

Manuscript version: Author's Accepted Manuscript

The version presented in WRAP is the author's accepted manuscript and may differ from the published version or Version of Record.

Persistent WRAP URL:

<http://wrap.warwick.ac.uk/114227>

How to cite:

Please refer to published version for the most recent bibliographic citation information. If a published version is known of, the repository item page linked to above, will contain details on accessing it.

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions.

Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

Please refer to the repository item page, publisher's statement section, for further information.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk.

Peacekeepers against Criminal Violence – Unintended Effects of Peacekeeping Operations?[†]

Short title: Peacekeepers against Criminal Violence

Keywords: peacekeeping; criminal violence; effectiveness; United Nations; subnational

Jessica Di Salvatore

University of Warwick

University of Warwick

Social Science Building

Coventry (United Kingdom), CV4 7AL

Jessica.di-salvatore@warwick.ac.uk

[†] I am grateful to Ursula E. Daxecker, Kyle Beardsley, Inken von Borzyskowski, Vincenzo Bove, Brian Burgoon, Stefano Costalli, Han Dorussen, Michael Gilligan, Marlies Glasius, Kristian Skrede Gleditsch, Andrea Ruggeri, Megan Shannon, and Abbey Steele for their extremely helpful comments on previous versions of this manuscript.

Peacekeepers against Criminal Violence – Unintended Effects of Peacekeeping Operations?

Abstract

Research shows that peacekeepers reduce conflict intensity; however, effects of deployment on non-political violence are unknown. This article focuses on criminal violence and proposes a two-fold mechanism to explain why peacekeeping missions, even when effectively reducing conflict, can inadvertently increase criminal violence. First, less conflict opens up economic opportunities (so-called peacekeeping economies) and provides operational security for organized crime, thus increasing violent competition among criminal groups. Second, demobilized combatants are vulnerable to turn to crime because of limited legal livelihood opportunities and their training in warfare. While UN troops may exacerbate these dynamics, UN police peculiar role is likely to successfully contain criminal violence. Cross-national and subnational empirical analyses show that large UN military deployments result in higher homicide rates whereas UN police, overall, moderates this collateral effect.

Replication Materials: The data, code, and any additional materials required to replicate all analyses in this article are available on the American Journal of Political Science Dataverse within the Harvard Dataverse Network, at: <https://doi.org/10.7910/DVN/RXXQS>

Word count: 9,994

Introduction

The United Nations (UN) has adapted its strategy of intervention to face specific challenges of civil wars, moving away from traditional missions toward multidimensional approaches and broader mandates. Mandates' objectives are primarily conflict-related; thus, assessments of peacekeeping effectiveness have reasonably focused on its impact on political violence. But among several threats to peace, criminal actors have emerged as particularly threatening to short and long-term stability. The sharp increase in homicides and organized crime in El Salvador, Haiti, Kosovo, Ivory Coast and Mali forced the UN to adapt and change the scope of mandates to include crime-related tasks. Criminal networks act as peace spoilers by disrupting or delaying stabilization, infiltrating and undermining government's legitimacy and threatening civilians' security. With the UN also acknowledging the risks of pervasive criminal violence for peacebuilding, a comprehensive assessment of peacekeeping effectiveness calls for more attention to broad security implications of peace missions.

Existing research agrees that peacekeeping works because it reduces lethality, duration and diffusion of civil wars (Hultman, Kathman, and Shannon 2013, 2014; Beardsley and Gleditsch 2015; Fortna 2008; Gilligan and Sergenti 2008). This scholarship, however, focuses on violence perpetrated by armed political actors and largely neglects violence perpetrated by non-politically motivated actors – above all, criminal actors. Are UN peacekeepers as effective in deterring criminal violence as they are in deterring political violence?

This manuscript contributes to two strands of literature on conflict and peace. First, it contributes to peacekeeping literature by focusing on a form of violence that is not considered in other studies and is all the same deleterious, namely criminal violence. By focusing on homicides rather than other types of non-violent crimes, the findings of the article directly speak to extant scholarship concluding that peacekeepers can provide security and

stabilization. Showing that this is likely true for conflict but not for criminal violence adds important nuance to our understanding of effectiveness and intervention policies. Second, it proposes an additional channel that explains why conflict and post-conflict countries exhibit high levels of crime by investigating the role of international military interventions. I show that military peacekeepers inadvertently increase criminal violence through two proposed mechanisms working at individual and group level. First, UN troops improve security by reducing conflict intensity and, simultaneously, providing ‘operational security’ that organized crime needs for business. In addition, local peacekeeping economies that emerge where UN staff is deployed create more opportunities for illegal activities. Criminal groups engage in violent competition to appropriate these new profit opportunities, thus producing higher levels of criminal violence. Second, peacekeeping economies promote predatory behaviours also among individuals, especially demobilized combatants. They lack marketable livelihood skills and have incentives to put their fighting skills at the service of criminal groups, which are not targeted by demobilization programs and peacekeeping mandates. Though the mechanisms support the hypothesis that peacekeeping exacerbates criminal violence, missions with substantial UN police (UNPOL) deployment provide vital support to public order and national law enforcement apparatus, thus countering criminal violence.

UNPOL’s involvement in capacity building, community patrolling and law enforcement explains the negative association with criminal violence. The empirical evidence for these arguments is based on a country-year sample and a subnational analysis on the UN mission in South Sudan (UNMISS). At both levels analysis, results indicate higher homicide rates following the deployment of large UN troop contingents, while UNPOL is associated with lower homicide rates. Interestingly, UNPOL moderates the crime-increasing effect of UN troops when deployed alongside. The conclusions discuss the key policy implications of these findings.

Criminal violence in conflict and post-conflict societies

Scholarship on the relationship between criminal violence and stability consists of two main strands that do not necessarily stand in opposition to each other, namely the political economy and the cultural account. The political economy of crime adopts a rational choice perspective, which posits that criminal acts are the result of cost–benefit trade-offs, where the gains from the action outweigh the risk of being punished (Becker 1968). Both institutional capacity and economic opportunities matter for these calculations since low state capacity, poverty and inequalities make the ideal scenario for high crime incidence. In conflict and post-conflict contexts, we find both state weakness and economic opportunities for crime. Furthermore, major political shocks, including wars or revolution create the power vacuum necessary for criminal groups to emerge and thrive (Skaperdas 2001).

Relatedly, the cultural argument hinges on the observation that society does not immediately shift to peace when political conflict declines. Civil wars normalize violence, hence war-torn societies tend to internalize new norms and values that favour the social permissiveness of violence and crime (Archer and Gartner 1976; Steenkamp 2005). This cultural explanation of high crime rates in post-conflict settings is compatible with the social disorganization theory argument, according to which variation in delinquency and crime rates is explained by the disruption of formal and informal community networks (Sampson and Groves 1989). Hence, conflict and post-conflict societies are more likely to experience rapid growth in violent and non-violent crimes because war alters the normative order and decreases social organization.

It follows that states weakened by civil wars provide ideal conditions for criminal activities. The decline of state authority and its inability to fulfil core functions opens up space for criminal actors, ranging from street gangs to more organized mafia-like groups. However, differently from insurgent groups that aim to overthrow the government, criminals

prefer under-provision of governance over total anarchy (Hazen 2010; Kalyvas and Kocher 2009). Clunan and Trinkunas observe that the illicit economies is not ungoverned, rather differently governed since “total chaos and complete removal of the governing authority pose critical threats to the survival of the illicit (and licit) economies” (2010, 179).

In addition, relatively safe environments reduce losses and encourage potential buyers. If a region is torn by war, trading becomes particularly risky, even more so if criminal actors (individuals or groups) do not have their own armed militia and have to rely on outsourced security. While mafias can provide security to themselves and sell it to others (Gambetta 1995), most criminal groups that are less powerful and organized do not have resources to carry the burden of providing security while also conducting their business. Some criminal groups thus prefer the state or other actors to provide minimum levels of governance and security, which they can either free-ride or buy, as in the case of Somali pirates buying protection from clan leaders (Shortland and Varese 2014).

State weakness is a permissive condition not only for organized criminal groups but also for individuals. Civil wars turn societies into *crime-facilitative* and *crime-coercive* systems in which structural conditions (namely incentives, opportunity and immunity) make crime rewarding (Needleman and Needleman 1979). In coping economies, crime represents the only available survival strategy for segments of the population. The unprecedented increase in opium production in post-2001 Afghanistan was not a consequence of greedy farmers switching opportunistically from legal to illegal crops; rather, for the majority of poor households it was a matter of survival (Goodhand 2005; Bove and Gavrilova 2017).

Conflict and post-conflict societies are likely to experience high levels of criminal violence, because in these societies crime and violence are not only permitted (by society and, unwittingly, by weak institutions) but also induced by a war-ravaged economy. How do

peacekeepers affect these dynamics when deployed? In most countries, criminal violence is high during and in the aftermath of a civil war, but can peacekeeping make a difference? I will argue that UNPOL can achieve deterrence but the impact of military peacekeepers is less clear-cut. Instead of deterring crime, troops may even exacerbate criminal violence as an unintended consequence of insurgents-focused mandates and the economic stimulus triggered by their presence.

Do peace missions boost criminal violence?

In this section, I elaborate on how personnel types have distinct impact on criminal violence. The crime-reducing effect of police is extensively supported in the economy of crime literature (Chalfin and McCrary 2017). The effect of UN troops, however, is not necessarily unidirectional and requires further discussion. On the one hand, UN troops may be able to deter any form of armed violence, regardless of its purpose. On the other hand, criminal violence may respond differently to peacekeeping because of specific dynamics that generates this form of violence. Below, I put forward group and individual -level mechanisms through which peacekeeping could inadvertently promote rather than deter criminal violence. At both levels, improvements in security and stimuli to local economies have important implications for the incidence of crime-related violence.

Organized Crime and Peacekeeping

The priority of UN mission is to restore minimal levels of security by reducing violence and disarming combatants to lower the chances of relapse into armed conflict. This objective is a priority for both traditional and multidimensional interventions because state-building, economic and social reforms require stability in the first place. Peacekeeping missions with large military personnel reduces conflict intensity and casualties (Hultman, Kathman, and

Shannon 2013, 2014). Sizeable UN military presence is thus a credible deterrent for political actors and effectively reduces incentives to fight. Notably, however, peacekeepers' effectiveness in reducing political violence "provide[s] a minimum level of stability and predictability which can unintentionally facilitate illicit economic exchange" (Andreas 2009, 34). As already mentioned, organized criminals need "operational security to plan, prepare, and conduct their illicit activities" (Patrick 2011, 135-136). The decline of political violence creates more favourable environments for criminal entrepreneurs. As UN troops reduce violence monthly (Hultman, Kathman, and Shannon 2014), organized crime benefits from these improvements since early stages of the mission. Several cases provide evidence of this pattern. In a survey conducted in Haiti, Kolbe finds that affiliation with gangs started increasing just after peacekeepers arrived in Port-au-Prince in 2004, and peaked in 2006; when MINUSTAH's presence increased just after the 2010 earthquake, gang affiliation rose again (Kolbe 2013).

The second mission-specific effect is economic. The arrival of UN personnel turns the local economy into a so-called "peacekeeping economy" (Jennings and Nikolić-Ristanović 2009). Peacekeeping stimulates the local economy in several ways, for example, increasing employment opportunities and wages (Bove and Gavrilova 2017). In some circumstances, peacekeeping economies foster illicit activities that are made possible by peacekeepers presence. In particular, missions boost black markets in economies that are already criminalized and "absorb" external actors, whose direct involvement further fuels illicit exchanges (Andreas 2008). Besides black markets, peacekeepers arrival also increases demand of sex workers, resulting in more transactional sex and human trafficking (Beber et al. 2017; Bell, Flynn, and Martinez Machain 2018), especially when deployment is sizeable and violence decreases (Nordås and Rustad 2013). Even when peacekeepers do not actively

participate to illicit activities, the impact of the deployment is economically profitable for organized crime.

Hence, the combination of the security and economic effect of peace operations hints that criminal groups will *i*) be able to free-ride on the security provided by peacekeepers without having to fear state punishment, and *ii*) become more exploitative as direct result of peacekeeping economies. Since the state is unable to counter them and the mission focuses on political actors, criminal groups are largely unaffected by the external intervention.

Intuitively, the larger missions are more likely to produce the security and economic effects described above. Increased opportunities for predatory behaviour will produce more competition among criminal actors, which oftentimes involves violence (Kalyvas 2015; Moro, Petrella, and Sberna 2014). Contrary to this expectation, it is often argued that homicides drop significantly when organized crime is doing business; thus low homicide rates are a function of solid territorial control (Cockayne and Lupel 2011). However, this idea that criminal groups do not use violence in their home territory is mostly derived from studies of Italian mafias, whether this is generalizable to Africa or other contexts is debatable. African criminal groups exhibit loose structures and temporary business-oriented formations that do not allow them to establish actual territorial control (Abadinsky 2007; Mazzitelli 2007).

Individual Criminals and Peacekeeping

The security and economic effect of peacekeeping has implications also for individuals that are not embedded in organized crime. First, incentives for predatory behaviour associated with peacekeeping economies exist not only for group members but also for individuals.

Particularly vulnerable to this are ex-combatants. In order to reduce the risk of re-escalation, UN missions often launch DDR programs (disarmament, demobilization and reintegration). Disarmament aims at reducing ongoing violence, but reintegration of combatants to civilian life plays an equally relevant role for the peace process.

DDR programs can produce undesirable consequences if former combatants are not successfully reintegrated because economic insecurity may drive them toward crime. Ex-combatants are more vulnerable as they usually lack education and do not have strong marketable skills, thus have limited alternatives for earning money legally (Muggah 2008; Patel, DeGreiff, and Waldorf 2010). Their main skill is the use of violence and familiarity with weapons (Collier 1994; Schulhofer-Wohl and Sambanis 2010). After being disarmed, they find themselves in a context where these skills are neither rewarded nor replaced by new ones, thus increasing the risk of recidivism (Kaplan and Nussio 2018; Phayal, Khadka, and Thye 2015). According to the World Bank Development Report (2011), individuals joining rebellion do not differ much from those joining criminal gangs with regard to motivations. However, in a context where the only credible sanctioning power is the UN mission, which primarily focuses on rebel groups, it is more reasonable to join criminal networks. Different from armed groups, gangs and criminal organizations are not subject to disarmament programs.

It could be argued that demobilisation leads to crime waves in all post-conflict settings, regardless of peacekeepers. Two things are worth noting, though. First, peacekeepers implement DDR programs both during and after conflict, which is why I do not exclusively focus on the post-conflict phase. Second, UN has the capacity to implement country-wide DDR programs, while government-led implementations are much less systematic. Furthermore, insurgents are less likely to join government-led DDR programs in absence of external security guarantors such as the UN. Thus, on the one hand, peacekeepers assist

disarmament and demobilization processes by deploying to different locations, collecting weapons while also acting as security guarantor. On the other hand, the reintegration phase is a very long-term process and relies mostly on non-military, local actors. The UN can limitedly support the reintegration phase by assisting NGO and government projects for employment and vocational training, providing infrastructures and supporting economic recovery; but successful reintegration is not as quick as disarming and is not simply about reinserting ex-combatants into communities. Thus, large missions smoothly disarm and demobilize combatants but their contribution to reintegration is negligible, thus leaving many vulnerable to turning to crime and criminal networks in the short run. These dynamics are common to many DDR processes, as in Mozambique, South Africa, El Salvador, Nicaragua and Cambodia (Knight and Özerdem 2004). Veterans might be more prone to such behaviours, because of their recent history of violence and the criminalization of demobilized wartime networks by former high and mid-rank commanders (Themnér 2015, Daly, Paler, and Samii 2016, Nussio 2018).

The role of UN troops and police

Overall, I expect large UN missions to increase criminal violence in host-states. More specifically, UN troops should be associated with more criminal violence because of their direct impact on security and local economy. Conversely, UNPOL has potential to decrease criminal violence. The main function of UNPOL involves two main tasks, namely *i)* prevention, detection and investigation of crimes and maintenance of public order, and *ii)* support for the restructuring and reform of host-state police through training, mentoring, advising, and joint patrolling. By performing these tasks, UNPOL can support violent crimes reduction both directly through *deterrence* (e.g. patrolling and operations) and indirectly

through offenders' *incapacitation* (e.g. arrests). The latter effect, in particular, hinges on the role of UNPOL as capacity-builders, hence does not require deployments as extensive as military ones because few officers are needed to train hundreds of host-state counterparts.¹ But the more immediate impact of UNPOL through deterrence is the result of joint operations and high visibility patrols carried out with national police and provision of material support. Numerous studies confirm that the crime-reducing effect of police is largely due to deterrence rather than incapacitation (Chalfin and McCrary 2017; Di Tella and Schargrotsky 2004). Not surprisingly, the operational guidelines for UNPOL in DDR settings clearly highlight the role of patrolling as crime deterrent (UN 2014), even if mandates do not allow to arrest and detain criminals. Crime-reduction literature shows that high visibility police patrols signal the presence of a sanctioning force and thus effectively reduce crimes, including firearms crimes (McGarrell, Chermak, and Weiss 2001). While executive mandates have only been authorized in Kosovo and East Timor, UNPOL contribution to the mission planning is pivotal as it provides important expertise on organized crime and public order. UN military, on the other hand, are less well equipped against criminal violence. First, troops tend to believe that policing activities are a distraction from their primary responsibilities (Perito 2004). Second, military lack flexibility and expertise in maintaining public order, which usually involves low-intensity violence.

It was the UNPOL, not UN troops, that conducted a very successful offensive against gangs in Haiti and assisted the Haitian police in setting up 2,000 checkpoints to arrest more than 4,500 suspects²; in Liberia, UNPOL participated to Operation Sweeping Wave whose aim was to defeat organized crime involved in drug dealing, such as the Isakaba Gang. Similar operations were conducted in Sierra Leone, with several successes including arrest of

¹ For example, the trainer-to-recruit ratio was 1:10 in Haiti (MINUSTAH) and 1:8 in Liberia (UNMIL).

² UNPOL website publishes information on the counter-crime activities listed in this paragraph, for more information see <https://police.un.org/en/un-police-magazine>.

200 suspects and seizure of hundreds of kilograms of cannabis, heroin and cocaine. In East Timor, UNPOL contributed to successful arrest of several human traffickers by Timorese police. Also, in DRC UNPOL joint checkpoints with Congolese police (Operation SOLIB) deterred criminals from accessing the axis Beni-Mavivi and reduced criminality, which in turn allowed people to return to their villages. To conclude, UN troops can provide security against military threats but are of (almost) no help in rebuilding domestic security.

Based on the above discussion, I formulate the following hypotheses:

H1: UN troops have a positive effect on criminal violence

H2: UN police has a negative effect on criminal violence

Empirical strategy

The empirical analysis is divided into two parts. First, I use country-year as unit of analysis with national-level statistics on homicide rates in countries that experienced civil wars from 1995 to 2012. This allows me to include most of the countries that hosted a UN mission after the Cold War. The second stage moves to the subnational and monthly level by focusing on UN mission in South Sudan. Inclusion of other cases is limited by lack of subnational crime statistics for countries hosting peace missions. To operationalize criminal violence, as discussed later, I use homicide rates per 100,000 population as dependent variable and estimate a Panel Corrected Standard Errors model (PCSE) (Beck and Katz 1995) with correction for temporal autocorrelation within panels (AR1). For the cross-national analysis, I also include country fixed effects and region-year fixed effects to account for region specific shocks in a given year.³ This strategy addresses measurement errors due to the pooling of different homicide data sources, assuming that the error is “systematically related to the country, but does not change much over time” (Neumayer 2003: 628).

³ Regions are Africa, Asia, Europe and Central America.

Empirical studies on peacekeeping need to tackle the problem that peacekeepers are not randomly deployed; usually the most violent conflicts and locations host peacekeepers (Fortna 2003; Gilligan and Stedman 2003; Ruggeri, Dorussen, and Gizelis 2016). This is problematic when one wants to assess the effect of peacekeeping on political violence. However, crime and more specifically homicide rates are not among the main drivers of mission deployment. UN mandates are not designed to reduce crime. While I do not argue that the mission is completely exogenous to criminal violence, I believe that the selection bias is a less threatening issue for statistical inference. Statistical models confirm this intuition when coarsened exact matching (CEM; Iacus, King, and Porro 2011) is used to alleviate selection bias and model dependence.

Dependent variable: Homicide Rates

Violence is classified as criminal or political depending on perpetrators' intentions. I operationalize criminal violence with intentional homicides rates. Homicide rates are strongly associated with presence of criminal groups. The Handbook for European Homicide Research also states that "homicide rates are generally accepted as both the most reliably measured crime and as an accurate indicator of a nation's overall level of criminal violence" (Liem and Pridemore 2012). Hence, the dependent variable of the analysis is homicide rates per 100,000 populations. For the country-year analysis, I use UNODC homicide rates in countries that are either in conflict or within 5 year from conflict termination. UNODC combines homicides from the World Health Organization (WHO) and the Crime Trend Surveys (UN-CTS). Intentional homicides, in particular, are defined as "death deliberately inflicted on a person by another person, including infanticide" (UN Statistical Division 2003, 91). These data provide the best indicator for homicide rates and has been already used in cross-national studies on crime (Neumayer 2003, 2005; Ouimet 2012; Rivera 2016). For South Sudan, I use crime statistics reports published by the South Sudan National Police. These reports,

published with the support of the UN Development Program, cover all months and states from June 2011 to March 2013 (SSPS 2011-2013). The Appendix (Section A10, p.19) presents a possible validation of these statistics through a comparison with crime victimization as reported in World Bank Surveys in the years 2012-2014.

Independent variable

The independent variables of interest are the size of UN troops and UNPOL units deployed. Information on the size of UN personnel at the country level is from IPI. For subnational deployment, I rely on UN Secretary General reports, which often include maps with peacekeepers' location. These maps are combined with data from the International Peace Institute (IPI) on contribution to peace missions to estimate the size of UN units in each location (see sample map and the output of the procedure in Section A3, Appendix p.8; this strategy is also used in Ruggeri, Dorussen, and Gizelis (2016)).

Control variables

For the cross-national analysis, I add a set of lagged control variables that are expected to be associated with homicide rates and peacekeeping. First, I include battle-related deaths from UCDP/PRIO Armed Conflict Dataset v.4 (Pettersson and Wallensteen 2015) to control for overall levels of conflict-related violence. The models also include dummies for ceasefires, DDR provisions in the peace agreement and post-conflict years retrieved from UCDP peace agreement dataset (Högbladh 2011, Harbom, Högbladh, and Wallensteen 2006) and the conflict termination dataset (Kreutz 2010). I also include State Fragility Index from the Centre for Systemic Peace (Marshall and Cole 2014), which includes indicators for governance, socio-economic development and security. Population and GDP are also included from Gleditsch (2002), the most complete source for these two measures. In the Appendix, I show additional specifications with other control variables that unfortunately are not available for several countries in the sample (Section A9, p.17).

The control variables for the subnational analysis cannot be identical to the above because those indicators are not available for each South Sudanese state by month. However, I keep the battery of variables as consistent as possible. First, population density is measured yearly at the state level according to the national statistics (NBS 2014). Urban share and poverty incidence are time-invariant and measure respectively the share of population living in urban area, the share of population with below minimum welfare levels in 2009 (NBS 2011). I add state control as measured by the number of police station in each state, (SSPS reports). To account for conflict intensity, monthly killings reported in UCDP-GED are factored in (Sundberg and Melander 2013). Furthermore, I add a spatial lag for homicides to control for potential diffusion. Finally, I do not add DDR or post-conflict since both always equal 1 in the period under analysis. All independent variables are temporally lagged to alleviate endogeneity. Descriptive statistics for the cross-national and subnational variables are in Section A1 (Appendix, p.3).

Potential threats to inference

Before presenting the results, I discuss three threats to causal inference and how I propose to alleviate them. The first one concerns whether the homicide variable is also capturing political violence. The argument that homicides are a good proxy for criminal violence hinges on the assumption that reported homicides are not politically motivated. In principle, it should then be possible to distinguish political and criminal violence. In practice however, it is difficult to empirically pin down criminal violence. It is no surprise that crime statistics are imperfect. In South Sudan, these were collected with the support of the UN Development Program (UNDP), which suggests reasonable data quality. As for the quality of the data for cross-country comparisons, I explained how country-fixed effects reduce concerns over comparability. Additionally, I also follow Neumayer's strategy (2003) and show that

averaging variables across three years to reduce the influence of exceptionally high/low values does not change the results (Section A8, Appendix p.16).

Yet, one could argue that homicides proxy political rather than criminal violence. First, this implies that homicide rates should correlate with conflict data; however, the scatterplot of political and criminal violence across countries shows low levels of correlation (Section A4, Appendix p.9). Second, in line with negative relationship found in the most recent literature on peacekeeping, I should not observe the expected positive effect of peacekeeping but instead a decrease in homicides. Hence, if the argument that homicides simply mirror conflict is true and still a positive effect is found, the latter is likely to be an underestimation of the true effect. More importantly, the effects of troops and police on homicides should have the same direction; however, I will show that these two types of personnel still have opposite impact on homicides.

Slightly different is the case where political violence is miscategorised as criminal violence. As argued by Autesserre (2010), peacebuilders in DRC have interpreted local violence as instances of criminal and private violence rather than political. This suggests that international interveners can wrongly perceive the nature of violence and thus its characterization as criminal. In collecting homicide data in South Sudan, UNDP was not unaware of these challenges. UNDP adhered to the widely accepted definition of intentional homicides and adopted a set of criteria to exclude conflict deaths from the counting, mostly examining whether there was a direct link between the death and the conflict. For example, a death involving non-combatants is classified as intentional homicide. This does not allow to distinguish homicides from conflict deaths when at least one party is plausibly linked to a party in conflict, neither it solves the misperception problem acknowledged by Autesserre;

however, it suggests that the data collection was based on some criteria that, when used systematically, would alleviate miscounting.⁴

Second, the causal mechanisms cannot all be tested separately since we do not have data on each step of the chain. However, I provide more support for the plausibility of my theory with two empirical tests. First, I replicate the analysis using an international expert survey on organized crime as in Pinotti (2015) instead of homicides. Flourishing of organized crime during peacekeeping economies is one of the mechanisms I propose to link UN missions and higher homicide rates. I find confirmation that UN troops are associated with (emergence of) organized crime, while police have a negative impact on it (Section A6, Appendix p.11). This is also consistent subnationally, where I use counterfeiting to measure organized crime. In particular, counterfeiting is one of the most common activities of organized crime in South Sudan, so it is plausible proxy for criminal groups. In Section A6 (Appendix), I also find that counterfeiting is associated with large UN military presence. Second, and even more importantly, a falsification regression shows that total crime rates are not affected at all by peacekeepers (Section A7, Appendix p.12). These regressions confute two crucial points. First, peacekeepers presence does not result in generalized rise/drop in reported crimes; and second, not all crimes, but specifically homicide and organized crime-related felonies, increase where UN troops are deployed, and decline when UNPOL is present. These very important results are further discussed in Appendix.

⁴ Grady (2016) flags some important issues concerning UN missions' efforts to collect data on sexual exploitation and abuses (SEA), but it is worth highlighting two key differences with UNDP support on data collection. First, the SEA reports have consequences on the missions' reputation and legitimacy is at stake. SEA allegations undoubtedly cast a shadow on the mission's conduct, while conversely, bad crime statistics do not necessarily reflect negatively on the mission. Second, reporting on SEA does not involve any effort to build statistical capacity of local institutions, nor the mission itself has expertise on such matters. The UNDP, on the other hand, provides exactly that type of expertise.

Third, reporting bias could be a concern for the subnational analysis, where data was collected with UN assistance. The test mentioned above reduces the credibility of such issue since not all crimes are affected by peacekeepers' presence. Still, it could be argued that homicides are more reported in locations where UNPOL supports the national police. Hence, peacekeepers will be associated with higher homicide counts. If these reporting biases are severely affecting the results, I should find a positive coefficient for UNPOL, in particular. What the analysis reveals, in fact, is that UNPOL is associated with *fewer* homicides and only UN troops have positive coefficient. A different form of bias concerns UN presence resulting in more reported homicides as consequence of an intentional mis-categorization of political killings as criminal killings. However, this implies a negative correlation between political and criminal violence, which, as mentioned, is very close to zero in fact.

A fourth concern is that ungoverned spaces where state is absent explain both deployment and homicides, thus indicating a spurious relationship. Particularly at the subnational level, pockets of no-governance are common. While measuring degrees of un(der)-governance is a challenge, there are some important features of the research design that would rule out this alternative explanation. First, the subnational analysis includes the logged number of police stations in each state, which is a proxy for state presence. Second, all states in South Sudan host peacekeepers, thus the underlying selection process is not whether to send peacekeepers or not; rather it is about how many should be sent, which is in turn driven by conflict intensity. Under-provision of state capacity would be a more severe problem if some units did not receive peacekeepers at all. Third, since the time window I analyse subnationally is relatively narrow (18 months), I expect no significant temporal variation in degrees of state capacity, which is a slow-moving factor. This means that fixed effects would correct for this unobserved heterogeneity, given its assumed time-invariance in the sample.

The challenges discussed in this paragraph warn us from drawing causal conclusions from the analysis, which is why this article refrains from using causal language. However, the following analysis is clearly indicative of a plausible impact that peace operations may have on criminal violence.

Country-level Analysis

The cross-national sample includes countries that experienced internal conflict from 1995 to 2012. Countries enter the dataset if they experience violent conflict in a given year and leave after 5 consecutive years of peace. Figure 1 shows all countries in the sample, distinguishing those that hosted peacekeeping operations (blue-striped) from others (grey). Overall, 58 countries experienced conflict, and the UN intervened in 19 of these instances. Including both countries that hosted and did not host UN missions is important to distinguish whether increasing trends in crime are comparable across all civil wars or peacekeepers played a role in this process. In other words, by including both scenarios with and without UN peacekeepers, I can investigate if peacekeepers' presence altered otherwise similar trends of criminal violence. Figure 2 plots average annual homicide rates in countries included in the sample. Hollow circles are yearly country observations.⁵ On average, Figure 2 shows that homicide rates are lower in countries with UN peace missions (blue line). The peak around 1995 and 1996 is El Salvador, the main outlier in the sample.⁶

[Figure 1 about here]

[Figure 2 about here]

⁵ Plots in the article are created in Stata (v. 15) using Plottig (Bischof 2018). Maps are created in ArcGIS (v. 10.5.1).

⁶ The rate of homicides for El Salvador in 1995 is 139 – almost 8,000 cases of intentional killing – the maximum value in the sample. Results do not change when El Salvador is excluded (not shown).

Figure 2 does not counter the argument that peacekeepers presence may favour inducing environments for criminal violence. The argument of this manuscript is that sizeable military operations accelerate the unfolding of conditions that produce more criminal violence.

Estimation and results

One assumption of Hypothesis 1 linking homicides and peace missions is that UN troops reduce battle-related violence. This assumption is empirically supported in Hultman, Kathman and Shannon's (henceforth HKS, 2014) study on peacekeeping in Africa. In their sample (1992-2011 African countries in civil wars), UN armed personnel effectively reduced monthly political violence. The hypothesis I formulate hinges in part on this stabilizing effect that blue helmets have on host-states, whose fluctuations, we have seen, could drive criminal violence trends. Since existing studies find that UN personnel reduce conflict, I expect this to spur more homicides because of the security and economic effect provoked by large UN missions.

Given the relevance of this mechanism, I begin by analysing HKS data with yearly temporal aggregation. The results Model 1 (Table 1) are in line with expectations as UN military is associated with less violence in the subsequent period, while no significant effect is found for UNPOL. Armed personnel, more specifically troops, have a curbing effect on political violence because it signals stronger commitment. Consequently, the theoretical argument that, by reducing political violence, peacekeepers foster more criminal violence is likely to be observed in the African case.

In Models 2 and 3 I use homicide rates as dependent variable, and include all control variables from HKS. Peacekeeping missions are coded with a dummy variable in Model 2,

which does not report a significant coefficient.⁷ Model 3 disaggregates personnel type and size, and indicates that only UNPOL is significantly associated with fewer homicides in the next year, while a positive and significant coefficient is reported for UN troops. Since the main task of troops is to deter political violence, it is likely that their deterring role has the counterproductive effect of spurring criminal violence. Differently, UNPOL is associated with reduced criminal violence as its main responsibilities are rule of law, joint policing with national police and capacity-building, all activities that deter crimes. To some extent, police and troops may affect criminal violence in opposite ways as result of their effectiveness in performing their roles. Interestingly on control variables, DDR programs relate with increasing homicide rates, which is consistent with the individual-level argument proposed. Furthermore, all else equal, countries with ceasefires and within 5 years from conflict termination are also less likely to experience rising levels of criminal violence. Finally, conflict violence negatively correlates with homicides as hypothesized although the coefficient does not reach statistical significance. Appendix (Section A5, p.10) digs into this relation and shows that there is a threshold beyond which conflict reduction is accompanied by a concurrent reduction in criminal violence. Indeed, missions that fail to provide any degree of security are unlikely to have an impact of criminal violence; but when missions are particularly successful and almost eliminate conflict-related violence, these improvements will also be beneficial for crime reduction.

⁷ In additional analysis, I use International Military Intervention data (Pickering and Kisangani 2009) to control for other interveners in the host country. The main results for UN personnel do not change; but interestingly multilateral interventions are associated with increasing homicide rates while unilateral interventions are not. This is not surprising since the argument of the article is not UN-specific, rather generalizable to sizeable external military intervention. NATO or African Union missions that stabilize countries of deployment should produce similar results, with the exception that no international organization deploys units similar to the UNPOL. This means that the results on UN missions' sample are optimistic if compared to organizations that provide peacekeeping without deploying police units that counter unintended increases in criminal violence.

I extend the analysis to the sample of countries mapped in Figure 1. Thus, models in Table 2 have more observations and the control variables described previously.⁸ UN missions vary across regions in terms of composition, but the combination of country and region-year fixed effects addresses this concern. In Model 4, both UN troops and police have a significant effect on homicides and, as in Model 3, the effect is negative for police but positive for troops. In Model 5, the sample is weighted using Coarsened Exact Matching (CEM). CEM allows comparing countries that are similar except for having hosted UN missions by reducing the imbalance among covariates. I match countries based on pre-deployment levels of conflict (battle-deaths) and state fragility. In essence, CEM coarsens the sample on a set of variables; once observations are divided into strata, weights balance the number of treated (with peacekeeping) and untreated (without peacekeeping) observations in each stratum. This alleviates selection bias and model dependence. Following this procedure, the original covariate imbalance drops from 0.86 to 0.18. Results in Models 5 are in line with Model 4.

More substantively, estimates from Model 5 reveal that moving from 0 to 1000 UN troops (and no UNPOL) is associated to an increase in homicide rates per 100,000 population from 7.1 to 8.8. In a relatively small country such as Liberia, with a population of more than 4 million people, this corresponds to a yearly increase of 68 more homicides. It is estimated that to counter this increase, the UN should deploy at least 85 UN police units alongside the 1000 additional troops. This does not mean that UNPOL to UN troops ratio should always be 8.5:100, but such a ratio seems advisable at least until political violence is substantially reduced.

⁸ In Section A9 (Appendix, p.17) I present specifications that include other potential determinants of homicides as suggested in previous research. Because of missing data, this addition reduces the sample size.

Subnational case-study: South Sudan

The country-year analysis provides initial evidence of a relationship between peacekeeping and criminal violence. The fundamental limitation for cross-national analysis is the level of aggregation; peacekeepers are not homogeneously located in host-states, thus at the country-level we fail to observe whether variation in homicides is related to variations in UN personnel. Hence, I complement the country-level empirical analysis with a subnational analysis.

The case of South Sudan is of particular interest since most crimes were not related to smuggling of natural resources or other activities commonly also carried out by rebel groups. Most homicides in South Sudan are the result of cattle raids, one of the main forms of organized crime in the country. The data also shows that there is no significant overlap between areas that experienced very intense conflict and those that recorded high levels of homicides in the aftermath of independence from Sudan. The last UNODC Global Study on Homicides highlighted that in South Sudan “high levels of impunity, combined with ill-conceived DDR programs, the wide availability of weapons, and criminal opportunities associated with illicit markets can lead to other forms of violence, such as increased rates of homicides” (2013, 12). Interestingly, the same trend is also visible in Haiti, Afghanistan, Guatemala, Sierra Leone and Liberia – all countries that hosted UN peacekeeping missions. As mentioned and discussed, UNDP assisted South Sudan police in the collection of data on crime and homicide rates almost since its independence in July 2011.

[Table 1 about here]

[Table 2 about here]

Conflict Background

In January 2011, a referendum for the independence of South Sudan was held. The referendum had been granted as part of the 2005 Comprehensive Peace Agreement (CPA) that officially ended the conflict between the Sudanese government and Sudan People's Liberation Movement (SPLM). Almost 99% of participants to the referendum voted for independence, and South Sudan officially became independent in July 2011. In the same month, UNMISS was established and began transferring personnel from the terminated UNMIS (in Sudan) to UNMISS. The original mandate of the mission was multidimensional and included tasks from state-building to economic development and security sector reforms. The mission included troops, UNPOL, observers and civilian staff from the onset; however, due to the political crisis and the ensuing civil war, in 2013 UN increased troops presence in the country. The outbreak of civil war in 2013 force a change in the mandate toward humanitarian issues and protection of civilians. However, the exceptional circumstances that make UNMISS a not so typical mission today were largely absent in the period under consideration. The original mandate of UNMISS does not differ substantially from the mandate of other robust UN missions such as MONUSCO and UNAMSIL. It is also important to acknowledge that South Sudan had increasingly gained autonomy from the government in Karthoum. Regional autonomy was granted with the Addis Ababa agreement in 1972 (though reneged in 1983) and with the 2005 CPA. Hence, the day after independence, South Sudan could rely on institutional arrangements and structures to govern, however dysfunctional.

Subnational Analysis

The unit of analysis for this subnational study is state-month. States are first-order administrative units of South Sudan. These ten units are analysed for 18 months (June 2011 to March 2013). The analysis starts just before independence and the arrival of the UN mission. The time frame is constrained by the availability of national crime statistics. Figure 3 shows a clear increase in homicides just after UNMISS deployment.

[Figure 3 about here]

As mapped in Figure 5, UNMISS deployed to all South Sudanese states as consequence of the decentralized strategy adopted by the mission. However, there is variation in size of the deployment by state. Furthermore, Figure 6 and 7 show that, overall, the intensity of criminal violence (homicides) does not clearly mirror patterns of political violence in the period under consideration. In other words, states that are torn by conflict do not necessarily score high on homicides. In Appendix (Section A11, p.21), I discuss endogeneity concerns for both troops and police showing that they are not deployed based on substantially differing logics, and their deployment does not respond to homicide rates.

The first model estimated in Table 3 measures peacekeeping as the total number of UN personnel deployed in each South Sudanese state. The results show that larger contingents are statistically associated with more homicides in the following month (Model 6). Model 7 disaggregates UNMISS by personnel, namely troops and police, showing that troops are positively related to homicides while a negative relation exists for UNPOL. Hence, the subnational analysis seems to provide support for the relationship observed at the country-year level.

[Figure 4 about here]

[Figure 5 about here]

[Figure 6 about here]

[Table 3 about here]

In more substantive terms, homicide rates move from 1.5 to 2.5 when there is one standard deviation increase in troops size (from 1300 to 2100) but decrease at a similar rate when approximately 40 UNPOL officers (at the least) are sent to the state. It is important to recall that troops are often in the order of thousands, whereas the police component is significantly smaller. As mentioned, however, UNPOL should reduce criminal violence by empowering national police and training officers; few tens of UNPOL usually train hundreds of national counterparts, which explain why relatively small number of UNPOL exert a strong effect on criminal violence. By comparing the plots in Figure 7, the two types of personnel seems to have opposite effects on homicide.

One important corollary is that UN troops and police are usually deployed together in the same location. So, it could be that the UNPOL negative effect can fully mitigate the positive impact of UN troops when enough police are deployed alongside troops. To investigate this issue and estimate the net impact of UN presence on the ground on homicide rates, I interact UNPOL and UN troops (Model 8). Figure 8 shows the interaction effect and suggests UNPOL can moderate the positive effect of UN troops if at least 60 police units are deployed in the same location. If UNPOL numbers fall below 30, homicide rates tend to rise as more troops are deployed.

[Figure 7 about here]

[Figure 8 about here]

Discussion and conclusions

This article is the first to analyse the effect of peacekeeping on criminal violence. I have formulated the hypothesis that peacekeepers may trigger and/or facilitate criminal violence

for two reasons. First, peacekeepers reduce political violence and create more space for illegal business and criminal groups, as result of peacekeeping economies, decreasing instability, and the counterproductive establishment of non-state monopoly of violence that is limited to only addressing political violence.

Second, the disarmament of combatants may expand the pool of individuals willing to "invest" their violent skills in criminal activities, sometimes independently from implementation and success of DDR programs and SSR. The resulting relationship between peacekeeping missions (as function of UN troop deployment, the main actor responsible for curbing political violence) and criminal violence is expected to be positive. Conversely, UNPOL is hypothesized to have a negative correlation with criminal violence.

The empirical evidence provided in this manuscript supports these expectations robustly at different levels of analysis, with different model specifications and using different estimation strategies. At the country-year level, the mere presence of peacekeepers does not affect violence, although large missions do increase homicide rates. However, when the mission is disaggregated by type of personnel and relative size, presence of military personnel is robustly associated with more homicides. Police, on the other hand, has a positive impact on curbing criminal violence and although police are deployed in smaller contingents than troops, their beneficial impact is not dwarfed by the (unintended) nefarious one troops have. In fact, when deployed in the same location, UNPOL mitigates these effects and manages counter crime, likely by supporting and assisting national police.

But, overall, large missions are associated with rising homicide rates consistently with the hypothesized security and economic effect of military missions on organized and individual crime. The importance of the country-level analysis is that it shows that countries with UN missions with significant military components experience higher levels of

homicides, compared to others with low or no UN presence. So, the rise in homicides is not simply a consequence of the post-conflict environment because *i)* not all countries with UN missions are in a post-conflict phase, and *ii)* the sample includes both countries with and without "treatment". The subnational analysis of monthly homicides and UNIMSS personnel deployment mirrors the country-year analysis. The Appendix further strengthens these conclusions with a falsification test indicating that overall levels of crimes and of non-violent crimes are unrelated to peacekeeping activities. Homicides and organized-crime related measures, on the other hand, are robustly related to troops (positively) and police (negatively).

This study highlights that the focus on battle-field violence and political actors in most UN missions is short-sighted. New multidimensional peacekeeping involves more civilian-oriented tasks but troops still makeup the largest share of peacekeeping personnel. Considering that reducing violence is highest priority for peacekeepers, this is not surprising. But it does not match the broader UN strategy for peace as outlined in the 2015 HIPPO. The very first recommended shift put forward in the HIPPO is that peace missions “should be deployed as part of a broader strategy in support of a political process”, emphasizing the importance of protecting civilians “in all dimensions”, including criminal violence (UN 2015). With this regard and in line with the empirical findings, the role of UNPOL is acknowledged as crucial. The findings of this study do not suggest that UN troops *cannot* reduce criminal violence. A fairer conclusion is that UN troops are ill-equipped to reduce criminal violence *under current mandates* that do not allow them to directly engage criminal actors. The UN should keep sending large contingents of blue helmets because they achieve the primary goal of saving lives. However, the UN should also closely monitor how deployment impacts other forms of violence. Awareness about how transition to peace works and potential side effects can improve missions’ planning in terms of sequencing and timing

of deployment. Future research should be devoted to unpack dynamics between conflict and criminal violence to uncover which mechanisms explain their non-linear relationship and how transition to peace can be managed to contain surges in criminal violence.

References

- Abadinsky, Howard. 2007. *Organized Crime*. Belmont: Wadsworth.
- Andreas, Peter. 2008. *Blue Helmets and Black Markets--The Business of Survival in the Siege of Sarajevo*. Ithaca: Cornell University Press.
- Andreas, Peter. 2009. "Symbiosis Between Peace Operations and Illicit Business in Bosnia." *International Peacekeeping* 16(1): 33–46.
- Archer, Dane, and Rosemary Gartner. 1976. "Violent Acts and Violent Times--A Comparative Approach to Postwar Homicide Rates." *American Sociological Review* 41(41).
- Autesserre, Séverine. 2010. *The Trouble with the Congo: Local Violence and the Failure of International Peacebuilding (Vol. 115)*. Cambridge University Press.
- Beardsley, Kyle, and Kristian Skrede Gleditsch. 2015. "Peacekeeping as Conflict Containment." *International Studies Review* 17(1): 67–89.
- Beber, Bernd, Michael Gilligan, Jenny Guardado, and Sabrina Karim. 2017. "Peacekeeping, International Norms, and Transactional Sex in Monrovia, Liberia." *International Organization* 71(1): 1–30.
- Beck, Nathaniel, and Jonathan Katz. 1995. "What to Do (and Not to Do) with Time-Series Cross-Section Data." *American Political Science Review* 89(03): 634–47.
- Becker, Gary. 1968. "Crime and Punishment: An Economic Approach." *Journal of Political Economy* 76(2): 169–217.
- Bell, Sam, Michael Flynn and Carla Martinez Machain. 2018. "U.N. Peacekeeping Forces and the Demand for Sex Trafficking." *International Studies Quarterly* 62: 643-655.
- Bischof, Daniel. 2018. "New Graphic Schemes for Stata: Plotplain and Plottig." *The Stata Journal* 17(3): 748-75.
- Chalfin, Aaron and Justin McCrary. 2017. "Criminal Deterrence: A Review of the Literature", *Journal of Economic Literature* 55(1): 5-48.
- Clunan, Anne, and Harold Trinkunas. 2010. *9 Ungoverned Spaces: Alternatives to State Authority in an Era of Softened Sovereignty*. Stanford: Stanford University Press.
- Cockayne, James, and Adam Lupel (eds). 2011. *Peace Operations and Organized Crime : Enemies or Allies?* New York:Routledge.
- Collier, Paul. 1994. "Demobilization and Insecurity: A Study in the Economics of the Transition from War to Peace." *Journal of International Development* 6(3): 343–51.
- Daly, Sarah Zukerman, Laura Paler, and Cyrus Samii. 2016. "Wartime Networks and the Social Logic of Crime." *Work in progress* (http://sarahzukermandaly.com/wp-content/uploads/2016/02/wartime_ties_main.pdf)

- Fortna, Virginia Page. 2003. "Inside and out--Peacekeeping and the Duration of Peace after Civil and Interstate Wars." *International Studies Review* 5: 97–114.
- . 2008. *Does Peacekeeping Work? Shaping Belligerents' Choice After Civil War*. Princeton:Princeton University Press.
- Gambetta, Diego. 1995. *The Sicilian Mafia: The Business of Private Protection*. Cambridge:Harvard University Press.
- Gilligan, Michael, and Stephen Stedman. 2003. "Where Do Peacekeepers Go?" *International Studies Review* 5(4): 37–54.
- Gilligan, Michael, and Ernest Sergenti. 2008. "Do UN Interventions Cause Peace? Using Matching to Improve Causal Inference." *Quarterly Journal of Political Science* 3(2): 89–122.
- Gleditsch, Kristian 2002. "Expanded Trade and GDP Data." *Journal of Conflict Resolution* 46(5):712–24.
- Goodhand, Jonathan. 2005. "Frontiers and Wars--The Opium Economy in Afghanistan." *Journal of Agrarian Change* 5(2): 191–216.
- Grady, Kate. 2016. "Sex, Statistics, Peacekeepers and Power: UN Data on Sexual Exploitation and Abuse and the Quest for Legal Reform." *Modern Law Review* 79(6): 931-960.
- Harbom, Lotta, Stina Högladh and Peter Wallensteen. 2006. "Armed Conflict and Peace Agreements." *Journal of Peace Research* 43(5)Hazen, Jennifer. 2010. "Understanding Gangs as Armed Groups." *International Review of the Red Cross* 92(878): 369–86.
- Högladh, Stina, 2011. "Peace agreements 1975-2011--Updating the UCDP Peace Agreement dataset", in Pettersson, Therése & Lotta Themnér (eds.), 2012, *States in Armed Conflict 2011*, Uppsala University Department of Peace and Conflict Research Report 99.
- Hultman, Lisa, Jacob Kathman, and Megan Shannon. 2013. "United Nations Peacekeeping and Civilian Protection in Civil War." *American Journal of Political Science* 57(4): 875–91.
- . 2014. "Beyond Keeping Peace--United Nations Effectiveness in the Midst of Fighting." *American Political Science Review* 108(9): 737–53.
- Iacus, Stefano, Gary King, and Giuseppe Porro. 2011. "Causal Inference without Balance Checking--Coarsened Exact Matching." *Political Analysis* 20(1): 1-24.
- International Peace Institute. "IPI Peacekeeping Database." <http://www.providingforpeacekeeping.org/contributions/>.
- Jennings, Kathleen, and Vesna Nikolić-ristanović. 2009. "UN Peacekeeping Economies and Local Sex Industries--Connections and Implications." MICROCON WP17.

- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1488842.
- Kalyvas, Stathis. 2015. "How Civil Wars Help Explain Organized Crime--and How They Do Not." *Journal of Conflict Resolution* 59(8): 1–24.
- Kalyvas, Stathis, and Matthew Kocher. 2009. "The Dynamics of Violence in Vietnam: An Analysis of the Hamlet Evaluation System (HES)." *Journal of Peace Research* 46(3): 335–55.
- Kaplan, Oliver, and Enzo Nussio. 2018. "Explaining Recidivism of Ex-Combatants in Colombia." *Journal of Conflict Resolution* 62(1): 64–93.
- Knight, Mark, and Alpaslan Özerdem. 2004. "Guns, Camps and Cash: Disarmament, Demobilization and Reinsertion of Former Combatants in Transitions from War to Peace." *Journal of Peace Research* 41(4): 499–516.
- Kolbe, Athena. 2013. "Revisiting Haiti's Gangs and Organized Violence." *Households in Conflict Network* WP147 (<http://www.hicn.org/wordpress/wp-content/uploads/2012/06/HiCN-WP-147.pdf>).
- Kreutz, Joakim. 2010. "How and When Armed Conflicts End--Introducing the UCDP Conflict Termination Dataset." *Journal of Peace Research* 47(2): 243–50.
- Liem, Marieke, and William Pridemore, eds. 2012. *Handbook of European Homicide Research*. New York: Springer.
- Marshall, Monty, and Benjamin Cole. 2014. *Global Report 2014*. Center For Systemic Peace (<http://www.systemicpeace.org/vlibrary/GlobalReport2014.pdf>)
- Mazzitelli, Antonio. 2007. "Transnational Organized Crime in West Africa--The Additional Challenge." *International Affairs* 83(6): 1071–90.
- McGarrell, Edmund, Steven Chermak, Alexander Weiss, and Jeremy Wilson. 2001. "Reducing Firearms Violence Through Directed Police Patrols." *Criminology & Public Policy* 1(1): 119-148.
- Moro, Francesco, Andrea Petrella, and Salvatore Sberna. 2014. "The Politics of Mafia Violence: Explaining Variation in Mafia Killings in Southern Italy (1983–2008)." *Terrorism and Political Violence* 28(1): 90-113.
- Muggah, Robert (ed). 2008. *Security and Post-Conflict Reconstruction*. Routledge.
- Mvukiyehe, Eric, and Cyrus Samii. 2010. "The Subtle Micro-Effects of Peacekeeping--Evidence from Liberia." *Work in progress* (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1642803).
- National Bureau of Statistics. 2011. "South Sudan Statistical Yearbook." (<http://static1.1.sqspcdn.com/static/f/750842/18935415/1349357346780/South+Sudan+Statistical+Yearbook+2011+FINAL.pdf?token=zhLQaCV5jaOHkoxhsq9EWUKRYO0%3D>).

- National Bureau of Statistics. 2014. *Population Projections, South Sudan From 2008–2015*. (http://www.ssnbss.org/sites/default/files/2016-08/population_projections_for_south_sudan_2015_2020.pdf).
- Needleman, Martin, and Carolyn Needleman. 1979. "Organizational Crime--Two Models of Criminogenesis." *The Sociological Quarterly* 20(4): 517–28.
- Neumayer, Eric. 2003. "Good Policy Can Lower Violent Crime--Evidence from a Cross-National Panel of Homicide Rates, 1980–97." *Journal of Peace Research* 40(6): 619–40.
- . 2005. "Inequality and Violent Crime--Evidence from Data on Robbery and Violent Theft." *Journal of Peace Research* 42(1): 101–12.
- Nordås, Ragnhild, and Siri Rustad. 2013. "Sexual Exploitation and Abuse by Peacekeepers--Understanding Variation." *International Interactions* 39(4): 511–34.
- Nussio, Enzo. 2018. "Ex-combatants and violence in Colombia--Are yesterday's villains today's principal threat?" *Third World Quarterly(Thematics)* 3(1): 135-152.
- Ouimet, Marc. 2012. "A World of Homicides--The Effect of Economic Development, Income Inequality, and Excess Infant Mortality on the Homicide Rate for 165 Countries in 2010." *Homicide Studies* 16(3): 238–58.
- Patel, Ana Cutter, Pablo DeGreiff, and Lars Waldorf (eds). 2010. *Disarming the Past: Transitional Justice and Ex-Combatants*. New York: Social Science Research Council.
- Patrick, Stewart. 2011. *Weak Links: Fragile States, Global Threats, and International Security*. New York: Oxford University Press.
- Perito, Robert. 2004. *Where Is the Lone Ranger When We Need Him?* Washington DC: United States Institute of Peace.
- Pettersson, Therese, and Petter Wallensteen. 2015. "Armed Conflicts, 1946-2014." *Journal of Peace Research* 52(4): 536–50.
- Phayal, Anup, Prabin Khadka, and Clayton Thyne. 2015. "What Makes an Ex-Combatant Happy? A Micro-Analysis of Disarmament, Demobilization, and Reintegration in South Sudan." *International Studies Quarterly* 59(4): 654-668.
- Pinotti, Paolo. 2015. "The Causes and Consequences of Organised Crime--Preliminary Evidence Across Countries." *The Economic Journal* 125(586): 58–74.
- Rivera, Mauricio. 2016. "The Sources of Social Violence in Latin America." *Journal of Peace Research* 53(1): 84–99.
- Robert Perito. 2004. *Where Is the Lone Ranger When We Need Him?* Washington DC: United States Institute of Peace. (<https://www.usip.org/publications/2004/01/where-lone-ranger-when-we-need-him>).
- Ruggeri, Andrea, Han Dorussen, and Theodora-Ismene Gizelis. 2016. "On the Frontline

- Every Day? Subnational Deployment of United Nations Peacekeepers.” *British Journal of Political Science*: 1–21. (OnlineFirst)
- Sampson, Robert, and Byron Groves. 1989. “Community Structure and Crime--Testing Social-Disorganization Theory.” *American Journal of Sociology* 94(4): 774–802.
- Schulhofer-Wohl, Jonah, and Nicholas Sambanis. 2010. *Disarmament , Demobilization , and Reintegration Programs: An Assessment*. Folke Bernadotte Academy Report (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1906329).
- Shortland, Anja, and Federico Varese. 2012. *The Business of Pirate Protection*. DIW Report (<https://doi.org/10.1093/bjc/azu046>, accessed 06/18)
- . 2014. “The Protector’s Choice: An Application of Protection Theory to Somali Piracy.” *British Journal of Criminology* 54(5): 741–64.
- Skaperdas, Stergios. 2001. “The Political Economy of Organized Crime: Providing Protection When the State Does Not.” *Economics of Governance* 2(3): 173–202.
- Steenkamp, Chrissie. 2005. “The Legacy of War: Conceptualizing a ‘Culture of Violence’ to Explain Violence after Peace Accords.” *The Round Table: The Commonwealth Journal of International Affairs* 94(379): 253–67.
- Sundberg, Ralph, and Erik Melander. 2013. “Introducing the UCDP Georeferenced Event Dataset.” *Journal of Peace Research* 50(4): 523–32.
- Themné, Anders. 2015. "Former Military Networks and the Micro-Politics of Violence and State-building in Liberia" *Comparative Politics* 47(33): 334-353.
- UN Statistical Division. 2003. *Manual for the Development of a System of Criminal Justice Statistics*. United Nations Publications.
- UN. 2014. *Operational Guide to the Integrated Disarmament, Demobilization and Reintegration Standards*. (http://unddr.org/uploads/documents/Operational_Guide.pdf).
- UN. 2015. *Report of the High-Level Independent Panel on Peace Operations on Uniting Our Strengths for Peace: Politics, Partnership and People*. (<http://www.globalr2p.org/media/files/n1518145.pdf>)
- . 2013. *Global Study on Homicide 2013 - Trends, Contexts, Data*. (https://www.unodc.org/documents/data-and-analysis/statistics/GSH2013/2014_GLOBAL_HOMICIDE_BOOK_web.pdf)
- World Bank. 2011. *World Development Report - Conflict, Security and Development*. http://siteresources.worldbank.org/INTWDRS/Resources/WDR2011_Overview.pdf .

Table 1. Models on African sample with Dynamic PCSE

	Model 1 HKS Africa Data DV: Battle-Deaths	Model 2 UN Dummy DV: Homicide Rates	Model 3 UN Personnel DV: Homicide Rates
UN Troops	-0.0001 ⁺ (0.000)		0.002* (0.000)
UNPOL	0.001 (0.0004)		-0.127* (0.030)
PKO Dummy		0.113 (3.699)	
Conflict Deaths	0.007* (0.001)	-0.014 (0.012)	-0.012 (0.010)
Ceasefire	-0.806 (0.590)	-8.975* (3.420)	-7.773* (3.143)
Rebels Strength	-0.520 (0.698)	61.417* (11.162)	59.565* (10.974)
Num. of Rebel Groups	0.145 (0.158)	-13.004* (2.835)	-12.099* (2.750)
Population (log)	-4.098 ⁺ (2.229)	44.376* (14.370)	38.739* (17.011)
GDP pc	0.000 (0.001)	0.003 (0.004)	0.001 (0.004)
Biased Mission	0.087 (0.472)	2.263 (2.677)	1.772 (2.285)
DDR	-0.014 (0.242)	9.658* (2.648)	9.837* (2.471)
Post-Conflict	-1.261* (0.391)	-9.129* (2.329)	-7.422* (2.218)
Observations	299	88	88

* p < 0.05, + p < 0.10

Standard errors in parentheses

Country & Region-Year Fixed Effects Included

Table 2. Post-CEM Models on Global Sample with Dynamic PCSE

	Model 4 Global Sample	Model 5 Global Sample (CEM)
UN Troops	0.003* (0.000)	0.003* (0.000)
UNPOL	-0.155* (0.047)	-0.165* (0.050)
Conflict Deaths	-0.021* (0.006)	-0.019* (0.006)
State Fragility	-0.158 (0.236)	-0.058 (0.212)
Ceasefire	-0.274 (1.908)	-0.496 (1.939)
Population (log)	-9.906 (7.992)	-2.818 (9.069)
GDP pc	-0.001* (0.000)	-0.001* (0.000)
DDR	2.862+ (1.582)	3.946* (1.807)
Post-Conflict	-1.713* (0.593)	-1.360* (0.483)
Observations	352	324

* p < 0.05, + p < 0.10

Panel-corrected Standard Errors in parenthesis
Country & Region-Year Fixed Effects Included

Table 3. Estimation on South Sudan Mission with Dynamic PCSE

	Model 6 Total UN	Model 7 UN Type	Model 8 Interaction
UN Total Personnel	0.0004+ (0.0002)		
UN Troops		0.001* (0.000)	0.003* (0.000)
UNPOL		-0.075* (0.018)	0.027 (0.020)
UNTroops#UNPOL			-0.0001* (0.00002)
UN Others		-0.006 (0.021)	-0.050+ (0.029)
Conflict Deaths	0.005 (0.013)	0.007 (0.012)	0.009 (0.012)
Conflict Deaths (sq)	-0.0001 (0.00002)	-0.0001 (0.00002)	-0.0001 (0.00002)
Population Density	-0.069 (0.105)	-0.078 (0.132)	-0.132 (0.117)
Poverty Incidence	-0.010 (0.013)	-0.009 (0.027)	-0.002 (0.020)
Urban Share	-0.103 (0.092)	-0.091 (0.096)	-0.101 (0.090)
DV (Sp. Lag)	0.052 (0.181)	0.174 (0.181)	-0.040 (0.158)
Numb. Police Stations (ln)	0.817 (0.712)	0.786 (0.616)	0.944 (0.679)
Observations	180	180	180

* p < 0.05, + p < 0.10

Panel-corrected Standard Errors in parenthesis
State-level Fixed Effects

Figure 1. Countries included in the sample (list Section A2, Appendix p.5)

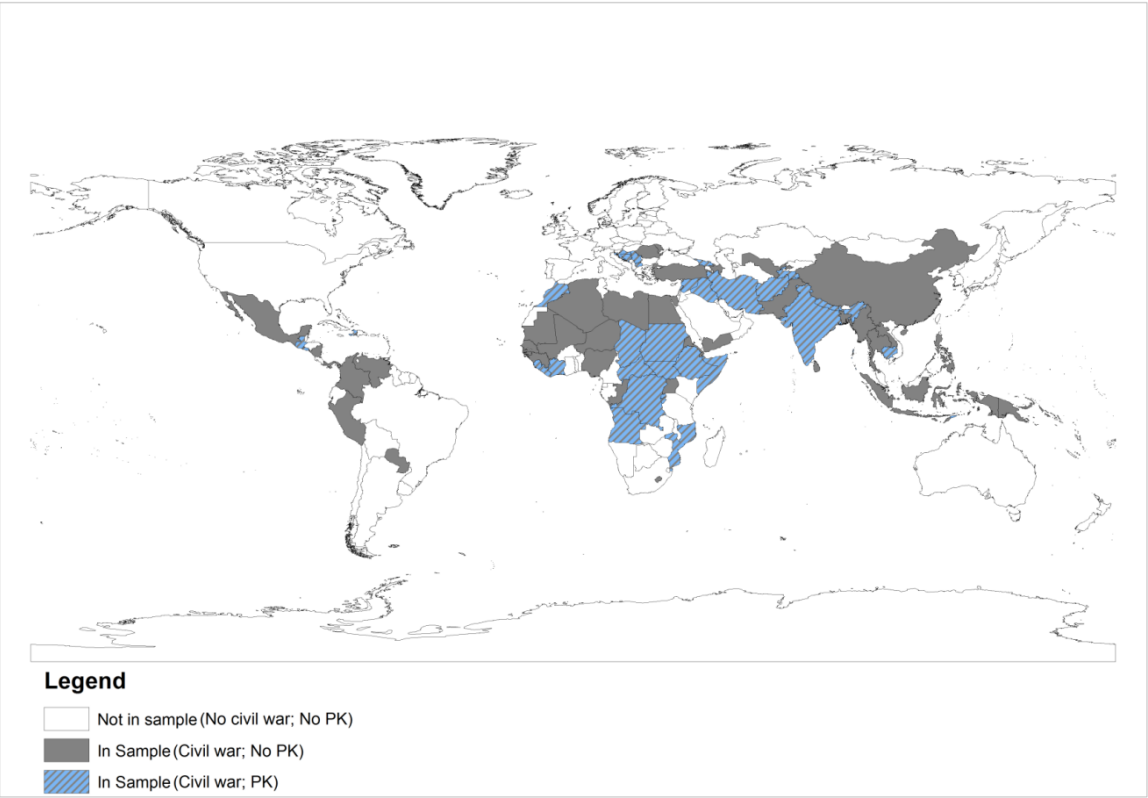


Figure 2. Trends in homicides in conflict countries with (blue) and without (black) peacekeepers

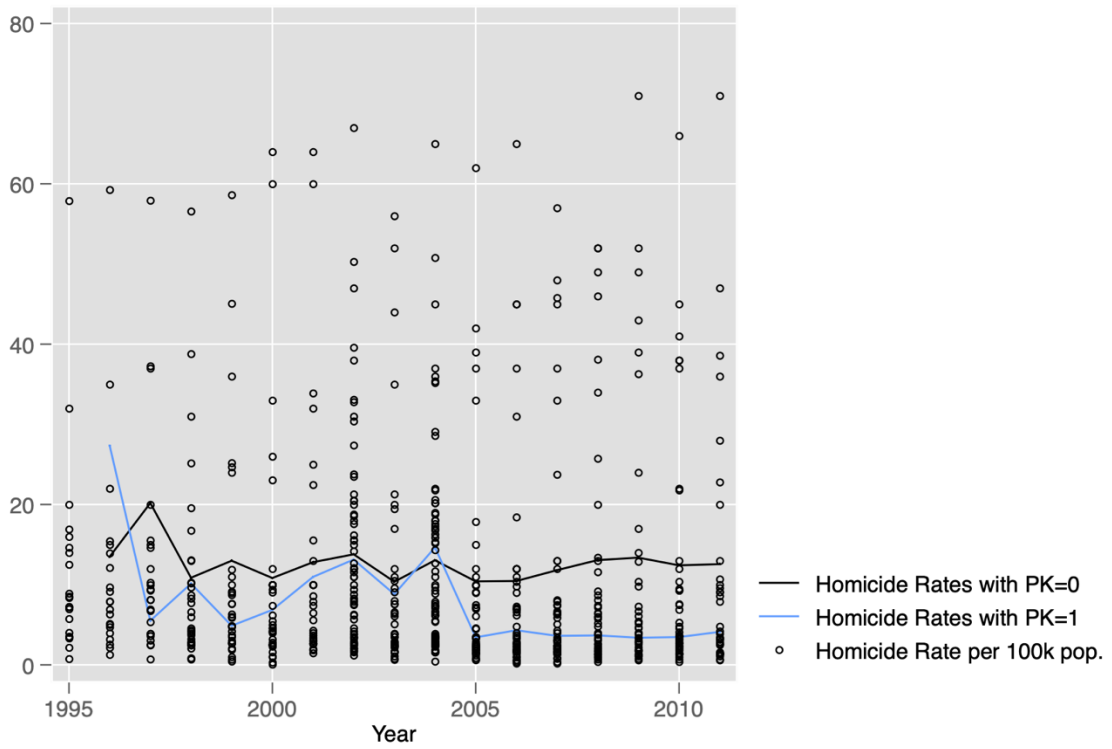


Figure 3. Trends in homicides and UNMISS deployment

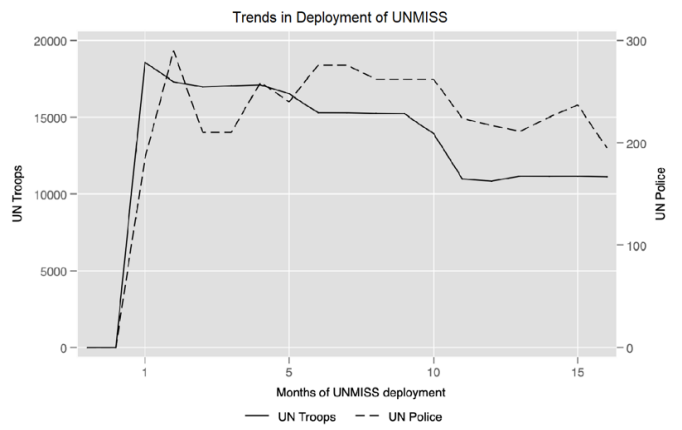
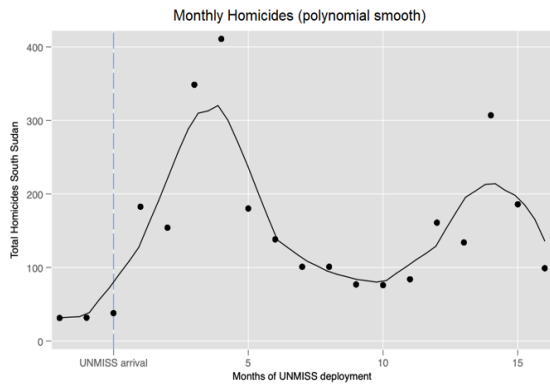


Figure 4 . Average UNMISS deployment

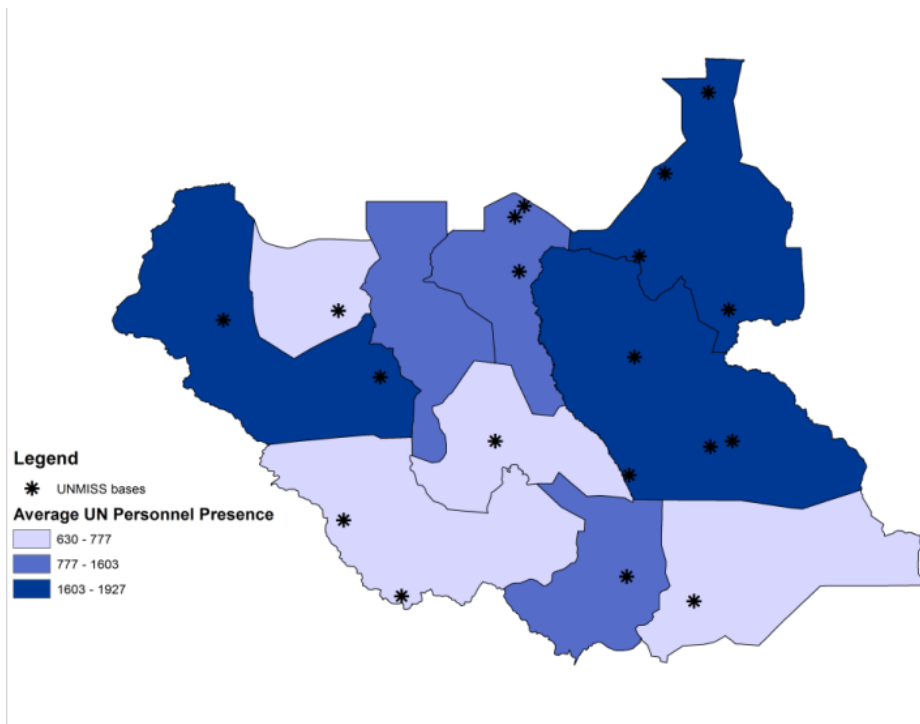


Figure 5. Average Conflict-related Deaths

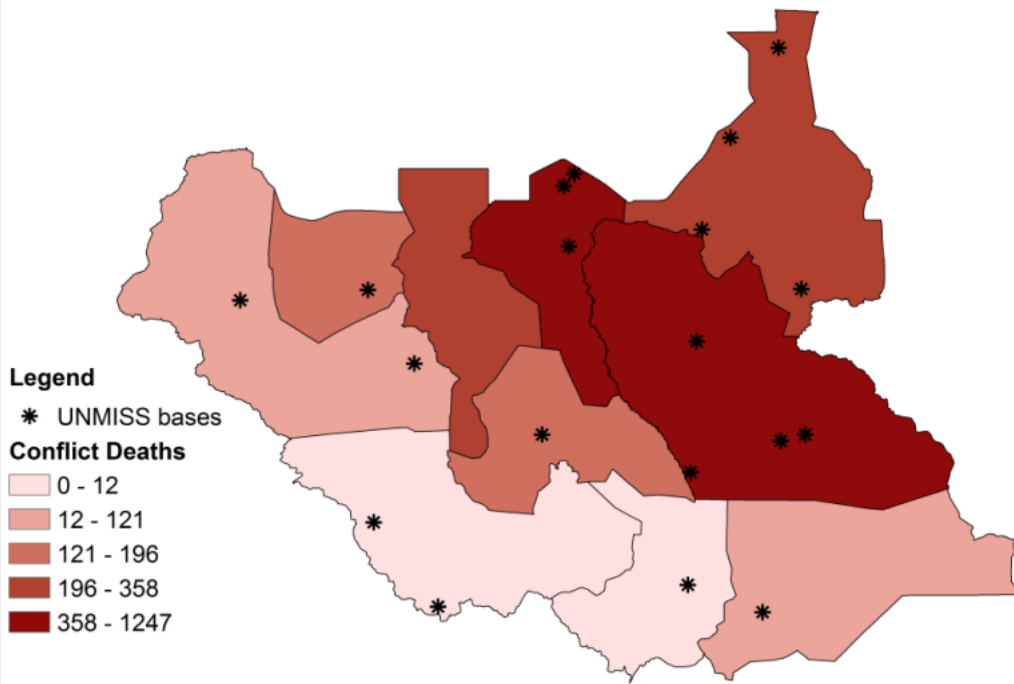


Figure 6. Average Homicide Deaths

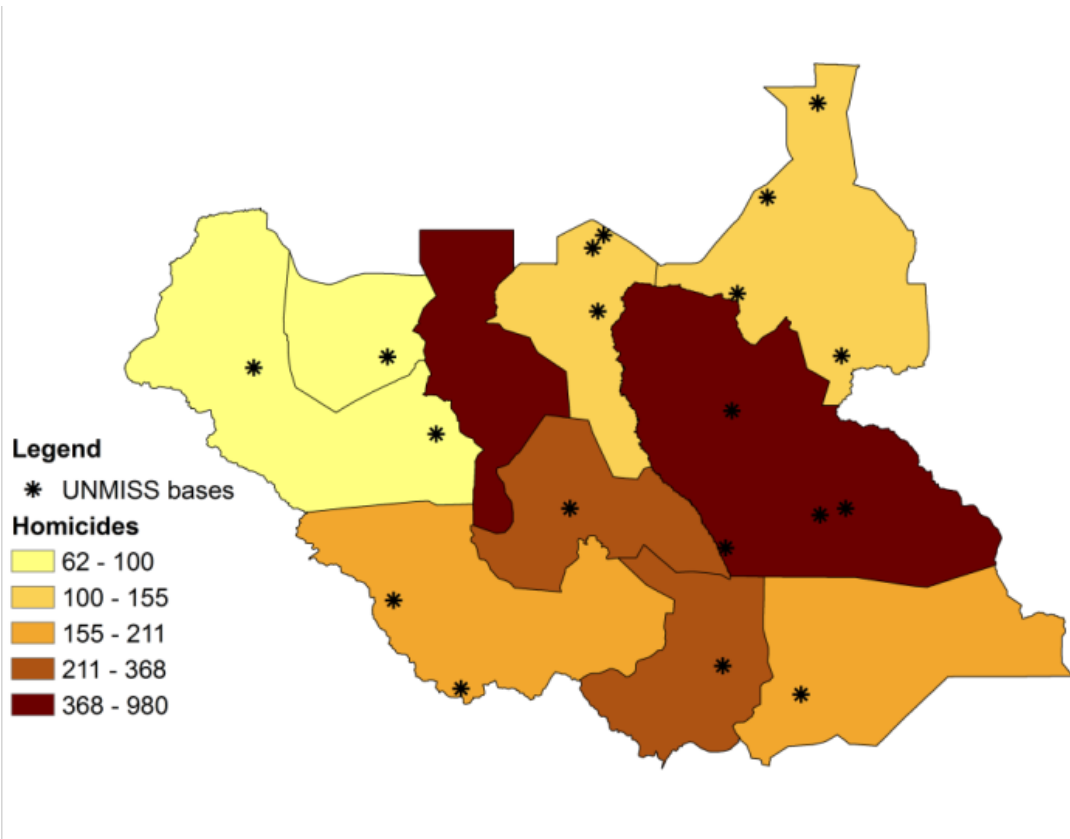


Figure 7. Predicted homicide Rates

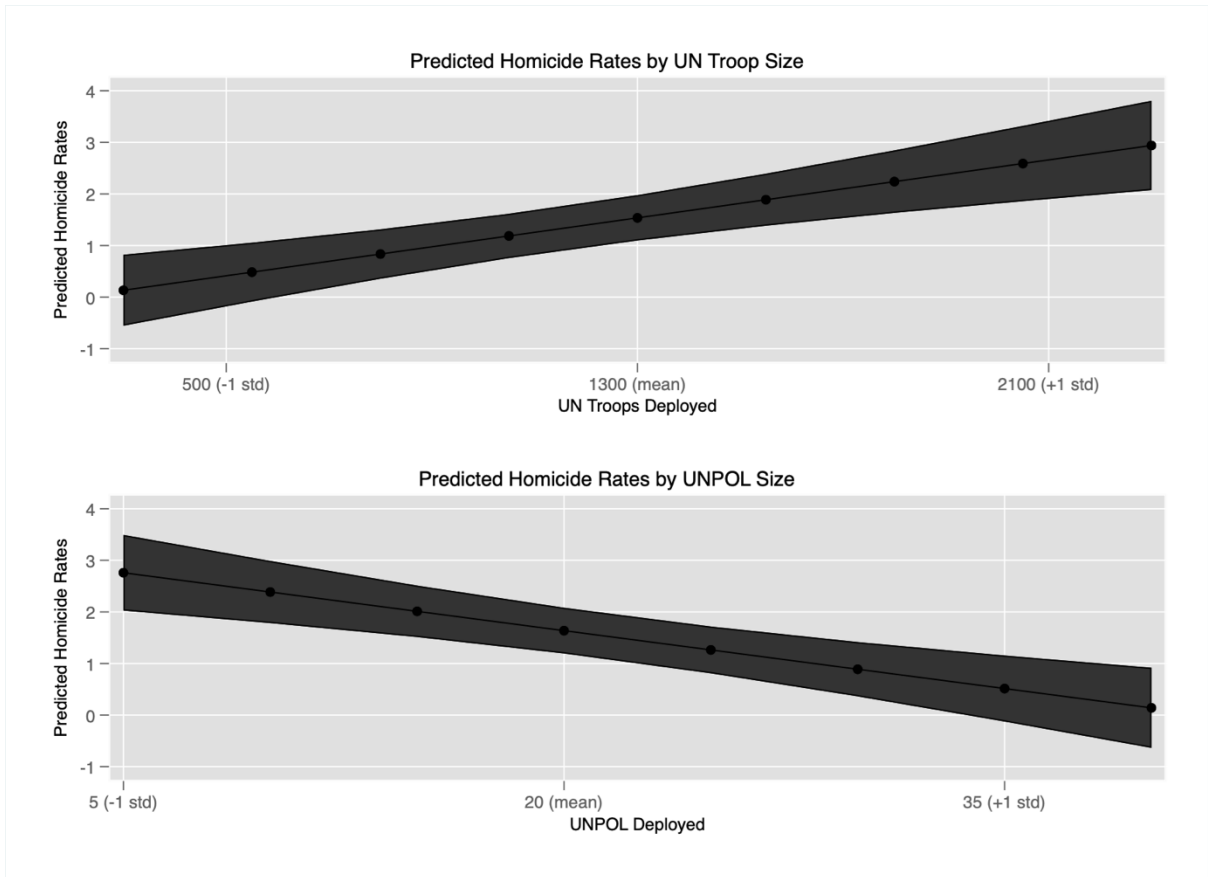


Figure 8. Conditional effect of UN Troops by UNPOL size

