

The Deadly Impact of Socio-Economic Inequality

How socio-economic inequality affects conflict intensity in
Sub-Saharan Africa and Central- and South America



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Abstract

Civil wars continue to prevail, and the number of casualties increase in the last decade, while socioeconomic disparities within countries steadily widen in many parts of the world. Yet, the understanding of the potential correlations between these two trends remains incomplete. This thesis aims to probe this relationship by studying what effect socioeconomic inequality has on conflict intensity. By doing a regression analysis using GINI-coefficient and Exclusion by Socio-Economic Group as variables for socioeconomic inequality, and conflict related deaths per 100 000 inhabitants (total and non-state) as variables for conflict intensity, the study finds a significant correlation between Exclusion by Socio-Economic Group and conflict intensity, but not for the GINI-coefficient. Through discussing the results in relation to Human Needs Theory and grievances, the results of this study indicate that it is not socioeconomic inequality in itself that intensifies conflicts. Rather, the study points at the importance of the repression of basic human needs, such as cognitive or control, and limited access to satisfiers, such as education or political influence, for understanding conflict intensity.

Key words: socioeconomic inequality, conflict intensity, greed versus grievances, human needs theory, Sub-Saharan Africa, Central America, South America

Number of words: 8 545

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1 Introduction

Intrastate and internationalized conflicts make up next to all armed conflicts today (Buhaug et al 2011:815). With some fluctuations in the number of conflicts and number of casualties, they have been steady on the rise during the last decade (Palik et al 2020:8). This begs the question: what drives civil wars? To understand this, we need not only to probe what induces new conflicts, but what factors that can influence the duration and the intensity of them. Previous research has pointed to factor such as population size (Hegre & Raleigh 2009), ethnic and religious heterogeneity (Fearon & Laitin 2003), state fragility (Dupuy et al 2016), for example, as key phenomena in explaining the outbreak of civil war. What all researchers can agree on though, is that civil wars are extremely complex and hard to generalize. Another clear trend in world affairs is that while the global economic gap between countries has slowly narrowed in terms of GDP per capita over the last decades, the socioeconomic inequality within countries has a reversed trend in most countries (Alvaredo et al 2018). While armed conflicts have many possible drivers, the question arises whether there is any correlation between these two trends.

In this thesis I will look into how socioeconomic inequality as a factor possibly influence the intensity of intrastate armed conflicts. In an attempt to understand the possible correlation on a larger scale, I will conduct a quantitative study of 51 countries, applying statistical analysis on the correlation between socioeconomic inequality and conflict intensity. These 51 countries are located in Sub-Saharan Africa and Central- and South America. The regions Sub-Saharan Africa and Central- and South America are particularly interesting when conducting a study on socioeconomic inequality and conflict intensity, as both regions have been characterized by civil wars and persistent high levels of inequality (UCDP 2017; OECD 2019). Included in the Sub-Saharan sample are: Mauritania, Mali, Niger, Chad, Sudan, Eritrea, Senegal, the Gambia, Guinea-Bissau, Guinea, Burkina Faso, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Nigeria, Cameroon, Central African Republic, South Sudan, Ethiopia, Djibouti, Somalia, Kenya, Uganda, Democratic Republic of the Congo, Republic of the Congo, Angola, Tanzania, Rwanda, Burundi, Mozambique, Zimbabwe, South Africa, Lesotho, and Madagascar. Included in the Central- and South American sample are: Guatemala, Honduras, El Salvador, Nicaragua, Panama, Colombia, Venezuela, Guyana, Suriname, Brazil, Ecuador, Peru, Bolivia, Paraguay, and Argentina.

The thesis is structured as follows. After outlining the purpose and research question (1.1), I provide a short background for the Sub-Saharan Africa and Central- and South American sample (2.1). It is followed by a summary of earlier research on how socioeconomic inequality affect armed conflict (2.2), and the theoretical framework of Human Needs Theory and greed versus grievances is outlined (3.1 & 3.2). The following section outlines the methodology of the study

(4). In section 5 the result from the statistical analysis is presented, and in section 6 the result is discussed and analyzed through the theoretical framework. In section 7 a conclusion of this study can be found.

1.1 Purpose and Research Question

Research on the economic dimensions of armed conflict has in recent years gathered increased attention. However, the particular effects of how unequal distribution of economic and social assets could be disadvantageous has so far received relatively scant attention. Consequently, there is a gap in understanding of whether and how socioeconomic inequality affects conflict remains. Therefore, the purpose of this thesis is to further the research in this field by exploring the correlation between socioeconomic inequality and conflict intensity. To study this potential relationship, I will statistically analyze to what extent levels of two indicators on socioeconomic inequalities in a state correlates with conflict intensity, namely the GINI-coefficient and Exclusion by Socio-Economic Group, in the regions Sub-Saharan Africa and Central- and South America.

The research question is as follows: *What effect does socioeconomic inequality have on conflict intensity?*

2 Background

In this section of the thesis, I will first give some context to the general development in socioeconomic development and in term of conflict in Sub-Saharan Africa and Central- and South America around the millennial shift. Second, I will outline previous research on socioeconomic inequality and armed conflict.

2.1 Regional Background

Both Sub-Saharan Africa and Central- and South America are heavily affected by high inequality and the prevalence of armed conflict the last century (Booth 1991:33). Many of the conflicts have their root causes in the exclusionary politics that characterize the regions since the beginning of their colonialization (Trejos & Gindling 2004; Davis 2020). The large disparities in political power, income inequality, educational level and land ownership between different ethnic or indigenous groups are often a colonial heritage that still prevails today (UNDP 2017; Villarreal Escallón 2021). Even though the regions have seen great economic expansion and rise in Gross Domestic Product (GDP) the last 20 years, the inequalities within the countries remain. In fact, in both Sub-Saharan Africa and Central- and South America the income inequality has risen since the beginning of this millennia (Sulemana et al 2019; Nijman & Wei 2020). The regions are still among the most unequal in the world (UNDP 2017).

The regions have historically also been affected by long and violent civil wars. While Central- and South America saw civil war mainly during the late 20th century, many conflicts still prevail today as the exclusionary politics and skewed distribution power and land ownership remain (Guereña 2016). Peace treaties have been poorly implemented in many cases as the elite has opposed change causing violence to flare up continuously (Nilsson 2018). Sub-Saharan Africa has seen a different development in conflicts, where the previously politically motivated conflicts have taken new forms to resource wars (Davis 2020). The lucrative and scarce resources which can be found in the region has motivated many rebel organizations to take up arms. Sub-Saharan Africa is also characterized by ethnic and religious conflict, often in the form of communal violence (Fjelde & Østby 2014).

2.2 Previous Research

A vast section of the previous research on socioeconomic inequality and conflict has studied socioeconomic inequality as a possible root cause for the onset of conflict (Buhaug et al 2011; Rustad 2016; Hegre et al 2016). While the correlation is still contested among scholars, those who argue for a positive causal relationship often points at horizontal, as opposed to vertical, inequality as the prominent cause for violent conflict (Fjelde & Østby 2014; Buhaug et al 2011; Bahgat et al 2017). Horizontal inequality is the socioeconomic inequality between different groups e.g., ethnic, religious or over geographical areas. Vertical inequality, instead, is the socioeconomic inequality between individuals (Buhaug et al 2011:817).

Hanna Fjelde and Gudrun Østby (2014:737) argue that socioeconomic inequality generates intergroup grievances and argue that Sub-Saharan Africa is particularly vulnerable because of the exclusionary politics of many states in the region. The authors state that it is mainly communal violence that spikes in a country if the inequality is high, and that regions within a state that have higher socioeconomic inequality are more likely to experience communal violence (Fjelde & Østby: 738). Halvard Buhaug et al (2011:814-815) also argue that there is a correlation between inequality and risk for conflict outbreak, but they also state that there is a lack of understanding in the field as researchers have tended to overlook the regional disparities within countries.

Why would then socioeconomic inequality incite conflicts? Socioeconomic inequality may, according to Fjelde & Østby (2014:740) cause feelings of relative deprivation and marginalization which gives incentive for mobilization. Widespread frustration over grievances increases the risk for violent conflict according to Baghat et al (2017:7–8). The conflicts may arise from a self-enforcing spiral as the elites which are challenged fear the economic change that might unfold by the rebellion caused by grievances, which causes them to often take to arms themselves to protect their status.

Fjelde and Østby (2014:741) argue that quantitative studies on vertical inequality and conflict have not found significant relationships between the variables, whereas those ones who measure horizontal inequality have. Horizontal grievances cause intergroup comparison, and by extension grievances (Fjelde & Østby 2014:742). The authors also argue that unequal access to education fuel grievances and incentives for violence, and Hegre et al (2009:2) expresses education's pacifying effect. So why do the groups turn against each other and not the state? Fjelde and Østby (2014:743) explains that communal violence often is cheaper than rebellion against the state. In addition to this, rebellion can be sustained by looting, which severely can prolong a conflict (Buhaug et al 2011:816).

When economic inequality is high violence can be “useful” for getting access to the distribution of resources (Fjelde & Østby 2014:744). Still Fjelde and Østby argue that it not solely grievances that drives less well-off groups to take to arms, but also elite incentives by those who can benefit economically from communal

violence. Therefore, the authors argue that in regions where vertical inequality is high the risk for communal conflicts rises (Ibid:746).

At the same time, Siri Rustad (2016:106) mean that both vertical and horizontal inequality increases the risk for conflict and finds the interesting result that among individuals (vertical) less well-off groups support violence to a larger extent, but among groups (horizontal) the more-well off tended to support means of violence to a greater extent. Her argument builds on her study on data collected in the Niger Delta region considering attitudes towards violence. This corresponds with Carles Boix' (2008:392) research, where he argues that the elites are more resistant to change by democratic means in states with high levels of inequality. Therefore, Boix argues that states where wealth is static and distributed unequally violent conflict is more likely to break out (Ibid:432).

To sum it up, previous research in the field of socioeconomic inequality and conflicts has studied it in relation to conflict outbreak, and a great portion of it has focused on horizontal inequalities. My contribution to this research field is that this thesis will study socioeconomic inequality affects conflict intensity, using data measuring vertical inequality. Therefore, this study can possibly help fill a current gap within this field of research.

3 Theoretical Framework

In order to interpret and analyze the result from the statistical analysis I will combine two theories considering economic and social aspects of conflict – Human Needs Theory and the theory about greed versus grievances. Human Needs Theory is relevant to the study as it draws on the underlying social and physical necessities for human beings to live a satisfactory life, which if repressed lead to frustration that in turn might cause violent conflicts (Burton et al 1990). The greed versus grievances theory might give insight in which economic aspects that drives both the repressed and repressors to take to violence (Berdal-1 & Malone 2000). By comparing the theories explanatory power, we will get a more comprehensive understanding of how socioeconomic inequality may affect conflict intensity, if such should be the case.

3.1 Human Needs Theory

Basic human needs are the necessary conditions humans need to live a valuable life, according to Human Needs Theory (Sandole 1990:60). These needs are somewhat disputed, but Ronald J. Fisher (1990:91) defines them as physiological needs, safety needs, belongingness and love needs, cognitive needs, aesthetic needs, esteem needs, and self-actualization needs. Johan Galtung (1990:309) further develops this line of reasoning by exemplifying what the different needs actually consists of, and what can satisfy them. To give two examples: security needs mean to avoid individual and collective violence, which can be satisfied through the presence of police force and a military respectively; cognitive needs, such as self-expression and education, can be satisfied through schooling.

These human needs can be placed in a “hierarchy” of importance, with physiological needs at the bottom, that is they are fundamental for human beings, while self-actualization is at the top, according to Fisher (1990:91). In contrast, Galtung (1990:308) argues that placing the needs hierarchy should be avoided, as, for example, people with access to higher education could use this to underline their superiority in a society.

William Potapchuk (1990:265) divides the needs expressed by Fisher into two categories: instrumental and substantive needs. Instrumental needs are ones such as control, identity, recognition, power and security, that is factors that can serve to pursue and attain a goal or a line of action. Substantive ones are physical sustenance and security from predators, that is factors related to people’s livelihood and human security.

The core argument of the Human Needs Theory is that basic human needs need to be satisfied, otherwise the likelihood of conflict outbreak rises. Victoria Rader (1990:220) argues these needs which will be pursued no matter what when repressed for example by an authoritarian regime. At the same time, as Christopher Mitchell (1990:155) stresses, it is not the strife for the needs themselves that cause violence, but the shortage of *satisfiers*. It is when faced by scarcity of satisfiers, such as limited access to education or food insecurity, violence may prevail, according to this theory. On the other hand, Mitchell (1990:156) also discusses the possibility of the malign nature of some basic human needs. The strife for security can be realized by dominating others, the need for identity through creating an enemy and so on.

Authorities can manipulate the system and create what Rader (1990:229) calls artificial scarcity, in order to uphold an oppressive political and economic order. Rader means that in many cases there are no real scarcity of satisfiers, they are just hogged by a small part of the population. The less well-off then becomes more dependent on the elite which facilitates breaches of power and weakens ingroup autonomy (Ibid:232).

3.2 Greed versus Grievances

The greed versus grievance theory is a prominent theory in peace and conflict research that argues whether greed, which is solely economic gains, is a main driver of civil war, or grievances, which is the frustration caused by inequality (Collier & Hoeffler 2004:563). The theory has been well discussed in research especially in relation to the nature of contemporary conflicts, which often is intrastate and can be found to relate to economic agendas in many cases. To what degree contemporary conflicts are driven by economic incentives varies between cases, but Mats Berdal, and David M. Malone (2000:2) mean that even conflicts which are motivated by political or military goals can be related to economic opportunities one way or another.

A lot of the greed versus grievance research has studied incentives for rebel organizations to turn to violence. While some researchers argue that it is the prevalence of grievances and frustration that causes conflict outbreak, many disputes that and mean that rebel groups often have an economic agenda which can be achieved through the use of violence. Access to lucrative scarce resources, the black market or control over trade routes – the gains possible through violent means are many (Collier & Hoeffler 2004:588). When the perceived gains outweigh the possible losses in waging a civil war, rebels will initiate violence, according to Collier and Hoeffler (1998:563). In societies where inequality is high, the possible losses often are next to none for the young men who are the target for recruitment by rebel organizations. This increases the risk for conflict outbreak as a larger proportion of the population are likely to be recruited by rebel groups, as it only is the only option for employment or income (Collier 2007:20).

Along with this, economic power is often linked to political power. David Keen (2000:19) argues that economic agendas are prevalent in contemporary conflicts, and that they often are intertwined with political ones. With economic power one can coerce and dictate to a greater extent (Collier & Hoeffler 2004:588). Therefore, violence can be said to be generated by certain political economies, and it can also be used to protect one's economic privileges (Ibid:22-23).

The theory can be said to re-define Karl von Clausewitz (2008:118) classic denotation that war is a continuation of politics by other means, and instead argue that war is a continuation of economy, by other means (Keen 2000:27). By this theory war is not an end in itself, it is rather a means to ensure one's economic agendas (Ibid:29). This complicates the warfare because as long as war is feasible for the warring parties, there is no use in ending the conflict from their point of view. Economic incentives therefore prolong the duration of civil wars, according to Collier (2000:91).

The greed versus grievances theory also encompasses top-down and bottom-up violence. Even if the focus of previous research often has been on rebel groups, violence mobilized by political leaders might also be driven by greed (Keen 2000:27). In bottom-up violence it is easier to see grievances as a driver of conflict, as Gurr (1993:190) argues that the play on grievances is important for group mobilization. Young men within poorer conditions are often the target for recruitment of rebel organizations (Collier 2007:20), which links to the denotation that the possible gains outweigh the possible losses.

While there is an ongoing discussion about greed or grievances as a main driver of conflict, a lot of researchers have stressed the limitations the grievance stance has. Fearon and Laitin (2003:76) points out how grievances are prevalent in all societies, but not all societies face armed conflict. Therefore, they mean, the aspect of greed that comes with the ability to do well out of war has greater explanatory value when it comes to why civil wars break out.

Another aspect that David Keen (2000:29) points out is that elites also can take advantage of civil war for economic agendas. Both rebels and elites that use armed conflict to pursue economic gains (Ibid:31). As usual, it is often civilians that are exploited both by the government and non-state actors, and therefore, Keen argues that its mostly greed that drives civil conflict. Collier (2000:94) argues in similar lines with stating that while grievances is used for recruitment of civilians into rebel groups (or military), the leaders are essentially driven by greed.

4 Methodology

4.1 Research Design

In order to answer the research question, I will begin the study by doing a statistical analysis of data from the 51 countries in Sub-Saharan Africa and South America.

As this thesis examines the relationship between socioeconomic inequality and conflict intensity using various indices for these two sets of variables, I have opted for using bivariate linear regression analysis. Sandra Halperin and Oliver Heath (2020:427) describes linear regression as the most common technique for statistical analyses in political research. A regression analysis can tell us if, and to what extent, the independent and dependent variable correlates by calculating a line of best fit. If a certain amount of the data analyzed follows the regression line, we get a significant result (Ibid:429). For the statistical analysis I will use the software platform SPSS Statistics.

In order to test the significance of the result, I will apply the null hypothesis – that there is no significant correlation between the dependent variable and the respective independent variables. In this study the significance level is set at 0.05. If the significance is lower than 0.05, which means that there is less than five percent probability that the null hypothesis is correct, it is rejected, meaning we have a significant relationship (Ibid:424).

Another important calculation that a linear regression analysis can provide is the value of the coefficient of determination (R^2). The R^2 -value ranges between 0 and 1 and explains what percentage of the dependent variable (y-axis) can be explained by the independent one (x-axis) (Ibid:436). For example, a R^2 -value of 0.4 would mean that 40 percent of the variance in the dependent variable relates to the variance of the independent variable.

Not as telling as the other calculations, but still interesting to mention is the regression coefficient calculated analysis. A regression coefficient shows with how much the y-axis rises with every point of the x-axis, otherwise known as the slope of the regression line (Halperin & Heath 2020:430). As the slope of a specific regression line might not be comparable for one with different variables its explanatory value is limited, but to visualize the analysis I find it important to mention.

When doing a regression analysis, one might also identify extreme outliers. According to Halperin & Heath (2020:492) outliers are values that are significantly different from the general distribution.

4.2 Operationalization

The study departs from the hypothesis that conflict intensity in a state relates to the level of socioeconomic inequality, meaning we have a dependent and independent variable. Halperin and Heath (2020:141) defines a dependent variable as the factor which the hypothesis states is affected by the other variable, the independent. The independent value is a factor or phenomena that we hypothesize affect the dependent variable but is not influenced by the relationship we aim to study.

In this case socioeconomic inequality is the *independent* variable, and conflict intensity is the *dependent* one.

Socioeconomic inequality can be conceptualized in a variety of different ways. In this study, I will use two different measures on socioeconomic inequality, which show different aspects of the phenomena corresponding to whether socioeconomic inequality can influence duration of conflict in terms of diverging distribution of access to human needs or as a consequence of greed versus grievances.

Socioeconomic inequality will thus be operationalized by two different measures, GINI-coefficient and Exclusion by Socioeconomic Group. For the latter, Varieties of Democracy's (V-Dem) definition of socioeconomic groups is "based on attributes of wealth, occupation or other economic circumstances". V-Dem's definition of Exclusion by Socioeconomic Group is "when individuals are denied access to services or participation in governed spaces based on their identity or belonging to a particular group", mainly politically, geographically, in terms of gender, or socio-economic situation (V-Dem 2019). These individuals may for example be restricted from voting because they are not landowners, or have limited access to education, justice and health care as costs are too high (Ibid). The Exclusion by Socio-Economic Group ranges between the values 0 and 1, where 1 is total exclusion.

The GINI-coefficient is a compiled calculation aimed at measuring the income inequality within a state. It compares the "cumulative proportions of the population against cumulative proportions of income they receive" (OECD 2021). The coefficient stretches between 0 and 1, where 1 is total income inequality (Bahgat et al 2017:66). In this study the GINI-coefficient will be retrieved from the World Bank's data, from the year 2000 or earlier. The World Bank presents the GINI-coefficient between 0 to 100, and therefore it will be presented as such in this thesis as well.

According to Uppsala Conflict Data Programme (UCDP) a conflict's intensity level denotes what degree of fighting a state-based conflict or dyad reaches (UCDP-1 n.d.). Conflict intensity will be operationalized by calculating conflict related deaths per 100 000 inhabitants in the country between the time period 2000–2019. I will both calculate the total conflict related deaths and the non-state conflict ones in order to relate to earlier research which argues that communal conflict is most prevalent when socioeconomic inequality is high. The years delimiting the study are set as they will give us sufficiently long time series to be able to make a conclusion on the intensity of conflicts, while also ensuring that we have

comparable data for indices measuring the independent variables. In order to examine how socioeconomic inequality affects conflict intensity, it is important that the data is before or from the year 2000, to be able to establish a possible correlation. The data is retrieved from the UCDP-database looking at the total as well as solely non-state deaths between the years 2000 and 2019.

Since the study is of quantitative character, the external validity will be high, but the internal validity will be lower. High external validity means that the results are generalizable (Halperin & Heath 2020:489), which this study will provide since it encompasses 51 cases. Internal validity, in turn, is how confident we can be that there is a causal relationship between the variables (Ibid:490). Civil wars are generally very complex and dynamic, and even if the regression analysis in this study can give us a significant correlation, one should always be careful to proclaim causality when there are no control variables included in the analysis. Control variables can be used to establish a causal relationship when doing a regression analysis, through trying the correlation between the independent and dependent variable against other variables (Ibid:451). However, this study is of bivariate character, which is another limitation to the study and its result. The absence of control variables for the statistical analysis is motivated by the limited scope and capacity of this thesis. Thus, further research is encouraged to interject this to advance the validity of a study of this kind.

4.3 Data and Material

The data for the dependent and independent variable was retrieved for 51 countries from Sub-Saharan Africa, Central America and South America, based on the UCDP's "Countries in Conflict View" (UCDP-2 n.d.). It is also from UCDP's country specific data I retrieve the information on how many conflict-related deaths took place between the years 2000–2019.

The data on level of Exclusion by Socioeconomic Group is retrieved from V-Dem's variable index for the specific countries the year 2000 (V-Dem 2021). The GINI-coefficients are retrieved from the World Bank from the year 2000 or earlier. Here 12 countries had to be removed, since they had no coefficient available until after 2000, delimiting the study (World Bank 2021).

4.4 Limitations

Beginning with the shortcomings of the data, twelve of the 51 cases had to be removed in the regression analysis using the GINI-coefficient as the independent variable, since those countries did not have a GINI-coefficient available at the World Bank dataset before or from the year 2000. Since the timeframe for this thesis was limited to the years between 2000 and 2019, the data used had to be from before

or from the start of the timeframe in order to be able to answer how socioeconomic inequality affects conflict intensity. Had data been used from *after* the year 2000, it would have skewed the result, as conflict can impact the level of inequality as well, thus generating so-called “reverse causality”. Hence, 23 percent of the data was removed leaving the analysis of the GINI-coefficient with 39 cases. The more cases, the more robust the findings will be. So, while the findings presented in this thesis display some significant results, some variables only give an indicative result. While the exclusion of cases has not impeded on the ability to perform a robust statistical analysis, a greater sample of cases may have provided even more vigorous results, in particular where the result indicates a positive correlation, but does not meet the mark for the statistically significant value.

5 Statistical Results

In this section I present the results from the regression analysis between the dependent and independent variables, focusing on the significant value, the R^2 -value and the coefficient. The result is visualized in scatter plots created in the statistical software platform SPSS. The regression analysis as presented by SPSS can be found in the Appendix (9).

5.1 Exclusion by Socioeconomic Group and Conflict Intensity

5.1.1 Total conflict deaths per 100 000 inhabitants

By statistically comparing total deaths per 100 000 inhabitants between the years 2000–2019 with Exclusion by Socioeconomic Groups the analysis finds a strong correlation with a significant value of 0.001 for exclusion by socioeconomic group and total deaths per 100 000 inhabitants between the years 2000–2019 (See Appendix A). The R^2 -value is 0.192, which means that close to 20 per cent of the cases fits the regression-line (Figure 1). The regression coefficient is 161.046, meaning that for every decimal point (0.1) the exclusion goes up, 16.1 more deaths per 100 000 inhabitants can be expected. The outliers are identified to be Burundi, Liberia, and Sudan, as well as Central African Republic (CAR) and Somalia as extremes.

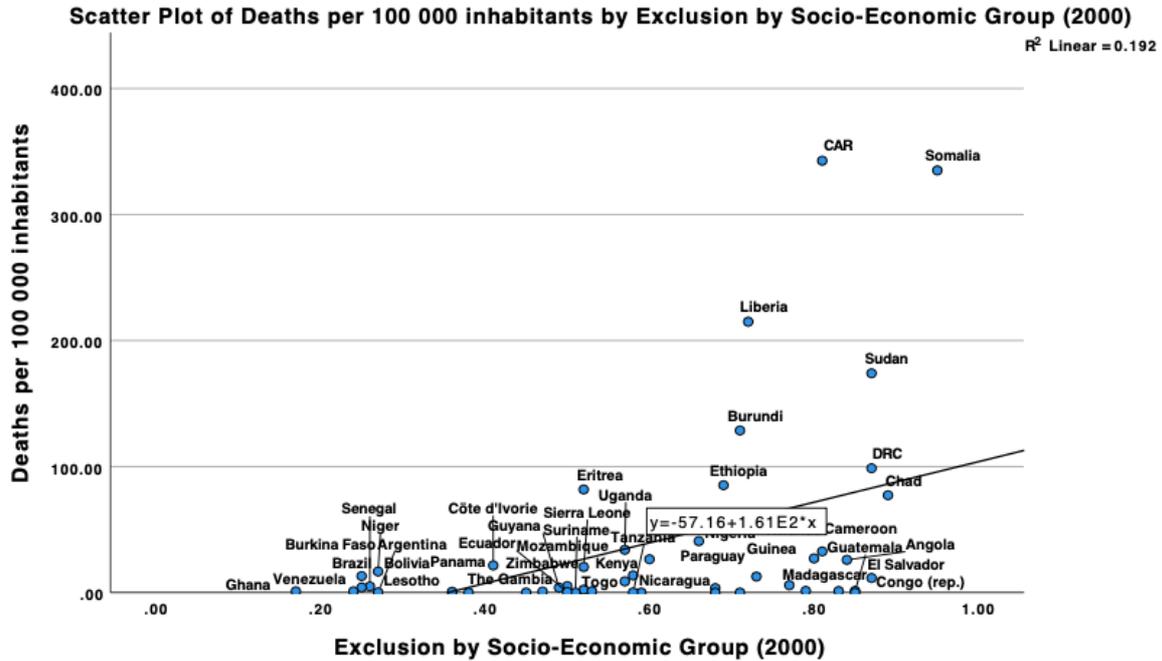


Figure 1. Scatterplot showing the correlation between the intensity of total conflicts, measured in the total deaths per 100 000 inhabitants between the years 2000–2019, and Exclusion by Socio-Economic Group (2000).

5.1.2 Non-state conflict deaths per 100 000 inhabitants

The regression analysis finds that there is a positive correlation with a significant value of 0.012 for exclusion by socioeconomic group and non-state deaths per 100 000 inhabitants between the years 2000–2019 (see Appendix B). The R²-value is 0.124, which means that one out of eight of the cases fits the regression-line (Figure 2). The regression coefficient is 28.458, meaning that for every point (0.1) the exclusion rises, 2.9 more deaths per 100 000 inhabitants can be expected. The outliers in this analysis are Sudan, Somalia and Central African Republic, which deviation also here is extreme.

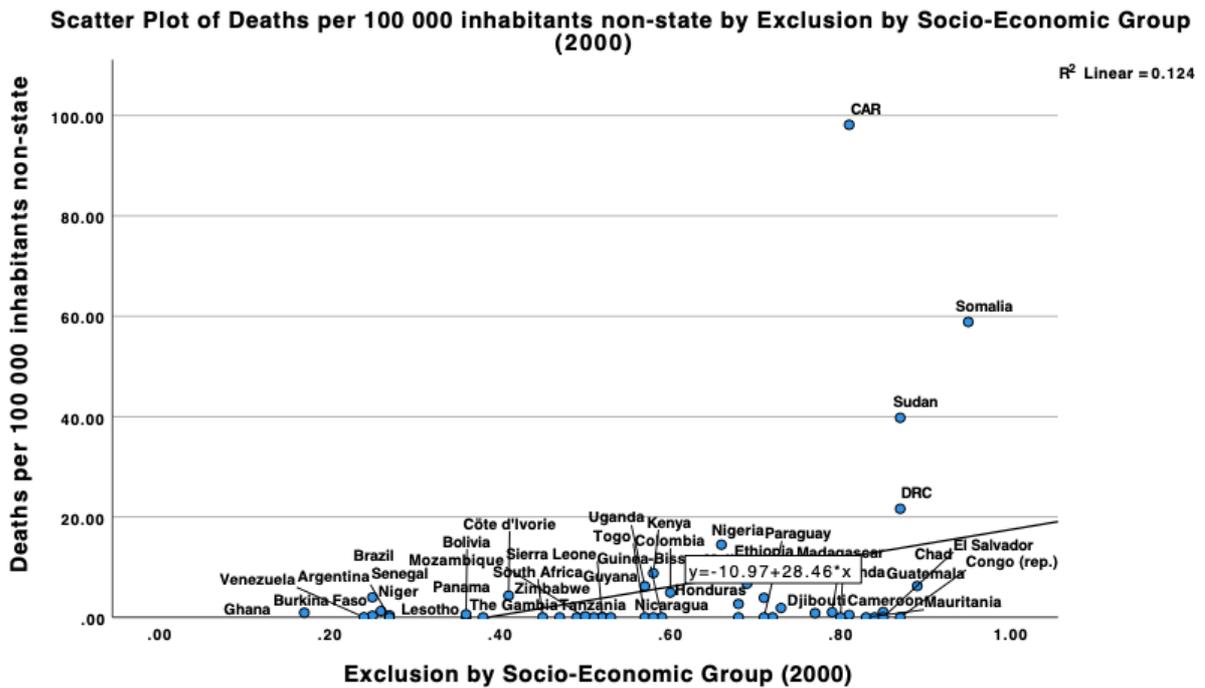


Figure 2. Scatterplot showing the correlation between the intensity of total conflicts, measured in total deaths per 100 000 inhabitants between the years 2000–2019, and Exclusion by Socio-Economic Group (2000).

5.2 GINI-coefficient and Conflict Intensity

5.2.1 Total conflict deaths per 100 000 inhabitants

While the statistical analysis finds clear correlation using the socioeconomic exclusion as independent variable, the regression analysis did not establish a significant correlation between GINI-coefficient and total deaths per 100 000 inhabitants between the years 2000-2019, as the significant value is 0.667 (See Appendix C). Still, the regression analysis shows us that there is a positive correlation between the independent and dependent variable, albeit not with statistical significance (Figure 3). The regression coefficient is 0.532, meaning that for every point the GINI-coefficient goes up, the death rate per 100 000 inhabitants would rise with 0.53. The outliers can be identified as Ethiopia, Burundi and the extreme case, yet again of the Central African Republic.

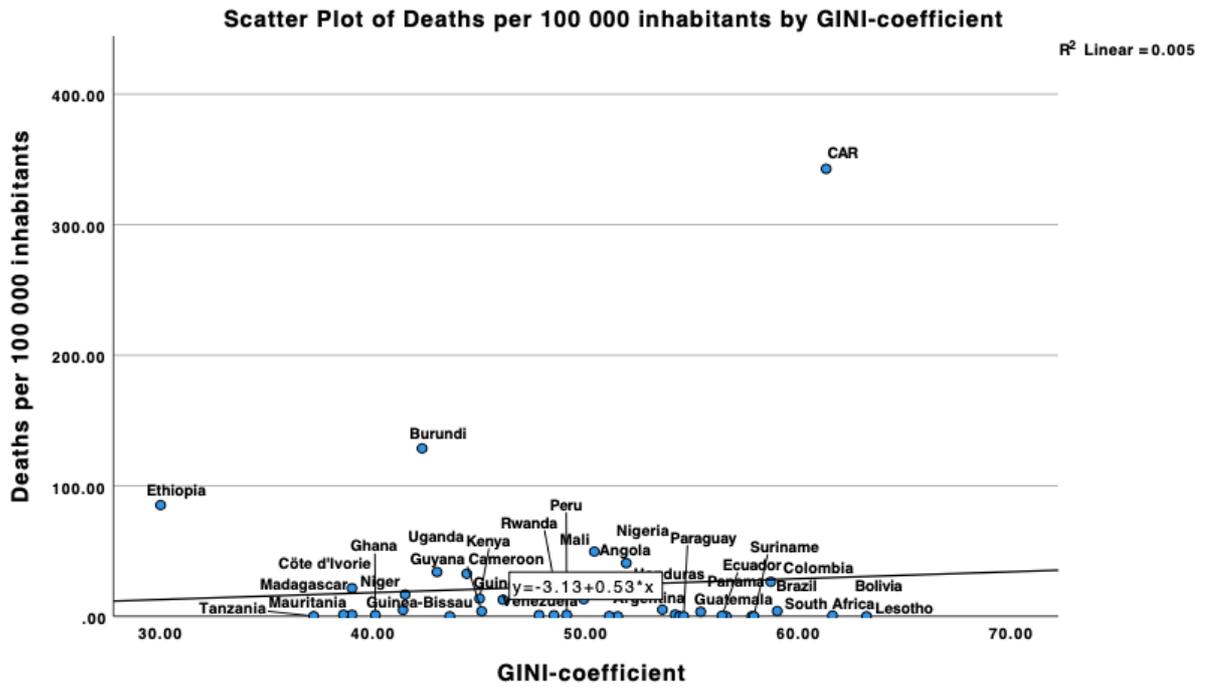


Figure 3. Scatterplot showing the correlation between the intensity of non-state conflicts, measured in total deaths per 100 000 inhabitants between the years 2000–2019, and GINI-coefficient.

5.2.2 Non-state conflict deaths per 100 000 inhabitants

The statistical analysis finds no significant correlation between GINI-coefficient and non-state deaths per 100 000 inhabitants between the years 2000-2019, as the significant value is 0.180 (See Appendix D). Just like the other measure on GINI-coefficient and conflict intensity (5.2.1), a positive relationship between the independent and dependent variable can be seen, but again, not with enough statistical significance (Figure 4). The regression coefficient is 0.441, meaning that for every point the GINI-coefficient goes up, the death rate per 100 000 inhabitants would rise by 0.441. There is one extreme outlier in this scatterplot: Central African Republic.

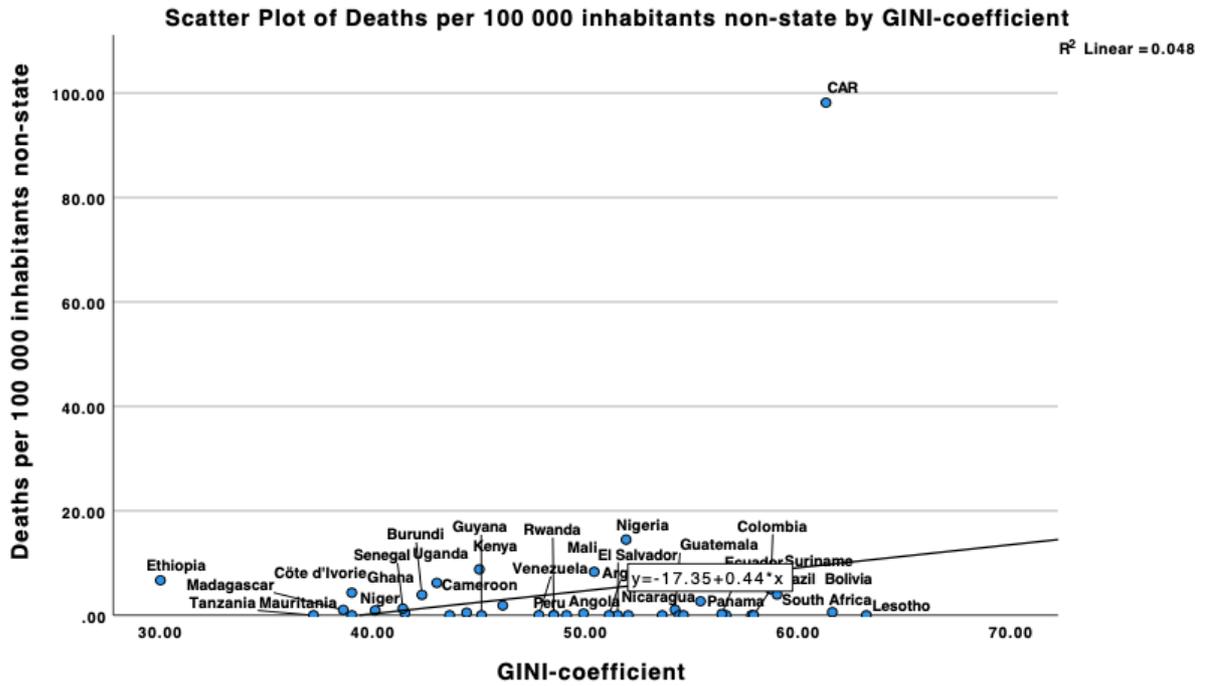


Figure 4. Scatterplot showing the correlation between the intensity of non-state conflicts, measured in total deaths per 100 000 inhabitants between the years 2000–2019, and GINI-coefficient.

6 Discussion

As the regression analysis shows, there is a positive relation between exclusion by socioeconomic group and conflict intensity, both measured in total and non-state conflict related deaths per 100 000 inhabitants. Yet, there is no such correlation with a significant value between the GINI-coefficient, measuring income inequality within the countries, and the same dependent variables. Even a comparison of outliers illustrates these differences. All outliers in the analysis of Exclusion by Socio-Economic Group showed an even more profound positive correspondence with conflict intensity than the statically established correlation. In contrast, we find the three outliers for all conflict's intensity dispersed over the whole x-axis for the GINI-coefficient.

The disparate results between the two different measures of socioeconomic inequality are nevertheless interesting, despite the limitations in GINI-coefficient analysis described above (4.5.). They indicate that it is not the levels of socioeconomic inequality in itself, which GINI measures, that has a clear effect on conflict intensity. Rather it is a more specific part of socioeconomic inequality: exclusion by socioeconomic group which affects the intensity of armed conflicts.

In this part of the thesis, I will interpret and discuss the varied result the statistical analysis presents using the chosen theories.

6.1 Human Needs Theory's explanatory power

As described in the theoretical framework (3.1), Human Needs Theory assume that there are several basic human needs – such as physiological needs, safety needs, belongingness and love needs, cognitive needs, aesthetic needs, esteem needs, and self-actualization needs – which if repressed can lead to violent conflict. Relating this to the statistical results, we find that higher exclusion of socioeconomic groups correlates to higher conflict intensity. Repression in this case can be said to take form in exclusion. Connecting this to the instrumental human needs describes by Potapchuk – control, identity, recognition, power and security – this result receives explanatory value. Exclusion by socioeconomic group indicates that individuals in lower socioeconomic classes are excluded from spaces where these needs can be expressed, practiced, and influenced. This through, for example, limited access to education which satisfies cognitive needs, or political positions and influence, which can satisfy the need for power.

This has also explanatory value when it comes to the statistical result when the GINI-coefficient was the independent variable. Human Needs Theory suggest that it is not the socioeconomic inequality or income discrepancies per se that drives

conflicts, but the exclusion from important spaces of power access, influence and participation. As Mitchell describes it, it is not the needs in themselves that are drivers for conflict outbreak, but the shortage of satisfiers. The satisfiers in this case would be access to education, land ownership and political representation, which a high exclusion-variable shows are in shortage.

Here we can also relate to Rader's (1990) argument that authorities can create artificial scarcity. There might not exist a scarcity in for example fertile land, but with oppressive political systems the elite might skew or refuse redistribution of land. This has been the case in many Latin American countries, for example Colombia, Guatemala, El Salvador and Nicaragua. In Colombia, an important part of the peace treaty from 2016 between the government of Colombia and Fuerzas Armadas Revolucionarias de Colombia (FARC) was to redistribute agrarian land. However, Colombian elite and current landowners has prevented this from being ratified. This resistance has been a part of why violence still persists in the country (Villarreal Escallón 2021:8).

To this, we can also bring in the interesting implication that human needs can be malign or lead to malign actions. As human needs encompass all humans, they also go for the wealthier. Sharing governed spaces or land ownership means less influence for the particular group or individuals in power. That, in turn, threatens their perceived human needs in form of power or control. Therefore, their pursuit for human needs can have malign consequences in the sense that they use violence in order to ensure their position.

With the explanation that both the elite and the less well-off can turn to use of violence in the strive for satisfying their human needs, we can understand why the intensity of conflict might increase if the exclusion is higher. Wider gaps means that the more the less well-off can stand to gain through turning to violence, the more the richer stand more to lose.

Fjelde and Østby (2014) explain how many Sub-Saharan African states have built their legitimacy on exclusionary politics, by for example diminishing rights for other ethnic groups. In many states political power is enacted as a zero-sum game. That means that the state often protects the more well-off, or even represents them. This gives further incentives for the state to prevent rebellion by other groups, which might result in one-sided violence by the governments of the state. Fjelde and Østby (2014) argue that unequal access to wealth and education can breed hostility and feelings of deprivation towards the individuals who have access to these needs.

The regression analysis also showed a significant correlation between Exclusion by Socio-Economic Group and non-state conflict intensity, but the Human Needs Theory does not encompass that aspect of civil war. Therefore, when the analysis is complemented theoretically with greed and grievances theory, it can better explain this result, as we shall see in the next section.

6.2 Greed versus grievances' explanatory power

The greed versus grievances theory assumes that conflict outbreak and prevalence can be explained by economic incentives – greed – or frustration over inequality – grievances (See 3.2). Connecting this to the Exclusion by Socio-Economic Group, greed can be interpreted motivation for upholding or strengthening exclusionary economic and political systems, which grievances might stem from.

A prominent argument for why individuals turn to violent means, according to greed and grievances theory, is the possibility it brings for economic gains. By using violence, the warring groups might gain control over scarce resources, trade routes or the political economy. In a society where the socioeconomic inequality is high, this might be an appealing approach to for the less well-off to gain power. As Collier and Hoeffler (2004) argues, when the perceived gains outweigh the risk of possible losses, the risk for conflict increases.

One explanation to why conflicts with larger Exclusion by Socio-Economic Groups are more intense is that the grievances that stems from the exclusion makes it easier for rebel organizations to recruit. For example, in Nigeria along the Niger Delta region, high unemployment rates made joining rebel organizations more appealing to young men as it could provide break a cycle of exclusion. This led to the forming of the Niger Delta's Volunteer Force (NDPVF), later declaring a war against the Nigerian government in 2004 with the motive to get control over the Niger Delta region's vast resources of oil (Rustad 2016:106). This illustrates the argument that rebel leaders can play on grievances, and not greed, to convince young men to join their movement. Exclusion by Socio-Economic group can represent grievances, as it describes more than poverty – it shows how economic inequality affects the life of the poorer population for example through less access to healthcare and education. The vast majority of the rebels, in this case, might not be motivated by the greed and economic incentives for continuing and waging the war, but the ability and the means to change the course of life for their peoples. This can be further illustrated by the second Liberian civil war, where security and family protection were motivating factors for joining rebel organizations (Hegre et al 2009:607).

This theory also argues that if it is too costly, rebel organizations will not take up arms against the state, and instead might turn to violence against communal groups to satisfy their greed or express their grievances. The result from the statistical analysis does not quite assort to this argument, as it shows that conflict intensity rises with socioeconomic inequality for both non-state and armed conflict in general. Other factors such as stability of the state or its economic power is not measured in this analysis might also play a role. The point here is to underscore how socioeconomic inequality might have explanatory value to conflict intensity in countries even when the lower classes are heavily repressed, meaning rebellion is more costly. Here further research is needed to shed light on these results.

Level of Exclusion by Socio-Economic Group indicates to what extent resources and power is concentrated to the higher classes, something that could be interpreted as “greed” in this regard. Therefore, one might speculate that the

government might be willing to risk more to push back at rebellions caused by grievances, to maintain political power and control over resources. This can explain why conflict intensity rises with Exclusion of Socio-Economic Group. The wider the gap between the have and have-nots in terms of power access, influence and participation, the more intense the conflicts tend to be. Collier & Hoeffler (2004) argue that rebel groups will wage civil war if the perceived benefits outweigh the costs of rebellion. If so, we might assume that this goes for the government and military as well.

Collier also argues that it is the greed of rebel groups that increases the risk for civil wars and rejects the theory of grievances as main drivers of conflict duration and outbreak. The statistically significant results from this analysis contradicts this claim. We can clearly see that with rising levels of exclusion, the intensity has increased. If it was only a matter of greed, we could expect to see that reflected more clearly in the analysis of the GINI-coefficient than in Exclusion by Socio-Economic Group. The GINI-coefficient is a calculation of income inequality, so if rebel groups were solely driven by greed for wealth and access to lucrative resources, a greater level of income inequality would argue the perceived need by rebels to take up arms to achieve their goal, which would result in higher conflict intensity. However, the regression analysis could not establish such a correlation with statistical significance.

Instead, the results from the analysis of Exclusion by Socio-Economic group indicate that grievances affect the conflict intensity. Yet, it might be argued that it is the greed of the elite to hoard resources and riches to boost their own human needs while depriving others of their fundamental needs that risks increasing conflict intensity. That said, civil wars are complex and dynamic. This study is of course limited, and such indicative results need to be probed in further studies. Nevertheless, the results contradict that grievances would have no role at all. Collier also studies several different grievances that socioeconomic inequality does not encompass, such as religious and ethnic hatred and level of education. While not studied in this thesis, based on previous research I would argue that similar patterns in socioeconomic inequality can be found in repression of certain religious or ethnic groups, or access to education. Fjelde and Østby (2014) states that many states in sub-Saharan Africa are governed by particular ethnic or religious groups. Exclusion by socioeconomic group also encompass the differences in education in terms of access for lesser of individuals. Future analyses could compare the results from this analysis against such parameters to give further depth to our understanding of the role grievances play for the intensity of conflicts.

6.3 Comparison

From the discussion above, we can gather that the different theoretical frameworks can explain different aspects of the results. While the Human Needs Theory has bigger explanatory value in explaining why Exclusion by Socio-Economic Group

has an effect on conflict intensity in general, the greed versus grievances arguments helps us understand why non-state conflicts also prevails, as well as *why* groups turn to violence to uphold or change their economic status. Combining the theories, we can understand Exclusion by Socio-Economic Group as a cause for grievances in this case, as it upholds a system of unequal access to human needs.

While communal violence, measured in non-state conflict intensity, is significantly correlated to Exclusion by Socio-Economic Group, this study shows that so are state-based conflicts. When total conflict-related deaths are compared with Exclusion by Socio-Economic Group, the R^2 -value is higher by 6.8 higher percentage points compared to non-state related deaths (19.2 vs. 12.4). This contradicts previous quantitative research, which argues that there is no correlation between state-based conflicts and socioeconomic in contrast to communal violence.

Vertical inequality can, if we apply the combined theory of human needs and greed versus grievances, explain both bottom-up and top-down violence. While researcher such as Collier and Hoeffler (2004) argue that it is mostly rebel organizations that are motivated by greed and grievances when waging civil war, the discussion above illustrates why government forces, or the elite, might turn to violent means as well. Higher conflict intensity, in this case, means more violence in the form of deaths. Why do the conflicts become more violent? According to the greed and grievances theory, the more frustrated people are over grievances, the more aggressive they become. At the same time, it could indicate that the government uses violence to contain their status to a greater extent. Elites in many states with socioeconomic inequality oppose change in land distribution, for example in Colombia (Villarreal Escallón 2020:8). Land ownership is important for example for voting, which Exclusion of Socio-Economic Group measures.

This study hence indicates that it is not just communal violence that is affected by greater inequality within a state. At the same time, it is important to note that this thesis has not measured horizontal inequalities, which previous researchers state has greater effect on conflict outbreak and duration than vertical inequalities. Both GINI-coefficient and Exclusion by Socio-Economic Group are indicators of vertical inequality, which measures the inequality between individuals. The point here is not to dismiss that horizontal inequalities have an effect on conflict intensity, but to argue, based on the results, that vertical inequality does as well.

Even though the results indicate a correlation between socioeconomic inequality and conflict intensity, it is important to not draw a causal correlation between the variables. Civil wars are caused by various reasons and are complex and rarely follow a cut-out scheme. Still, the more various aspects of armed conflicts are explored, the better understanding we will have of patterns in their complexity. This study has explored one of the many phenomena that might affect conflict duration and outbreak and has found a significant result. Therefore, this study is of importance as it gives an inclination on one factor intensifying conflict which could be of value to incorporate into conflict resolution. If the globally widening gap of the socio-economic inequality within countries translates into grievances or protection of greed driven interests, we can expect to see an enhanced intensity of conflicts around the world. These disparities may be further widened by other factors.

For example, poor people are likely to be more heavily affected by climate change as they have less resilience to disruptive weather events in terms of social safety nets and financial resources. Long-term climate change is also more severely affecting poorer areas, such as flood prone or drought exposed marginalized land. These climate impacts can profoundly exacerbate socio-economic marginalization, which may further enhance the risk of armed conflicts within countries (Koubi 2019; von Uexkull & Buhaug 2021). Further, while climate adaptation measures can reduce the negative effects on human security of climatic change, there are numerous examples when climate change adaptation has also led to exclusion of vulnerable and poor communities (Sovacool et al 2015). This thesis point at the at risk for peace and security of this dual risk of climate driven grievances.

Conflict intensity is interesting to study as it shows us an indication on how violent and deadly the armed conflict is. With studies looking further into what affects conflict intensity gives us further knowledge on why some conflicts become more violent than others. Instead of looking at for example conflict outbreak, which studies the root causes of armed conflict, examining conflict intensity can explain to what extent a government fights back rebellion, or how far rebel organizations are willing to go to achieve their goals, and how feedback loops can deepen and prolong conflicts. This study, looking into how socioeconomic inequality affects conflict intensity, clearly indicate that basic human needs are of such importance to individuals that people are willing to take up arms to protect or strive to satisfy them.

The analysis lands in that basic human needs, which are distributed asymmetrically in states with high socioeconomic inequality might both cause grievances or greed, which in turn affects how violent an armed conflict becomes. The grievances stem from having less access to the satisfiers, and the greed from wanting to obtain or keep obtaining the satisfiers to strengthen or preserve one owns position. Why higher inequality causes more violent conflicts (in terms of deaths) can be explained by the argument that a shortage of satisfiers can cause malign behavior in the strife to obtain or maintain human needs.

Hence, when comparing the explanatory power the different theoretical frameworks have for the regression analysis, we can state that Human Needs Theory gives us means to understand why the statistical results turned out as they did. Greed versus grievances, in turn, backs up and helps us further understand why these human needs can lead to violence. Together with the regression analysis, they help provide a nuanced answer to the research question on what effect does socioeconomic inequality have on conflict intensity.

7 Conclusion

The aim of this study was to probe what effects, if any, socioeconomic inequality has on conflict intensity. This question was approached by conducting a regression analysis using GINI-coefficient and Exclusion by Socio-Economic group as variables on socioeconomic inequality, and deaths per 100 000 inhabitants (total vs. non-state) as variables for conflict intensity. The scope of the study was limited to 51 countries in Sub-Saharan Africa and Central- and South America, areas that also are characterized by high levels of inequality and conflict outbreak.

The regression analysis displays that intensity of a conflict measured in the number of deaths in conflicts in these regions have a strong significant positive correlation with the effect to which groups are excluded socioeconomically. In general, the greater the exclusion is, the more intense conflicts. While there are many factors behind the intensity of a conflict, the regression analysis indicates that the variation in in the number of deaths can be related to the socio-economic exclusion in one out five of the total numbers of studied conflicts and one out eight of the non-state conflicts.

While the regression analysis also presents a positive relationship between GINI-coefficient and conflict intensity, it is not statistically significant. The regression coefficient is at 0.532 for conflicts in total, respectively 0.441 for non-state conflicts when using the GINI-variable. In comparison, the positive effect of Exclusion of Socio-Economic Groups is 16.1 respectively 2.9, which shows a significantly greater positive effect.

So, the regression analysis helps us establish that there *is* an effect, but to understand *what* this effect entails we need to look at the data through the lenses of Human Needs Theory and grievances. The results of this study indicate that it is not socioeconomic inequality in itself that intensifies conflicts. Rather, it is the repression of basic human needs, such as cognitive or power, and limited access to satisfiers, such as education or political influence.

This study contributes to existing research as it establishes a significant correlation between vertical socioeconomic inequality and conflict intensity, something that previous researchers has stated to be difficult. Therefore, the research field mostly encompasses horizontal inequality, and has argued that it mainly affects communal violence. In order to relate to earlier research, both conflict intensity in total and for non-state conflicts was incorporated in this study. While a significant correlation between Exclusion by Socio-Economic Group and non-state conflict intensity could be established, the result for conflicts in general had both a higher R^2 -value, stronger significant value and notably higher regression coefficient.

In spite of the limitations of this thesis, the results give an inclination of a correlation that is interesting to look further into. As stated earlier, one should be

careful to establish causal relationships for something as complex and dynamic as civil wars. Yet, this study shows that exclusion of socioeconomic groups cannot be overlooked when trying to understand the factors of a violent conflict, and points at an important area to address to mitigate conflict risks. As socioeconomic inequality within many countries continue to widen, and these disparities risk translating into grievances or protection of greed driven interests, we can expect to see an enhanced intensity of conflicts around the world. If socioeconomic inequality continues to be neglected in peace and conflict pursuits, the risk is imminent that the death tolls will continue to rise.

8 Bibliography

- Alvaredo, Facundo; Chancel, Lucas; Piketty, Thomas; Saez, Emmanuel & Gabriel Zucman (2018). *World Inequality Report 2018*. Paris: World Inequality Lab.
- Bahgat, Karim; Barrett, Gray; Dupuy, Kendra; Gates, Scott; Hillesund, Solveig; Mokleiv Nygård, Håvard; Aas Rustad, Siri; Strand, Håvard; Urdal, Henrik & Gudrun Østby (2017). *Inequality and Armed Conflict: Evidence and Data*. PRIO: Peace Research Institute Oslo.
- Berdal-1, Mats & David M. Malone (eds.) (2000). *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder: Lynne Rienner Publishers.
- Berdal-2, Mats & David Malone (2000). "Introduction" in Berdal, Mats & David M. Malone (eds.) *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder: Lynne Rienner Publishers, pp. 1–15.
- Buhaug, Halvard; Skrede Gleditsch; Kristian; Holtermann, Helge; Østby, Gudrun & Andreas Forø Tollefsen (2011). "It's the Local Economy, Stupid! Geographic Wealth Dispersion and Conflict Outbreak Location". *Journal of Conflict Resolution*, vol. 55, no. 5, pp. 814–840.
- Burton, John (eds.) (1990). *Conflict: Human Needs Theory*. Basingstoke: MacMillan.
- Boix, Carles (2008). "Economic Roots of Civil Wars and Revolutions in the Contemporary World". *World Politics*, vol. 60, no. 3, pp. 390–437.
- Booth, John A. (1991). "Socioeconomic and Political Roots of National Revolts in Central America". *Latin American Research Review*, vol. 26, no. 1, pp. 33–77.
- von Clausewitz, Carl (2008). "On War" in Sun Tzu; von Clausewitz, Carl, Machiavelli, Niccolò & Baron de Jomini (eds.) *The Complete Art of War*, pp. 81–331.
- Collier, Paul (2000). "Doing Well out of War: An Economic Perspective" in Berdal, Mats & David M. Malone (eds.) *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder: Lynne Rienner Publishers, pp. 91–112.
- Collier, Paul (2007). *The bottom billion: why the poorest countries are failing and what can be done about it*. New York: Oxford University Press.
- Collier, Paul & Anke Hoeffler (1998). "On economic causes of civil war". *Oxford Economic Papers*, no. 50, pp. 563–573.
- Collier, Paul & Anke Hoeffler (2004). "Greed and Grievance in civil war". *Oxford Economic Papers*, no. 56, pp. 563–595.
- Davis, Ian (2020). "Armed conflict and peace processes in sub-Saharan Africa" in *SIPRI Yearbook 2020: Armaments, Disarmaments and International Security*. Oxford: Oxford University Press.
- Dupuy, Kendra; Gates, Scott & Håvard Mokleiv Nygård (2016). "State Fragility and Armed Conflict". *Conflict Trends*, no. 7. Oslo: Peace Research Institute Oslo.

- Fearon, James D. & David D. Laitin (2003). "Ethnicity, Insurgency, and Civil War". *American Political Science Review*, vol. 97, no. 1, pp. 75–90.
- Fisher, Ronald J. (1990). "Needs Theory, Social Identity and an Eclectic Model of Conflict" in Burton, John (eds.) *Conflict: Human Needs Theory*. Basingstoke: MacMillan, pp. 89–112.
- Fjelde, Hanne & Gudrun Østby (2014). "Socioeconomic Inequality and Communal Conflict: A Disaggregated Analysis of Sub-Saharan Africa, 1990-2008". *International Interactions*, vol. 40, pp. 737–762.
- Galtung, Johan (1990). "International Development in Human Perspective". in Berdal, Mats & David M. Malone (eds.) *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder: Lynne Rienner Publishers, pp. 301–335.
- Guereña, Arantxa (2016). *Unearthed: Land Power and Inequality in Latin America*. Oxfam International.
- Gurr, Ted Robert (1993). "Why Minorities Rebel: A Global Analysis of Communal Mobilization and Conflict Since 1945". *International Political Science / Revue internationale de science politique*, vol. 14, no. 2, pp. 161–201.
- Halperin, Sandra & Oliver Heath (2020). *Political Research: Methods and Practical Skills*. 3rd ed. Oxford: Oxford University Press.
- Hegre, Håvard; Østby, Gudrun & Clionadh Raleigh (2009). "Poverty and Civil War Events: A Disaggregated Study of Liberia". *The Journal of Conflict Resolution*, vol. 53, no. 4, pp. 589–623.
- Hegre, Håvard & Clionadh Raleigh (2009). "Population size, concentration, and civil war. A geographically disaggregated analysis". *Political Geography*, vol. 28, no. 4, pp. 224–238.
- Hegre, Håvard; Buhaug, Halvard; Calvin, Katherine V.; Nordkvelle, Jonas; Waldhoff, Stephanie T. & Elisabeth Gilmore (2016). "Forecasting civil conflict along the shared socioeconomic pathways". *Environmental Research Letters*, 11 054002.
- Keen, David (2000). "Incentives and Disincentives for Violence" in Berdal, Mats & David M. Malone *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder: Lynne Rienner Publishers, pp. 19–42.
- Koubi, Vally (2019). "Climate Change and Conflict". *Annual Review of Political Science*, vol. 55, pp. 343–360.
- Mitchell, Christopher (1990). "Necessitous Man and Conflict Resolution: ore Basic Questions About Basic Human Needs Theory" in Burton, John (eds.) *Conflict: Human Needs Theory*. Basingstoke: MacMillan, pp. 149–176.
- Nijman, Jan & Yehua Dennis Wei (2020). "Urban inequalities in the 21st century economy". *Applied Geography*, no. 117, pp. 1–8.
- Nilsson, Manuela (2018). Civil society actors in peace negotiations in Central America". *Journal of Civil Society*, vol. 14, no. 2, pp. 135–152.
- OECD (2019). "Socio-economic risks and challenges: A macro-perspective". *Latin American Outlook 2019: Development in Transition*. Paris: OECD Publishing, pp. 41–61.
- OECD (2021). "Income inequality". *OECD Data*. [Online] <https://data.oecd.org/inequality/income-inequality.htm> (Accessed 2021-05-21).

- Palik, Júlia; Aas Rustad, Siri & Fredrik Methi (2020). "Conflict Trends: A Global Overview, 1946–2019". *PRIO Papers*. Oslo: PRIO.
- Potapchuk, William R. (1990). "Processes of Governance: Can Governments Truly Respond to Human Needs?" in Burton, John (eds.) *Conflict: Human Needs Theory*. Basingstoke: MacMillan, pp. 265–282.
- Rader, Victoria (1990). "Human Needs and the Modernization of Poverty" in Burton, John (eds.) *Conflict: Human Needs Theory*. Basingstoke: MacMillan, pp. 235–256.
- Rustad, Siri A. (2016). "Socioeconomic Inequalities and Attitudes towards Violence: A Test with New Survey Data in the Niger Delta". *International Interactions*, vol. 42, no. 1, pp. 106–139.
- Sandole, Dennis J. D. (1990). "The Biological Basis of Needs in World Society: The Ultimate Micro-Macro Nexus" in Burton, John (eds.) *Conflict: Human Needs Theory*. Basingstoke: MacMillan, pp. 60–88.
- Sovacool, Benjamin K.; Linnér, Björn-Ola & Michael E. Goodsite (2015). "The political economy of climate adaptation". *Nature Climate Change*, vol. 5, pp. 616–618.
- Sulemana, Iddisah; Nketiah-Amponsah, Edward; Codjoe, Emmanuel A. & Jennifer Akua Nyarko Andoh (2019). "Urbanization and income inequality in Sub-Saharan Africa". *Sustainable Cities and Societies*, no. 48, pp. 1–8.
- Trejos, Juan Diego & Thomas H. Gindling (2004). "Inequality in Central America in the 1990s". *Cepal Review*, no. 84, pp. 175–196.
- UCDP-1 (n.d.). "UCDP Definitions". *Uppsala universitet*. [Online] https://www.pcr.uu.se/research/ucdp/definitions/#tocjump_9360012460897609_27 (Accessed 2021-04-21).
- UCDP-2 (n.d.). "Countries in Conflict View". [Online] <https://ucdp.uu.se> (Accessed 2021-05-10).
- UCDP-3 (2019). "Mauritania". [Online] <https://ucdp.uu.se/country/435> (Accessed 2021-05-10).
- UCDP-4 (2019). "Mali". [Online] <https://ucdp.uu.se/country/432> (Accessed 2021-05-10).
- UCDP-5 (2019). "Niger". [Online] <https://ucdp.uu.se/country/436> (Accessed 2021-05-10).
- UCDP-6 (2019). "Chad" [Online] <https://ucdp.uu.se/country/483> (Accessed 2021-05-10).
- UCDP-7 (2019). "Sudan". [Online] <https://ucdp.uu.se/country/625> (Accessed 2021-05-10).
- UCDP-8 (2019). "South Sudan". [Online] <https://ucdp.uu.se/country/626> (Accessed 2021-05-10).
- UCDP-9 (2019). "Eritrea". [Online] <https://ucdp.uu.se/country/531> (Accessed 2021-05-10).
- UCDP-10 (2019). "Ethiopia". [Online] <https://ucdp.uu.se/country/530> (Accessed 2021-05-10).
- UCDP-11 (2019). "Djibouti". [Online] <https://ucdp.uu.se/country/522> (Accessed 2021-05-10).

- UCDP-12(2019). "Somalia". [Online] <https://ucdp.uu.se/country/520> (Accessed 2021-05-10).
- UCDP-13 (2019). "Kenya". [Online] <https://ucdp.uu.se/country/501> (Accessed 2021-05-10).
- UCDP-14 (2019). "Uganda". [Online] <https://ucdp.uu.se/country/500> (Accessed 2021-05-10).
- UCDP-15 (2019). "Senegal". [Online] <https://ucdp.uu.se/country/433> (Accessed 2021-05-10).
- UCDP-16 (2019). "Gambia". [Online] <https://ucdp.uu.se/country/420> (Accessed 2021-05-10).
- UCDP-17 (2019). "Guinea-Bissau". [Online] <https://ucdp.uu.se/country/404> (Accessed 2021-05-10).
- UCDP-18 (2019). "Guinea". [Online] <https://ucdp.uu.se/country/438> (Accessed 2021-05-10).
- UCDP-19 (2019). "Burkina Faso". [Online] <https://ucdp.uu.se/country/439> (Accessed 2021-05-10).
- UCDP-20 (2019). "Sierra Leone". [Online] <https://ucdp.uu.se/country/451> (Accessed 2021-05-10).
- UCDP-21 (2019). "Liberia". [Online] <https://ucdp.uu.se/country/450> (Accessed 2021-05-10).
- UCDP-22 (2019). "Ivory Coast". [Online] <https://ucdp.uu.se/country/437> (Accessed 2021-05-10).
- UCDP-23 (2019). "Ghana". [Online] <https://ucdp.uu.se/country/452> (Accessed 2021-05-10).
- UCDP-24 (2019). "Togo". [Online] <https://ucdp.uu.se/country/461> (Accessed 2021-05-10).
- UCDP-25 (2019). "Nigeria". [Online] <https://ucdp.uu.se/country/475> (Accessed 2021-05-10).
- UCDP-26 (2019). "Cameroon". [Online] <https://ucdp.uu.se/country/471> (Accessed 2021-05-10).
- UCDP-27 (2019). "Central African Republic". [Online] <https://ucdp.uu.se/country/482> (Accessed 2021-05-10).
- UCDP-28 (2019). "DR Congo (Zaire)". [Online] <https://ucdp.uu.se/country/490> (Accessed 2021-05-10).
- UCDP-29 (2019). "Congo". [Online] <https://ucdp.uu.se/country/484> (Accessed 2021-05-10).
- UCDP-30 (2019). "Angola". [Online] <https://ucdp.uu.se/country/540> (Accessed 2021-05-10).
- UCDP-31 (2019). "Tanzania". [Online] <https://ucdp.uu.se/country/510> (Accessed 2021-05-10).
- UCDP-32 (2019). "Rwanda". [Online] <https://ucdp.uu.se/country/517> (Accessed 2021-05-10).
- UCDP-33 (2019). "Burundi". [Online] <https://ucdp.uu.se/country/516> (Accessed 2021-05-10).
- UCDP-34 (2019). "Mozambique". [Online] <https://ucdp.uu.se/country/541> (Accessed 2021-05-10).

- UCDP-35 (2019). "Zimbabwe". [Online] <https://ucdp.uu.se/country/552> (Accessed 2021-05-10).
- UCDP-36 (2019). "South Africa". [Online] <https://ucdp.uu.se/country/560> (Accessed 2021-05-10).
- UCDP-37 (2019). "Lesotho". [Online] <https://ucdp.uu.se/country/570> (Accessed 2021-05-10).
- UCDP-38 (2019). "Madagascar (Malagasy)". [Online] <https://ucdp.uu.se/country/580> (Accessed 2021-05-10).
- UCDP-39 (2019). "Guatemala". [Online] <https://ucdp.uu.se/country/90> (Accessed 2021-05-10).
- UCDP-40 (2019). "Honduras". [Online] <https://ucdp.uu.se/country/91> (Accessed 2021-05-10).
- UCDP-41 (2019). "El Salvador". [Online] <https://ucdp.uu.se/country/92> (Accessed 2021-05-10).
- UCDP-42 (2019). "Nicaragua". [Online] <https://ucdp.uu.se/country/93> (Accessed 2021-05-10).
- UCDP-43 (2019). "Panama". [Online] <https://ucdp.uu.se/country/95> (Accessed 2021-05-10).
- UCDP-44 (2019). "Colombia". [Online] <https://ucdp.uu.se/country/100> (Accessed 2021-05-10).
- UCDP-45 (2019). "Venezuela". [Online] <https://ucdp.uu.se/country/101> (Accessed 2021-05-10).
- UCDP-46 (2019). "Guyana". [Online] <https://ucdp.uu.se/country/110> (Accessed 2021-05-10).
- UCDP-47 (2019). "Suriname". [Online] <https://ucdp.uu.se/country/115> (Accessed 2021-05-10).
- UCDP-48 (2019). "Ecuador". [Online] <https://ucdp.uu.se/country/130> (Accessed 2021-05-10).
- UCDP-49 (2019). "Brazil". [Online] <https://ucdp.uu.se/country/140> (Accessed 2021-05-10).
- UCDP-50 (2019). "Peru". [Online] <https://ucdp.uu.se/country/135> (Accessed 2021-05-10).
- UCDP-51 (2019). "Bolivia". [Online] <https://ucdp.uu.se/country/145> (Accessed 2021-05-10).
- UCDP-52 (2019). "Paraguay". [Online] <https://ucdp.uu.se/country/150> (Accessed 2021-05-10).
- UCDP-53 (2019). "Argentina". [Online] <https://ucdp.uu.se/country/160> (Accessed 2021-05-10).
- UNDP (2017). *Income Inequality Trends in sub-Saharan Africa: Divergence, Determinants and Consequences: Overview*. New York: United Nations Development Programme.
- von Uexkull, Nina & Halvard Buhaug (2021). "Security implications of climate change". *Journal of Peace Research*, vol. 58, no. 1, pp. 3–17.
- V-Dem (2019). "Exclusion by Socio-Economic Group". *V-Dem: Varieties of Democracy*. [Online] <https://www.v-dem.net/en/news/exclusion-socio-economic-group/> (Accessed 2021-05-10).

- V-Dem (2021). "Variable Graph: Exclusion by Socio-Economic Group". *V-Dem: Varieties of Democracy*. [Online] <https://www.v-dem.net/en/analysis/VariableGraph/> (Accessed 2021-05-10).
- Villarreal Escallón, Jose Michael (2021). "The historical relationship between agrarian reforms and internal armed conflicts: Relevant factors for the Colombian post-conflict scenario". *Land Use Policy*, no. 101, pp. 1-13.
- World Bank (2021). "Gini index (World Bank estimate)". *The World Bank Data*. [Online] <https://data.worldbank.org/indicator/SI.POV.GINI> (Accessed 2021-05-10).
- World Bank (2021). "Population, total". *The World Bank Data*. [Online] <https://data.worldbank.org/indicator/SP.POP.TOTL> (Accessed 2021-05-10).

9 Appendix

9.1 Appendix A

Results from regression analysis with Exclusion by Socio-Economic Group as the independent variable, and total conflict related deaths per 100 000 inhabitants as the dependent variable.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	ExclusionbySocioEconomicGroup2000 ^b	.	Enter

- a. Dependent Variable: Deathsper100000inhabitants
 b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.438 ^a	.192	.175	69.66744

- a. Predictors: (Constant), ExclusionbySocioEconomicGroup2000

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55327.204	1	55327.204	11.399	.001 ^b
	Residual	232970.511	48	4853.552		
	Total	288297.714	49			

- a. Dependent Variable: Deathsper100000inhabitants
 b. Predictors: (Constant), ExclusionbySocioEconomicGroup2000

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	-57.163	30.033		-1.903
	ExclusionbySocioEconomicGroup2000	161.046	47.699	.438	3.376

9.2 Appendix B

Results from regression analysis with Exclusion by Socio-Economic Group as the independent variable, and non-state conflict related deaths per 100 000 inhabitants as the dependent variable.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	ExclusionbySocioEconomicGroup2000 ^b	.	Enter

a. Dependent Variable: Deathspers100000nonstate

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.352 ^a	.124	.106	15.95152

a. Predictors: (Constant), ExclusionbySocioEconomicGroup2000

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1727.641	1	1727.641	6.790	.012 ^b
	Residual	12213.643	48	254.451		
	Total	13941.284	49			

a. Dependent Variable: Deathspers100000nonstate

b. Predictors: (Constant), ExclusionbySocioEconomicGroup2000

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	-10.966	6.877		-1.595
	ExclusionbySocioEconomicGroup2000	28.458	10.921	.352	2.606

9.3 Appendix C

Results from regression analysis with GINI-coefficient as the independent variable, and total conflict related deaths per 100 000 inhabitants as the dependent variable.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	GINIcoefficient ^b	.	Enter

a. Dependent Variable: Deathspertotalinhabitants

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.071 ^a	.005	-.022	59.18368

a. Predictors: (Constant), GINIcoefficient

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	659.261	1	659.261	.188	.667 ^b
	Residual	129600.216	37	3502.709		
	Total	130259.478	38			

a. Dependent Variable: Deathspertotalinhabitants

b. Predictors: (Constant), GINIcoefficient

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.133	61.193		-.051	.959
	GINIcoefficient	.532	1.227	.071	.434	.667

a. Dependent Variable: Deathspertotalinhabitants

9.4 Appendix D

Results from regression analysis with GINI-coefficient as the independent variable, and non-state conflict related deaths per 100 000 inhabitants as the dependent variable.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	GINIcoefficient ^b	.	Enter

a. Dependent Variable: Deathsper100000inhabitantsnonstate

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.219 ^a	.048	.022	15.56479

a. Predictors: (Constant), GINIcoefficient

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	452.199	1	452.199	1.867	.180 ^b
	Residual	8963.721	37	242.263		
	Total	9415.920	38			

a. Dependent Variable: Deathsper100000inhabitantsnonstate

b. Predictors: (Constant), GINIcoefficient

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-17.345	16.093		-1.078	.288
	GINIcoefficient	.441	.323	.219	1.366	.180

a. Dependent Variable: Deathsper100000inhabitantsnonstate

9.5 Appendix E

The table of all data collected for the purpose of this study.

	Country	Exclusi onbySc dio...	GINCo efficient	Year	Numberofdeaths 20002019	Nonstateviolence	Population	Deaths per 10000 Oinhabitants	Deathsper10000 Oinhabitant snons tate
1	Mauritania	.83	39.00	2000	32	0	2,630,219	1.22	.00
2	Mali	.64	50.40	1994	5427	912	10,946,445	49.58	8.33
3	Niger	.27	41.50	1994	1888	47	11,331,557	16.66	.42
4	Chad	.89			6450	522	8,355,654	77.19	6.25
5	Sudan	.87			47475	10848	27,275,015	174.06	39.77
6	Eritrea	.52			1875	0	2,292,416	81.79	.00
7	Senegal	.26	41.40	1994	480	124	9,797,743	4.90	1.27
8	The Gambia	.47	48.50	1998	10	0	1,317,703	.76	.00
9	Guinea-Bissau	.59	43.60	1993	0	0	1,201,301	.00	.00
10	Guinea	.73	46.10	1994	1047	154	8,240,730	12.71	1.87
11	Burkina Faso	.25	49.90	1999	1515	39	11,607,942	13.05	.34
12	Sierra Leone	.52			930	0	4,584,571	20.29	.00
13	Liberia	.72			6123	0	2,848,456	214.96	.00
14	Côte d'Ivoire	.41	39.00	1998	3540	710	16,454,668	21.51	4.32
15	Ghana	.17	40.10	1998	180	180	19,278,856	.93	.93
16	Togo	.57			437	0	4,924,402	8.87	.00
17	Nigeria	.66	51.90	1996	49815	17693	122,283,850	40.74	14.47
18	Cameroon	.81	44.40	1996	5056	74	15,513,945	32.59	.48
19	CAR	.81	61.30	1992	12477	3573	3,640,427	342.74	98.15
20	South Sudan				11778	3701	6,199,394	189.99	59.70
21	Ethiopia	.69	30.00	1999	56415	4433	66,224,804	85.19	6.69
22	Djibouti	.77			42	6	717,584	5.85	.84
23	Somalia	.95			29729	5223	8,872,254	335.08	58.87
24	Kenya	.58	45.00	1997	4341	2808	31,964,557	13.58	8.79
25	Uganda	.57	43.00	1999	8017	1463	23,650,172	33.90	6.19
26	DRC	.87			46491	10187	47,105,826	98.70	21.63
27	Congo (rep.)	.87			362	0	3,127,411	11.58	.00
28	Angola	.84	52.00	2000	4250	0	16,395,473	25.92	.00
29	Tanzania	.58	37.20	2000	48	0	33,499,180	.14	.00
30	Rwanda	.80	48.50	2000	2146	0	7,933,681	27.05	.00
31	Burundi	.71	42.30	1998	8204	249	6,378,871	128.61	3.90
32	Mozambique	.50	53.60	1996	901	0	17,711,927	5.09	.00
33	Zimbabwe	.52			267	0	11,881,477	2.25	.00
34	South Africa	.45	57.80	2000	7	344	967,713	.02	.01
35	Lesotho	.36	63.20	1994	0	0	2,032,804	.00	.00
36	Madagascar	.79	38.60	1999	211	161	15,766,806	.00	.00
37	Guatemala	.85	54.20	2000	160	123	11,589,761	1.34	1.02
38	Honduras	.68	55.40	1999	231	176	6,574,509	1.38	1.06
39	El Salvador	.85	51.50	2000	0	0	5,887,936	3.51	2.68
40	Nicaragua	.68	54.40	1998	0	0	5,069,302	.00	.00
41	Panama	.38	56.60	2000	0	0	3,030,328	.00	.00

