance in its role to lower mistrust. Therefore, while a higher level of mistrust about the opponent's intentions could lead to increases in uncertainty and pre-emptive violence, the presence of peacekeepers lowers such mutual mistrust,

thus helping to save civilian lives that occur as a consequence of unintended armed clashes among the former warring parties (Fortna 2008, 84, 86).

Second, most peacekeeping missions today are mandated to protect civilians (Bellamy 2009). Since violent confrontation with peacekeepers is costly for a belligerent party, having a unit of peacekeepers near settlement areas or vulnerable places like internally displaced person (IDP) camps raises the risk of such costly encounters for armed groups that seek to target civilians. Anticipating this, civilians in conflict areas often come to nearby UN camps for shelter when being targeted by armed groups or when they are caught in the middle of fighting that erupts among former fighters. In May 2008, for instance, when heavy fighting started between the Sudanese Armed Forces and the Sudanese People's Liberation Army in Abyei, Sudan, many civilians who rushed to the nearby Zambian peacekeeping camp were offered sanctuary and later relocated to a safer place (S/2008/485, p. 6). This is *deterrence by default* since the mere positioning of peacekeepers can raise the cost for belligerents that target civilians, even when peacekeepers are not actively seeking to challenge local fighters.²⁸

Finally, the presence of peacekeepers not only poses physical costs for perpetrators of civilian violence, but monitoring and reporting can also bring international condemnation. Former belligerent parties in a post-war country are usually rational actors with specific political goals, for whom international support is crucial. Especially when belligerents are signatories of peace agreements, the presence of UN peacekeepers and their roles in monitoring and identifying violent

²⁸ The mandate on protection of civilians in peacekeeping missions is often unclear (Jose and Medie 2015; Nasu 2009). Peacekeepers may capitalize on this ambiguity and not actively seek to pursue armed elements or take timely actions in order to avoid costly confrontations. But both Pouligny (2006) and Autesserre (2010) find well-armed peacekeepers that demonstrate a willingness to engage local belligerents help to maintain peace.

perpetrators can raise the cost for the parties in pursuit of their political objectives (Fortna 2004; Gilligan and Sergenti 2008; Mullenbach 2005). In sum, these three reasons lead to expectations that the presence of UN peacekeepers in a region should lower violence against civilians.

The size of UN peacekeeper deployments is also likely to impact the level of violence against civilians. As discussed above, the monitoring function of peacekeeping units raises reputational costs for violent perpetrators and larger units are likely to be more effective in such roles as it ensures a sufficient number of troops to accomplish such tasks, as well as guard the camps or provide reinforcements if required. The availability of larger troop deployments and resources can also expand the monitoring reach of peacekeepers, especially when investigating the aftermath of incidents like violent clashes or mass killings. UNAMID peacekeepers in Darfur, for instance, frequently conducted investigative and other types of patrols. Between 15 August and 1 October 2009 alone, UNAMID military personnel conducted 3,033 confidence-building patrols, 2,729 escort patrols, 1,031 night patrols, and 37 investigative patrols (S/2009/592).²⁹ Larger numbers of peacekeeping units therefore is helpful in expanding the frequency and monitoring coverage of UN operations. The above discussion suggests the following hypothesis:

²⁹ An example of such patrol is the monitoring task by UNAMID after the clash between rebel groups and the government in the village area of Korma, Northern Darfur in September 2009. After the clashes were over, UNAMID peacekeepers were denied access to the village by the Sudanese government for 11 days and later the monitoring teams reported the killings of 13 civilians in the clashes, displacement of nearly 31,000 civilians to nearby villages, and numerous other cases of sexual violence and human rights violation (Secretary General's quarterly report S/2009/592, p. 4).

H2: As the size of a deployed peacekeeping unit increases, the level of violent civilian fatalities in the vicinity of the deployment is likely to be lower.

Violence against civilians also tends to spike whenever armed clashes occur between the key political actors. Armed clashes that result in killings are often covered by news media and such events often drive UN peacekeepers to boost their deployment levels. Macfarlane, Thielking and Weiss (2004, 988) discuss how media coverage of high profile crises can invoke responsibility to protect.

Above discussion suggests following two hypotheses:

H2a: As the size of a deployed peacekeeping unit increases, the level of violent fatalities in the vicinity of the deployment is likely to be lower.

Research design

We test the above expectations by analyzing evidence from four peacekeeping missions: the UN African Union Missions in Darfur (UNAMID) from 2008 to 2016, The United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) from 2011 to 2016, The United Nations Operation in Côte d'Ivoire (UNOCI) from 2006 to 2016, and The UN Mission in South Sudan (UNMISS) from 2011 to 2016. Three of these missions, UNAMID, UNMISS and MONUSCO, are in central, Sub-Saharan Africa and border each other, while the third is in West Africa. The four missions vary in terms of their conflict severity, geographical dispersion due to the size of the country, and the level of infrastructure development. For instance, when compared to the

other three missions, UNOCI in the Ivory Coast confronts less severe levels of violence. The only time when conflict intensity increased in the country was around 2011, when President Gbagbo refused to relinquish power even when electorally defeated by presidential candidate at the time, Mr. Ouattara. Moreover, the infrastructure of the Ivory Coast, such as its road network, is much better compared to Darfur, South Sudan or the DRC, and therefore it is relatively easier for peacekeepers to maneuver.³⁰ But despite certain differences, each mission shares a civilian protection mandate. This commonality allows us to explore the effects of UN troops at the local level in four countries that vary along other important dimensions.

To test the local level effect of deployments, we use a grid-cell year as the unit of analysis. We have maps of four mission areas and divide them into 0.5 x 0.5 decimal-degree grid-cells using the PRIO-grid dataset. These grid-cells are quadratic square polygons on a two-dimensional terrestrial plane, which are approximately 55x55 kilometers in size (Tollefsen, Strand, and Buhaug 2012), and the data in each grid-cell are at an annual level. From 2006 to the end of 2016, there are 9884 grid-cell year observations.³¹

³⁰ According to CIA World Fact data, while the total length of paved road in Ivory Coast is 6502 km; South Sudan has only 192 km of paved road, DRC has 2792 km of paved road and Sudan has 4320 km. Yet, most roads in Sudan and DRC areas are in capital area, rather than in Darfur in Sudan and the North East region in DRC. Darfur alone is larger in area (493,180 sq km) compared Ivory Coast (322,463 sq km) and close to South Sudan (644,329 sq km). DRC is much larger (2.3 million sq km) and the road network in north and east region where majority of the peacekeepers are deployed is poor.

³¹ There are grid-cells in the border of South Sudan and DRC, and, South Sudan and Darfur. In order to avoid double counting we removed 90 border grid-cells from DRC and 78 border grid-cells from Darfur, keeping only South Sudan grid-cells. There are no activities in DRC or the Darfur side of the border in Sudan, but there are activities and UN deployments in South Sudan.

There are two dependent variables in this study. First, we use a measure of deployment level of peacekeepers in each grid-cell year as the dependent variable in order to examine how civilian killings may influence where peacekeepers go. Deployment level is measured as a count of operational peacekeeping units in a grid-cell rather than a headcount of peacekeepers as has been done in some past studies (Hultman, Kathman, and Shannon 2013, 2014; Ruggeri, Dorussen, and Gizelis 2016). This is because the number of personnel in an area does not necessarily reflect the operational capability of peacekeepers. For instance, base headquarters tend to have more manpower, but mainly due to the presence of non-operational force enablers, such as logistic, medical or signal unit personnel, who will have little direct impact on civilian protection. Instead, the capability to provide security in an area is often the function of deployable infantry or mechanized units that patrol the area. Therefore, for the purpose of this study, we use the number of company-sized units in a grid-cell as a measure of UN deployment.

[Figure 1 here]

The data on peacekeeping deployments are generated from the UN Secretary General's quarterly reports available from the UN digital archives. As shown in Figure 1, majority of the grid-cells in the four missions are without deployment but those that have deployments range from 0.33 to 17 companies.³² There are 76 grid-cell years with less than one company of peacekeepers deployed (1 or 2 platoons), 552 grid-cells years with 1-4 companies of peacekeepers, and 77 grid-cells with more than 4 companies of peacekeepers. We are interested in examining the effect of

³² There are generally three platoons in company, therefore deployment of a platoon (around 30-50 personnel) is counted as .33 company.

change in the deployment of peacekeeping units in each grid-cell from one year to the next. For instance, there were only 8 companies deployed in Goma in 2011, but after the surge in violence, 4 more companies were sent to the area in next two subsequent years. Using deployment level as a dependent variable, we use fixed effects regression model to examine whether peacekeepers systematically go to areas experiencing violence directed against civilians, with grid-cell as the fixed effects.³³

The second dependent variable is the number of civilians killed in a grid-cell, which is used to examine the question of how the deployment of peacekeepers affects the level of violence against civilians (H2). Data on civilian fatalities come from the Armed Conflict and Location and Event Dataset (ACLED), which codes date, location and other characteristics of conflict events such as information about actors, types of events, and the number of fatalities (Raleigh et al. 2010). We aggregate the geocoded ACLED observations on fatalities in each grid-cell year, focusing mainly on the total number of civilians killed, but also filtering on one-sided killings by government forces and rebel groups.³⁴

(FIGURE 2 here)

As an illustration of our dataset, Figure 2 shows the gridded map of the Democratic Republic of Congo, which hosts the MONUSCO peacekeeping mission, one of the four peacekeeping missions in this study. It provides information, such as the geographical distribution of the

³³ The main model here is fixed effects from OLS. But we also convert companies to platoons so that the deployed units in a grid-cell are in the form of integer. Using count of platoons, we then show in the supplementary information results from fixed effects Poisson model, which are not different from the main models. Note that the count model excludes observations that do not change over time.

³⁴ Fatalities due to clashes or the number of peacekeepers killed by belligerents are excluded.

peacekeeping units and the levels of violence against civilians in each grid-cell in years 2011 to 2016. As evident in the figure, the level of violence against civilians seems to be increasing in recent years, despite the deployment of peacekeepers.

We use fixed effects model (within group) with grid-cell as the fixed effects. Since we have a panel dataset with continuous dependent variables, one way to estimate the effect of killings on deployment or deployment on killings is to use pooled OLS model with lagged independent variables. But a pooled model does not utilize the rich information provided by the panel data, as it would assume that each independent variable is strictly exogenous and does not depend on current, past or future values of the error term (Gujarati and Porter 2009). A fixed effects model is better, in this context, since it takes the temporal factor into account and we are essentially comparing how changes in independent variable impact change in the dependent variable (Angrist and Pischke 2008). It also handles better the omitted variable biases and other poorly measured static variables. Haussmann tests on our dataset suggested that fixed effects model is superior to pooled OLS or random effects model. In the following section, we provide the details of other variables used in the study and explain our findings on how peacekeeping troops influence violence against civilians at the local level.

Main Explanatory and Control Variables

The number of civilians killed in the preceding year is the main explanatory variable for testing expectations about where peacekeepers get deployed (H1, H1a, H1b). For the subsequent hypothesis that examines whether peacekeepers are effective in protecting civilians (H2), the main explanatory

variable is the number of peacekeeping units deployed in the grid-cell. Since we expect peacekeepers to respond differently to high profile clashes between government and rebel groups, we use a dummy variable *clash* to mark such violent incidents which are treated as conditional variables. The variable, *clash*, is coded as 1 for a grid-cell year that has incident(s) of fighting between government forces and rebel groups that results in more than one killings and it is coded as 0 if a grid-cell year does not have any clashes. According to ACLED, 283 grid-cell years in our dataset include such clashes. Among the 283 grid-cell years, the mean level of killings because of the clashes is 51.³⁵ As we noted above, controlling for clashes is meant to isolate instances of fighting between former belligerents as compared to one-sided violence against civilians by either government forces or previous rebels. Identifying grid-cell years with armed clashes allows us to assess whether peacekeepers react differently to renewed combat involving the previous warring parties versus one-sided targeting of civilians by armed actors. In both instances, civilians experience violence that peacekeepers are meant to help mitigate, but host-nation consent implies peacekeeping troops serve alongside government forces rather than resist them (Sebastian and Gorur 2018). Consequently, peacekeepers are expected to deploy to areas experiencing armed conflict but may respond more slowly to spaces where government troops unilaterally target civilians.

We control for a number of other factors. First, peacekeepers tend to deploy to more populated areas. In other words, population can affect deployment. It is important to consider that the population distribution of countries in conflict tends to change fairly quickly as a result of forced migration (Raleigh 2011). Large number of internally displaced personnel (IDP) in a grid-cell can also increase the risk of civilian targeting by various armed groups, which can affect the level of

³⁵ Changing this threshold to 10 (159 grid-cells) or 50 (75 grid-cells) does not change the results substantively. The main results with these two variations are included in online supporting document.

peacekeeping deployment. Generic population data, however, are static over a number of years and therefore not very useful in capturing this dynamic information.³⁶ We therefore use calibrated data on mean nightlight emissions taken from satellite images as a proxy for population in a grid-cell (Tollefsen, Strand, and Buhaug 2012).³⁷

Second, drought intensity in a grid-cell can influence economic activity and population. We use the variable, droughtcrop_spi, from the PRIO GRID dataset, which uses the standard precipitation index (SPI) during a crop growing season to assess drought intensity. Its value in our dataset ranges from 0 to 0.8, with higher values indicating more intense drought levels in a grid-cell year.

Third, distance to the nearest peacekeeping unit also shapes the likelihood of deployment. It is logistically easier to deploy a peacekeeping unit to a grid-cell that is closer to a grid-cell that already has deployed units. Distance here is coded as the aerial distance in kilometers, measured from the centroid of a grid-cell to the centroid of the closest grid-cell that has peacekeeping units. All three control variables mentioned above, nightlights, drought and distance to nearest unit are lagged by one year. Finally, we also add mission-year dummies to account for the number of deployed units in a mission year, and a lagged dependent variable to account for the presence of companies in a grid-cell in the preceding year. Variables MONUSCO, UNMISS, UNAMID and UNOCI have unique dummies for grid-cells with these mission for each year, and 0 for years when they are not represented in the dataset.

³⁶ Moreover, such a static measure gets rejected by our fixed effects model.

³⁷ Past studies have used night lights to proxy population density (See Besley and Reynal-Querol 2014; Sutton 1997).

Results

Table 1 shows the results from statistical analyses that examine the effect of previous year's civilian killings on the level of peacekeeping deployment in a grid-cell. The last three models in the table, those that include the interaction term, are the main models. For comparison, we will start with the first three models that do not include the interaction term. Model 1 looks at the effect of combined one-sided killings by both actors and the two models that follow investigate the effects of one-sided killings by government forces and rebel groups respectively. For the first three models, coefficients for civilian fatalities are small but statistically significant only for models 1 and 3. This suggests that, on average and when controlling for all other variables, larger number of civilian killings in the preceding year, combined or by rebel groups alone, increases peacekeeping deployment levels in a grid-cell. The combined effect in model 1 is driven mainly by the rebel group killings in model 3, since the coefficient for rebel killings in model 3 is relatively larger and the effect of government killings in model 2 is not statistically significant (at p<0.1).

The coefficient for government killings in model 2 is statistically insignificant. Compared to model 3, this indicates that government perpetrated civilian killings tend to invoke a different response from peacekeepers compared to rebel perpetrated civilian killings. More important, variable *clash* in model 2 is statistically significant unlike in the other two models. But as discussed earlier, we believe that renewed fighting among former belligerents has a conditional effect rather than an isolated direct effect. In other words, one-sided killing by government forces are much more likely in spaces where government troops are present. Models 4, 5 and 6 include the interaction

between civilian fatalities and the variable clash. Model comparison and fitness information, R-squared, AIC and BIC, indicate that models with the interaction term fit better when compared to models without the interaction term. In the following section, we explain the results from these three main models presented in Table 1.

[Table 1 here]

[Figure 3 here]

Models 5, 6 and 7 in Table 1 show the conditional effect of clashes and civilian killings on deployment of peacekeeping units. Substantive results from the models are shown in Figure 3. From left to right, the three panels in the figure show the predictive margins of the three variables, total killings, government killings and rebel killings, on the level of peacekeeping deployment in a grid-cell. The two lines in the panels represent grid-cell years that experienced violent clash in the previous year (lines with small squares) and those where no such clashes occurred. Positive slope of the lines indicate positive correlation, and vice-versa. According to the left-most panel in the figure, peacekeeping deployment level in a grid-cell increases, when the grid-cell has incidents of armed clashes and as the number of one-sided killings (combined) increased in the preceding year. For grid-cells without such clashes in the previous year, an increase in the number of civilian killings by government and rebels combined has little effect on the level of deployment. Disaggregating combined killings into government-perpetrated and rebel-perpetrated civilian killings in models 5

and 6 provides a more compelling evidence that peacekeepers react differently to government killings at least in spaces where renewed fighting among former belligerents has not occurred.

The center panel of Figure 3 is based on model 5, Table 1, and it shows predictive margins of government killings on the level of peacekeeping deployment. The positive slope of the line (with small squares) in the panel suggests positive association. As grid-cells experience clashes and large government killings in the preceding year, more peacekeeping units are deployed in the grid-cell. The other line in the panel represents grid-cell years without clashes, where more government killings (lagged) is associated with drop in the number of peacekeeping deployments. Note that a clash is defined minimally, as one or more fatalities because of armed clash between government and rebel forces. As a clash becomes higher profile, defined by increasing the threshold to 10 or 50 fatalities,³⁸ the positive slopes become steeper, suggesting a more robust increase in peacekeeping deployment levels. But such an increase does not have much effect on grid-cells that do not have clashes.

Finally, the right-most panel of Figure 3 is from model 6 in Table 1 and it depicts the interactive effect of civilian killings by rebel groups and clash on peacekeeping deployment. It shows that the number of peacekeeping units in a grid-cell increases with increase in rebel violence against civilians increases. Unlike the center panel, we find this increase irrespective of clash. Peacekeepers seem particularly concerned about mitigating rebel-perpetrated violence against civilians throughout a post-war space.

Overall, these findings indicate that peacekeepers are more likely to deploy their units to areas that experience high-profile clashes, where government or rebel atrocities against civilians are also high. However, what is alarming is the finding that peacekeepers are less willing to deploy their

³⁸ See online supplementary document for results with increased threshold for clash.

troops to areas where government troops are perpetrating one-sided violence against civilians. While the need to build and support a host-nation government is understandable, evidence here suggests that UN peacekeepers may be tolerating a certain level of government-perpetrated violence against civilians.

Does Deploying Peacekeepers Lower Civilian Killings?

To examine the impact of deployment on violence against civilians (H2), we compare the number of peacekeeping units with the number of one-sided civilian killings by belligerents in a grid-cell year. The novel aspect of the deployment data in this study is that it is dynamic, as the number of deployment units in a grid-cell varies on an annual basis. For each year, the number of peacekeeping units in a grid-cell is coded at the beginning of the year, while the number of civilian fatalities is aggregated for the whole year. Because deployment level precedes violent fatalities in each gridcell, it avoids the need to lag the deployment variable in order to avoid simultaneity.

To identify how change in deployment level affects civilian killings in a grid-cell, we use fix-effects model with grid-cell as the fixed effects. Results from the models are presented in Table 2.³⁹ Since we expect peacekeepers to respond differently to active fighting between former belligerents, we interact peacekeeping deployment level with variable *clash*. The three models in the table include the interaction term, which is the main variable of interest.

We control for a number of other factors. As in the previous analysis, we include in the models nightlights (lagged) and drought (lagged), as they both associate with the population of a

³⁹ The main model once again is fixed effects from OLS. But we show in the supplementary information results from fixed effects count models, which are substantively similar to the main results. Note that the count model excludes observations that do not change over time.

grid-cell and the level of civilian fatalities. We also include mission-year dummies to control for mission level heterogeneity. The main variable of interest in the table is the interaction term, the substantive effect of which is presented in Figure 4.

The three panels in Figure 4 depict the interaction term in the three models of Table 2. The panels show the predictive margins of peacekeeping deployments on the level of civilian fatalities, conditioned by variable clash and when all other variables are at constant. The three models look at the effect of civilian killings perpetrated (1) by rebels and government forces combined, (2) only by government forces, and (3) only by rebel groups. The two slope line categories in the figure differentiate the effects, when civilian killings are with or without clashes.

The left-most panel in Figure 4 shows that the presence of peacekeeping units lowers combined one-sided civilian killings by rebels and government forces. As the number of peacekeeping units increases, combined fatalities by rebels and government forces declines. Yet, the slope of the two lines shows that the rate of decrease is slightly more in grid-cells that did not experience clashes between former belligerents. In other words, peacekeepers are more hesitant to intervene against government troops that are directly engaging former rebel fighters, a result that is in line with our discussion earlier.

Models 2 and 3 further disaggregates the result into government and rebel perpetrated violence. We find that deploying peacekeepers is relatively less effective in curbing government violence against civilians than rebel violence. Quite the contrary, the center panel in Figure 4 shows that in presence of clash, increasing the number of peacekeeping units in a grid-cell only increases government atrocities. This finding is similar to the earlier micro-level studies by (Costalli 2014), but diverges from at least one country-level study (Hultman, Kathman, and Shannon 2014). Rather than troop increases being the cause of increased government atrocities, we believe that troop

increases are in response to anticipated fighting between government and former rebel forces. But the opposite consequence is quite clear. Increase in peacekeeping deployment is not able to prevent increased civilian fatalities. Even when we increase the threshold of clashes, increases in deployments lead to more civilian fatalities by government forces.⁴⁰ These findings resonate well with a recent study in DR Congo, which argues that deployed peacekeepers tend to act as enablers of authoritarianism in host-countries (von Billerbeck and Tansey 2018). But rather than at all times, we find that deployed peacekeepers are more indifferent to government violence against civilians during clashes. Peacekeeping units appear unwilling to interfere in government efforts to fight against former rebel groups, even at the cost of civilian lives. When there are no clashes, however, the negative slope in the center panel suggests that increasing the number of peacekeeping units leads to decline in civilian fatalities.

For rebel perpetrated violence, the number of peacekeeping units in a grid-cell is shown to lower the number of civilian fatalities, irrespective of whether or not the grid-cell contained a clash incident. Yet, when comparing grid-cells with and without clashes, increasing peacekeeping units in grid-cells without clashes have a higher rate of curbing civilian fatalities from rebel violence. For a grid-cell that experienced clashes,⁴¹ deploying 8 peacekeeping companies can save 5 more civilian lives than when deploying a single peacekeeping company. In contrast, for a grid-cell that did not experience clash, deploying 8 such units can save 50 more civilian lives than when deploying just one peacekeeping unit.

Interestingly, when we increase the clash threshold to 50 battle deaths, the effectiveness of the peacekeepers increases. For instance, when the threshold for clash is increased that way,

⁴⁰ See online supporting document.

⁴¹ Note that clash is defined as involving one or more battle death

deploying 8 units in a grid-cell with clash can save 56 more civilian lives than when deploying only 1 peacekeeping unit. In other words, peacekeeping units are increasingly effective against rebel violence as clashes become more high profile. Yet, we do not see this restraining effect on government perpetrated civilian violence. Especially when grid cells experience fighting between government forces and rebels, the presence of peacekeepers does not seem to deter government from targeting civilians.

Conclusion

Sbrenica and Rwanda exposed weaknesses in UN efforts to protect civilians from harm during civil war. Agreed upon rules of engagement prohibited peacekeepers from combatting local belligerents and UN officials chose not to revisit those rules even when confronted with clear evidence of civilian victimization. Belgian peacekeepers stepped aside as Hutus murdered Tutsis in Rwanda and Dutch forces did the same as 8,000 Muslim men were murdered in a UN safe area in Bosnia. The Brahimi Report was designed to change this. Protecting civilians is a priority in current missions and UN forces now possess the authority to use deadly force. In the DRC, a special counter-insurgency force was authorized to combat armed groups and in South Sudan the UN authorized the additional deployment of 4,000 peacekeepers to protect the country's capital and shield civilians from harm.

In this study, we examine the effectiveness of UN peacekeepers in accomplishing their mandate of protecting civilians from harm. First, we investigated whether or not peacekeepers deploy in response to civilian killings. In general, we found that peacekeeping units do get deployed to areas that experienced civilian killings, especially when a grid-cell faced armed clashes in the preceding year. However, in the absence of violent clashes between government and rebel forces, peacekeepers responded differently depending on the actor perpetrating the civilian abuse. Peacekeepers deploy to areas experiencing rebel violence against civilians, but do not show the same deployment response to grid cells where government forces are doing the killing. Second, we looked at whether deploying peacekeepers had an effect on the level of one-sided civilian killings. We found once again that peacekeepers are more effective in curbing rebel killings than government killings.

These findings expose a potential weakness of current peacekeeping operations: a lukewarm response to one-sided violence against civilians perpetrated by government troops. We argue that such weakness arise primarily because the key responsibility of protecting civilians, according to peacekeeping mandates, falls on the host-nation government, and the need for consent from the host-nation likely complicates deployment decisions. But it nevertheless presents an important question about the goal of sustaining post-war peace. If peacekeeping nurtures illiberal regimes, then can it actually foster long-term peace and reconciliation?

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Figure 1 Number of grid-cell years with deployed peacekeeping companies in four missions UNAMID (2008-16), UNMISS (2011-15), UNOCI (2006-16) and MONUSCO (2011-16)

Note: Figure above shows the number of grid-cell years with deployed companies in four peacekeeping missions from 2006 - 2016. It does not show 9,179 grid-cell years without any peacekeeping deployments.



Figure 2 Civilian fatalities and the deployment of peacekeepers in DR Congo

1	υ					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Companies	Companies	Companies	Companies	Companies	Companies
Combined fatalities (L)	0.0003***			-0.0001**		
	(0.0001)			(0.0001)		
Fatalities by gov (L)		0.0002			-0.001***	
		(0.0001)			(0.0001)	
Fatalities by rebels (L)		`	0.001***		`	0.0001
			(0.0001)			(0.0001)
F.all(L) x Clash(L)			× /	0.001***		× ,
				(0.0001)		
E.gov(L) x Clash(L)				(010001)	0.003***	
1.80 (<u>(</u>) ii 0.1051(<u>(</u>)					(0.0001)	
F rebels(L) x Clash(L)					(0.0001)	0.001***
						(0.001)
						(0.0001)
Clash(L)	0.025	0.053*	0.031	-0.021	-0.034	0.017
Clush(L)	(0.020)	(0.033)	(0.029)	(0.021)	(0.037)	(0.030)
Nearest Deployment	0.001***	0.001***	(0.02)	0.001***	0.001***	0.000
(L)	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
(L)	(0, 0001)	(0, 0001)	(0, 0001)	(0, 0001)	(0, 0001)	(0, 0001)
Drought Conditions (I)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Diought Conditions (L)	(0.094)	(0.076)	(0.090)	(0.083)	(0.076)	(0.034)
Night Lighta (L)	(0.070)	(0.070)	(0.070)	(0.070)	(0.070)	(0.070)
Night Lights (L)	1.498*	1.508*	1.488*	1.402*	1.484*	$1.4/2^{*}$
MONINGCO	(0.880)	(0.881)	(0.879)	(0.877)	(0.877)	(0.879)
MONUSCO	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
UNMISS	0.034***	0.033***	0.035***	0.033***	0.033***	0.034***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
UNAMID	0.004	0.005	0.005	0.004	0.004	0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
UNOCI	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Constant	-0.297**	-0.287**	-0.310**	-0.290**	-0.288**	-0.301**
	(0.123)	(0.123)	(0.123)	(0.123)	(0.123)	(0.123)
Observations	8 4 5 2	8 4 5 2	8 4 5 2	8 4 5 2	8 4 5 2	8 4 5 2
	3/68	3/05	3/57	3/10	3/16	3//6
RIC	3528	3565	3579	3406	3404	3574
DIC Number of anid calls	3330 1 494	1 474	5520 1.496	J490 1 496	J474 1 176	5524 1.494
multiper of glid-cells	1,420	1,420	1,420	1,420	1,420	1,420

Table 1 Effect of civilian fatalities (preceding year) on the likelihood of change in peacekeeper deployment level in a grid-cell

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1



Figure 3 Civilian killings (Previous year) & deployment of UN peacekeeping units

Note: Panels in the above figure represent interaction terms in models 4, 5 and 6 of Table 1. The y-axis shows companies of peacekeeping deployment and the x-axis shows the number of civilian killings by government and/or rebel groups during the previous year. The line with square shapes represents grid-cells with clashes (lagged), while the other line represents grid-cells without any such clashes in the previous year. Positive slope of the lines indicates increasing peacekeeping deployments, while the negative slope suggests decreasing peacekeeping deployments. For instance, the center panel shows that peacekeeping deployment tends to increase as killings by government increases in grid-cells with clashes. But in grid-cells where there are no such clashes, one-sided killings by government tends to lower peacekeeping deployments. But more rebel killings tends to increasing peacekeeping deployments irrespective of the status of clash.

rable 2 Effect of peacekeeping deployment on civinal ratanties										
	(1)	(2)	(3)	(4)	(5)	(6)				
VARIABLES	Combined	Ву	By rebels	Combined	By	By rebels				
		government			government					
Peacekeeping units	-5.533***	-0.425	-5.107***	-10.721***	-3.410***	-7.311***				
	(1.852)	(0.847)	(1.372)	(2.028)	(0.926)	(1.505)				
Clash	102.439***	45.604***	56.835***	90.098***	38.506***	51.592***				
	(4.414)	(2.018)	(3.269)	(4.832)	(2.206)	(3.585)				
PKO Units x Clash				12.480***	7.178***	5.302***				
				(2.014)	(0.919)	(1.494)				
Night lights (lagged)	-16.634	-14.063	-2.571	-22.065	-17.187	-4.878				
	(136.562)	(62.437)	(101.142)	(136.202)	(62.173)	(101.060)				
Drought (lagged)	-4.113	1.492	-5.606	-3.904	1.613	-5.517				
	(11.829)	(5.408)	(8.761)	(11.798)	(5.386)	(8.754)				
MONUSCO	-0.062	-0.024	-0.038	-0.040	-0.011	-0.029				
	(0.552)	(0.252)	(0.409)	(0.550)	(0.251)	(0.408)				
UNMISS	-5.067***	-0.686	-4.381***	-5.063***	-0.684	-4.379***				
	(1.079)	(0.493)	(0.799)	(1.076)	(0.491)	(0.799)				
UNAMID	1.783***	1.083***	0.701	1.832***	1.111***	0.722				
	(0.608)	(0.278)	(0.451)	(0.607)	(0.277)	(0.450)				
UNOCI	-0.042	0.024	-0.066	-0.036	0.027	-0.063				
	(0.586)	(0.268)	(0.434)	(0.585)	(0.267)	(0.434)				
Constant	80.520***	11.471	69.049***	81.249***	11.890	69.359***				
	(18.548)	(8.480)	(13.737)	(18.499)	(8.444)	(13.726)				
Observations	8,452	8,452	8,452	8,452	8,452	8,452				
R-squared (within)	0.074	0.072	0.044	0.079	0.080	0.046				
AIC	88744	75515	83669	88700	75444	83655				
BIC	88808	75578	83732	88770	75514	83725				
Number of gid	1,426	1,426	1,426	1,426	1,426	1,426				

Table 2 Effect of peacekeeping deployment on civilian fatalities

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1



Figure 4 Effect of peacekeeping deployment on civilian fatalities

Note: Figure above shows the effect of deploying peacekeeping companies (x-axis) on civilian killings by government and/or rebel groups (y-axis). The panels in the figure represent the interaction terms in models 1, 2 and 3 of Table 2. The line with square shapes represents grid-cells with clashes, while the other line represents grid-cells without any such clashes. Positive slope of the lines indicates increasing number of killings, while the negative slope suggests decreasing number of killings. For instance, the figure suggests that deploying peacekeeping units tends to lower civilian killings in all cases except when a grid-cell has clashes and the perpetrator is the government.