## Peacekeepers against ethnic violence

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#### Abstract

How do peacekeepers affect violence in ethnic conflict? Existing scholarship focuses on how the features of a mission make it more effective in reducing ongoing violence. While this research has shown that the deployment of large numbers of military personnel decreases conflict intensity, it is unclear how the domestic environment affects the chances of success. This paper factors in the local sources of violence and thus aims to provide a more complete explanation of the conflict-reducing effect of peacekeepers. Since ethnic violence is related to the distribution of ethnic groups and the demographics of locations, I argue that ethnic configurations also influence the success and failure of peace operations. Effective reduction of ethnic violence depends not only on peacekeeper type and the size of missions, but also on their capacity to alter opportunities and incentives for specific forms of violence stemming from ethnic configurations. The interaction between ethnicity and peacekeeping and their effect on violence is empirically investigated with a quantitative and sub-national analysis of peacekeeping missions in Sub-Saharan Africa. The research design combines UCDP-GED data con conflict with peacekeeping and ethnicity data. Case selection is based on the availability of sub-national data on ethnicity. At this stage, the analysis includes Liberia and Sierra Leone, but will be extended to other cases. The results support the general hypothesis that large UN troops reduce one-sided and two-sided violence conditionally on the level of ethnic polarization. The robustness of the mandate also significantly affects the performances of the peacekeepers.

## Introduction

Is peacekeeping effectiveness conditional on local ethnic configurations? Existing studies have shown that variations in the distribution of ethnic groups plays a role in shaping the dynamics of civil conflict and the target of violence selected by warring parties. In particular, local differences in groups' size and number result in specific dynamics of violence because each of these configurations correspond to distinct capacities and incentives to use violence. If conflict dynamics are sensitive to variations in the balance of power between ethnic groups, it is problematic to assume that a type of peacekeeping intervention that worked in one context will be successful when implemented in different circumstances. Also, it is unlikely that peacekeeping have a homogenous curbing effect on conflict, independently from local or territorial sources of violence. Hence the question is how peacekeeping interventions interact with ethnicity, and which missions are more likely to be successful in ethnic conflicts?

In attempting to answer this question, this paper bridges theories of how ethnicity affects dynamics of violence with the literature on peacekeeping. The proposed theoretical framework introduces ethnicity as a factor that influences not only violence but also the effectiveness of a mission. The literature on peacekeeping has found that the success of UN missions is dependent on two sets of factors, namely the features of the mission and the environment where peacekeepers operate. With regard to the first set, robust mandates, financial budget, size and type of personnel play an important role for success (Hegre et al 2012; Hultman et al 2014). However, this does not account for the fact that curbing violence in some locations may be more difficult than in others and that increasing the number of blue helmet might not automatically curb violence in the locations where they are deployed. There are internal features of a conflict that can interact with peace missions and affect their success or failure. Hence, in order to outline the mechanism driving some interventions to success, the domestic environment has to be included more explicitly in the theoretical framework as this is the *locus* where local sources of hostility and local capacity interactively impact UN peace policies (Doyle and Sambanis 2000; Lyon 2005). If the objective of peacekeeping is to increase the cost of violence, its effect is necessarily conditional on what motivates and allows conflict among the combatants (Regan 2002). In other words, the characteristics of the parties mediate the success of peacekeeping. I argue that since the dynamics of ethnic violence are related to the distribution of the groups and the demographic composition of locations, the ethnic makeup also influences the success and failure of peace operations. Effective reduction of ethnic violence depends not only on peacekeeper type and the size of missions, but also on their capacity to alter the opportunity and incentives for specific forms of violence stemming from ethnic configurations.

This paper is structured as follows. First, I review the main contributions in the scholarship of peacekeeping and peace mission's effectiveness. I also explain how this paper attempts to link this research that focuses on missions' features with the literature on how ethnicity explains patterns and types of violence. This represents one of the two main contributions of this paper. The other contribution is its spatial *and* temporal disaggregated empirical approach. In the theoretical section, I formulate hypotheses on how robust and weak missions affect violence *conditional* on local distribution of power among groups. As discussed in the empirical section, distribution of power is proxied using the index of ethnic polarization. The index ranges from 0 to 1, where 1 equals bipolarity, thus power symmetry. The empirical analysis focuses on Sierra Leone and Liberia as instances of robust and weak mandate missions. My intention is to include more cases to the analysis. The hypotheses are tested with a Conditional Mixed Processes model to account for the selection bias. Conclusions are TBD.

## Effectiveness of Peacekeeping and Dynamics of Violence: Building the Bridge

The main objective of peacekeepers deployed in ongoing ethnic conflict is to reduce violence. In order to do so, they have to eliminate incentives and opportunities for mobilization. Hence, peacekeepers must tackle the cost-benefit calculation that makes violence so attractive in ethnic conflicts. Doyle and Sambanis (2006) distinguish three types of interventions, namely traditional, multidimensional and enforcement missions.<sup>1</sup> Traditional peacekeeping adequately describes most UN Cold war missions based on parties' consent and composed of neutral lightly armed personnel. Multidimensional missions move beyond merely military function to entail state-building measures (economic and justice reforms, for example). Lastly, enforcement missions differ from traditional approaches as they do not need parties' consensus and the troops are entitled to use violence in order to implement the mandate. However, the mandate of enforcement missions is limited to military issues thus being less extensive than in multidimensional deployments. Together, multidimensional and enforcement missions are referred to as transformational approaches to peacekeeping. Testing the different effects that these types of mission have on effective peace-building, Doyle and Sambanis found, enforcement and multidimensional missions have a positive impact on peace-building in contrast with traditional peacekeeping (Doyle and Sambanis 2006). This is consistent with the argument on the robustness of the mandates since enforcement missions usually have the strongest mandates (Kreps and Wallace 2009). Multidimensional missions, however, can arguably be successful when there is already some peace to keep. More importantly, the implementation of the mandate and the type of mission define, in turn, the composition and the size of the deployed personnel. Enforcement missions, for example, will result in the more troops and armed police while multidimensional missions entail more extensive functions for civilian staff. In this paper I will focus on a specific feature of the mission instead of adopting the broad typology of traditional versus transformational peacekeeping. I place more emphasis on how missions' robust mandate and weak mandate affects peacekeepers effectiveness conditional on local ethnic configurations of power. Robust mandates favour a proactive approach to peace and allow peacekeepers to use all necessary mean to achieve the objective of the mission. Besides, it is also important to consider variations in mission size. Missions with the same type and even with the same mandate may differ significantly in size and composition, which as existing scholarship suggests, affect success. Moving beyond examining the simple presence of peacekeepers, Hultman et al (2014) find that armed personnel is particularly effective for intervention in the midst of ongoing conflict because they are better equipped to separate and demobilize combatants while providing guarantees of security. Police and unarmed observers, on the other hand, do not reduce violence because they are usually are deployed behind frontlines and cannot significantly affect battlefield activity. The conclusion drawn from the empirical the analysis is that 10,000 troops could reduce violence by 73%. More troops also are found to reduce violence against civilians in Africa (Hultman, Kathman, and Shannon 2013), thus suggesting that substantial deployment of armed peacekeepers should almost always reduce both one-sided and two-sided violence. Indeed, the literature consistently highlights that large armed forces are important determinants of peacekeeping success not only of violence reduction but also of cooperation with peacekeepers (Hultman, Kathman, and Shannon 2014; Kreps 2010; A. Ruggeri, Gizelis, and Dorussen 2012). This highlights the importance of looking

<sup>&</sup>lt;sup>1</sup> Observer missions can be added to this taxonomy. As traditional missions, it requires consensus but the deployed personnel is unarmed.

at which and how many peacekeepers are deployed; simply accounting for the type of mandate does not recognize this important variation. In addition, however, it is clearly relevant to identify to which locations peacekeepers are sent. Most of mentioned studies disaggregate their analysis at the monthly level, thus improving the quality of the inferential analysis. Nonetheless, the spatial disaggregation and specific location of peacekeepers is either missing or coded as presence or absence of UN personnel (with no distinction in the type of personnel). One of the contributions of this paper, thus, is in its disaggregated perspective on temporal and spatial dynamics of violence and peacekeeping deployment.

Similarly to existing literature, this paper is centred on factors that favour the success of a mission but it directly addresses how peacekeepers can alter local dynamics violence. The literature on civil war has shown that the territorial distribution of power among ethnic groups is related to conflict dynamics, thus represents one of the sources of violence that peacekeepers have to respond to. Each configuration of ethnic distribution obviously results in different patterns of violence, which mainly differs in who is the target of violence. In other words, opponents resort to different types of violence (one-sided, two-sided, selective, indiscriminate, etc....) according to the distribution of power in an area. For example, groups victimize the population indiscriminately in areas where power is fragmented while they are more selective in areas with hegemonic control (Kalyvas 2006). Ethnic composition also affects the likelihood of one-sided versus two-sided violence. Highly polarized societies are overall more violent (Costalli and Moro 2012; Montalvo and Reynal-Querol 2005). Civilian victimization, on the other hand, increases in presence of either high polarization (two large groups) or low polarization, whereas an asymmetry of power makes the smaller group more reliant on civilian support by coercion (Esteban et al 2010; Montalvo and Reynal-Querol 2008). The fragmentation of groups also increases civilian victimization as consequence of higher competition and in-group dynamics boosting predatory behaviours (Ottmann 2015). Finally, the first paper of this proposal confirms the role of the distribution of ethnic groups, showing that majority groups attack enclavized minorities in their territory to achieve ethnic homogeneity. Consequently, the effectiveness of peacekeeping in reducing violence appears conditional on the ethnic characteristics of locations. This paper factors in the local sources of violence and thus aims to provide a more complete explanation of the conflict-reducing effect of peacekeepers. Instead of focusing only on either mission features or conflict environment, it attempts to develop helpful implications for peace missions by combining both information on the ethnic composition of deployment locations and features of mission mandates.

## Theory and Hypotheses: Peacekeepers against ethnic violence

Given the limited amount of resources available for missions, peacekeepers are clearly not able to intervene everywhere. Moreover, some locations that are more violent than others have higher priority as well. Peacekeepers are indeed sent to conflict with more casualties and, subnationally, to more violent areas (Costalli 2014; Virginia Page Fortna 2004, 2008; Gilligan and Stedman 2003; Hultman 2010; Ruggeri, Gizelis, and Dorussen 2011). Violence is not evenly distributed within countries and sometimes clusters in specific regions. The dynamics of violence in ethnic conflict, as showed in the first paper, can be explained by the geographic distribution of ethnic groups. Building on this work, I expect that ethnic geography also affects the success of external interventions. Obviously this expectation is valid if the conflict is fought along ethnic cleavages thus ethnic identities have been activated. If violence is used strategically and is based on the ethnic configurations of groups, then this factor also influences the decision to abandon violence. Intervention by external actors enters this calculation and alters groups'

expectations on the outcome of the conflict and the "attractiveness" of violence as tool to achieve goals. Strong, large military interventions curb violence and foster some cooperation, but what is an optimal strategy is dependent on the context and the actors involved. In sum, the effect of peacekeeping, as Regan notes, "plays out through the strategic calculation between the combatants" (Regan 2002, 74). I proceed by formulating hypothesis on how some ethnic configurations condition the effect of different types of peacekeeping missions.

The security dilemma peacekeepers are called to solve is shaped by the demography of ethnic groups. If a region is perfectly homogeneous ethnically, it is very unlikely to see violence there. In contrast, where two groups of similar size live close to each other, the intensity of violence is very high. In this latter example, the high ethnic polarization forces groups to fight harder in order to defeat the opponent. Indeed, ethnic polarization is a good predictor of violence. Consider again the bipolar case, with two ethnic groups of comparable size. Because of the symmetry of power, these groups will mainly engage in military confrontations, which would result in more battle-related deaths while also using mass killings as complementary tactics (Balcells, Daniels, and Escriba-Folch 2014; Esteban, Morelli, and Rohner 2010). It follows that highly polarized locations require a significant deployment of armed troops in order to reduce the incentives to violence by threatening credible punishment for such large groups. Deployment of large armed personnel is crucial to deter groups but deterrence only works if peacekeepers commitment is "credible". In this sense, missions require robust mandate to reduce violence where polarization is very high. Robust mandates are characterized by UN Security Council authorization to use "all necessary means" to deter parties from disrupting peace civilians' and protection (UN: http://www.un.org/en/peacekeeping/operations/principles.shtml). With robust mandates, peacekeepers are enabled to also adopt a proactive rather than reactive approach to peace. This aspects is even more important if, , along with the size of the mission, it is used to signal the salience of the conflict for the intervener (Carment and Rowlands 1998). This makes mandate type an important feature of peacekeepers' activity when groups have comparable power. Credible commitment is a core factor here and can be signalled by the presence of large numbers of armed personnel operating under a robust mandate (Hultman, Kathman, and Shannon 2014; Pushkina 2006; A. Ruggeri, Gizelis, and Dorussen 2012; Thyne 2009). The discussion can be summarized in the following hypothesis:

## *H1: When polarization is high, robust and large PK deployment reduces violence H2: When polarization is high, weak PK deployment is ineffective in reducing violence (at best)*

In contrast, when ethnic groups differ in size, such as when ethnic polarization is low, an asymmetry of power dominates. When polarization decreases, the balance of power of the groups becomes more asymmetric. The resulting asymmetry changes the dynamics of violence. Majority groups are more likely to attack minorities if they are vulnerable, enclavized and isolated from their co-ethnics (Di Salvatore 2016). Scenarios of low ethnic polarization are commonly characterized by the presence of a majority group that likely resorts to large-scale killings of civilians to achieve ethnic homogeneity. Two-sided violence, on the other hand, is less common since the enclavized minorities are isolated and difficult to protect. What would prevent a majority group from resorting to one-sided violence? Since it is targeting a disadvantaged group, deploying troops is not likely to change this behaviour. Several studies have shown that civilian victimization can be prevented only if the peace mission intervenes by explicitly targeting the perpetrators (Hultman 2010; Krain 2005). This implies that deploying

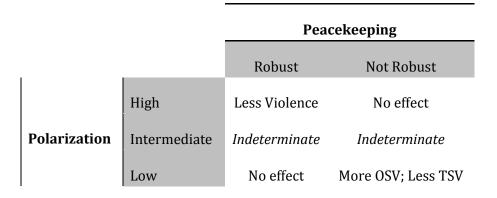
troops with weak mandate is potentially very dangerous as it may fail to reduce one-sided violence and, in the worst case, have the opposite effect of increasing it. Nonetheless, with the possibility of acting proactively, large deployments under robust mandates are expected to reduce violence, both against civilians and on the battlefield. Additionally, with regard to two-sided violence, asymmetry of power makes this type of violence overall less intense because the minority is strongly disadvantaged and lack the necessary capacities to organize a resistance or use guerrilla tactics against the majority. It is unlikely to see prolonged large-scale two-sided violence when polarization is low as the smaller group has not enough resources to sustain the confrontation and, in some cases, might lack operational capacities to do so. Thus, I would expect even deployments of troops with weak mandates to be able to reduce two-sided violence in locations with low polarization. This discussion results in the following hypotheses:

# H3: When polarization is low, robust and large PK deployment reduces violence H4a: When polarization is low, weak PK deployment reduces TSV H4b: When polarization is low, weak PK deployment does not reduce OSV

The hypotheses formulated so far focus on high and low polarization in a broad sense. In these two scenarios, the most important aspect of the distribution of groups is their size or power. When polarization is high, ethnic groups have comparable sizes while when polarization is low there is a strong asymmetry. But when polarization is neither very high nor very low, groups' size could be less important than other aspects of ethnic patterns in explaining dynamics of violence. As example, let's assume that polarization is not extremely low, thus the asymmetry between groups is not huge. The minority will still be unable to confront the dominant group on the battlefield but it can resort to alternative strategies as it has more resources than in the low polarization scenario. One option for the minority group is to rely on civilian support or to use guerrilla tactics to counter the supremacy of the majority. This strategy would still require some degree of organizational capacity and resources that fragmented groups will often lack. In other words, when polarization is at intermediate levels, the asymmetry is less pronounced and can be overcome even without openly confronting the enemy. In order to formulate hypotheses in the expected effect of peacekeeping in this context, it could be crucial to account for other measures of ethnic distribution which are not captured by polarization, for example the degree of segregation or concentration of the minority group. At this stage, I do not formulate hypothesis on the conditional effect of intermediate polarization on peacekeeping effectiveness.

The hypotheses are summarized in Table 1

Table 1



## **Empirical analysis**

For this preliminary analysis, I focus on two African countries, namely Liberia and Sierra Leone. I chose these two cases because they both had UN mission but with different mandates. The UNAMSIL mission in Sierra Leone was characterized by a robust mandate while the UNMIL mandate in Liberia was weak. I will test the hypotheses of the conditional effect of ethnic polarization on peacekeeping effectiveness using a Time Series Cross Sectional dataset with administrative unit-month as unit of analysis. Geographically, data disaggregation depends on the availability of data on the subnational distribution of ethnic groups. For Liberia, such information is available up to the second order administrative unit, namely counties within districts. For Sierra Leone, the data is available for the third order administrative unit, which is the chiefdom. In total, there are 68 counties in Liberia and 153 chiefdoms in Sierra Leone (see Figure 1). The time period goes from the year prior to UN peacekeeping deployment to the following 5 years of the mission. For Sierra Leone, this period cover all months from 1997 to 2001, thus including both the observer mission (UNOMSIL) and the 1999 UNAMSIL mission. The UNMIL peace mission in Liberia was established at the end of 2003, thus the period of interest ranges from January 2003 to December 2007.



Figure 1. Map of Chiefdoms in Sierra Leone and Counties in Liberia.

I use two dependent variables, namely the monthly log of civilian victims and the log of battlerelated victims to measure types of conflict intensity. Different degrees of ethnic polarization provide incentives for different types of violence, thus it is crucial to account for this distinction when assessing the impact of peacekeeping. The data used are from the UCDP-GED (Sundberg and Melander 2013).

The main independent variables are ethnic polarization and the number of armed personnel deployed by the UN in each month-unit. For the latter, I rely on United Nations Secretary

General (UNSG) Reports, which often include a map indicating the position of peacekeepers and the countries that are contributing. The problem with these maps is that they do not give information on the size of the contingent in each location. However, the UN Department for Peacekeeping Operations (UNDPKO) records how much countries contribute monthly to peacekeeping by mission and by type of personnel. This allows me to estimate the size of the mission in the locations indicated by the maps. For example, suppose India has contributed to UNMIL with 100 troops in a given month. If the deployment map in the UNSG report indicate Indian troops in two different counties, I divide the country contribution by two and assing the mean to both counties. If the map indicates that India is contributing in two counties but only providing troops to one, then only the latter is assigned 100 soldiers. With regard to ethnic polarization, I calculate the index using data from census in Sierra Leone and Liberia before the civil war (1963 and 1974 respectively). I also replicate the models using ethnic polarization indexes calculated from census data after the conflict and find no significant difference in the estimation. Indexes of polarization pre and post conflict are mapped in Figure 2. The census data are from IPUMS-International database of the Minnesota Population Center (Minnesota Population Center 2015). The IPUMS-International database contains representative samples from the original national census. In some cases, data might be missing for some units either because of small units are aggregated or because of changes in units borders. This is not a problem for Sierra Leone. Of all Liberia districts, however, data from pre-war census is available only for 48 counties out of 66 (12 only for post-conflict census).

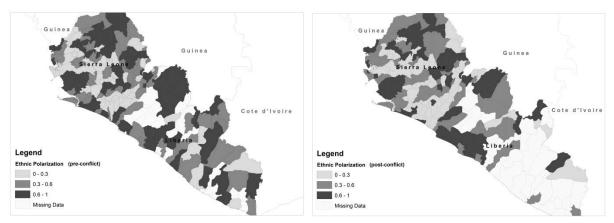


Figure 2. Ethnic polarization before and after civil war in Sierra Leone and Liberia.

Finally, several control variables from the PRIO grid version 2.0 are included in the specification, namely population, purchasing power parity, night light emissions and two dummies for excluded ethnic groups and presence of diamond mining sites (Tollefsen, Strand, and Buhaug 2012). These variables do not vary much as they are reported at yearly intervals.

Model-wise, I estimate two separate panel regressions for each country in order to differentiate between a mission with a robust mandate (Sierra Leone) and one with a weak mandate (Liberia). At this preliminary stage, I estimate a Conditional Mixed Process model (CMP) to reduce the selection bias. By estimating two models simultaneously, CMP models allow to relax the assumption that conflict intensity and peacekeepers presence/size are independent processes. The two variables are used as outcome in two separate models with correlated disturbances. The interpretation of the atanhrho parameter will be used to assess the severity of the selection. In all specified models, all covariates are lagged at the previous month. Descriptive statistics are in Table 2 (see end of paper).

## Results

My empirical analysis begins with a baseline CMP model with total number of conflict killings as dependent variables and both UN troops and ethnic polarization as main independent variables. In this section, I mostly present graphs with marginal effects, but all tables with estimations are included at the end of the paper. In this Model (1), the two variables of interest are not interacted in order to show their independent effect on conflict intensity. Firstly, it is important to note that the atanhrho parameter for this model is statistically significant and positive, suggesting that more troops are deployed in areas that are more violent. When we focus on impact of UN troops on violence (Figure 2, left panel), it is clear that the more armed peacekeepers are deployed, the lower the level of violence in the following month. This negative effect of violence is reported also in model where peacekeepers presence is measured as a dummy. However, the coefficient for UN troop size does not reach statistical significance (Figure 3). Ethnic polarization, on the other hand, is positively and significantly associated with higher levels of violence (Figure 3, right panel).

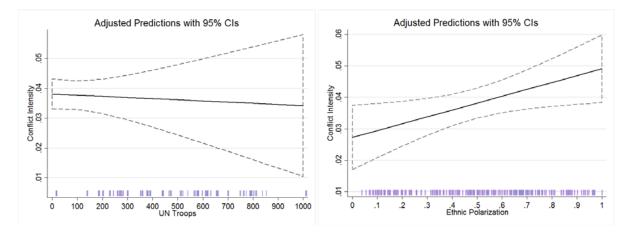


Figure 3. Predicted conflict intensity by UN troop size (left panel) and ethnic polarization (right panel).

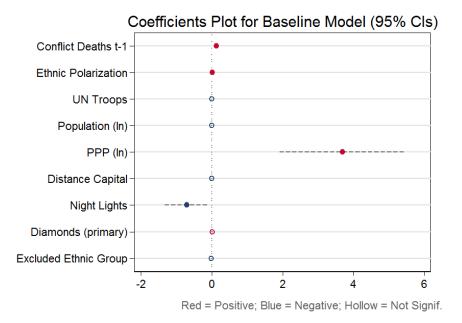


Figure 4. Coefficients estimated in the Baseline Model.

Figure 4 also shows coefficients and statistical significance for the control variables. Among these, only purchasing power parity and night light emissions are statistically significant, respectively with positive and negative signs.

After estimating the baseline model, I move to the main models which include the interaction term between ethnic polarization and size of UN armed contingent. This interaction allows testing hypotheses that condition UN effectiveness to local ethnic configurations. As mentioned, this paper preliminarily operationalizes these configurations using ethnic polarization index. Using two cases (Sierra Leone and Liberia) further differentiate between missions with a robust mandate from those with a weaker one. In this discussion, I present the marginal effects of peacekeeping contingent size from four different CMP models plotted in Figure 5. The marginal effects are reported for the scenario with no peacekeepers deployed (dark grey, triangular marker) and for the scenario where the average size of the mission is increased by one standard deviation. Let's focus on the effect of armed peacekeepers on one-sided violence (top graphs). When peacekeepers operate with a robust mandate as in Sierra Leone, they are equipped to strongly reduce civilian violence. Indeed, when no peacekeeper is deployed, violence against civilians increases with polarization. Interestingly, the exacerbating effect of polarization is at least moderated by the presence of a sizeable mission. The situation is different in the context of a not robust mandate, as in Liberia. As the top right graph shows, the effect is opposite: peacekeepers increase violence against civilians, although they do so only in locations with very low polarization. As polarization increases, the effect shrinks until it is no longer significant beyond 0.5 level of ethnic polarization. It is possible that this effect is the result of peacekeepers being able to deter one-sided violence in locations where groups' parity would discourage it because of retaliation. However, groups might still be able to resort to civilian targeting in low polarized units which are also more likely to present enclaves of vulnerable minorities (Di Salvatore, 2016). These minorities are easy targets and peacekeepers might not be able to prevent this type of violence unless they are equipped with a stronger mandate.

Now I move to two-sided violence (bottom graphs). Surprisingly, the effect of robust mission presence on battle violence is indistinguishable from the scenario where no troops are present. The difference between the two scenarios is only significant when polarization ranges from 0.3-0.6. At these conditions, peacekeepers seem to increase the military confrontation among armed parties instead of deterring them. Possibly, this depends on particular patterns of ethnic groups' distribution that are difficult to outline at intermediate levels of polarization. For example, these areas might be more contested than areas with almost complete balance or, at the opposite, fragmentation of power, for reasons that are not captured by the polarization index alone. These locations could be easier to gain and would inflict a significant loss to the opponent, something that balance of power would make difficult and risky to achieve. This explanation needs to be supported by further analysis and alternative operationalization of how groups are distributed. As an example, the effect of polarization is likely to vary according with the degree of segregation among groups (see for example Klasnja and Novta 2014). With regard to weak mandates, peacekeepers operating under these conditions (bottom right graphs) cannot reduce two-sided violence where groups have almost equal power but can achieve this objective in low polarized areas. Where polarization is low, indeed, battle violence should be on smaller scale and easier to control. Weak peacekeepers may deter this class of violent confrontation, but can do little when groups are similarly large and powerful.

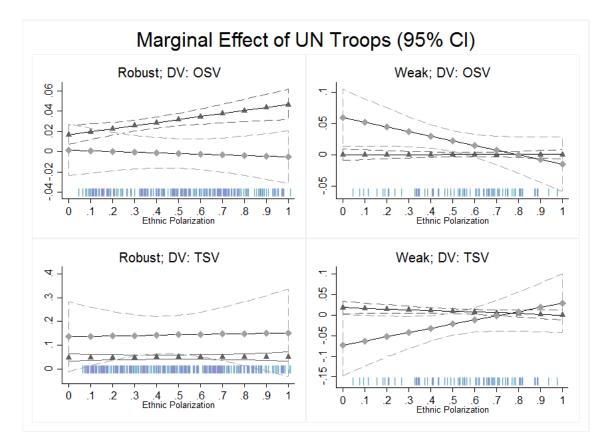


Figure 5. Marginal Effect of UN Troops conditional on levels of Ethnic Polarization. Two depicted scenarios are no troops (triangle, dark gray) and one-standard deviation increase in troops (circle, light gray)

**Conclusions - TBD** 

# Tables

## Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Civilian Violence (ln)	13140	.0228536	.1973612	0	5.70711
Battle Violence (ln)	13140	.0145102	.1626672	0	4.15104
Ethnic Polarization	11472	.4838834	.2599956	.0226121	.9853789
UN Troops	13140	67.63304	337.585	0	8394
Population (ln)	13140	9.185473	.7313532	7.009428	11.25033
Power Purchase Parity (ln)	13140	.004612	.0038096	.0001178	.0259386
Distance from Capital	13140	184.0008	82.96396	9.028231	398.7035
Night light emissions	13140	.0295007	.0083732	.0143976	.0656628
Diamonds	13140	.1497717	.3568611	0	1
Excluded Ethnic Group	13140	.1716895	.4118524	0	2

#### Table 3. Baseline Model

	Model 1 Baseline		
Variables	Equation:	Equation:	
(All covariates are at t-1)	Conflict Deaths	UN Troops	
Conflict Deaths	0.420***	-4.506*	
	(0.00808)	(2.565)	
Ethnic Polarization	0.0254	2.591	
	(0.0157)	(4.903)	
UN Troops	-1.27e-06	0.915***	
-	(1.25e-05)	(0.00359)	
Population (log)	0.00354	7.193***	
	(0.00785)	(2.328)	
Purchasing Power Parity	4.607***	-558.6	
	(1.455)	(444.4)	
Distance from Capital	3.95e-05	-0.0417***	
	(5.39e-05)	(0.0158)	
Night Light Emissions	-1.448***		
	(0.366)		
Diamonds	0.0161		
	(0.0119)		
Excluded Ethnic Group	-0.0134		
_	(0.0104)		
Constant	0.0180	-50.32**	
	(0.0663)	(20.63)	
Atanhrho	0.0177*		
	(0.00974)		
Observations	12,593	12,593	
Standard errors in narentheses			

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

## Table 4. Models on Liberia

	Model Liber		Model 3 Liberia	
Variables	DV: Civilan	DV: UN	DV: Battle	DV: UN
(All covariates are at t-1)	Violence (log)	Troops	Violence (log)	Troops
Civilian Violence (log)	-0.0186	724.6***		
	(0.0169)	(76.65)		
Battle Violence			-0.00778	18.38
			(0.0162)	(47.57)
Ethnic Polarization	0.000567	-135.3***	-0.0181	-140.3***
	(0.00757)	(31.51)	(0.0125)	(31.87)
UN Troops	3.94e-05**		-6.09e-05**	, c
1	(1.68e-05)		(2.77e-05)	
UN Troops*Polarization	-5.01e-05*		8.00e-05	
*	(3.01e-05)		(4.96e-05)	
Population (log)	1.13e-05	51.06***	0.0115*	51.22***
-F - ( - 0)	(0.00369)	(16.16)	(0.00609)	(16.34)
Purchasing Power Parity	-0.220	-4,929*	-1.068	-5,175*
(log)		,		-, -
	(0.585)	(2,633)	(0.967)	(2,663)
Distance from Capital	-2.41e-05	-0.660***	-1.33e-05	-0.686***
Ĩ	(1.51e-05)	(0.0634)	(2.50e-05)	(0.0641)
Night Light Emissions	-0.113		-0.00810	
6 6	(0.135)		(0.222)	
Diamonds	-0.00106		0.0473***	
	(0.00711)		(0.0117)	
Excluded Ethnic Group	-0.00140		0.00876	
•	(0.00415)		(0.00685)	
PKO dummy		511.9***		517.3***
5		(15.22)		(15.39)
Constant	0.0107	-260.8*	-0.0872*	-253.6*
	(0.0318)	(148.0)	(0.0524)	(149.7)
Atanhrho	0.0825**	, , , , , , , , , , , , , , , , , , ,	0.0946**	
	(0.0374)		(0.0374)	
Observations	3,843	3,843	3,843	3,843
Standard errors in		-		
parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

#### Table 5. Models on Sierra Leone

	Model Sierra Leo		Model 5 Sierra Leone 2	
	DV: Civilan Violence	DV: UN Troops	DV: Battle Violence	DV: UN Troops
Variables	(log)	2r-	(log)	2,r
(All covariates are at t-1)				
Civilian Violence (log)	0.439***	-4.161		
	(0.00940)	(3.292)		1
Battle Violence (log)		-	0.296***	-5.408**
			(0.0100)	(2.555)
Ethnic Polarization	0.0728***	-2.657	0.00384	-2.981
	(0.0161)	(5.602)	(0.0160)	(5.507)
UN Troops	1.47e-05		4.38e-05	
_	(3.76e-05)		(3.75e-05)	1
UN Troops*Polarization	-4.71e-05		5.88e-06	1
	(7.42e-05)		(7.41e-05)	
Population (log)	0.0139*	-0.0685	0.000763	0.0179
	(0.00777)	(2.650)	(0.00776)	(2.641)
Purchasing Power Parity (log)	3.142**	852.7	3.419**	874.5*
-	(1.508)	(521.3)	(1.506)	(521.1)
Distance from Capital	0.000250***	-0.0207	-7.27e-05	-0.0226
_	(7.06e-05)	(0.0224)	(7.03e-05)	(0.0215)
Night Light Emissions	0.371		1.200**	
-	(0.590)		(0.589)	
Diamonds	-0.0264**		0.0217*	
	(0.0120)		(0.0119)	
Excluded Ethnic Group	-0.0212*	-1.625	0.0101	
-	(0.0108)	(3.718)	(0.0108)	
PKO dummy		0.831***		0.831***
-		(0.00584)		(0.00584)
Constant	-0.180***	7.351	-0.0131	6.985
	(0.0691)	(23.14)	(0.0689)	(23.12)
Atanhrho	-0.0107		-0.0370***	
	(0.0127)		(0.0127)	
Observations	9,079	9,079	9,079	9,079
Standard errors in parentheses	,	,	,	, ,
*** p<0.01, ** p<0.05, * p<0.1				

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