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Exploring the 'dark matter' of conflict

The role of inequalities, perceptions, identity and social capital

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Exploring the 'dark matter' of conflict

The role of inequalities, perceptions, identity and social capital

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Exploring the 'dark matter' of conflict

The role of inequalities, perceptions, identity and social capital

Doctoral Thesis

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from Radboud University Nijmegen
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according to the decision of the Council of Deans
to be defended in public on Friday, December 20, 2019
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Chapter 1

Introduction

1.1 - Aim

Scholars have long sought to understand why and how ethnic conflict occurs, and why it persists. Despite the rapid expansion of the field of conflict studies in the past few decades, there is still much we do not yet fully understand, and there are important issues that have not been addressed. First, to date there is no definitive consensus on the nature of the connection between horizontal inequalities -- differences between culturally defined groups -- and ethnic conflict. Quantitative studies have shown socioeconomic and political horizontal inequalities to be positively associated to ethnic conflict in some cases, but unrelated in others. The diversity of the findings implies that horizontal inequalities and conflict share a complex relationship, and the underlying mechanisms require further investigation. Second, the positive relationship between political inequalities and conflict is often attributed to the grievances formed when groups are excluded from political access, despite strong evidence pointing specifically toward political discrimination by the state (repression) as the main cause of rebellion. Third, researchers studying inequalities have mainly relied on information that has been 'objectively' measured. However, they acknowledge that people develop grievances based on their own perceptions, rather than the information at academics' disposal. Perceptions may be shaped by 'objective' inequalities, but are also likely to be influenced by other factors at the individual level, such as how strongly individuals identify with their ethnic group, their personal wealth, or their educational background. Fourth, grievances alone are usually insufficient to mobilize individuals toward violence. Social capital, which functions as the glue that holds communities together, is often required for individuals to commit to a larger cause and mobilize collectively. Most of the literature on social capital has touted its positive effects for development and governance, but its role in the context of violent collective action is ambiguous and remains understudied.

Despite acknowledging the substantial role that perceptions, identities, and social capital have in shaping conflict, due to their intangible nature, scholars do not yet have much empirical evidence to support their claims. These concepts could be considered the 'dark matter' of conflict, to borrow a term from astrophysics. Dark matter accounts for a significant proportion of all matter in the universe, but because its properties do not interact with ordinary matter such as light, it cannot be observed with the instruments currently at our disposal. Nevertheless, its presence and effect on gravitational forces is undisputed in theories of astrophysics (Ibarra, 2015). In a similar way, how individuals perceive inequalities is far more difficult to observe than the inequalities themselves, but perceptions are critical to understanding whether inequalities lead to violence or not. Categorizing people according to a preconceived notion of identity can be problematic because identity can have a different meaning for

every individual, but how individuals associate with their identity will undoubtedly have an effect on the way they view the status of their identity group. How social capital is measured remains a topic of ongoing debate, but it is evident that the glue that holds a community together can influence how communities respond to difficult circumstances.

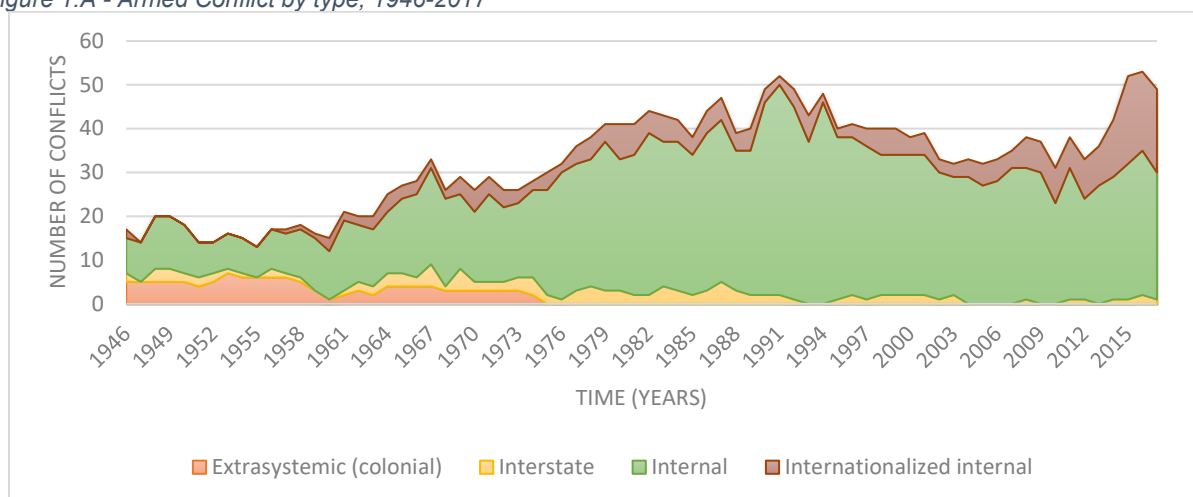
The aim of this thesis is to analyze the relationship between inequalities and conflict in a systematic manner, and to reassess the theoretical assumptions made by the conflict literature at the group and individual level by accounting for this 'dark matter'. In order to achieve this, I tackle the problems outlined above using a three-pronged approach that consists of 1) disaggregating the concepts by their components, 2) constructing a framework that links the individual and group levels of analysis, and 3) exploring the role of intangible characteristics such as perceptions, identity salience, and social capital. In this thesis I find that at the group level, the relationship between horizontal inequalities and ethnic conflict depends on the type of inequality, and that the degree of political discrimination by the state makes ethnic groups more prone to conflict, particularly when there is a strong presence of elites. At the individual level, I find that the salience of ethnic identity and individuals' socioeconomic context not only moderate the relationship between horizontal inequalities and perceived collective grievances, but are also important indicators of both grievances and violent behaviour. I also find that social capital has an ambiguous relationship with violence, with different dimensions of social capital having opposite effects on support for and the use of violence. The following sections discuss the research on horizontal inequalities and ethnic conflict thus far, outline the theoretical framework and research questions answered in this thesis, explain the methodological approach utilized, and provide a brief overview of the empirical chapters that follow.

1.2 – Inequalities and ethnic conflict

Due to the prevalence of internal conflicts in contemporary society (see Figure 1.A), scholars of various disciplines have endeavoured to understand why they occur. One of the most widespread types of internal conflicts are so-called 'ethnic' conflicts: conflicts between groups that distinguish themselves from one another by emphasizing differences in heritage, language, culture, religion or physical characteristics. It has long been theorized that ethnic identities can resolve the collective action problem, defined as a situation in which individuals who would benefit from cooperating are discouraged to do so because of conflicting interests (Olson, 1965). However, although ethnic identities often play a key role in shaping

incentives for violence (Pearlman and Cunningham, 2012), today most analysts agree that identity itself is not a direct cause of violent conflict. Instead, it can exacerbate tensions when groups clash due to other factors, such as bad governance, deprivation, discrimination, and resource disputes.

Figure 1.A - Armed Conflict by type, 1946-2017



Source: Armed Conflict Database, Uppsala Conflict Data Program (Pettersson and Eck, 2018). Ethnic conflicts are classified within internal or internationalized internal conflicts.

The literature on ethnic conflict coalesces around a general theoretical framework that includes socioeconomic, demographic and political factors (Gurr and Harff, 1994; Sambanis, 2001; Cordell and Wolff, 2009). Research points to a strong link between inequalities and conflict (Østby, 2013; Cederman and Wucherpfennig, 2017), especially for ‘horizontal inequalities’. These are defined as differences between culturally formed groups (Stewart, 2008). Differences between individuals, or ‘vertical inequalities’, may also generate grievances, but are unlikely to lead to organized group conflict because grievances will not be experienced collectively. Horizontal inequalities, however, may enhance ethnic group grievances and thus facilitate mobilization for conflict (Østby, 2008).

The unreliability of group-level inequality data long prevented scholars from thoroughly assessing the relationship between horizontal inequalities and conflict (Fearon and Laitin, 2003; Miguel, 2004). However, as data have become more widely available, scholars have made inroads towards improving our understanding of the relation between horizontal inequalities and conflict. In the past decade, researchers have been able to study the effects of socioeconomic, population size and political horizontal inequalities on conflict incidence. Socioeconomic inequalities, such as uneven education levels and wealth distribution between ethnic groups, have been found to exacerbate the potential for ethnic conflict because of the grievances they generate (Cederman et al., 2013). Still, the literature has not reached a consensus on the

effect of horizontal inequalities. Østby's (2008) seminal research found the evidence for social inequalities to be more robust than for economic inequalities. Other studies have found an insignificant or even negative relationship between economic horizontal inequalities and conflict, and suggest this may be because economically disadvantaged groups have a relative lack of capacity to wage war (Huber and Mayoral, 2014; Mitra and Ray, 2013). More consensus can be found in studies that focus on the relationship between population size inequalities and violence. In line with the capacity argument for economic inequalities, conflict is more likely the closer in size that ethnic groups are to each other (Esteban et al., 2012; Balcells et al., 2016). This finding holds both when dominant groups are small (Ellingsen, 2000) and when marginalized groups are large (Cederman et al., 2010).

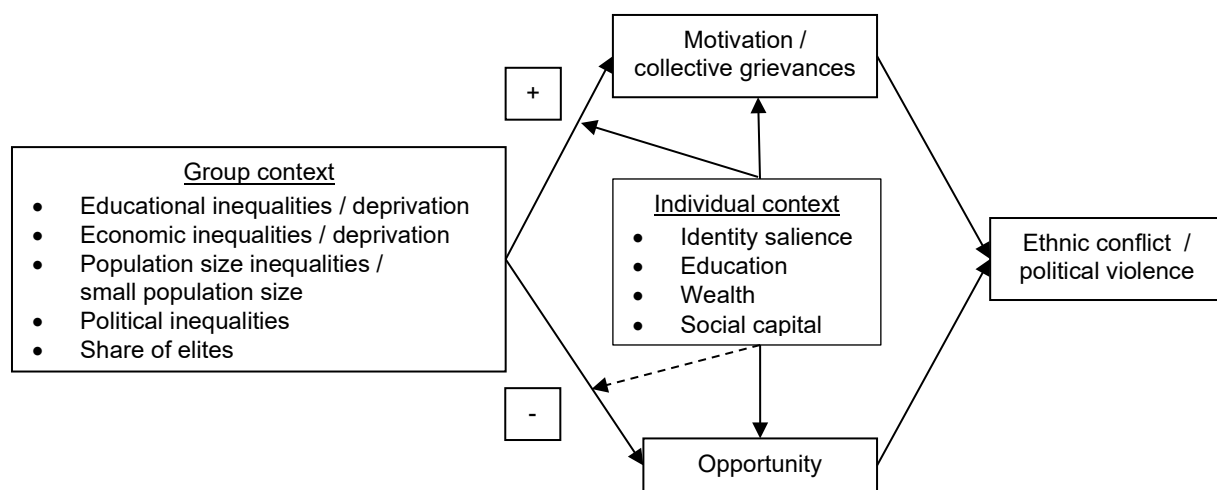
Political inequalities refer to differences in access to power, and range from ethnic groups being strongly represented in government to groups being politically discriminated. Exclusion from political power has been found to make groups more conflict prone (Cederman et al., 2013). If an ethnic group is underrepresented in the government, its members may feel their political demands are unattended and decide to use more aggressive means to achieve them. Proportional political representation for ethnic groups may lead to reduced ethnic conflict (Saideman et al., 2002), as the opportunity cost of rebellion is higher in countries with more political freedoms and rights. If discriminatory practices are used against ethnic groups - such as when there is a history of injustice towards a particular community, or when the government restricts traditional practices or the use of a language - the chance of ethnic conflict can increase. Political discrimination is likely to breed strong grievances amongst repressed groups, but it may also limit their capacity to address the imbalance (Gurr, 1993). Slightly repressive governments may face greater backlash from minorities, whereas highly repressive governments may discourage any type of rebellion (Reynal-Querol, 2002).

1.3 - Theoretical framework

Although the research discussed above has expanded our knowledge on the relationship between horizontal inequalities and conflict, there are several questions that have not yet been answered. The following research questions will be examined in the corresponding four chapters of this thesis, with the first two focusing on the group context and the second two examining the individual context:

- RQ1 In which way and to what extent do educational, economic and population size inequalities between ethnic groups influence the risk of conflict incidence between the groups?
- RQ2 To what extent and under which conditions is the effect of political exclusion on ethnic conflict attributable to political discrimination against ethnic groups?
- RQ3 To what extent and under which conditions do individuals perceive relative group deprivation as collective grievances?
- RQ4 In which ways are indicators for the cognitive and structural dimensions of social capital associated to the reported support for and use of political violence?

Figure 1.B - Relationship between horizontal inequalities and ethnic conflict



The solid lines represent the relationships examined in this thesis. The dotted line illustrates how individual characteristics can moderate the effect of group characteristics on the opportunity mechanism. Due to a lack of available data measuring opportunities, testing these relationships were beyond the scope of this research.

The relationship between horizontal inequalities and conflict is theorized to work through either of the two conflict mechanisms of motivation and opportunity highlighted in Figure 1.B. When groups experience inequalities and discrimination, they are likely to perceive themselves as relatively deprived. The collective grievances they may develop as a consequence create *motivation* for conflict (Gurr, 1993). The *opportunity* argument suggests that inequalities reflect the capacity that the group has relative to its opponents with respect to the materials and manpower required to mobilize for collective action and successfully wage war (Collier and Hoeffler, 2004).

Much of the literature on horizontal inequalities finds a positive relationship with ethnic conflict (Stewart, 2008; Østby, 2008; Cederman et al., 2011), so explanations by and large focus on the motivation mechanism, and do not account for the link to the opportunity mechanism. However, recent studies have

found empirical evidence for a negative relationship between economic and population size inequalities and conflict (Huber and Mayoral, 2014; Balcells et al., 2016). These studies contend that when horizontal inequalities increase, the difference in capacity to wage war between groups also increases, reducing the perceived opportunities for the disadvantaged group to win a conflict.

One of the main contributions of the first two empirical chapters is to posit that in the group context, the relationship between horizontal inequalities and conflict is likely to function through *both* motivation and opportunity mechanisms, as the two arrows leading from the group context in Figure 1.B illustrate. Horizontal inequalities may create countervailing forces that simultaneously increase and decrease the risk of conflict. The direction of the relationship with conflict ultimately depends on the strength of each horizontal inequality's association with either mechanism. To complicate matters further, horizontal inequalities do not usually occur in isolation. They often occur simultaneously or together with other conditions, and the combination of factors may alter the balance between the opposing mechanisms (Bara, 2014). This underlines why it is essential to scrutinize the characteristics of horizontal inequalities in order to determine their link to motivations and opportunities. Chapter 2 focuses on discerning how educational, economic, and population size inequalities are related to these mechanisms in order to comprehend their relationship with ethnic conflict.

The approach of deconstructing the relationship between horizontal inequalities and conflict can also be applied to political inequalities. Differences in the political access of ethnic groups have long been regarded as a cause of ethnic conflict because groups feel underrepresented or excluded from power (Wimmer et al., 2009; Cederman et al., 2013). However, these differences could also represent existing socioeconomic or population size imbalances between groups, or reflect the traditional or isolated way of life that some cultures voluntarily choose to maintain. In these instances, groups are less likely to develop motivations for conflict since their political differences are seen as 'natural'. Furthermore, politically excluded groups will have fewer opportunities to engage in violence as they will be less able to form political alliances and allocate state funds toward supporting their conflict (Gurr, 1993). Ethnic groups are more prone to fighting if their motivation outweighs the limitations they face. This scenario seems more likely if the excluded groups are also politically discriminated by the state, because repression tends to produce strong grievances. The question of whether political discrimination is the underlying determinant of ethnic conflict is explored in depth in Chapter 3. In addition, I explore the conditions under which the effects of political discrimination on conflict may vary, such as when elites have a large presence in the group.

In Chapters 4 and 5 I examine the framework for the individual context, as shown in the central box in Figure 1.B. The relationship between inequalities and political violence at the individual level follows the two-sided logic of the conflict mechanisms at the group level. Inequalities can create the perception for individuals that their group is relatively deprived. On the one hand, if their group is smaller or socioeconomically deprived in comparison to other groups in the country, individuals may feel their ethnic group is being unfairly treated, in which case they are more likely to mobilize with their group in protest and potentially resort to violent action. On the other hand, if their group is relatively smaller or socioeconomically deprived, the group will also have less resources than others, so individuals might believe that their group is less likely to defeat more advantaged groups in conflict. Individuals might thus be less inclined to risk their lives by engaging in political violence, even if they have more incentive to do so.

Nonetheless, group characteristics alone cannot fully explain why individuals resort to using violence. Conflict analysis models need to account for variation in characteristics between individuals, such as their socioeconomic background, the salience of their identity and the level of social capital (outlined in the central box in Figure 1.B). These factors can also influence individuals' decision to engage in political violence by distorting their perceptions of collective grievances (motivation) and their prospects of winning the conflict (opportunity). It is also possible that the motivations and opportunities to engage in violence are determined by a combination of individual and group-level factors, as the arrows in Figure 1.B going from the individual context to the arrows between group context and motivation/opportunity indicate. This has been exemplified by studies on how inequalities between groups and inequalities between individuals work in unison to shape conflict (Huber and Mayoral, 2014; Langer and Smedts, 2013).

The complexity that individual factors add to the relationship between inequalities and political violence highlights an important flaw in the literature. The measurement of inequalities in contemporary research can be problematic because scholars use 'objectively' observed indicators of inequality, yet individuals' perceptions of inequalities are not necessarily based on the same information. People usually do not have access to detailed information and will develop collective grievances based partly on their personal experiences or those of others. This increases the risk of individuals making inaccurate or misled comparisons with other groups. Langer and Smedts (2013) show for example that the presence of one horizontal inequality might contaminate individuals' perception of other horizontal inequalities. Individuals who are members of a group that experiences inequalities in education may also perceive their

group to be economically deprived, even if this is not the case. Other factors, such as individuals' attachment to their ethnic group, their own personal socioeconomic background, manipulation by elites, and media consumption, are likely to have an effect on whether individuals perceive their group to be discriminated or not (Langer and Smedts, 2013). This has led scholars in the field to propose a shift their research towards a perceptions-based approach (Langer et al., 2017).

Another important, yet often overlooked, issue is the role of identity. In order to conduct empirical research with groups as the unit of analysis, scholars must assume that ethnic identity is fixed and politically relevant (Stewart, 2005). But ethnic identity is not static or unanimous for a group's members. Some individuals may associate strongly with their ethnic identity, whilst others might not be so attached, or they may hold overlapping ethnic and national identities. When identities are salient, politics stemming from an identity can often exacerbate the differences and distrust between groups, increasing the motivation for conflict (Gurr, 1993). Groups with strong ethnic identities are more likely to clash with other identities, as differences are harder to bridge (Toft, 2003). In contrast, if identities are diluted, or attachment to them weakens, group grievances might be felt less acutely by individuals, which could make them less inclined to mobilize with their ethnic group. Studies have shown that when the salience of ethnic identity varies per individual, the risk of conflict decreases (Bhavnani and Miodownik, 2009; Miodownik and Bhavnani, 2011). Chapter 4 addresses both issues of identity and perceptions by examining to what extent horizontal inequalities are perceived as collective grievances by members of an ethnic group, illustrated in Figure 1.B by the arrow going from group characteristics to motivation. In addition, the Chapter analyzes whether factors on the individual level, such as the individuals' socioeconomic background and attachment to their ethnic identity, moderate this relationship.

The final critique on prevailing conflict research has to do with the strong emphasis on inequalities as explanatory factors of conflict (see Østby, 2013). The importance of political and socioeconomic resources for community development and improving ethnic group status in society supports the reasoning behind the current focus. However, to some extent this focus is also due to the relative ease of measuring quantifiable indicators, such as access to education and employment, compared to less tangible characteristics of a society, such as social capital. Blattman and Miguel (2010) note that the scarcity of data should not diminish from the importance of intangible characteristics. Phenomena such as social capital are especially relevant when dealing with intercommunal relationships. Social capital refers to the resources available to individuals and groups that arise from their social networks, which can be used to improve the efficiency of society or facilitate coordination for collective action (Putnam, 1993; Ostrom

and Ahn, 2009). Early studies examining the conflict potential of social capital indicators such as associational membership (Varshney, 2001), trust (Krebs, 2007), and social cohesion (Bhavnani and Backer, 2007) have shown they can perform critical functions in the build-up to violence.

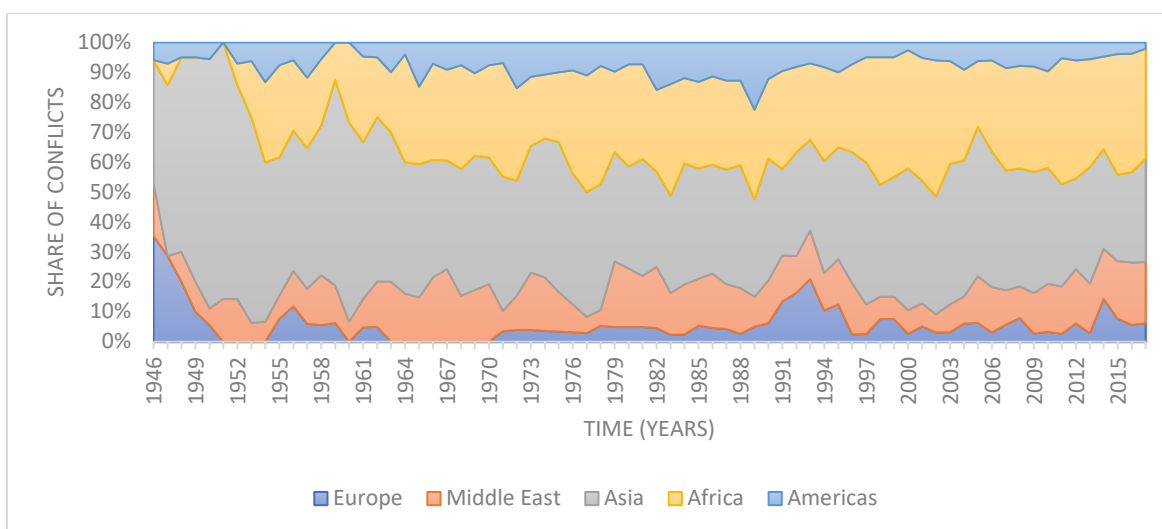
Although social capital is traditionally considered to be beneficial for a community and is usually associated with less violence (Cassar et al., 2013; Grosjean, 2014), recent studies have shown that this is not always the case – for example, social networks can improve the access to information and resources available to individuals, which could increase the opportunities for violent collective action (El Hajj et al., 2011; McDougall and Banjade, 2015). Social capital is a broad concept - to fully comprehend its relationship with violence it is useful to examine it according to two different dimensions. These include structural social capital, which refers to the social networks that individuals participate in, and cognitive social capital, which relates to the norms and values that people in a community share. Studies have shown that these dimensions do not have the same relationship with (indirect) measures of violence (Dinesen et al., 2013; Hansen et al., 2014). According to these studies, high levels of cognitive social capital lead to more trust and solidarity within a community, and the resulting social cohesion will reduce that community's exposure to violence. In contrast, high levels of structural social capital increase civic engagement, and the collective action that ensues will increase that community's exposure to violence. Chapter 5 focuses on discerning between these two dimensions of social capital and testing whether their relationship with violence hold for more direct measures of political violence than those that have been tested thus far. The relationship of the dimensions of social capital with violence is investigated in the context of the conflict mechanisms highlighted in Figure 1.B.

1.4 – Focus on Africa

The region under analysis is the African continent. One of the main reasons for focusing on a specific region is that the concept of ethnic identity has different categorizations depending on the region under study. In different contexts, alternative measures of identity are used. In North America identity is often categorized according to race, in South America it is discerned mainly by social class, in most of Africa by ethnolinguistic groups, and in Asia by either caste (e.g. Nepal/India), religion or ethnicity, depending on the country. Other categorizations include geographical region, dialect, and indigenous groups. The diverse interpretations of what constitutes an ethnic identity makes it difficult to be able to generalize across different regions, as the notion of ethnicity changes according to the society being studied.

For this reason, I decided to examine only countries in Africa, where ethnic cleavages are for the most part defined along ethnolinguistic lines. The African continent is an interesting testbed because the region is ethnically highly diverse (Posner, 2004) and it is very susceptible to ethnic conflict. Figure 1.C illustrates the proportion of state-based armed conflicts¹ per region. The Middle East, which is often considered to be a conflict-prone area, represents less than 6% of armed conflicts observed since 1946.² Since the 1960s, when most African countries achieved independence, a large percentage of all armed conflicts observed has taken place on the African continent. This percentage has gradually increased over time, and in the last decade, Africa has surpassed Asia as the region with the highest share of ongoing conflicts (37% vs. 34%). Many, if not most of these conflicts, consisted of violence between ethnic groups (Esteban et al., 2012). This underlines the importance of concentrating on African countries to understand why contemporary ethnic conflicts occur.

Figure 1.C – Armed Conflict by region, 1946-2017



Source: Armed Conflict Database, Uppsala Conflict Data Program (Pettersson and Eck, 2018)

1.5 – Methodological Approach

A quantitative approach is employed throughout the project, using multilevel and (ordered) logistic regression analysis on panel data for the next two chapters and on cross-sectional data for the two

¹ A state-based armed conflict is a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, resulting in at least 25 battle-related deaths in one calendar year.

² The graph represents incidences of conflict but does not indicate their intensity.

subsequent chapters. This approach allows a broad study across a range of countries. Having a large sample of countries makes it possible to identify the most salient factors at play, control for country-level variance and isolate the local characteristics that do not hold up in all observations. Additionally, the panel data allows for the examination of the relationship between horizontal inequalities and ethnic conflict over time.

In the first part of the thesis, a unique method of dyadic analysis is used to examine the relationship between horizontal inequalities and ethnic conflict. To construct an original Ethnic Dyad Database (EDD), I extracted socioeconomic and demographic information for individuals and households from the Demographic and Health Surveys (DHS), and aggregated it to the group level for each of 290 main ethnic groups identified in 29 African countries. This allowed the construction of group-level averages for all ethnic groups. Ethnic group categories are not always the same across different survey years, therefore the groups needed to be harmonized before they could be compared over time. The Ethnic Dyad Database is created from this aggregated database by pairing every possible combination of ethnic groups within a country, resulting in 1548 ethnic dyads and 38,213 ethnic dyad year observations. Data on the political status of the ethnic groups are taken from the Ethnic Power Relations dataset (Vogt et al., 2015).

The socioeconomic and political data for ethnic groups in a dyad are matched with a variable for whether conflict between those ethnic groups is observed in a given year or not. Ethnic conflict data are obtained from the Dyadic Dataset (Pettersson and Eck, 2018), the Non-State Conflict Dataset (Sundberg et al., 2012), and the One-Sided Violence Dataset (Eck and Hultman, 2007) from the Uppsala Conflict Data Program (UCDP). Multi-level logistic regressions are run on this dyadic dataset, with country fixed-effects dummies and controls for clustering of ethnic groups within dyads. Chapter 2 focuses on socioeconomic horizontal inequalities, whilst Chapter 3 integrates political horizontal inequalities.

The second part of the thesis explores the nexus between the characteristics from the individual and group context, and focuses on more intangible characteristics such as perception, the salience of identity and social capital. Variables for these attributes are taken from the Afrobarometer surveys, which are public opinion surveys for individuals of 220+ ethnic groups across 27+ countries in Africa. Individuals are asked about their ethnicity, how strongly they associate with their ethnic identity, whether they feel their ethnic group is discriminated against, as well as about their support for and participation in violence. In addition, respondents are queried on indicators that measure their level of social capital and socioeconomic context. The analyses are run at the individual level, with a total of 40,455 observations

for the analysis on social capital and violence and 80,158 observations for the analysis on perceived collective grievances. The analysis on grievances could be conducted on more observations as two rounds of the Afrobarometer could be used (5 and 6). The socioeconomic information is aggregated to the ethnic group level and compared to the national average to indicate to what extent the groups is deprived compared to other groups in the country. The models also control for clustering of individuals within ethnic groups and countries.

Figure 1.D – Coverage of DHS, EPR, and Afrobarometer databases for countries in Africa



Sources: DHS (ICF, 1990-2014), EPR (Vogt et al., 2015), and Afrobarometer Surveys Rounds 5 & 6 (2012 & 2014).

Figure 1.D illustrates the coverage of the DHS, EPR and Afrobarometer datasets in Africa in which ethnicity data were available. The map shows that most countries on the African continent are included and the three databases overlap in coverage for at least 20 of the 27-30 countries in each analysis. Of the countries

that do not overlap across all databases, information for Chad, Central African Republic, Congo, DR Congo, Ethiopia, Rwanda and Angola is contained in both the DHS and EPR datasets, so these Sub-Saharan countries are incorporated into the dyadic analysis. Due of the lack of political data, Burkina Faso could only be included in the analysis on socioeconomic horizontal inequalities. For the second part of the thesis, the additional countries in the analysis using the Afrobarometer data are Morocco, Algeria, Burundi, Tanzania, Botswana, Lesotho, Madagascar and Mauritius. The Afrobarometer surveys do not cover Chad, Central African Republic, Congo, DR Congo, Ethiopia, Rwanda and Angola, however. For the countries in grey, either information on ethnic groups was not recorded or the countries were not included in any of the databases. Overall, the wide coverage of the databases used in this research indicates that the results are generalizable across a majority of African countries.

1.6 – Overview of chapters

The chapters are organized according to the four research questions outlined in section 1.3. Chapters 2 and 3 seek to understand the subtle differences in the relationship between horizontal inequalities and ethnic conflict sketched out in Figure 1.B. Chapter 2 focuses on socioeconomic inequalities, while Chapter 3 focuses on political inequalities. Chapters 4 and 5 study how the individual-level factors in Figure 1.B relate to political violence. Chapter 4 examines how perceived collective grievances are formed, Chapter 5 studies the relationship of social capital with violence, and Chapter 6 concludes the thesis with a summary of the results, and a discussion of the contributions and limitations of the research. The chapters are described in further detail below.

Chapter 2 – Socioeconomic inequalities and ethnic conflict

Theories on ethnic conflict predict that horizontal inequalities should be associated with a greater likelihood of violent conflict, but empirical results have been mixed. One reason might be that different types of inequalities have opposite effects on the likelihood of conflict. I posit in Chapter 2 that educational inequalities are likely to incentivize collective action by inducing grievances, while economic and population size inequalities may actually dis-incentivize collective action by limiting opportunities for disadvantaged groups to engage in rebellion, as illustrated in Figure 1.B. I formulate the hypotheses that larger educational inequalities between groups will increase the risk of conflict, whilst economic and population size inequalities between groups will decrease the risk of conflict. I also examine whether the

relationship between horizontal inequalities and ethnic conflict might change under certain conditions on the national level, such as the level of democracy and rule of law, and on the group level, such as whether the group is wealthy or in power.

Chapter 3 – Political Inequalities and ethnic conflict

According to the conventional literature, political inequalities are expected to have a positive effect on conflict incidence. The literature on political inequalities often uses grievance-based mechanisms to explain the relationship between political exclusion and conflict. However, it tends to treat the grievance argument with broad-brush strokes and does not differentiate between types of exclusion. In Chapter 3, I disaggregate politically-excluded groups into two subgroups: those that face discrimination by the state designed to exclude them from political power, and those that have no political power but are not explicitly discriminated against. In the context of the conflict mechanisms in Figure 1.B, I hypothesize that excluded groups who are explicitly discriminated against by the state are more likely to experience grievances and therefore be more prone to conflict with groups in power than excluded groups who are not discriminated against. Furthermore, I examine the conditions under which discriminated ethnic groups might be more or less prone to conflict. The expectation is that discriminated groups are less likely to engage in conflict if they are relatively poorer than the other group, and are more likely to engage if their ethnic group consists of a larger proportion of elites.

Chapter 4 – The formation of collective grievances

Chapter 4 hones in on how the motivation mechanism functions on the individual level, represented in Figure 1.B by collective grievances. Scholars within the conflict-inequality field often argue that inequalities between groups lead to intergroup conflict because of the collective grievances experienced by relatively deprived groups. With this claim they make two critical assumptions that have hitherto not been properly tested. First, they assume that observed group inequalities are connected to perceived group grievances. Second, despite acknowledging that attachment to identity and socioeconomic characteristics may vary per individual, they assume that group identities are salient and that groups are unitary actors. This chapter addresses these issues by investigating how group and individual characteristics may influence individual perceptions of collective grievances. I expect that the more relatively deprived an ethnic group is in education or wealth, or the smaller it is relative to other groups

in the country, the more likely individuals belonging to that group will perceive their group to be unfairly treated. Individual perceptions of collective grievances will also be higher if the share of elites in the group is larger. I anticipate these effects to be moderated by individuals' attachment to their ethnic identity and their socioeconomic background. A salient ethnic identity is likely to increase the effect of relative deprivation on collective grievances, whilst a higher individual socioeconomic status is expected to reduce the perception of grievances potentially generated from experiencing intergroup cleavages.

Chapter 5 – Social capital and violence

Chapter 5 incorporates an intangible characteristic into the model that is usually overlooked in the conflict literature, as shown in the central box in Figure 1.B. Social capital has been promoted in research and policy circles as a way to achieve social transformation and economic development. There is also, however, a potential 'dark side' to social capital. In this final empirical chapter, I investigate whether structural and cognitive social capital have different relationships with the reported propensity towards violence. Structural social capital in the form of community and religious associational membership increase civic engagement, which allows an easier diffusion of grievances and facilitates collective mobilization. Cognitive social capital provides a 'glue' or social cohesion within a community, because characteristics such as communal trust and a shared identity are thought to bring people together. Connecting these arguments to political violence, I hypothesize that higher levels of structural social capital are positively related to support for or use of violence, whilst higher levels of cognitive social capital are negatively related to support for or use of violence.

Chapter 6 - Conclusion

In the final chapter of the thesis, I present a summary of the results, outlining the answers to the four research questions on the effects of horizontal inequalities, political discrimination, perceptions, identity, and social capital on grievances and conflict. I subsequently draw overall conclusions from the research and discuss the theoretical and methodological contributions of this thesis to the existing conflict literature. By disaggregating concepts and the unit of analysis, investigating the nexus between the individual and the group level, and examining intangible characteristics such as perceptions and social capital, the thesis sheds new light on the processes that lead to conflict. The final chapter continues with a discussion on the limitations of the research, and finishes with a section that highlights the major takeaways of the findings.

Chapter 2

Socioeconomic inequalities and ethnic conflict¹

¹ Based on Alcorta, Ludovico, Smits, Jeroen, and Haley J. Swedlund. 2018. Inequality and ethnic conflict in Sub-Saharan Africa, *Social Forces*, Advance online publication, <https://doi.org/10.1093/sf/soy049>

Abstract

Theories of ethnic conflict predict that between-group inequality should be associated with a greater likelihood of violent conflict, but empirical results are mixed. One reason might be that different types of inequalities have opposite effects on the likelihood of conflict. Group inequalities reflect differences in group endowments and capacity. In this chapter, I posit that educational inequalities are likely to incentivize collective action by inducing grievances, whilst economic and population size inequalities may actually dis-incentivize collective action by limiting opportunities for disadvantaged groups to engage in rebellion. I test these hypotheses using the Ethnic Dyad Database, which incorporates 1,548 dyads formed by 290 ethnic groups living in 29 Sub-Saharan African countries. The analysis reveals that educational inequalities are indeed positively associated with conflict incidence, whilst economic and population size inequalities are negatively associated with conflict incidence. The positive association between educational inequality and conflict is stronger if the groups are wealthier. A higher joint educational level of the groups is associated with less conflict, particularly under more autocratic regimes. These findings demonstrate that to understand the relationship between inequality and conflict, it is important to disaggregate the effects of inequalities according to the underlying mechanisms and the political context with which they are associated.

2.1 - Introduction

It is well established that inequalities between different ethnic groups can sometimes result in tensions between these groups, particularly when ethnic groups have to compete for resources and endowments (Bollig, 1993), or when social identities overlap with major political or economic grievances (Gurr, 1993). More recently, however, scholars have noted that different types of inequalities may have different effects on conflict incidence (Østby, 2008), with some inequalities even decreasing the likelihood of conflict (Besançon, 2005). Although this possibility is widely acknowledged, data limitations have made it difficult to test the impact of different types of inequality on conflict incidence. As a result, we still lack clarity on how different types of inequalities affect the likelihood of conflict between ethnic groups.

This chapter contributes to the field by using a new dataset to test the impact of three different types of inequalities—educational, economic, and population size inequalities—on ethnic conflict. I find that educational inequalities between ethnic groups are positively correlated with conflict risk, while economic and population size inequalities are negatively correlated with conflict risk. I argue that the discrepancy in the effects of inequalities is because educational inequalities can foster grievances amongst groups, which increase the motivation to engage in conflict, while economic and population size inequalities may actually dis-incentivize conflict by limiting opportunities for rebellion.

The research improves over earlier studies of ethnic conflict by using a much more comprehensive database. Rather than using national-level data or focusing only on the largest ethnic group(s) within a country, I examine the differences between all combinations of ethnic groups in 29 Sub-Saharan Africa countries. By bringing together data on 290 ethnic groups within these countries over the period 1990–2014, I constructed a database containing information on 1,548 within-country pairs of groups (referred to as “ethnic dyads” henceforth). This database provides a much more detailed insight of the associations between intergroup inequalities and ethnic conflict than has been possible in prior research. I draw on this dataset to address the following research question:

In which way and to what extent do educational, economic and population size inequalities between ethnic groups influence the risk of conflict incidence between the groups?

The findings support the argument that different types of inequalities can have different impacts on the probability of conflict incidence, suggesting that the relationship between inequalities and the occurrence of violent conflict is more complicated than it is often suggested.

The chapter proceeds as follows. In the next section, I discuss how the relationship between inequality

and conflict has been analyzed in the past. In the third section I tie horizontal inequality to the debate between motivations and opportunities, and formulate hypotheses about the effects of different types of inequalities on conflict. In section four I discuss the data and methods used in this research. I provide the results of the empirical analysis in the fifth section. In section six I discuss the relevance of these findings to the academic debate on inequalities and conflict. Finally, I outline the implications of the results and offer concluding remarks.

2.2 - Vertical versus Horizontal Inequalities

Communities in least developed countries are often deprived of their political rights and public services due to a lack of state resources and/or capacity (Besley and Persson, 2010). This may generate feelings of injustice, particularly if the allocation of resources and services is unfairly distributed between communities (Horowitz, 1985). Inequalities can strengthen the extent of these grievances and lead to competition for scarce resources, which could eventually result in violence (Bollig, 1993).

The traditional method to measure relative deprivation and its impact on conflict incidence was to investigate *vertical inequalities*; that is, to observe inequalities between individuals within a population using national-level data. However, the link between vertical inequality and conflict between groups was difficult to establish empirically. Gurr (2000) claimed the relationship between relative deprivation and conflict was positive, whereas other scholars determined the relationship to be less significant than other factors (i.e., Collier and Hoeffler, 2004; Blattman and Miguel, 2010). Still others found a negative correlation between vertical inequality and ethnic war (Besançon, 2005).

One of the likely reasons why scholars had difficulties finding a clear-cut link between vertical inequalities and conflict was the use of national-level data. Causal factors that provide intuitive explanations for conflict, such as inequality and discrimination between groups, tend to vary *within* countries. As a result, their impact cannot be accurately captured with national-level data (Cramer, 2003; Buhaug et al., 2011). This has led to a new approach among scholars to disaggregate the study of civil war and to focus on systemic inequalities between culturally formed identity groups, that is, *horizontal inequalities* (Stewart, 2008).

In order for horizontal inequalities to become a basis of discontent and antipathy, group identity has to be socially significant to its members. Members have to feel attached enough to the group to identify with other members who feel aggrieved and to aggregate their experience to a collective injustice. Group members therefore must share some identifiable attributes that are stable over time and are perceived to notably influence group behavior and well-being. These characteristics place

constraints on the possibility to select a group identity and must be in place before collective mobilization can emerge. If people can easily switch between ethnic identities, members are less likely to feel attached to the group and might be inclined to change groups when it benefits them. This would reduce inequalities between groups until an equilibrium is reached (Stewart, 2008). When identities are relatively static, however, members are more likely to develop feelings of belonging toward their group and therefore to experience inequalities collectively.

The shift toward studying horizontal inequalities (henceforth, simply inequalities) has proved fruitful, and the relationship between horizontal inequalities and ethnic conflict has been more robustly established (e.g., Murshed and Gates, 2005; Østby, 2008; Cederman et al., 2013). Research has shown that when horizontal inequalities coincide with identity cleavages, they may enhance group grievances and thus facilitate mobilization for conflict (Cederman et al., 2011). Nonetheless, the literature on the relationship between inequalities and conflict incidence is still limited in several ways.

First, while there is strong support in the literature for a positive relationship between educational inequalities and conflict incidence (Mancini, 2008; Østby, 2008), findings are less consistent on the impact of economic inequalities (e.g., Østby, 2008; Buhaug et al., 2011; Cederman et al., 2011; Deiwiks et al., 2012). Contrasting results suggest that the relationship between inequalities and conflict is not necessarily straightforward, and that we should not assume that all types of horizontal inequalities have the same effect on the incidence of violence. As I explore in detail in the subsequent section, different types of inequalities might have different effects on ethnic conflict incidence, because the associations with the underlying mechanisms likely differ.

Second, cross-national research has, for the most part, focused on ethnic groups as the unit of analysis rather than ethnic dyads. The latter, however, more accurately captures the dynamics between groups in a conflict situation. Dyadic analysis allows for the observation of subtler differences that would otherwise go unnoticed. For example, when studying inequality and conflict in Nigeria, scholars often emphasize religious and economic differences between the poorer, Islamic north and the oil-rich, Christian south (Montalvo and Reynal-Querol, 2005; Fenske and Zurimendi, 2017). While these differences are no doubt important, they cannot explain conflicts between, for example, the Ijaw and the Itsekiri, two ethnic groups who largely share the same religion and live mainly in the southern region.

In her study, Østby (2008) took a group-level approach, but her analysis only included the two largest ethnic groups in a country. Although this is a significant step forward, including only the largest ethnic groups does not account for the complex multi-ethnic dynamics present in many societies. In Nigeria,

for example, there are three main ethnic groups (the Yoruba, Igbo, and Hausa), but also dozens of other smaller ethnic groups that periodically come into conflict with one another. In fact, out of 25 dyads engaged in interethnic conflict in Nigeria between 1990 and 2014 that I identified in the Uppsala Conflict Database Program (www.ucdp.uu.se), only 14 involved the three main ethnic groups. Thus, an approach that focuses only on the largest groups would omit almost half of the conflicts in the country, such as the fighting between the Ijaw and Itsekiri. Additionally, since smaller ethnic groups are less likely to be vying for control of the state than larger ethnic groups, it is possible that the incentives for conflict differ between groups of different sizes. Fjelde and Østby (2014) account for this by comparing the wealth of the largest ethnic group in a region to that of the rest of the population within that region. However, this is an indirect measure of how economic inequality between groups can affect the chance of conflict between them. To gain better insight into this complexity, data including more than the largest ethnic groups are required.

2.3 - Motivations or Opportunities?

The inequality literature coalesces around two concepts that can potentially lead to conflict incidence: motivations and opportunities (Tilly, 1978; Gurr, 1993, 2000; Ellingsen, 2000; Stewart, 2008). Motivation for conflict is created by within-group feelings of frustration and resentment, whereas opportunity for conflict is related to the capacity of the group to mobilize for collective action. The former stems from grievances that are caused by inequalities, discrimination, or defeat in prior conflicts. The latter derives from the ethnic group's capacity to engage in violence relative to other groups.

The concepts of motivation and opportunity are not mutually exclusive. In fact, inequalities are likely to work through both mechanisms, as disparities in resources that cause resentment between groups may also inhibit them from mounting a successful insurgence (Esteban and Ray, 2008). Without resources and organization, grievances can do little to challenge powerful defenders of the status quo. People will only mobilize for collective action when they have the resources and opportunity to do so, and even then, only if they believe it is in their interest (Tilly, 1978).

That being said, to increase our understanding of the role of these mechanisms in conflict outbreak, it is important to discern between inequalities more strongly linked to motivations and those more strongly linked to opportunities. In this chapter, I do this by distinguishing between three types of inequalities: educational inequalities, economic inequalities, and population size inequalities. I posit that educational inequalities are more strongly associated with motivation, while economic and

population size inequalities are more strongly associated with opportunities. In the next section, these forms of inequality are discussed and hypotheses are formulated pertaining to their effect on conflict outbreak.

2.3.1 - Educational Inequalities

Stewart (2008) highlights the importance of inequalities in social access to public services. In this chapter, I focus on the differences in access to education, which is considered to be a major indicator of social inequality (Østby, 2008). Government investments in education have a direct and lasting positive impact on people's lives and can help reduce the level of grievances in society (Aoki et al., 2002). Education may reduce conflict risk by encouraging political participation (Hegre, 2003) and social cohesion (Thyne, 2006). At the same time, more education increases the future prospects of individuals and thus increases the opportunity costs for recruits in a potential conflict (Collier and Hoeffler, 2004).

If education is unfairly distributed, it can become a main vehicle for frustration in society (de Ferranti et al., 2004). Differences in levels of education—or in other social outcomes such as health and infrastructure—may be severely felt by disenfranchised groups, since these are considered public goods and services. Under ideal circumstances, education would be evenly distributed across society. However, in reality its allocation often depends on the political power balance in the country. Under Apartheid in South Africa, for example, the expenditure on education for white students was 14 times larger than it was for black students, and education was considered one of the main sources of grievance (Stewart, 2008).

Given the importance of education for development and well-being and the expectation of equal provision, I assume that educational inequalities are linked to conflict motivation. Esteban et al. (2012), for instance, argue that intergroup differentiation matters when the payoffs are for the entire group and group identification may influence the policies chosen, thereby negatively impacting other groups. This suggests that the larger the educational inequalities between groups, the stronger the feelings of resentment, increasing the likelihood of conflict. The effect is likely to be even stronger as wealth levels rise. In such cases, groups may expect more provision of public services from the state. If their demands are not met, their wealth can provide funding for a rebellion.

H1: If educational inequalities between ethnic groups are larger, the tendency of the group with less education to engage in ethnic conflict is higher.

2.3.2 - Economic Inequalities

Although educational and economic inequalities may be correlated with each other, this does not necessarily mean they will have the same effect on conflict (Besançon, 2005; Østby, 2008). There are several reasons to believe that economic inequalities, which I measure through differences in the average levels of household asset wealth between groups, are less likely to be connected to conflict-inducing grievances than educational inequalities. First, inequalities in assets between groups may be less noticeable than educational inequalities, because many of them remain within the confines of the household. For example, if a trader of a certain ethnicity visits a village of a different ethnic group where a larger share of people has televisions and fridges, he will only be able to observe this if he enters several houses in that village. However, he will be able to spot whether the village has a school or health centre, as well as discern to some extent the quality of the facility.

Second, even when economic inequalities are visible, economic assets are private, so they could be attributed to individual welfare or productivity (vertical inequality) rather than group welfare. The trader will thus only observe that some households are better off, which is probably also the case for some households in his own community. If these differences are not perceived to fall across ethnic divisions, groups are unlikely to develop a sense of collective grievance.

Third, private assets do not necessarily benefit the group as a whole, and therefore are less likely to be valued as much as public goods on the collective level. If we consider educational or economic gains as the prize an ethnic group fights for, education is a good that can be shared across the group at little to no cost, while economic prizes will become diluted depending on the size of the group.

Fourth, even if economic inequalities are noticeable on a group level, they may be perceived to indicate lifestyle differences between groups. For example, nomadic Fula herdsmen in Sierra Leone are less likely to require the same household assets as Limba farmers. This does not necessarily represent a motivation for conflict but is rather a reflection of the different lifestyles of each group.

Given that the motivation mechanism does not provide a straightforward argument for why economic inequalities lead to conflict, I posit that the opportunity mechanism might offer a better explanation for the relationship between economic inequalities and conflict. It is often assumed that higher levels of economic inequality will lead to more conflict; however, when disparities are large, disadvantaged groups may not have the resources to compete with the advantaged groups (Huber and Mayoral, 2014). Wealthier groups are more capable of financing conflict, because they can better afford to pay their recruits and will have greater access to material resources (Østby, 2013). Both are necessary to organize and mobilize for collective action (Tilly, 1978; Olzak, 1994). As a result, poorer groups may think

twice about starting an open conflict when the disparities with other groups are high. Instead of engaging in violence, they may look for other ways to improve their situations. This leads to the prediction that, contrary to the common assumption that greater economic inequalities are likely to lead to conflict:

H2: If economic inequalities between ethnic groups are larger, the tendency of the poorer group to engage in ethnic conflict is lower.

2.3.3 – Population size inequalities

When considering group differences in terms of relative capacity to engage in conflict, differences in population size between the groups may also be important. Horowitz (1985) contends that the closer the size of major ethnic groups, the greater the chance of domestic conflict or a coup d'état, as both parties believe they have an opportunity to win the conflict. Montalvo and Reynal-Querol (2005), on the other hand, argue that the propensity for conflict increases when a society is ethnically polarized, or divided into fewer and larger, equally sized groups. As ethnic identities are often manipulated by elites for their own political or financial objectives (Varshney, 2003), it makes sense that when there are fewer and larger groups, it would be easier for elites to mobilize for collective action. However, it remains to be seen whether such a situation actually is associated with more ethnic conflict. When differences in population among groups are larger, it should become riskier for the smaller group to engage in conflict. As a result, conflict risk may actually be lower. Balcells et al. (2016), for example, find that similarly sized rival communities that are in contact with each other are more at risk of violence due to increased intergroup competition and threat perception. Ellingsen's (2000) study tentatively supports this claim, finding that countries with non-dominant ethnic majorities are more prone to domestic conflict than countries with dominant ethnic majorities. This leads to the prediction that population size inequalities, like economic inequalities, are more closely associated with the opportunity mechanism and thus will have a negative effect on conflict incidence.

H3: If population size differences between ethnic groups are larger, the tendency of the smaller group to engage in ethnic conflict is lower.

2.4 – Data and Methods

2.4.1 - Data

To test the hypotheses, I construct the Ethnic Dyad Database including information on 1,548 dyads of 290 ethnic groups living in 29 Sub-Saharan African countries (for a list of all groups, see Table A.2.1 in

the Appendix). The data used for constructing this database are derived from the Database Developing World (DDW) of the Global Data Lab (www.globaldatalab.org). There are 77 household surveys carried out between 1990 and 2014 as part of the Demographic and Health Survey (DHS) program. DHS are large, nationally representative surveys that consist of a household survey, in which basic information is collected of all household members, and separate women's and men's surveys. I first construct an ethnic group database by aggregating data to the ethnic group level for all ethnic groups for which the required information is available in the surveys. Information on the ethnic group of household members is sometimes asked in the household survey and sometimes in the women's or men's surveys. The question most often used is "What is your ethnic group/tribe?" The respondent could choose from a number of predefined categories, or a category "Other" followed by "Specify." Small ethnolinguistic tribes or subgroups for which only a few observations were available are categorized into larger clusters of ethnolinguistically similar groups. Smaller ethnic groups that do not fit within a cluster and contain less than 1 percent of the observations within a country are excluded from the analysis.

The data included in the ethnic group database are used to form dyads of ethnic groups within each of the 29 countries. Each ethnic group is paired with all other ethnic groups within the same country, resulting in 1,548 ethnic dyads. Constructed in this way, the Ethnic Dyad Database contains characteristics of both ethnic groups within the dyad and variables indicating differences between the characteristics of the groups. On the basis of this database, an ethnic dyad panel dataset is constructed with yearly observations for the period 1990–2014. As the data are derived from household surveys, I only had information for the years when surveys were held. Five surveys are available for only one country, four surveys are available for seven countries, three surveys for another eight countries, two surveys for seven countries, and only one survey is available for six countries (see Table A.2.2 in the Appendix). To obtain information for the years for which no dataset is available, the values of the survey nearest in time before the observation year is used. For the years before the first survey, the values of the first survey is used. If no survey preceding a specific year is available, data are extrapolated from later surveys. Since values of later years might be influenced by the conflict, a control factor indicating this situation is added to the model. To test the robustness of this approach, the database is recreated with interpolated values for intervening years between surveys. Repeating the analyses with this dataset produces substantially similar results (see Table A.2.3 in the Appendix).

Data for the dependent variable, ethnic conflict, are compiled from the Uppsala Conflict Data Program (UCDP), which contains intrastate conflict observations consisting of rebellions against the state, non-state conflict, and one-sided violence against civilians (by state and/or non-state actors) in countries

in Sub-Saharan Africa for the period 1990–2014. The datasets used are the UCDP Dyadic Dataset v.1–2015, UCDP Non-State Conflict Dataset v. 2.5–2015, and UCDP One-Sided Violence Dataset v 1.4–2015.

According to UCDP, ethnic conflict is defined as violence that occurs between ethno-linguistic groups. For the purpose of this research, ethnic conflict includes (1) the use of armed force between two ethnic groups (Sundberg et al., 2012; Pettersson and Eck, 2018); or (2) the use of armed force by an organized ethnic group against civilians (Eck and Hultman, 2007); either case resulting in at least 25 conflict-related casualties per year. The minimum threshold of 25 battle-related deaths allows for the inclusion of low-intensity conflict, while still separating group conflict from other types of low-intensity violence. I include an indicator for conflicts involving ethnic groups that are in power to distinguish between conflicts in which the state is involved and those where it is not. The period 1990–2014 was selected because of data availability. Additionally, by selecting conflicts starting from 1990 onwards, I can exclude ideological conflicts and external involvement from other countries during the Cold War.

Using the UCDP data, I construct the dependent variable as a dummy variable taking the value 1 for years when a conflict is recorded within a specific dyad and 0 otherwise. In total, it consists of 731 intrastate conflict incidence observations (the full list of conflict observations is included in Table A.2.4 in the Appendix). Of the 29 countries included in this study, six (Benin, Burkina Faso, Gabon, Malawi, Namibia, and Zambia) did not have any observations of intra-state ethnic conflict during the years included in the analysis. Since I record the occurrence of conflict for each year as opposed to only the year that violence breaks out, I observe conflict incidence rather than onset. Although there may be a distinction between these incidence and onset, other studies have shown the difference to have no impact on their results (see Esteban et al., 2012).

The actors involved in a conflict observation are coded according to the ethnic groups described in the UCDP database and cross-checked with other sources (Olson, 1996; Joshua Project, 2016; Simons and Fennig, 2017). Each conflict observation is matched to the corresponding ethnic dyad among which it took place. Ethnic groups within a dyad are treated equally, independent of who initiated the conflict. For multi-ethnic conflicts, all ethnic groups that play a substantial role within the conflict are included as a separate ethnicity. I focus on intrastate domestic conflict and do not include cross-border wars. Conflicts where the actors involved were foreign, where they could not be identified by ethnicity (e.g., the conflict in 2007 between the Black Axe/Bush Boys vs. Outlaws in Nigeria), or where they belonged to the same ethnic group (intra-Hutu violence in DR Congo) are excluded from the analysis.

2.4.2 - Methods

To test the hypotheses, mixed-effects logistic regression analysis is used. I conduct a multilevel analysis to control for clustering due to the repeated measurement of the dyads over time and the nesting of observations within countries. I assess both the bivariate and multivariate associations between the independent and dependent variables. The dependent variable is a dummy indicating whether (1) or not (0) in a given year an ethnic conflict has taken place between the groups in a dyad. The major independent variables are based on (differences between) characteristics of the ethnic groups in the dyads.

Educational inequality is measured through a variable indicating the difference in educational level between the groups. A group's educational level is the mean years of schooling of adults aged 20–49 in the group. Economic inequalities are measured in two ways—by the difference in groups' wealth levels and the proportion of economic elites in a dyad. Group wealth is measured as the mean value of the households belonging to the group on the International Wealth Index (IWI), a comparable welfare index that is based on the household's possession of consumer durables, quality of housing, and access to water and electricity (Smits and Steendijk, 2015). IWI scores run from 0 to 100, with 0 representing households having none of the included durables and lowest-quality housing/public utilities and 100 representing households having all the durables, as well as highest-quality housing and utilities. For the proportion of economic elites, I calculate the percentage share working in higher (professional, managerial, technical) occupations within the group's male workforce in the 20–49 age category. Ethnic group size is measured by the percentage of the country's population that is a member of the group. Both the dyad's average values (levels) and the differences (inequalities) between the two groups in regard to education, wealth, employment, and population are included in the analyses. Due to the presence of the mean values, the effects of the differences will indicate the relative inequalities for the respective indicator.

As I wish to study conflict incidence, it is necessary to control for temporal dependence by including dummy variables that indicate whether conflict is recorded in any of the four years prior to the conflict observation year. This isolates the factors that lead to conflict incidence from factors that occur during conflict and may determine conflict escalation. Controls for conflicts more than four years prior were also tested but turned out not to be significant, so they are not included in the model. Differences in levels of urbanization between the groups and mean urbanization levels of the dyad are used as proxies to control for inter-group exposure and geographical concentration. The first control compares the difference in the percentage of population residing in urban compared to rural areas between ethnic groups, which can signal the level of exposure that groups have to each other. The second control

measures the average share of the ethnic groups in the dyad that lives in an urban area, which provides a crude indication of whether groups are concentrated or dispersed.

Several controls for political factors are incorporated into the model. At the group dyad level, I include an indicator for whether (1) or not (0) one of the ethnic groups in the dyad was in power in that year. On the national level, I record the occurrence of regime change. A dummy is coded as 1 in years that elections, military interventions, or transitional governments are observed, and 0 otherwise. I further control for the country's democracy level, using the national polity score (to what extent it is autocratic or democratic, on a scale of -10 to 10, where 10 represents the most democratic level of government) derived from the Polity IV dataset (Marshall et al., 2016). Finally, I control for the effect of the rule of law, taken from the World Governance Indicators (Kaufmann et al., 2011). This variable measures the extent to which people have confidence in and abide by the rules of society. This applies particularly to the quality of contract enforcement, property rights, the police, the courts, and the risk of crime and violence. Scores are on a country level and range on a scale from -2.5 to 2.5. As the World Bank first started recording governance indicators on a biannual basis in 1996, I use interpolation between years and extrapolation in the period 1990–1995. Missing values for the education, higher occupation, and regime change variables are addressed using the dummy variable adjustment procedure (Allison, 2001).

To study the bivariate effects of the independent variables, I estimate separate multilevel models for each coefficient. Given the intimate connection between the two components of the main independent variables (the difference component and the mean component), both are included simultaneously in the bivariate analyses. Given the strong effects of conflict incidence in the preceding years, the dummies controlling for this were also included in these analyses. In addition, dummy variables addressing missing values in the independent variables are included when necessary. To test for multicollinearity, I ran variation inflation factor (VIF) tests for the major independent variables. All VIF values were far below the critical threshold of 10 (Belsley et al., 1980), hence there seems to be no noteworthy multicollinearity among these variables.

As the relationship between inequalities and conflict is not necessarily linear, I tested for nonlinear effects of the independent and control variables by adding quadratic terms to the model. I also tested for interaction effects among the major independent variables and between these variables and the control factors. Significant nonlinearities and interaction effects were included in the model.

2.5 - Results

2.5.1 - Main

Descriptive statistics are presented in Table 2.A. In the dataset, educational inequality ranges between 0 and 8.9 years, and the mean educational difference between the groups within the dyads is 1.6 years. Average group education level is 4.6 years. The mean difference in wealth is 7.7 on the IWI scale, and the average wealth level of the groups is 22.0 on this scale (running from 0 to 100). The average elite share, represented by the proportion of ethnic group members in higher occupations, is 9.3 percent, and the average difference between groups in elite share is 6.2 percent. The mean ethnic group in a dyad represents 7.3 percent of the total population of a country, while the mean difference in population size percentage between the groups in a dyad is 8.1 percent. The average proportion of groups in a dyad living in an urban area is 30.4 percent, and the difference in urbanization between groups is on average 16.9 percent.

Table 2.A - Descriptive statistics summary table for selected independent variables and ethnic conflict incidence in 29 Sub-Saharan African countries, 1990–2014

Variables	Mean	Standard deviation	Minimum	Maximum
Conflict incidence	0.02	0.14	0	1
Educational inequality (years)	1.62	1.58	0	8.9
Average education (years)	4.65	2.23	0.25	11.9
Wealth inequality (IWI)	7.69	8.53	0	72.9
Average wealth (IWI)	22.03	11.21	2.15	93.40
Elite share inequality (%)	6.20	8.97	0.00	97.00
Average elite share (%)	9.31	7.36	0.00	59.25
Population size inequality (%)	8.08	10.64	0.00	87.03
Average population size (%)	7.29	6.45	0.99*	43.87
Control factors				
Difference in urbanization (%)	16.95	15.81	0.00	94.20
Average urbanization (%)	30.35	16.85	0.50	93.15
Conflict 1 year prior	0.02	0.13	0	1
Conflict 2 years prior	0.01	0.08	0	1
Conflict 3 years prior	0.01	0.08	0	1
Conflict 4 years prior	0.00	0.07	0	1
Regime change	0.18	0.39	0	1
Level of democracy (polity)	1.07	4.70	−9	9
Ethnic group in power	0.18	0.38	0	1
Rule of law (WGI)	−0.81	0.50	−2.13	0.35

*Minimum cut-off value is set at 0.99%. Sources: Demographic and Health Surveys (DHS) and Uppsala Conflict Data Program (UCDP).

The national polity scores range from −9 to 9, with an average of 1.1. The observations for the rule of law vary on a scale from −2.1 to 0.3 and are on average −0.8. The dummy variables for the control factors indicate that in 17.7 percent of dyads one of the groups is in power and that in 18.5 percent of

the observation years a regime change took place.

The results of the multilevel logistic regression analyses are presented in Table 2.B. Model 1 provides the coefficients for the bivariate relationships between the independent variables and ethnic conflict incidence, while Models 2 and 3 displays the coefficients for the multivariate relationships. Model 2 is the baseline model and Model 3 includes the interaction terms. Coefficients of the bivariate analyses were estimated in separate multilevel regression models, whereby the two components of the main independent variables (the difference component and the mean component) were estimated simultaneously. The number of dyad observations included in this analysis is 38,213, and the number of conflict-year observations is 731. The coefficients presented in the table are odds ratios, which are more easily interpretable than logit coefficients.

The bivariate coefficients in Model 1 essentially tell the same story as the multivariate coefficients in Models 2 and 3. The same variables have significant coefficients, and the directions of the significant relationships are also similar. Most coefficients of the independent variables are slightly stronger in the multivariate models. This suggests that their effects are somewhat suppressed bivariately, due to the influence of confounding factors. Given that the coefficients are so similar, I will focus the discussion of the results on the multivariate outcomes in Models 2 and 3.

Model 2 in Table 2.B shows that the effect of educational inequality is significantly positive. When the difference in average years of education between groups increases by one year, the odds of conflict are 41.5 percent higher, supporting H1. Larger differences in education may exacerbate the political and social tensions between groups and undermine the legitimacy of state institutions (Heyneman and Todoric-Bebic, 2000). The effect of the overall educational level is significantly negative. In Model 2, an increase of one year of education reduces the odds of conflict incidence by 21.5 percent. Higher education levels increase the capacity to solve conflicts through dialogue instead of fighting. More education also increases the possibilities for individual social mobility and raises the opportunity cost of rebellion (Collier and Hoeffler, 2004).

With respect to wealth inequality between groups, I find a significantly negative relationship with conflict risk. The odds of conflict in Model 2 are 6.6 percent lower when the wealth difference increases by one point on the IWI scale (0 to 100). There is no significant relationship between the average wealth level of the groups and conflict risk. Hence, the difference in wealth between groups is a better predictor of conflict than the absolute level.

Table 2.B - Multilevel logistic regression coefficients for bivariate and multivariate associations between selected independent variables and ethnic conflict incidence in 29 Sub-Saharan African countries, 1990–2014

Variables	Model 1	Model 2	Model 3
Constant		0.000*** (0.000)	0.000*** (0.000)
Educational inequality	1.165** (0.061)	1.415*** (0.099)	1.304*** (0.075)
Average education	0.846** (0.052)	0.785* (0.079)	0.798* (0.083)
Wealth inequality	0.973* (0.012)	0.934*** (0.017)	0.926*** (0.018)
Average wealth	0.997 (0.011)	1.014 (0.020)	1.001 (0.021)
Elite share inequality	0.972* (0.013)	0.963* (0.015)	0.967* (0.016)
Average elite share	1.043*** (0.011)	1.063*** (0.014)	1.063*** (0.016)
Population size inequality	0.964** (0.013)	0.966* (0.015)	0.963* (0.015)
Average population size	1.251*** (0.055)	1.251*** (0.062)	1.263*** (0.064)
Average population size ²	0.997* (0.001)	0.997* (0.001)	0.997* (0.001)
Control factors			
Urbanization inequality	0.994 (0.006)	1.011 (0.008)	1.014 (0.008)
Average urbanization	0.990 (0.008)	1.000 (0.010)	0.993 (0.011)
Conflict 1 year prior	27.445*** (4.511)	16.174*** (2.543)	14.488*** (2.296)
Conflict 2 years prior	4.997*** (1.100)	3.327*** (0.719)	3.112*** (0.674)
Conflict 3 years prior	3.395*** (0.875)	2.496*** (0.644)	2.361*** (0.612)
Conflict 4 years prior	2.132* (0.679)	1.592 (0.511)	1.478 (0.475)
Regime change	1.000 (0.000)	1.126 (0.157)	1.157 (0.161)
Level of democracy	0.936*** (0.012)	0.941*** (0.016)	0.946** (0.017)
Ethnic group in power	2.993*** (0.430)	3.413*** (0.533)	3.563*** (0.579)
Rule of law	0.128*** (0.036)	0.178*** (0.057)	0.132*** (0.045)
Interactions			
Educational inequality * average wealth			1.016*** (0.005)
Average education * democracy level			1.023*** (0.007)
Average elite share * rule of law			1.073** (0.025)
Average urbanization * democracy level			0.998* (0.001)
Average urbanization * ethnic group in power			1.023* (0.010)
Population size inequality * democracy level			0.997* (0.001)
Random-intercept parameters			
Country level		1.934*** (0.399)	1.995*** (0.412)
Ethnic dyad level		1.890*** (0.164)	1.939*** (0.168)
Omnibus test chi ² (DF)		722.01*** (23)	729.49*** (29)
Observations	38,213	38,213	38,213
Conflict-year combinations	731	731	731

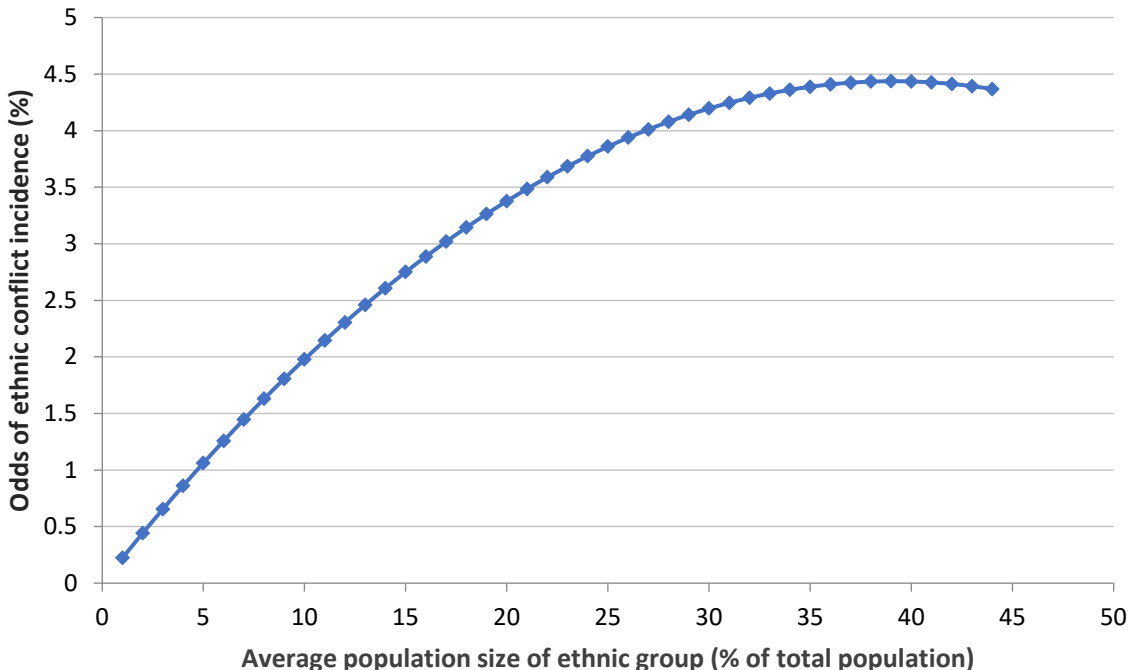
Coefficients are the log odds for the variables in the models and estimates for random-intercept parameters, with standard errors in parentheses. * $p < 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$. In Model 1, coefficients were estimated for each variable separately, whereby both components of the major variables (inequality and mean) were estimated simultaneously.

Regarding inequality in the share of the groups' economic elites, the odds of conflict incidence are 3.7 percent lower for each percentage point increase in the difference in proportion of ethnic group members in higher-level occupations. Ethnic groups with different levels of representation in the higher ranks of society thus seem less likely to compete for positions. If one group is mainly engaged in agriculture or manual work, while the other has a larger share of professional, managerial, and technical occupations, tensions are less likely to occur. The effect of the average level of participation in the economic elite on conflict risk is positive—a percentage increase in the joint elite share will

strengthen the odds of conflict occurring by 6.3 percent. This result is in line with the idea that conflict risk increases if the dyad's elites must compete for positions.

The relationship between inequality in population size and conflict is significantly negative. An increase of 1 percent in population size difference reduces the chance of conflict by 3.4 percent. Hence, the traditional idea that population size inequality leads to conflict is not confirmed by the findings. The combined population size of the groups has a significant nonlinear relationship with conflict (see Figure 6). In dyads with a higher average population size, conflict risk is higher, but the strength of this association decreases as the average population size increases and plateaus when the average population size is about 40 percent.

Figure 2.A - Predicted relationship between average population size and ethnic conflict incidence



Concerning the control factors, I find insignificant coefficients for urbanization. The variables accounting for prior conflict in the preceding three years have significant positive effects. The odds of conflict increase 16, 3, and 2.5 times, respectively, when there was a conflict one, two, or three years prior to the year of observation. Hence, if the groups within a dyad have been involved in conflict recently, there is a high risk of conflict occurring again, although this effect wanes over time. The grievances experienced during conflicts in preceding years may easily create new tensions between the ethnic communities, which can spark further bouts of violence. The strong effect of the variable controlling for conflict in the preceding year is probably due to the fact that it captures uninterrupted conflict incidence. Control variables for conflict more than four years before the measurement year were not significant.

If one of the groups in the dyad is in power, the odds of conflict incidence are considerably higher. An explanation for this is that the groups might contest political power, which could mean that the risk of conflict depends on the political context (Besançon, 2005) and on the prize at stake (Esteban et al., 2012). The democracy-level control variable shows that the national political context is also relevant. A one-point increase in the democracy level is associated with 5.9 percent lower odds of ethnic conflict. An increase by one point in the rule of law is associated with substantially (82.2 percent) lower odds of ethnic conflict. National regime change is not significantly related to ethnic conflict incidence.

2.5.2 - Interactions

Interaction analysis was performed to assess the possibility of the effects of the major independent variables being contingent on other factors. Model 3 in Table 2.B shows that in the interaction model the main effects of the independent variables do not alter much in strength and retain their significance. Among the main independent variables, only one significant interaction effect was found: a positive interaction between educational inequality and average wealth. This interaction suggests that educational inequality is a more salient indicator of potential conflict among wealthier groups than among poorer groups.

There are several significant interactions between the political control variables and the main independent variables. National democracy level interacts positively with average education, and negatively with population size inequality and average urbanization. The first interaction indicates that joint educational level is more important for conflict reduction in societies that are less democratic. The second one suggests that a difference in population size between groups reduces conflict risk more strongly in societies that are more democratic. The third one indicates that in more democratic societies, conflict risk is additionally reduced between urbanized groups. Average urbanization also interacts positively with one of the groups being in power, suggesting that a struggle for power increases the risk of conflict in urban areas. Finally, I find a positive interaction between the average size of the elites and rule of law. This suggests that the rule of law is particularly important for reducing conflicts between groups with a relatively small share of elites.

2.6 - Discussion

In this chapter, I put forward the argument that educational, economic, and population size inequalities may have different effects on the incidence of ethnic conflict. I argue that inequalities which work primarily through the motivation mechanism, such as differences in education, are likely

to be conflict-enhancing. This follows the conventional argument that inequalities are grievance-inducing, such that an increase in disparities will amplify feelings of injustice and subsequently lead groups to mobilize collectively against each other. For example, Langer (2008) highlights the ethnic disparities in the allocation of public investment, such as the gap in literacy rates between the Northern Mande and the Akan in Ivory Coast, as a source of communal tensions between the groups. However, when inequalities are more closely linked to the opportunity mechanism, such as with economic and population size inequalities, I argue that inequality should not necessarily be conflict-enhancing. Disparities in wealth and population size may make it difficult for disadvantaged groups to engage in rebellion and hence are negatively associated with conflict. In Rwanda, for instance, the Twa ethnic group is smaller and far poorer than either the Hutus or the Tutsis, yet—despite suffering from significant discrimination—they have not been involved in conflict.

To test the hypotheses, I built a new Ethnic Dyad Database, composed of 1,548 ethnic dyads, representing 290 different ethnic groups in 29 Sub-Saharan African countries. Multilevel logistic regression results indicate that—in line with the expectations—higher levels of educational inequality are associated with increased risk of ethnic conflict. In contrast, higher levels of economic inequality and of differences in population size were associated with a lower risk of conflict incidence.

These findings are important, as they indicate that there is no general effect of inequality on ethnic conflict. Instead, different kinds of inequalities appear to have different effects on conflict risk. To my knowledge, this is the first comprehensive cross-country study that finds divergent effects for horizontal inequalities on ethnic conflict. Opposing effects on conflict have been observed when examining different types of inequalities between individuals (Besançon, 2005), but not when inequalities between groups were studied (Østby, 2008). The results thus challenge a narrative in the literature that economic inequalities between groups will lead to conflict (Østby, 2013; Cederman et al., 2013).

I also find that ethnic dyads with lower joint educational levels, ethnic dyads that together make up a larger share of the country's population, and ethnic dyads with a larger joint share of economic elites are more likely to be involved in ethnic conflicts. A higher joint education level of the groups might increase the capacity to solve potential conflicts in more peaceful ways. It also raises the future prospects of individuals and thus the opportunity costs for potential rebel recruits (Collier and Hoeffler, 2004). Larger populations and a higher joint proportion of elites might lead to stiffer competition for the available positions. Although the analysis is focused on dyads and does not account for the overall composition of ethnic groups in society or for within-group inequality, these results provide some evidence in support of the ethnic polarization theory: the larger and more similarly sized ethnic groups

are, the more likely the chance of conflict between them (Esteban et al., 2012; Montalvo and Reynal-Querol, 2005). Finally, as expected, the risk of ethnic conflict is lower in societies with higher levels of democracy and rule of law, as well as when neither of the groups in the dyad is in power.

Besides the direct effects of the independent variables, I also studied interaction effects. This analysis revealed that the effect of educational inequality depends on the joint wealth levels of the groups in the dyad, with the negative association between educational inequality and conflict risk being even stronger if the groups are wealthier. This finding suggests that the grievance effect created by educational inequalities may become more poignant as groups are wealthier and expect more provision of public services from the state. If their demands are not catered to, these groups' wealth can provide them access to funding for rebellion, as was for example the case according to Humphreys and Mohamed (2005) with the wealthy Jola group in the Senegalese province of Casamance, which mobilized against the state because of what they perceived to be discriminatory policies in education and land allocation.

I also found a positive interaction between the average education level and the level of democracy, suggesting that a higher joint educational level might be particularly important for conflict reduction in less democratic societies. Or, if educated individuals are more conformist to the state, as Wimmer et al. (2009) argue, groups with a high joint education level may be less likely to engage in conflict. The findings also showed that the negative association between population size differences and conflict is even stronger in more democratic countries. A possible explanation is that in more democratic societies minorities are more able to participate in the government and can represent their interests through conventional political channels and therefore have less incentive to resort to violence (Cederman et al., 2013).

The heightened conflict risk when one of the groups is in power turns out to be particularly strong when the groups are more urbanized. A tense ethnopolitical environment coupled with power differences and proximity of groups might stimulate negative interethnic interactions. Northern Ireland provides a good example of this (Balcells et al., 2016). However, if a country moves toward a political system that is more democratic and allows better representation, an environment where interethnic trust can be cultivated may become more feasible, as is indicated by the finding of less conflict among urbanized groups in more democratic countries. A last important result of the interaction analysis is that the negative association between rule of law and conflict risk is weaker for groups with larger joint elites. Hence, competition among ethnic elites seems stronger in societies with better rule of law.

There are some limitations to the study that should be noted. First, a disadvantage of dyadic analysis is that it cannot include the effects of vertical (intragroup) inequalities—which may affect the group’s cohesiveness (Stewart, 2005)—or its ability to sustain a conflict (Huber and Mayoral, 2014), thus influencing the incentives for initially engaging in conflict (Kuhn and Weidmann, 2015). Second, with respect to the data, in some DHS surveys, ethnic groups did not have sufficient respondents. In order to have enough observations per group for the analysis, smaller ethnic groups had to be combined with others into larger ethnic clusters. This process inevitably led to some cases in which conflicts included ethnic groups that fell within the same ethnic cluster, and therefore could not be captured in the analysis. Nevertheless, the study is still a significant improvement over previous research, because it manages to incorporate far more ethnic groups than have been included before. It therefore provides a more granular analysis, which takes local conflicts between smaller groups into account.

In future research, it would be important to study whether the motivation argument extends to other types of social inequalities, such as differences in healthcare and infrastructure. Additionally, the public-private element of the inequality should be considered in greater detail, since the findings suggest that groups that are deprived from publicly administered resources are more likely to feel aggrieved than groups that are deprived from private resources. This could be done by, for example, studying inequalities in private and public employment more in depth once reliable disaggregated data on employment categories become available. Furthermore, it is possible that actual inequalities do not match up with perceived inequalities, due to potential bias stemming from personal background, lack of access, inaccurate media reporting, elite manipulation, or simple miscalculation (Langer and Mikami, 2013). According to Langer and Smedts (2013), people will often act according to their beliefs, as opposed to the actual facts. More investigation is thus needed on the role of “objective” inequalities versus perceptions of inequalities, in order to increase the understanding of the dynamics of this relationship.

With respect to interactions between inequalities, Besançon (2005) speculated that rich ethnic groups who feel politically oppressed may have sufficient wealth to provide the opportunity for rebellion. A similar argument could apply for group size, since a larger population provides a larger pool of recruits to mobilize for collective action if the group feels politically disadvantaged, such as the Oromo in Ethiopia or the Hutus in Rwanda. More recently, Cederman et al. (2013) observed that ethnic groups who are both poorer than other groups in the country and politically excluded from power are more conflict prone. However, I discover no evidence for significant interactions between different types of inequalities and conflict. That being said, the scope of the analysis is limited to socioeconomic inequalities, and expanding the analysis to include the interactions between socioeconomic and

political inequalities is done in a systematic way in Chapter 3.

2.7 - Conclusion

In sum, the results indicate that the type of inequality matters when analyzing the likelihood of conflict occurrence. I argue that the direction of the effect depends on whether the inequality is most associated with motivation or with opportunity. Inequalities that are more closely linked to the motivation claim are presumed to be positively associated with conflict incidence. Alternatively, for inequalities that are more linked to opportunity arguments, the relationship with conflict is negative. The study improves upon earlier work by including all ethnic groups for which enough data were available and in taking ethnic dyads as the unit of analysis. Whereas earlier research only used disaggregated national data (Collier and Hoeffler, 2004), focused only on the major ethnic groups (Østby, 2008), or used indirect measures, such as the difference with the national (Cederman et al., 2013) or regional average (Fjelde and Østby, 2014), the dyadic approach allows for the direct comparison of differences between most groups within a country. This offers the advantages that more richness is added to the findings and that the determinants of small-scale local conflicts are also captured. By directly measuring the socioeconomic characteristics of group members, the study is able to capture a more complex relationship between different types of horizontal inequalities and conflict outbreak.

2.8 – Appendix

Table A.2.1 - List of ethnic group clusters derived from the Demographic and Health Surveys

Portuguese Angola	Bakongo North and South Congo DR	Chewa Malawi	Hutu Rwanda
Khoisan Angola*	Bas-Kasai and Kwilu-Kwngo Congo DR	Tumbuka Malawi	Tutsi Rwanda
Mbundu Angola	Cuvette central Congo DR	Lomwe Malawi	Twa Rwanda*
Kongo Angola	Ubangi and Itimbiri Congo DR	Tonga Malawi	Wolof Senegal
Kwadi Angola*	Uele Lake Albert Congo DR*	Yao Malawi	Fulani Senegal
Kwanyama Angola	Basele-K, Man. and Kivu Congo DR	Sena Malawi*	Serer Senegal
Adja Benin	Kasai, Katanga and Tanganika Congo DR	Nkonde Malawi	Mandinka/Malinke Senegal
Bariba Benin	Lunda Congo DR	Ngoni Malawi*	Jola Senegal
Dendi Benin	Pygmy Congo DR*	Mang'anja/Nyanja Malawi	Soninke Senegal
Fon Benin	Afar Ethiopia	Lambya Malawi*	Bambara Senegal
Yoa/Lokpa Benin	Amhara Ethiopia	Ndali Malawi*	Temne Sierra Leone
Betamaribe Benin	Guragie Ethiopia*	Bambara Mali	Mende Sierra Leone
Peulh Benin	Oromo Ethiopia	Malinké Mali	Fula Sierra Leone*
Yoruba Benin	Sidama Ethiopia*	Peulh Mali	Creole Sierra Leone
Bobo Burkina Faso*	Somalie Ethiopia	Sarakolé/Soninké/Marka Mali	Mandingo Sierra Leone*
Dioula Burkina Faso*	Tigray (Tigraway) Ethiopia	Sonrai/Songhai Mali	Loko Sierra Leone*
Fulfulde/Peul Burkina Faso*	Welaita Ethiopia*	Dogon Mali	Sherbro Sierra Leone*
Gourmantché Burkina Faso*	Nilotic Ethiopia	Tamasheq/Tuareg Mali	Limba Sierra Leone*
Gourounsi Burkina Faso*	Omotic Ethiopia	Senoufo/Minianka Mali	Kono Sierra Leone
Lobi Burkina Faso*	Fang Gabon	Bobo Mali	Black/African South Africa
Mossi Burkina Faso*	Kota-Kele Gabon*	Emakhuwa Mozambique*	Colored South Africa
Senufo Burkina Faso*	Mbede-Teke Gabon	Portuguese Mozambique*	White South Africa
Touareg (Bella) Burkina Faso*	Myene Gabon	Xichangana Mozambique*	Asian/Indian South Africa
Bissa Burkina Faso*	Nzabi-Duma Gabon*	Cisena Mozambique*	Adja-Ewe Togo
Dagara Burkina Faso*	Okande-Tsogho Gabon*	Elomwe Mozambique*	Akposso/Akebou Togo*
Dafing Burkina Faso*	Shira-Punu/Vili Gabon	Echuwabo Mozambique*	Ana-Ife Togo*
Samo Burkina Faso*	Pygmees Gabon*	Shona Mozambique	Kabye/Tem Togo
Hausa CAR*	Akan Ghana	Cinyungwe Mozambique*	Para-Gourma/Akan Togo*
Sara CAR	Ga / Dangme Ghana	Cibalke Mozambique*	Acholi Uganda*
Mbum CAR*	Ewe Ghana	Bitonga Mozambique*	Alur Uganda*
Gbaya CAR	Guan Ghana*	Cicewa Mozambique*	Adhola Uganda*
Mandjia CAR*	Mole-Dagbani Ghana	Ciyao Mozambique	Bafumbira Uganda*
Banda CAR*	Grussi Ghana	Cichopi Mozambique	Baganda Uganda
Ngbaka-Bantu CAR	Gruma Ghana	Cindau Mozambique	Bagisu Uganda*
Yakoma-Sango CAR	Hausa Ghana*	Shimakonde Mozambique	Bagwere Uganda*
Zande-Nzakara CAR*	Dagarti Ghana*	Chitewe Mozambique*	Bakiga Uganda*
Gorane Chad	Mande Ghana*	Xitswa Mozambique*	Bakonjo Uganda*
Arab Chad	Sousou Guinea	Xitsonga Mozambique	Banyakole Uganda
Ouaddai Chad	Peulh Guinea	Kimwane Mozambique*	Banyarwanda Uganda*

Baguirmien Chad*	Malinke Guinea	Coti Mozambique*	Banyole Uganda*
Kanem-Bornou Chad*	Kissi Guinea*	Afrikaans Namibia	Banyoro Uganda
Fitri-Batha Chad*	Toma Guinea*	Damara>Nama Namibia	Basoga Uganda
Hadjarai Chad	Guerze Guinea*	English Namibia	Batoro Uganda
Lac Iro Chad*	Kalenjin Kenya	Herero Namibia	Iteso Uganda
Sara Chad	Kamba Kenya	Kavango languages Namibia	Karimojong Uganda*
Tandjile Chad*	Kikuyu Kenya	Caprivi languages Namibia	Lango Uganda
Peul Chad*	Kisii Kenya	Oshiwambo Namibia	Lugbara Uganda*
Mayo-Kebbi Chad*	Luhya Kenya	Tswana Namibia*	Madi Uganda*
Arab- Choa/Peulh/Haoussa/Kanuri Cameroon	Luo Kenya	San Namibia	Bemba Zambia
Biu-Mandara Cameroon Cameroon*	Maasai/Samburu Kenya*	Arab Niger*	Lala Zambia*
Adamaoua-Oubangui Cameroon	Meru/Embu Kenya*	Djerma/Songhai Niger	Bisa Zambia*
Bantoïde South-West Cameroon	Mijikenda/Swahili Kenya	Gourmantché Niger*	Ushi Zambia*
Grassfields Cameroon	Somali Kenya	Hausa Niger	Lamba Zambia*
Bamilike/Bamoun Cameroon	Taita/Taveta Kenya*	Kanuri/Toubou Niger	Tonga Zambia
Côtier/NGoe/Oroko Cameroon*	Turkana Kenya*	Mossi Niger*	Lenje Zambia
Beti/Bassa/Mbam Cameroon	Kuria Kenya*	Peul Niger*	Luvale Zambia
Kako/Meka/Pygmé Cameroon*	Bassa Liberia*	Touareg Niger	Lunda Zambia
Akan Ivory Coast	Gbandi Liberia*	Ibibio/Efik Nigeria*	Mbunda Zambia*
Kru Ivory Coast	Belle Liberia*	Bini/Edo/Urhobo Nigeria*	Kaonde Zambia
Mand (north) Ivory Coast	Dey Liberia*	Fulani Nigeria	Lozi Zambia
Mand (south) Ivory Coast	Gio Liberia	Hausa Nigeria	Chewa Zambia
Voltaic Ivory Coast	Gola Liberia*	Egbira/Igbira/Ibira Nigeria*	Nsenga Zambia
Burkina Faso Ivory Coast*	Grebo Liberia*	Igala/Igbala Nigeria*	Ngoni Zambia
Mali Ivory Coast*	Kissi Liberia*	Igbo Nigeria	Mambwe Zambia*
Kongo Congo Brazaville	Kpelle Liberia*	Ijaw/Izon Nigeria	Namwanga Zambia*
Eshira Congo Brazaville*	Krahn Liberia	Kanuri/Berberi Nigeria*	Tumbuka Zambia
Duma Congo Brazaville*	Kru Liberia*	Nupe Nigeria*	Black Zimbabwe
Mbéré/Mbéti/Kélé Congo Brazaville*	Loma Liberia*	Ogoni Nigeria	White Zimbabwe
Téké Congo Brazaville	Mandigo Liberia	Tiv Nigeria	Coloured Zimbabwe*
M'bochi Congo Brazaville	Mano Liberia	Yoruba Nigeria	Asian Zimbabwe*
Sangha Congo Brazaville*	Mende Liberia*	Middle Belt Nigeria	
Kota Congo Brazaville*	Sarpo Liberia*	Annang Nigeria*	
Makaa Congo Brazaville*	Vai Liberia*		
Oubanguiens Congo Brazaville*			
Pygmée Congo Brazaville*			

* Not included in the analysis for Chapter 3 due to lack of available EPR data for these ethnic groups.

Table A.2.2 - Demographic and Health Surveys included in panel data analysis

Country	Survey Years				
Angola	2011				
Benin	1996	2001	2006	2011	
Burkina Faso*	1993	1998	2003	2008	
Cameroon	1998	2004	2011		
Central African Republic	1994				
Chad	1997	2004			
Congo	2005	2011			
Democratic Republic of Congo	2007	2013			
Ivory Coast	1994	1999	2005	2011	
Ethiopia	2000	2005	2011		
Gabon	2000	2012			
Ghana	1998	2003	2008		
Guinea	1999	2005	2012		
Kenya	1993	1998	2003	2008	
Liberia	2007	2013			
Malawi	2000	2004	2010		
Mali	1995	2001	2006	2013	
Mozambique	1997	2003	2011		
Namibia	1992	2000	2006	2013	
Niger	1998	2006	2012		
Nigeria	1999	2003	2008	2013	
Rwanda	1992				
Senegal	1992	1997	2005	2011	2012
Sierra Leone	2008	2013			
South Africa	1998				
Togo	1998				
Uganda	1995	2011			
Zambia	1996	2002	2007		
Zimbabwe	1994				

* Burkina Faso not included in the analysis for Chapter 3 due to lack of available EPR data for ethnic groups.

Table A.2.3 - Multilevel logistic regression coefficients for multivariate associations between selected independent variables and ethnic conflict incidence in Sub-Saharan African countries, 1990-2014 (interpolated data)

Variables	Model 1	Model 2	Model 3
Constant		0.000*** (0.615)	0.000*** (0.638)
Educational inequality	1.156** (0.053)	1.355*** (0.07)	1.252** (0.074)
Average education	0.802*** (0.063)	0.720** (0.101)	0.738** (0.105)
Wealth inequality	0.983 (0.013)	0.941** (0.018)	0.934*** (0.019)
Average wealth	0.990 (0.011)	1.037 (0.02)	1.019 (0.021)
Elite share inequality	0.970* (0.014)	0.958** (0.017)	0.963* (0.017)
Average elite share	1.049*** (0.012)	1.073*** (0.014)	1.071*** (0.015)
Population size inequality	0.968* (0.014)	0.969* (0.015)	0.965* (0.016)
Average population size	1.241*** (0.044)	1.243*** (0.048)	1.256*** (0.05)
Average population size ²	0.997* (0.001)	0.997* (0.001)	0.997* (0.001)
Control factors			
Urbanization inequality	0.999 (0.006)	1.014 (0.008)	1.017* (0.008)
Average urbanization	0.984* (0.008)	0.990 (0.011)	0.985 (0.012)
Conflict occurred 1 year prior	27.582*** (0.165)	16.894*** (0.158)	15.087*** (0.159)
Conflict occurred 2 years prior	5.007*** (0.22)	3.476*** (0.217)	3.251*** (0.217)
Conflict occurred 3 years prior	3.366*** (0.258)	2.596*** (0.259)	2.445** (0.259)
Conflict occurred 4 years prior	2.108* (0.318)	1.643 (0.32)	1.531 (0.32)
Regime change	0.988 (0.141)	1.097 (0.14)	1.124 (0.139)
Level of democracy	0.938*** (0.012)	0.939*** (0.017)	0.944** (0.018)
Ethnic group in power	2.996*** (0.144)	3.356*** (0.155)	3.502*** (0.161)
Rule of law	0.128*** (0.284)	0.189*** (0.318)	0.144*** (0.343)
Interactions			
Educational inequality * average wealth			1.015** (0.004)
Average education * democracy level			1.020** (0.007)
Average elite share * rule of law			1.076** (0.024)
Average urbanization * democracy level			0.998* (0.001)
Average urbanization * ethnic group in power			1.025** (0.01)
Population size inequality * democracy level			0.997** (0.001)
Random-intercept parameters			
COW		1.846*** (0.385)	1.941*** (0.403)
Ethnic dyad		1.842*** (0.162)	1.892*** (0.165)
Omnibus test Chi ² (DF)		726.12*** (23)	732.66*** (29)
Observations	38,281	38,281	38,281
Conflict-year combinations	731	731	731

Coefficients are the log odds for the variables in the models and estimates for random-intercept parameters, with standard errors in parentheses. * $p < .05$; ** $p \leq .01$; *** $p \leq .001$. For Model 1, coefficients were estimated for each variable separately, whereby both components of the major variables (inequality and mean) were estimated simultaneously. The number of observations in this analysis is slightly higher than in the dataset with extrapolated values because there are more observations for average population size above the minimum cut-off value (0.99%).

Table A.2.4 - List of ethnic conflicts derived from the UCDP database for 29 Sub-Saharan African countries, 1990-2014

Country	Dyad ID	Group A name	Group B name	Start	End
MLI	4320102	Bambara Mali	Malinké Mali	2012	2012
MLI	4320105	Bambara Mali	Sonrai/Songhai Mali	2013	2014
MLI	4320107	Bambara Mali	Tamasheq/Tuareg Mali	1990	1994
MLI	4320107	Bambara Mali	Tamasheq/Tuareg Mali	2013	2014
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2007	2009
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2012	2012
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2014	2014
MLI	4320306	Peulh Mali	Dogon Mali	2012	2012
MLI	4320307	Peulh Mali	Tamasheq/Tuareg Mali	1997	1997
MLI	4320307	Peulh Mali	Tamasheq/Tuareg Mali	2014	2014
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	1994	1994
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2008	2008
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2012	2012
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2014	2014
SEN	4330105	Wolof Senegal	Jola Senegal	1990	1990
SEN	4330105	Wolof Senegal	Jola Senegal	1992	1993
SEN	4330105	Wolof Senegal	Jola Senegal	1995	1995
SEN	4330105	Wolof Senegal	Jola Senegal	1997	1998
SEN	4330105	Wolof Senegal	Jola Senegal	2000	2003
SEN	4330105	Wolof Senegal	Jola Senegal	2011	2011
SEN	4330305	Serer Senegal	Jola Senegal	1990	1990
SEN	4330305	Serer Senegal	Jola Senegal	1992	1993
SEN	4330305	Serer Senegal	Jola Senegal	1995	1995
SEN	4330305	Serer Senegal	Jola Senegal	1997	1998
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1990	1990
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1992	1993
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1995	1995
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1997	1998
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	1991	1991
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	1993	1993
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	2005	2005
NER	4360208	Djerma/Songhai Niger	Touareg Niger	1990	1992
NER	4360405	Haussa Niger	Kanuri/Toubou Niger	1995	1995
NER	4360405	Haussa Niger	Kanuri/Toubou Niger	1998	1998
NER	4360408	Haussa Niger	Touareg Niger	1994	1994
NER	4360408	Haussa Niger	Touareg Niger	1997	1997
NER	4360508	Kanuri/Toubou Niger	Touareg Niger	2007	2008
NER	4360708	Peul Niger	Touareg Niger	1997	1997
CIV	4370103	Akan Ivory Coast	Mand (north) Ivory Coast	2000	2000
CIV	4370103	Akan Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370105	Akan Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370106	Akan Ivory Coast	Burkina Faso Ivory Coast	2011	2011

Country	Dyad ID	Group A name	Group B name	Start	End
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2000	2000
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2002	2005
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370204	Kru Ivory Coast	Mand (south) Ivory Coast	1993	1995
CIV	4370204	Kru Ivory Coast	Mand (south) Ivory Coast	2002	2003
CIV	4370205	Kru Ivory Coast	Voltaic Ivory Coast	2002	2005
CIV	4370205	Kru Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370206	Kru Ivory Coast	Burkina Faso Ivory Coast	2002	2004
CIV	4370206	Kru Ivory Coast	Burkina Faso Ivory Coast	2011	2011
CIV	4370304	Mand (north) Ivory Coast	Mand (south) Ivory Coast	2005	2005
CIV	4370305	Mand (north) Ivory Coast	Voltaic Ivory Coast	2002	2003
GIN	4380104	Sousou Guinea	Kissi Guinea	2000	2001
GIN	4380203	Peulh Guinea	Malinke Guinea	2009	2009
GIN	4380206	Peulh Guinea	Guerze Guinea	2009	2009
GIN	4380306	Malinke Guinea	Guerze Guinea	2011	2011
GIN	4380306	Malinke Guinea	Guerze Guinea	2013	2013
LBR	4500510	Gio Liberia	Krahn Liberia	1990	1996
LBR	4500513	Gio Liberia	Krahn Liberia	1999	2003
LBR	4500514	Gio Liberia	Mandigo Liberia	1990	1996
LBR	4500514	Gio Liberia	Mandigo Liberia	2000	2003
LBR	4500910	Gio Liberia	Mano Liberia	1990	1990
LBR	4500913	Kpelle Liberia	Krahn Liberia	1993	1993
LBR	4500913	Kpelle Liberia	Krahn Liberia	1993	1996
LBR	4501012	Krahn Liberia	Loma Liberia	1993	1993
LBR	4501013	Krahn Liberia	Mandigo Liberia	1994	1994
LBR	4501013	Krahn Liberia	Mandigo Liberia	1996	1996
LBR	4501013	Krahn Liberia	Mandigo Liberia	1999	1999
LBR	4501014	Krahn Liberia	Mano Liberia	1990	1996
LBR	4501014	Krahn Liberia	Mano Liberia	1999	2003
LBR	4501213	Loma Liberia	Mandigo Liberia	1993	1996
LBR	4501314	Mandigo Liberia	Mano Liberia	1990	1996
LBR	4501314	Mandigo Liberia	Mano Liberia	1999	2003
SLE	4510102	Temne Sierra Leone	Mende Sierra Leone	1991	2000
SLE	4510104	Temne Sierra Leone	Creole Sierra Leone	1992	1995
SLE	4510105	Temne Sierra Leone	Mandingo Sierra Leone	1996	2001
SLE	4510108	Temne Sierra Leone	Limba Sierra Leone	1991	1991
SLE	4510108	Temne Sierra Leone	Limba Sierra Leone	1997	1997
SLE	4510204	Mende Sierra Leone	Creole Sierra Leone	1995	1995
SLE	4510205	Mende Sierra Leone	Mandingo Sierra Leone	1998	1998
SLE	4510206	Mende Sierra Leone	Loko Sierra Leone	1995	1995
SLE	4510208	Mende Sierra Leone	Limba Sierra Leone	1997	1999
SLE	4510209	Mende Sierra Leone	Kono Sierra Leone	1991	2000
SLE	4510409	Creole Sierra Leone	Kono Sierra Leone	1992	1995
SLE	4510509	Mandingo Sierra Leone	Kono Sierra Leone	1996	2001
SLE	4510809	Limba Sierra Leone	Kono Sierra Leone	1991	1991

Country	Dyad ID	Group A name	Group B name	Start	End
SLE	4510809	Limba Sierra Leone	Kono Sierra Leone	1997	1997
GHA	4520407	Guan Ghana	Gruma Ghana	1991	1992
GHA	4520407	Guan Ghana	Gruma Ghana	1994	1995
GHA	4520507	Mole-Dagbani Ghana	Gruma Ghana	1994	1995
CMR	4710103	Arab- Choa/Peulh/Haoussa/Ka nuri Cameroon	Adamaoua-Oubangui Cameroon	1992	1994
CMR	4710104	Arab- Choa/Peulh/Haoussa/Ka nuri Cameroon	Bantoïde South-West Cameroon	1991	1991
CMR	4710108	Arab- Choa/Peulh/Haoussa/Ka nuri Cameroon	Beti/Bassa/Mbam Cameroon	1994	1994
CMR	4710506	Grassfields Cameroon	Bamilike/Bamoun Cameroon	1998	1998
NGA	4750208	Bini/Edo/Urhobo Nigeria	Ijaw/Izon Nigeria	1997	1999
NGA	4750208	Bini/Edo/Urhobo Nigeria	Ijaw/Izon Nigeria	2003	2003
NGA	4750213	Bini/Edo/Urhobo Nigeria	Yoruba Nigeria	1999	1999
NGA	4750307	Fulani Nigeria	Igbo Nigeria	1991	1991
NGA	4750307	Fulani Nigeria	Igbo Nigeria	2006	2006
NGA	4750308	Fulani Nigeria	Ijaw/Izon Nigeria	2008	2008
NGA	4750309	Fulani Nigeria	Kanuri/Berberi Nigeria	2009	2009
NGA	4750312	Fulani Nigeria	Tiv Nigeria	2011	2014
NGA	4750313	Fulani Nigeria	Yoruba Nigeria	2001	2004
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	1991	1992
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	1999	2002
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2004	2004
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2006	2006
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2008	2008
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2010	2014
NGA	4750405	Hausa Nigeria	Egbira/Igbira/Ibira Nigeria	2013	2013
NGA	4750407	Hausa Nigeria	Igbo Nigeria	1991	1991
NGA	4750407	Hausa Nigeria	Igbo Nigeria	2000	2001
NGA	4750407	Hausa Nigeria	Igbo Nigeria	2006	2006
NGA	4750413	Hausa Nigeria	Yoruba Nigeria	1998	1999
NGA	4750413	Hausa Nigeria	Yoruba Nigeria	2001	2004
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	1991	1992
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	1999	2002
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2004	2004
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2006	2006
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2008	2008
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2010	2010
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2012	2013
NGA	4750512	Egbira/Igbira/Ibira Nigeria	Tiv Nigeria	2013	2013
NGA	4750708	Igbo Nigeria	Ijaw/Izon Nigeria	1999	1999
NGA	4750710	Igbo Nigeria	Nupe Nigeria	1990	1990
NGA	4750712	Igbo Nigeria	Tiv Nigeria	1998	1998
NGA	4750713	Igbo Nigeria	Yoruba Nigeria	2003	2004

Country	Dyad ID	Group A name	Group B name	Start	End
NGA	4750809	Ijaw/Izon Nigeria	Kanuri/Berberi Nigeria	1998	1998
NGA	4750809	Ijaw/Izon Nigeria	Kanuri/Berberi Nigeria	2011	2014
NGA	4750811	Ijaw/Izon Nigeria	Ogoni Nigeria	1993	1994
NGA	4750813	Ijaw/Izon Nigeria	Yoruba Nigeria	1998	1999
NGA	4750813	Ijaw/Izon Nigeria	Yoruba Nigeria	2003	2004
NGA	4750911	Kanuri/Berberi Nigeria	Ogoni Nigeria	1994	1994
NGA	4750911	Kanuri/Berberi Nigeria	Ogoni Nigeria	1998	1998
NGA	4750913	Kanuri/Berberi Nigeria	Yoruba Nigeria	2004	2004
NGA	4750914	Kanuri/Berberi Nigeria	Middle Belt Nigeria	2011	2011
NGA	4751113	Ogoni Nigeria	Yoruba Nigeria	1999	1999
NGA	4751214	Tiv Nigeria	Middle Belt Nigeria	1991	1992
NGA	4751214	Tiv Nigeria	Middle Belt Nigeria	2001	2001
CAF	4820204	Sara CAR	Gbaya CAR	2002	2002
CAF	4820204	Sara CAR	Gbaya CAR	2006	2007
CAF	4820204	Sara CAR	Gbaya CAR	2012	2014
CAF	4820208	Sara CAR	Yakoma-Sango CAR	2001	2001
CAF	4820208	Sara CAR	Yakoma-Sango CAR	2013	2013
CAF	4820408	Gbaya CAR	Yakoma-Sango CAR	2011	2011
CAF	4820408	Gbaya CAR	Yakoma-Sango CAR	2014	2014
TCD	4830102	Gorane Chad	Arab Chad	1990	1990
TCD	4830105	Gorane Chad	Kanem-Bornou Chad	1990	1993
TCD	4830105	Gorane Chad	Kanem-Bornou Chad	1997	1997
TCD	4830105	Gorane Chad	Kanem-Bornou Chad	1999	2003
TCD	4830105	Gorane Chad	Kanem-Bornou Chad	2006	2009
TCD	4830203	Arab Chad	Ouaddai Chad	1999	1999
TCD	4830203	Arab Chad	Ouaddai Chad	2002	2002
TCD	4830203	Arab Chad	Ouaddai Chad	2004	2007
TCD	4830205	Arab Chad	Kanem-Bornou Chad	2005	2006
TCD	4830205	Arab Chad	Kanem-Bornou Chad	2008	2009
TCD	4830305	Ouaddai Chad	Kanem-Bornou Chad	1992	1994
TCD	4830305	Ouaddai Chad	Kanem-Bornou Chad	2005	2007
TCD	4830305	Ouaddai Chad	Kanem-Bornou Chad	2009	2010
TCD	4830409	Baguirmien Chad	Sara Chad	1994	1994
TCD	4830507	Kanem-Bornou Chad	Hadjarai Chad	1991	1991
TCD	4830509	Kanem-Bornou Chad	Sara Chad	1992	1994
TCD	4830509	Kanem-Bornou Chad	Sara Chad	1997	1997
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	1993	1993
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	1997	1999
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	2002	2002
COD	4900105	Bakongo North and South Congo DR	Uele Lake Albert Congo DR	2007	2008
COD	4900106	Bakongo North and South Congo DR	Basele-K, Man. and Kivu Congo DR	2007	2008
COD	4900107	Bakongo North and South Congo DR	Kasai, Katanga and Tanganika Congo DR	2007	2008
COD	4900305	Cuvette central Congo DR	Uele Lake Albert Congo DR	2002	2002

Country	Dyad ID	Group A name	Group B name	Start	End
COD	4900306	Cuvette central Congo DR	Uele Lake Albert Congo DR	2006	2006
COD	4900307	Cuvette central Congo DR	Basele-K, Man. and Kivu Congo DR	1998	2002
COD	4900307	Cuvette central Congo DR	Basele-K, Man. and Kivu Congo DR	2006	2006
COD	4900307	Cuvette central Congo DR	Kasai, Katanga and Tanganika Congo DR	1998	2000
COD	4900307	Cuvette central Congo DR	Kasai, Katanga and Tanganika Congo DR	2006	2006
COD	4900406	Ubangi and Itimbiri Congo DR	Basele-K, Man. and Kivu Congo DR	1990	1997
COD	4900506	Uele Lake Albert Congo DR	Basele-K, Man. and Kivu Congo DR	2002	2004
COD	4900506	Uele Lake Albert Congo DR	Basele-K, Man. and Kivu Congo DR	2006	2009
COD	4900506	Uele Lake Albert Congo DR	Basele-K, Man. and Kivu Congo DR	2012	2014
COD	4900507	Uele Lake Albert Congo DR	Kasai, Katanga and Tanganika Congo DR	2013	2013
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	1996	2000
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2002	2004
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2006	2009
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2012	2013
UGA	5000105	Acholi Uganda	Baganda Uganda	1990	1991
UGA	5000105	Acholi Uganda	Baganda Uganda	1994	1998
UGA	5000105	Acholi Uganda	Baganda Uganda	2000	2006
UGA	5000105	Acholi Uganda	Baganda Uganda	2008	2011
UGA	5000105	Acholi Uganda	Baganda Uganda	2013	2014
UGA	5000110	Acholi Uganda	Banyakole Uganda	1990	1991
UGA	5000110	Acholi Uganda	Banyakole Uganda	1994	1998
UGA	5000110	Acholi Uganda	Banyakole Uganda	2000	2006
UGA	5000110	Acholi Uganda	Banyakole Uganda	2008	2011
UGA	5000110	Acholi Uganda	Banyakole Uganda	2013	2014
UGA	5000116	Acholi Uganda	Iteso Uganda	1995	1995
UGA	5000116	Acholi Uganda	Iteso Uganda	2003	2007
UGA	5000118	Acholi Uganda	Lango Uganda	2003	2007
UGA	5000205	Alur Uganda	Baganda Uganda	1996	1996
UGA	5000210	Alur Uganda	Banyakole Uganda	1996	1996
UGA	5000219	Alur Uganda	Lugbara Uganda	1996	1996
UGA	5000509	Baganda Uganda	Bakonjo Uganda	1996	2002
UGA	5000509	Baganda Uganda	Bakonjo Uganda	2007	2007
UGA	5000509	Baganda Uganda	Bakonjo Uganda	2010	2011
UGA	5000509	Baganda Uganda	Bakonjo Uganda	2013	2014
UGA	5000516	Baganda Uganda	Iteso Uganda	1990	1992
UGA	5000519	Baganda Uganda	Lugbara Uganda	1996	1997
UGA	5000520	Baganda Uganda	Madi Uganda	1996	1997
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	1996	2002
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	2007	2007
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	2010	2011

Country	Dyad ID	Group A name	Group B name	Start	End
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	2013	2014
UGA	5001016	Banyakole Uganda	Iteso Uganda	1990	1992
UGA	5001019	Banyakole Uganda	Lugbara Uganda	1996	1997
UGA	5001020	Banyakole Uganda	Madi Uganda	1996	1997
UGA	5001617	Iteso Uganda	Karimojong Uganda	1990	1990
UGA	5001617	Iteso Uganda	Karimojong Uganda	2001	2001
UGA	5001920	Lugbara Uganda	Madi Uganda	1996	1996
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	1992	1994
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	1998	1998
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	2007	2008
KEN	5010104	Kalenjin Kenya	Kisii Kenya	1992	1992
KEN	5010104	Kalenjin Kenya	Kisii Kenya	2008	2008
KEN	5010105	Kalenjin Kenya	Luhya Kenya	1992	1993
KEN	5010106	Kalenjin Kenya	Luo Kenya	1992	1992
KEN	5010107	Kalenjin Kenya	Masai Kenya	2006	2006
KEN	5010107	Kalenjin Kenya	Masai Kenya	2009	2009
KEN	5010110	Kalenjin Kenya	Somali Kenya	2011	2014
KEN	5010112	Kalenjin Kenya	Turkana Kenya	1996	1996
KEN	5010112	Kalenjin Kenya	Turkana Kenya	2006	2006
KEN	5010112	Kalenjin Kenya	Turkana Kenya	2008	2008
KEN	5010112	Kalenjin Kenya	Turkana Kenya	2014	2014
KEN	5010210	Kamba Kenya	Somali Kenya	2011	2014
KEN	5010305	Kikuyu Kenya	Luhya Kenya	2007	2009
KEN	5010306	Kikuyu Kenya	Luo Kenya	2007	2009
KEN	5010307	Kikuyu Kenya	Masai Kenya	1993	1993
KEN	5010310	Kikuyu Kenya	Somali Kenya	2011	2014
KEN	5010407	Kisii Kenya	Masai Kenya	1997	1997
KEN	5010410	Kisii Kenya	Somali Kenya	2011	2014
KEN	5010510	Luhya Kenya	Somali Kenya	2011	2014
KEN	5010610	Luo Kenya	Somali Kenya	2011	2014
KEN	5010710	Masai Kenya	Somali Kenya	2011	2014
KEN	5010712	Masai Kenya	Turkana Kenya	1996	1996
KEN	5010712	Masai Kenya	Turkana Kenya	1999	1999
KEN	5010712	Masai Kenya	Turkana Kenya	2008	2008
KEN	5010810	Meru/Embu Kenya	Somali Kenya	2011	2014
KEN	5010910	Mijikenda/Swahili Kenya	Somali Kenya	2011	2014
KEN	5011011	Somali Kenya	Taita/Taveta Kenya	2011	2014
KEN	5011012	Somali Kenya	Turkana Kenya	2011	2013
KEN	5011013	Somali Kenya	Kuria Kenya	2011	2014
RWA	5170102	Hutu Rwanda	Tutsi Rwanda	1990	2002
RWA	5170102	Hutu Rwanda	Tutsi Rwanda	2009	2012
ETH	5300106	Afar Ethiopia	Somalie Ethiopia	2002	2002
ETH	5300107	Afar Ethiopia	Tigray (Tigraway) Ethiopia	1996	1996
ETH	5300203	Amhara Ethiopia	Guragie Ethiopia	1990	1991

Country	Dyad ID	Group A name	Group B name	Start	End
ETH	5300204	Amhara Ethiopia	Oromo Ethiopia	1990	1991
ETH	5300204	Amhara Ethiopia	Oromo Ethiopia	1999	2001
ETH	5300205	Amhara Ethiopia	Sidama Ethiopia	1990	1991
ETH	5300206	Amhara Ethiopia	Somalie Ethiopia	1991	1991
ETH	5300207	Amhara Ethiopia	Tigray (Tigraway) Ethiopia	1990	1991
ETH	5300208	Amhara Ethiopia	Welaita Ethiopia	1990	1991
ETH	5300209	Amhara Ethiopia	Nilotic Ethiopia	2003	2004
ETH	5300210	Amhara Ethiopia	Omotic Ethiopia	1990	1991
ETH	5300304	Guragie Ethiopia	Oromo Ethiopia	1990	1991
ETH	5300405	Oromo Ethiopia	Sidama Ethiopia	1990	1991
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	1991	1992
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	1998	1998
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2000	2000
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2003	2003
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2005	2005
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1990	1992
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1994	1995
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1998	2013
ETH	5300408	Oromo Ethiopia	Welaita Ethiopia	1990	1991
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2001	2001
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2004	2004
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2008	2008
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	1990	1992
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2006	2006
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2008	2008
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2013	2013
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1993	1994
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1996	1996
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1998	2014
ETH	5300709	Tigray (Tigraway) Ethiopia	Nilotic Ethiopia	2004	2004
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	1991	1991
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	1993	1993
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	1999	1999
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2002	2002
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2005	2005
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2009	2009
AGO	5400304	Mbundu Angola	Kongo Angola	1991	1991
AGO	5400304	Mbundu Angola	Kongo Angola	1994	1994
AGO	5400304	Mbundu Angola	Kongo Angola	1996	1998
AGO	5400304	Mbundu Angola	Kongo Angola	2002	2004
AGO	5400304	Mbundu Angola	Kongo Angola	2007	2007
AGO	5400304	Mbundu Angola	Kongo Angola	2009	2009
MOZ	5410104	Emakhuwa Mozambique	Cisena Mozambique	1991	1991
MOZ	5410107	Emakhuwa Mozambique	Shona Mozambique	1991	1991

Country	Dyad ID	Group A name	Group B name	Start	End
MOZ	5410114	Emakhuwa Mozambique	Cindau Mozambique	1991	1991
MOZ	5410304	Xichangana Mozambique	Cisena Mozambique	1990	1992
MOZ	5410304	Xichangana Mozambique	Cisena Mozambique	2013	2013
MOZ	5410307	Xichangana Mozambique	Shona Mozambique	1990	1992
MOZ	5410307	Xichangana Mozambique	Shona Mozambique	2013	2013
MOZ	5410314	Xichangana Mozambique	Cindau Mozambique	1990	1992
MOZ	5410314	Xichangana Mozambique	Cindau Mozambique	2013	2013
MOZ	5410417	Cisena Mozambique	Xitswa Mozambique	1990	1992
MOZ	5410417	Cisena Mozambique	Xitswa Mozambique	2013	2013
MOZ	5410418	Cisena Mozambique	Xitsonga Mozambique	1990	1992
MOZ	5410418	Cisena Mozambique	Xitsonga Mozambique	2013	2013
MOZ	5410717	Shona Mozambique	Xitswa Mozambique	1990	1992
MOZ	5410717	Shona Mozambique	Xitswa Mozambique	2013	2013
MOZ	5410718	Shona Mozambique	Xitsonga Mozambique	1990	1992
MOZ	5411417	Cindau Mozambique	Xitswa Mozambique	1990	1992
MOZ	5411417	Cindau Mozambique	Xitswa Mozambique	2013	2013
MOZ	5411418	Cindau Mozambique	Xitsonga Mozambique	1990	1992
MOZ	5411418	Cindau Mozambique	Xitsonga Mozambique	2013	2013
ZWE	5520102	Black Zimbabwe	White Zimbabwe	2008	2008
ZAF	5600102	Black/African South Africa	Colored South Africa	1993	1993
ZAF	5600103	Black/African South Africa	White South Africa	1990	1994
ZAF	5600103	Black/African South Africa	White South Africa	1998	1998
ZAF	5600203	Colored South Africa	White South Africa	1990	1994

Chapter 3

Political discrimination and ethnic conflict¹

¹ This Chapter has been submitted to a peer-reviewed scientific journal. Earlier versions of this Chapter were presented at several conferences: *Electoral Integrity Project / International Institute for Democracy and Electoral Assistance Workshop on Contentious Elections, Conflict and Regime Transitions (2016)*, *International Peace Research Association International General Conference (2016)*, *Political Studies Association Annual International Conference (2017)* and *European Political Science Association Annual Conference (2017)*.

Abstract

The literature on political exclusion and conflict tends to treat grievance-based mechanisms with broad-brush strokes and does not differentiate between types of political exclusion. This study disaggregates politically-excluded groups into two subgroups: groups that experience political discrimination from the state, and groups without political power that are not explicitly discriminated against. I posit that discriminated groups are more likely to experience grievances and therefore are more prone to conflict than excluded groups that are not actively discriminated against. I further argue that the effect of discrimination on conflict is moderated by interactions with economic inequalities and the share of elites. Drawing from the Demographic and Health Surveys and Ethnic Power Relations dataset, I construct a database for 423 ethnic dyads in 28 Sub-Saharan African countries, in which I find that - among politically excluded groups - it is indeed discriminated groups that are responsible for most of the association between political exclusion and conflict. Groups that face active, intentional, and targeted discrimination by the state are significantly more likely to be involved in conflict than excluded groups who do not face explicit discrimination. Additionally, I find that discriminated groups who also experience economic inequalities are less likely to engage in conflict, whilst an increased presence of elites within discriminated groups can precipitate the chances of conflict.

3.1 - Introduction

In his seminal study 'Why Minorities Rebel', Gurr (1993) posits that economic and political differences between groups can foster collective grievances. Gurr additionally argues that deeper grievances will only occur if the disadvantaged group has been forcibly discriminated against. The latter point has often been overlooked in empirical studies of political exclusion. Scholars frequently note the importance of discrimination in fostering collective grievances (Stewart, 2008; Wucherpfennig et al., 2012), but do not distinguish discriminated groups from other politically excluded groups in empirical analysis (i.e., Wimmer et al., 2009; Cederman et al. 2011; Deiwiks et al., 2012)². In this way, studies examining the relationship between political exclusion and conflict tend to rely more on arguments about relative deprivation than arguments about the repressive and discriminatory policies of states.

In this chapter, I return to the discrimination aspect of Gurr's original grievance argument. Rather than lumping all groups with no access to state power into one group, in the analysis I distinguish between two types of politically excluded groups: Discriminated groups are directly targeted by the state with discriminatory policies designed to exclude them from political power. Non-discriminated groups are also political-excluded from state power, but do not face overt political discrimination by the state. The central hypothesis to be tested in this study is that non-discriminated groups will have fewer grievances against the state and thus be less likely to engage in conflict with groups in power than those that face political discrimination.

In addition, I examine the potential moderating effects of educational and economic inequalities, population size disparities, and the share of ethnic elites. I predict that discriminated groups that are poorer or smaller relative to the ethnic group in power are less likely to engage in conflict. On the other hand, discriminated ethnic groups with less access to education and a larger share of elites will be more likely to engage in conflict. As Tilly (1978) makes clear, the presence of grievances alone does not necessarily lead to conflict. Groups must not only be motivated to engage in conflict, but also must have the opportunity to do so.

I test the hypotheses using dyadic data on socioeconomic inequalities from the Ethnic Dyad Database (EDD) (Alcorta et al., 2018), data on political access from the Ethnic Power Relations dataset (Vogt et al., 2015),³ and data on ethnic conflict incidence from the Uppsala Conflict Data Program (Allansson et

² A notable exception is Buhaug et al. (2014), who compare the largest discriminated group with the group in power. Cederman et al. (2010; 2013) differentiate between these two categories in preliminary analyses, but not when testing their hypotheses.

³ In the EPR dataset 'non-discriminated' groups are referred to as 'powerless' (Vogt et al., 2015). We opt to use the term non-discriminated in order to make clear that active discrimination by the state is the key difference between the two groups.

al., 2017; Sundberg et al., 2012; Eck and Hultman, 2007). In total, the EDD dataset includes 9,783 dyad year observations, incorporate 155 ethnic groups in 28 countries in Sub-Saharan Africa. Robust results from a multilevel regression model confirm the expectation that groups who face discrimination by the state designed to exclude them from political power are significantly more likely to be involved in conflict than groups who are excluded from power but do not face explicit political discrimination. In addition, I find that several conditions moderate the relationship between political discrimination and conflict. In particular, discriminated groups who are poorer relative to the group(s) in power are less likely to engage in conflict, whilst discriminated groups that have a larger share of elites are more likely to be engaged in conflict.

This study contributes to the literature on political inequalities and ethnic conflict by providing more nuance to our understanding of when politically excluded groups are more likely to engage in conflict. First, it differentiates between groups that face active and intentional discrimination by the state and groups that are 'merely' politically excluded, finding that it is discrimination that is largely driving the established relationship between political exclusion and conflict. Second, it examines how the relationship between political discrimination and conflict is influenced by characteristics of the groups and the situation in which they are living using data at the ethnic group level. This approach provides more direct insight into the effects of relative deprivation than just measuring how conflict-prone a group is based on its overall position in society, and provides further insights into when discrimination is likely to result in violence.

The rest of the chapter is divided into five sections. In section two, I examine the research that has been conducted on political exclusion and ethnic conflict thus far, and posit that explicit discrimination by the state is likely to be more grievance-inducing than exclusion alone. Additionally, I propose hypotheses for when discriminated groups face horizontal inequalities, and for the moderating role of elites. Section three presents the data and methodology used in this research. Section four provides the results of the empirical analysis. Section five discusses the relevance of the findings, and finally section six concludes with a summary of the study and its implications.

3.2 - Political Inequality and Conflict

There is a rich literature on the relationship between political inequalities and ethnic conflict. Political power provides groups with a channel through which to express their interests and address their grievances (Francois et al., 2015). If groups are politically represented at the state level, they should be able to better exercise and defend their political rights, as well as influence the distribution of public

goods and services (Cederman et al., 2013). However, groups in power may also be inclined to redistribute state wealth in a manner that is more favourable to their members (Burgess et al., 2015; Hodler and Raschky, 2014).

When certain groups are politically excluded or have no access to state power, this difference in status with groups in power may be perceived as unfairness in the political system (Vogt et al., 2015, Wimmer, 2002). Systemic exclusion of groups from power likely limits their ability to sustain or improve their rights and entitlements, as well as the possibility to build political alliances. If exclusion occurs along ethnic lines, excluded groups may also perceive this to be an infringement on their right to self-determination (Horowitz, 1985).

It is therefore not surprising that higher-levels of political inequalities are associated with higher-levels of conflict (Wimmer, 2009; Cederman et al., 2010; 2013). Under-representation in the police, military or government, or being blocked from access to state institutions is associated with feelings of a collective injustice, increasing the likelihood of conflict (Stewart, 2008; Wucherpfennig et al., 2012). Political exclusion and the absence of conventional paths to power may leave peripheral groups with little alternative than to challenge the rule of the centre through violence (Buhaug et al., 2008; Deiwiks et al., 2012).

What are the precise mechanisms linking political exclusion to the increased risk of conflict? Thus far, scholars have largely explained the association between political inequalities and ethnic conflict by suggesting that political exclusion fosters grievances, which in turn motivate ethnic groups to engage in conflict (i.e., Cederman et al., 2010; 2013; Deiwiks et al., 2012). However, some forms of political exclusion may produce more grievances than others. For example, groups that represent a small proportion of the national population are often inherently marginalized in democratic processes, but this marginalization may not be overt or explicit. Geographic isolation or a nomadic lifestyle (i.e., the Himba in northern Namibia or the Tuareg across the Sahel) may also affect the ability, knowledge or desire of groups to be involved with the running of the state. Even groups who are socioeconomically relatively advantaged or represent a large share of the population may be politically excluded, if society is ethnically divided and the ruling party practices ethnic nepotism (Vanhanen, 1999).

Although political exclusion may provide ethnic groups with the motivation to engage in conflict, it may at the same time inhibit the opportunities of the disadvantaged group to form political alliances and to allocate state resources towards its members, thereby reducing the group's capacity to engage successfully in conflict (Esteban and Ray, 2008; Tilly, 1978). Research on the relationship between conflict and socioeconomic inequality suggests that horizontal inequalities can simultaneously encourage and discourage conflict – in other words they might both provide motivations for conflict,

but also limited opportunities (Besançon, 2005; Bara, 2014; Alcorta et al., 2018). Similarly, when it comes to political inequalities, political exclusion may motivate groups to engage in conflict, but decrease opportunities to engage in violence.

3.2.1 - Discrimination versus political exclusion

In this chapter, I distinguish between two types of ethnic groups facing political exclusion by the state. Discriminated excluded groups are directly targeted by the state with discriminatory policies designed to exclude them from political power. Non-discriminated excluded groups are also disconnected from state power, but do not face overt political discrimination by the state. Both kinds of groups face the opportunity constraint of having no political access, and therefore have limited political resources to mobilize for conflict. However, in addition to being excluded from political access, the discriminated groups are also subjected to repressive policies with the aim of depriving them of their political rights (Koos, 2014).

According to Gurr (1993), group-level grievances are likely to be the strongest when groups face political discrimination, defined as active and intentional discriminatory state policies designed to exclude them from political power (Vogt et al., 2015): i.e., black South Africans during the Apartheid regime; Tutsis before and Hutus after the genocide in Rwanda; and the Tuaregs in Mali and Niger. Political discrimination by the state is likely to deteriorate the affected group's relations with groups in power, as members of the disadvantaged group may nurture grievances and attribute the discriminatory policies to those in power (Gurr, 1993; Regan and Norton, 2005). According to Buhaug et al. (2014), the severity of this type of political exclusion might invoke an emotional response strong enough for affected groups to overcome the resulting power differentials (i.e., opportunity costs) and mobilize toward conflict.

That political repression is likely to induce strong grievances is well acknowledged (Regan and Norton, 2005; Walter, 2006). Nonetheless, empirically, discriminated and non-discriminated groups are often lumped into one category—even if the scholars distinguish between the two theoretically (i.e., Wimmer et al., 2009; Cederman et al., 2011; Deiwiks et al., 2012). There are a few notable exceptions: Cederman et al. (2010; 2013) disaggregated the effects on conflict for included and excluded groups. Both studies find that the conflict-inducing effects of subcategories of access to power are continuous, with a gradual increase in the likelihood on conflict the more excluded groups are. In addition, Buhaug et al. (2014) specifically examine the effect of discriminated groups on conflict in their analysis. However, these studies do not directly compare discriminated groups to non-discriminated

(powerless) groups.

Returning to Gurr's (1993) argument that political repression is likely to induce the strongest grievances, I predicted that groups facing political discrimination will be more likely to engage in conflict than groups that are political excluded, but not discriminated against. In other words:

H1: The likelihood of conflict incidence is higher when excluded ethnic groups face discrimination from ethnic groups in power.

To give an example, in Ethiopia, both the Afar and the Beni-Shugal-Gumuz groups are politically excluded (Vogt et al., 2015). The Afar have limited access to political resources to utilize in their favour and have been historically subjected to discrimination by the state and by other groups (Yasin, 2008). The Beni-Shugal-Gumuz are also excluded from political power, but they have not recently suffered from overt political discrimination. Although both groups are relatively similar in size, the Afar have been involved in more conflicts in the last thirty years than the Beni-Shugal-Gumuz (Allansson et al., 2017).

3.2.2 - Moderators of the effect of political discrimination

Our expectation is that discriminated excluded groups are, on average, more likely to engage in conflict than non-discriminated excluded groups. However, political discrimination is not the only conflict risk factor to consider. Horizontal inequalities that occur simultaneously outside of the political sphere, as well as the composition of the group, might alter discriminated groups' balance of motivations and opportunities to engage in conflict. Accordingly, I also test the moderation effect of four factors: differences in wealth, education, population size, and share of the elites within the group.

First, I predict that discriminated groups that are poorer and smaller relative to the ethnic group in power are less likely to engage in conflict:

H2: Discriminated ethnic groups are less likely to engage in conflict, if they are poorer than the ethnic group in power.

H3: Discriminated ethnic groups are less likely to engage in conflict, if they are smaller than the ethnic group in power.

We expect that discriminated groups that are relatively poor or small are less likely to engage in conflict with wealthier/larger groups, because, although discriminated groups might have strong motivations to engage in conflict, opportunity costs are likely to be high (Balcells et al., 2016; Huber and Mayoral,

2014; Alcorta et al., 2018).⁴ Without sufficient organizational and material resources, aggrieved groups will be unable to rebel against the state (Tilly, 1978) as politically dominant groups maintain coercive control over them (Gurr, 1993). Poorer groups with less access to resources are less capable of financing conflict, whilst smaller groups have a smaller potential resource pool from which to draw rebel recruits (Cederman et al., 2010). Intergroup disparities in wealth and population size can also affect the groups' calculation of their own capabilities relative to other groups (Østby, 2013).

There is also the possibility that economic and population size disparities produce fewer collective grievances. Wealth measured in terms of income, assets and resources may be attributed to individual rather than collective welfare. As a result wealth disparities might be perceived as representing differences between individuals, productivity or livelihoods, rather than differences between groups (Alcorta et al., 2018). At the same time, differences in population size are natural to multi-ethnic societies and, on their own, are not necessarily likely to be perceived as unjust. If an ethnic group represents only a small portion of a country's population, having no access to political power could be considered a reflection of their relative size. In contrast, ethnic groups that constitute a larger proportion of the national population, but are excluded from the national political system, are more likely to perceive themselves as being unfairly treated (Cederman et al., 2010; 2013). Discontent can be expected to be stronger for groups approaching economic equality or equal size, but suffering from political and educational inequalities (Besançon, 2005). The independence movement in Catalonia illustrates how inhabitants of wealthy regions that suffer from discriminatory policies may have strong incentives to mobilize collectively (Keating, 2009). There is also some empirical evidence that politically excluded groups who are economically relatively advantaged or who reside in oil-rich regions are more involved in conflict (Cederman et al., 2013; Asal et al., 2016).

Second, I predict that discriminated ethnic groups with lower levels of education relative to the group in power are more likely to engage in conflict:

H4: Discriminated ethnic groups are more likely to engage in conflict, if they are less educated than the ethnic group in power.

Education is a public good which most citizens in a country expect to have some level of access to,

⁴ Earlier studies such as Regan and Norton (2005) examine the relationship between economic inequalities and conflict previously found a positive relationship between the two variables. However, these studies measured economic inequalities and conflict on a national level, whereas ethnic conflict often occurs on a subnational level. More recent studies on the group level found a similar relationship, but compared the wealth level of the group to the national average, rather than specifically with the group in power (Cederman et al., 2011; 2013). When capturing economic inequalities between groups directly involved in conflict, scholars have found no relation between economic inequalities and conflict (Huber and Mayoral, 2014; Alcorta et al., 2018).

regardless of their background. More education decreases the chance of conflict by reducing grievances and stimulating economic development (Thyne, 2006), increasing the cost of rebel recruitment (Collier and Hoeffler, 2004), reducing the size of the recruitment pool (Barakat and Urdal, 2009), and increasing the opportunity costs of young people to join a rebellion (Urdal, 2006). However, educational opportunities can potentially have the opposite effect on conflict, if distributed unequally (de Ferranti et al., 2004). Given the expectation of a fair provision of public services, inequalities in education are often considered fundamentally unjust. Groups that are educationally disadvantaged are found to have a higher tendency to engage in conflict (Østby, 2008; Alcorta et al., 2018). For this reason, I predict that differences in education will strengthen the motivation of the discriminated group to engage in violence and thus increase the risk of conflict.

Third, I predict that discriminated groups that have a larger share of elites are more likely to engage in conflict:

H5: Discriminated ethnic groups are more likely to engage in conflict, if the share of elites in their group is larger.

A key element tied to within-group inequalities is the influence and motivation of elites (Besançon, 2005; Fearon and Laitin, 2000; Huber and Mayoral, 2014; Wilkinson, 2004).⁵ An increased presence of elites may amplify demands for an improved political/economic status and strengthen the ability of elites to mobilize a group toward collective action (Besançon, 2005). Particularly if groups are subjected to political discrimination, elites can play an important role in the buildup to conflict.⁶ When socioeconomic inequalities facilitate the mobilization of their constituencies (Langer, 2005), repression can lead ethnic elites to take up arms in order to force the state to listen to their demands (Cederman et al., 2013; Lacina, 2014). By blaming the plight of their ethnic community on other groups or depicting other groups as a threat to their socioeconomic or political status, elites may mobilize their ethnic group toward collective action. Due to the risk involved in violent action, the masses must have reasons for following elites (Varshney, 2003). This is easier to facilitate if the group faces repressive policies by the state, to which their grievances can be directed (Langer, 2005). The Ivory Coast is a good example - after the death of Houphouët-Boigny in 1993, the state imposed policies favouring the ethnicity of the ruling elite (baoulisation) and excluding northern groups from the government and the military. This overt political discrimination, together with the presence of socioeconomic horizontal inequalities and latent ethnic tensions between the north and the south, encouraged northern elites from different

⁵ Daloz (2010) defines an elite as a selected and small group of citizens that controls a large amount of wealth and power.

⁶ For this reason, Goldstone et al. (2010) argue that models examining elite relationships will have greater predictive power for conflict onset than those focused on economic resources.

groups to unite in opposition to the state and ultimately led to a coup d'état in 1999 (Langer, 2005).

3.3 - Data and Methods

3.3.1 - Data

For the analyses, I use the Ethnic Dyad Database (EDD) with annual data for 155 ethnic groups within 28 countries in sub-Saharan Africa for the period 1990-2013. The EDD is based on datasets from 73 Demographic and Health Surveys (DHS) which were derived from the Global Data Lab (www.globaldatalab.org). DHS are large, nationally representative household surveys, collecting data on socioeconomic, demographic, and health-related issues through oral interviews. Response rates are usually very high (in most cases above 90%).

Ethnic identity was measured by asking respondents for their ethnic group or tribe. Respondents could select from several predefined categories, or specify their own if they classify as another. On the basis of the ethnic identity information, data from the surveys were aggregated to the ethnic group level. When ethnic groups in the survey were very small in size (less than 1% of the sample population), they were integrated into larger clusters of groups from the same ethno-linguistic family. The ethnic group cluster to which groups belonged to was identified with the help of a variety of databases (Joshua Project, 2016; Olson, 1996; Simons and Fennig, 2017). Small groups that could not be combined into larger categories were left out of the analysis, ending up with 155 out of the 180 ethnic groups originally identified (see Table A.2.1 for the list of 155 groups).

The aggregated information at the ethnic group level from the different surveys was combined into an ethnic group panel dataset with annual observations from 1990 to 2013. Since the dataset was based on DHS data, observations were only available for years in which DHS surveys were conducted within the countries (for the list of included surveys see Table A.2.2). The values of the closest survey prior to the year of observation were utilized for years in which no dataset was available. When the year of observation came before the earliest available survey, the values of the earliest survey were extrapolated.

The socioeconomic data in the EDD were merged together with annual political access data from the Ethnic Power Relations (EPR) dataset (Vogt et al., 2015). The EPR dataset identifies politically relevant groups and includes annual data on their access to power on the national level by coding to which extent the representatives of ethnic groups held executive-level state power—from total control of the government to overt political discrimination. Information was available for 155 ethnic groups

within 28 countries. To construct the Ethnic Dyad Database, within each country, every dyadic combination of ethnic group was generated, for a total of 9,783 ethnic dyad year observations. This approach allows the socioeconomic and political features of ethnic groups within pairs to be compared. Measures are included to indicate the average and the disparity between group features in each dyad.

Data on ethnic conflict incidence were derived from the Uppsala Conflict Data Program (UCDP).⁷ The database includes information on conflicts with at least 25 deaths in that year. It consists of 375 intrastate conflict incidence observations in sub-Saharan African countries containing conflicts between insurgents and the government, conflicts between actors where the government is not involved, and violence perpetrated against civilians by insurgents or the government from the period 1990 to 2013. The period of analysis chosen was due to the availability of reliable group-level data. Furthermore, by opting to leave out conflicts that occurred before 1990, it was possible to eliminate the possibility that the conflict would be associated to the Cold War, which occurred frequently during the 1970-1980s.

3.3.2 - Research design

To test the hypotheses, multilevel logistic regression analysis was performed with ethnic conflict incidence as dependent variable. To control for clustering of the dyads within countries and for the repeated measurement of dyads over time multilevel versions of the logistic regression model were used. The models were estimated with Stata Xtmelogit.

Ethnic conflict incidence was measured by a dummy variable indicating whether (1) or not (0) a violent conflict occurred within a specific dyad in a given year. Ethnic groups were recorded as participants in conflicts, when they were prevalent in the UCDP conflict description. Conflict observations were linked to the dyad of the ethnic groups involved in the fighting. Cases with the involvement of foreign groups or intra-ethnic conflicts (both groups from the same cluster) were excluded from the analysis. Of the 28 countries in this research, five did not contain cases of intrastate ethnic conflict (Benin, Gabon, Malawi, Namibia and Zambia).

The variable political inequality derived from the Ethnic Power relations (EPR) dataset measures the level of access to state power of an ethnic group through their political representation at the central

⁷ Specific datasets utilised include the UCDP Dyadic Dataset (Allansson et al., 2017), UCDP Non-State Conflict Dataset (Sundberg et al., 2012), and UCDP One-Sided Violence Dataset (Eck and Hultman, 2007).

regime level. It has three main categories: 'excluded from power', 'power-sharing', or 'dominant'. The excluded from power category consists of two kinds of groups, those that are only excluded from power and those that besides being excluded from power are also politically discriminated, with discriminated meaning intentionally and directly targeted by the state through repressive policies. The focus of the analysis is on the difference between the two kinds of excluded groups – discriminated and non-discriminated – in risk of conflict with groups in power. To create the category 'in power' the categories of power-sharing and dominant groups are combined. Theoretically this makes sense, as my interest is in how political discrimination by the state—represented by either a coalition or a single group—affects the propensity for conflict.

As control factors at the ethnic dyad level, I include within dyad differences in characteristics of the groups and the average values of those characteristics for the dyad. The characteristics are economic wealth, group size, education level, and elite share. Because the average values are included, the differences indicate the inequalities specifically in the characteristics within the dyad. This approach mirrors that of prior studies, such as Alcorta et al. (2018). To measure the *economic wealth* level of the groups, the average score on the International Wealth Index (IWI) of households belonging to the groups is taken. IWI measures economic welfare and access to resources according to a weighted combination of the household's possession of consumer durables, housing characteristics and access to public utilities (Smits and Steendijk, 2015). IWI ranges from 0 to 100, where 0 represents households without assets and with public/housing utilities of the poorest quality, and 100 represents households with all assets recorded in the survey and with public/housing utilities of the highest quality. The *size* of an ethnic group is determined by calculating the share of people in the group relative to the total population. The *education level* of a group is represented by the average number of years of schooling received by respondents in the group that are within the 20-49 age category. The share of the group's *elites* was measured by the group's share of employed men aged 20-49 with higher occupations, such as technical, professional and managerial positions. Urbanization of a group is measured as the proportion of its members living in urban areas.

At the national level, rule of law is included as control factor. This variable indicates to what extent people confide in and abide by the rules of society in which they live. In particular it reflects their views on the police, the courts, the quality of property rights, and contract enforcement, as well as on the likelihood of crime and violence occurring. The variable is derived from the World Governance Indicators (WGIs) and uses a scale that runs from -2.5 to 2.5 (Kaufmann et al., 2011). WGIs are only recorded from 1996 onwards, until 2002 on a bi-annual basis and since then yearly. Values for the missing years after 1996 are linearly interpolated. Values for the period 1990-1995 are linearly

extrapolated from 1996.

To control for earlier conflicts within the dyad, four dummy variables are used which indicate whether (1) or not (0) there was a conflict in the four years preceding the year of measurement. By controlling for prior conflict, the indicators leading to conflict incidence are separated from circumstances that may arise during an existing conflict. I include four of these dummies, as the dummy for conflict five years preceding the focus year was found to be insignificant. I also include a dummy indicating the observations for which the data are extrapolated from surveys taken later than the observation year. Allison's (2001) dummy variable adjustment procedure is used to address any values that were missing for education levels and share of elites. I tested for the possibility of nonlinear relationships by including quadratic terms for all interval-level variables in the models, but no indication of nonlinearity was found. I also test for multicollinearity by computing the Variance Inflation Factor (VIF) statistic for all independent variables. The highest VIF value was 4.5, which is substantially below the critical threshold of 10. I therefore conclude that there is no multicollinearity in the data.

3.3.3 - Modelling strategy

We first estimate multilevel models for each independent and control variable to examine their bivariate relationship with ethnic conflict. In the bivariate analysis of the control variables (education, economic, etc.), the difference and the mean variables are both incorporated within the model because the two components are strongly linked with each other. The controls for prior conflict are also integrated in the model because of the strong effects that preceding conflict exhibited on the relationship.

Our multivariate analysis consists of four major steps. I first apply a simple division between groups that are excluded from power and groups that are in power (Model 1). This means that the following three categories of dyads can be distinguished: (1) excluded versus in power, (2) excluded versus excluded, and (3) in-power versus in-power. For each of these categories a dummy is prepared indicating whether (1) or not (0) a specific dyad is in the respective category. The aim of this step is to test whether the data replicate the findings of earlier research (Cederman et al., 2013); that the combination of excluded versus in power has the highest chance of ethnic conflict. In this analysis, the category excluded versus in power is taken as reference category.

In the second step, I split up the excluded group into discriminated excluded groups and non-discriminated excluded groups (Model 2). Subsequently, six categories of dyads are obtained: (1) discriminated excluded versus in power, (2) non-discriminated excluded versus in power, (3)

discriminated excluded versus discriminated excluded, (4) non-discriminated excluded versus non-discriminated excluded, (5) discriminated excluded versus non-discriminated excluded, and (6) in power versus in power. Again for each of the categories a dummy variable is prepared. Taking the discriminated excluded groups as reference category, I test whether splitting up the excluded group into discriminated and non-discriminated may lead to a better explanation of the variation in within dyad conflict incidence.

Given that this indeed turns out to be the case, in the third step (Model 3) I simplify things by replacing the six-category variable used in Step 2 by a simple two-category dummy variable that compares the combination discriminated excluded versus in power (1) with all other combinations combined into one category (0). As the omnibus test indicates that this simple model is a significant improvement over Model 2, this model is taken as starting point for the interaction analysis (Model 4), in which I study whether the heightened conflict risk of the discriminated versus in power combination is moderated by the characteristics of groups and the circumstances under which they live.

3.4 - Results

Table 3.A provides a summary of the descriptive statistics. In the EDD dataset, ethnic conflict occurs within 3.8% of the country/year observations. Dyads pairing excluded groups with groups in power account for 23.2% of the observations. Disaggregating this category, dyads pairing discriminated excluded groups with groups in power represent 8.1% of the observations, whilst dyads pairing non-discriminated excluded groups versus groups in power correspond to 15.2% of the observations. Educational inequalities between groups averaged 1.6 years, and varies from 0 to 8.9 years. Ethnic groups receive 4.9 years of schooling on average. Wealth differences between groups average an IWI score of 8.8 (on a scale ranging from 0 to 100), and groups have a mean wealth level of 25.4 on this index. The difference between groups in the proportion of elites is on average 5.0%, and the mean share of elites within groups is 9.5%. Both the average population size of groups and the average difference between groups is 10.5% of the country's total population. The mean difference between groups in urbanization is 16.9%, and the mean percentage of group population living in an urban environment is 34.1%. National values for the rule of law average -0.6 on and range from -2.1 to 0.3.

Table 3.A - Descriptive statistics summary table for selected independent variables and ethnic conflict incidence in 28 Sub-Saharan African countries, 1990–2013

Variables	Mean/Odds	Std. Deviation	Min	Max
Conflict incidence	0.04	0.19	0	1
Political configurations of dyads				
Excluded/in power (%)	0.23	0.42	0	1
<i>Discriminated/in power (%)</i>	0.08	0.27	0	1
<i>Not discriminated/in power (%)</i>	0.15	0.36	0	1
Both excluded (%)	0.07	0.25	0	1
<i>Both discriminated (%)</i>	0.01	0.11	0	1
<i>Both not discriminated (%)</i>	0.03	0.18	0	1
<i>Discriminated/not discriminated (%)</i>	0.02	0.15	0	1
Both in power (%)	0.70	0.46	0	1
Control factors				
Education inequality	1.65	1.67	0	8.90
Average education	4.94	2.54	0.50	11.90
Wealth inequality	8.81	10.54	0	72.90
Average wealth	25.38	13.56	2.15	93.40
Population size inequality (%)	10.46	11.92	0.01	86.47
Average population size (%)	10.49	7.62	1.00*	43.87
Elite share inequality (%)	5.05	6.74	0	64.70
Average elite share (%)	9.46	7.45	0	52.35
Difference in urbanization (%)	16.94	15.60	0	88.70
Average urbanization (%)	34.09	16.44	3.20	93.15
Conflict occurred 1 year prior	0.04	0.19	0	1
Conflict occurred 2 years prior	0.02	0.13	0	1
Conflict occurred 3 years prior	0.01	0.11	0	1
Conflict occurred 4 years prior	0.01	0.10	0	1
Rule of law (WGI)	-0.63	0.54	-2.13	0.35

*Minimum cut-off value is set at 0.99%. Sources: Demographic and Health Surveys (DHS), Ethnic Power Relations Dataset (EPR) and Uppsala Conflict Data Program (UCDP).

The following section reports the results from the analyses used to evaluate the effects of the independent variables on ethnic conflict. Coefficients for the bivariate relationships are presented in Table 3.B and those for the multivariate relationships are shown in Table 3.C. The coefficients are displayed as odds ratios, because they are easier to interpret than logit coefficients. The number of dyad observations included in the analyses is 9,783 and the number of conflict-year observations is 375.

In Table 3.B and 3.C, the separate levels of political access are represented by dummy variables for the group combinations. In accordance with the political exclusion literature, the bivariate coefficient for dyads pairing excluded and in power groups shows a strongly significant and positive correlation to

conflict, indicating that this dyadic combination is 2.3 times more likely than other combinations to fuel ethnic conflict. In the bivariate analysis with the subcategories of excluded groups split up, however, the coefficients demonstrate that most of the weight of the impact of political exclusion on conflict risk is carried by the strong effect of dyads with discriminated and in power groups (3.5 times more conflict-prone than other dyads). Dyads combining non-discriminated excluded groups and groups in power are not significantly associated with conflict. Of the control factors that are significant, educational inequalities and occurrence of conflict 1-4 years prior are positively associated with conflict, whereas average education and rule of law show negative associations. These findings are in line with Alcorta et al. (2018).

Table 3.B - Multilevel logistic regression coefficients for bivariate associations between selected independent variables and ethnic conflict incidence in 28 Sub-Saharan African countries, 1990-2013

Variables	Bivariate Coefficients
Political configurations of dyads	
<i>Excluded/in power</i>	2.296*** (0.410)
<i>Discriminated/in power</i>	3.504*** (0.817)
<i>Not discriminated/in power</i>	1.099 (0.226)
Both excluded	0.731 (0.198)
<i>Both discriminated</i>	1.075 (0.527)
<i>Both not discriminated</i>	0.791 (0.326)
<i>Discriminated/not discriminated</i>	0.566 (0.248)
Both in power	0.452*** (0.086)
Educational inequality	1.167* (0.071)
Average education	0.833* (0.060)
Wealth inequality	0.991 (0.013)
Average wealth	0.982 (0.012)
Population size inequality	0.993 (0.012)
Average population size	1.031 (0.020)
Elite share inequality	0.991 (0.020)
Average elite share	1.025 (0.018)
Control factors	
Urbanization inequality	0.994 (0.007)
Average urbanization	1.002 (0.009)
Rule of law	0.137*** (0.048)
Conflict occurred 1 year prior	28.012*** (6.346)
Conflict occurred 2 years prior	6.488*** (1.834)
Conflict occurred 3 years prior	4.369*** (1.423)
Conflict occurred 4 years prior	3.200*** (1.187)
Observations	9,783
Conflict-year combinations	375

*Coefficients are the log odds for the variables in the models and estimates for random-effects parameters, with standard errors in parentheses. * $p < .05$; ** $p \leq .01$; *** $p \leq .001$. Models were estimated for each variable separately, whereby both components of the socioeconomic control variables (inequality and mean) were estimated simultaneously.*

In Table 3.C, the multivariate multilevel coefficients are presented. Model 1 compares the different political configurations, using the combination of excluded groups (both discriminated and not discriminated) with groups in power as a reference. Compared to this reference group, the two other combinations have lower odds of engaging in conflict, but the difference is only statistically significant for the dyads in which both groups are in power. The insignificant result might be due to the fact that the number of observations for the dyad pairing discriminated groups together is rather small. Dyads with groups who are both in power are 55% less likely to engage in conflict than dyads where one group is in power and the other is excluded from power.

In Model 2, I test whether splitting up the excluded groups into discriminated excluded groups and non-discriminated excluded groups leads to a better explanation of the variation in conflict incidence. This indeed turns out to be the case. I observe that in comparison with the combination of discriminated excluded groups versus groups in power (the reference category) all other dyadic combinations of ethnic groups have lower conflict risk. For all but one combination (two discriminated groups) the coefficients are significant and substantial. Most notably, dyads of non-discriminated excluded groups versus in power groups are 60% less conflict prone than dyads of discriminated and in-power groups. Hence it seems that it is the discriminated excluded groups, rather than non-discriminated excluded groups, that are driving the positive relationship between political exclusion and conflict. This finding is in accordance with Hypothesis 1.

In Model 3 the model is simplified and the effect of the discriminated/in-power dyad on conflict is isolated. Given that this Model 3 has a Chi^2 value which is hardly different from that of Model 2, while using 4 degrees of freedom less, this Model 3 is preferable over Model 2. In Model 3, the coefficient of the dummy variable for the combination discriminated excluded and in power is highly significant and has a 3.22 times higher odds of conflict than all other possible dyads combined.

To find out whether the heightened risk of conflict between discriminated excluded groups and groups in power is related to group characteristics and circumstances, an interaction analysis was performed, whereby interactions were tested with educational, economic and population size inequalities, as well as the average share of elites. In Model 4 these interaction coefficients are jointly included. The interaction effects with wealth inequalities between the groups and with the combined elite share of the groups were found to be significant. The negative interaction coefficient for wealth inequalities indicates that -- in line with hypothesis 3 -- the risk of conflict between discriminated excluded groups and groups in power is significantly reduced if wealth inequalities between the groups are higher. The interaction coefficient for average elite share is significantly positive. This indicates that conflict risk for discriminated and in-power group dyads is higher if the average share of elites in the dyad is larger,

as predicted by hypothesis 5. No evidence in favor of interactions predicted in hypotheses 2 and 4 was found. Hence, these results indicate that differences in access to education and in population size are not related to the difference in conflict risk between the discriminated versus in power combination and the other dyadic combinations of groups.

Regarding the effects of the control factors in our models, Table 3 shows that educational inequalities between groups, average group size, and average elite share of groups are positively associated to conflict, whilst average group education and difference in the share of elites between groups are negatively associated. An increase of one year in average group education decreases the chance of conflict by around 20%. However, if the difference in years of schooling between the groups is one year larger, the risk of conflict is 29-36% higher. This might be explained by the public value of education, whose unfair distribution could potentially breed strong grievances within communities (Alcorta et al. 2018). With respect to the average group size, each one-percent increase in joint population size increases conflict risk by around 6 percent. When ethnic groups are larger, the risk that conflict occurs between them is higher. If the difference in the share of elites between groups increases by one percent, the chance of conflict decreases by about 5%. A one percent increase in joint elite share is associated with about a 7 percent higher conflict risk, and – as the interaction analysis shows – even more so for dyads with discriminated and in-power groups.

The coefficients for the average level of education, wealth and urbanization, and the differences in wealth, elite share and urbanization, mostly follow those of Alcorta et al. (2018). However, they are all insignificant, probably because the sample size used in this analysis is much smaller. The control factors for conflict in preceding years are all significant, thus stressing the importance of including them in the model. I also tested an indicator for conflicts five years earlier, but its coefficient was not significant. Finally, the coefficient of rule of law is significant and strongly negative. For each one point increase on the five-points rule of law scale the odds of conflict is about 85 percent lower.

Table 3.C - Multilevel logistic regression coefficients for multivariate associations between selected independent variables and ethnic conflict incidence in 28 Sub-Saharan African countries, 1990-2013

Variables	Model 1	Model 2	Model 3	Model 4
Constant	0.002*** (0.000)	0.003*** (0.003)	0.001*** (0.001)	0.001*** (0.001)
Political configurations of dyads				
<i>Excluded/in power</i>	Reference			
<i>Discriminated/in power</i>		Reference	3.228*** (0.828)	3.090*** (0.850)
<i>Not discriminated/in power</i>		0.399** (0.124)	Reference	Reference
Both excluded	0.572 (0.172)			
<i>Both discriminated</i>		0.574 (0.331)	Reference	Reference
<i>Both not discriminated</i>		0.313* (0.154)	Reference	Reference
<i>Discriminated/not discriminated</i>		0.240** (0.125)	Reference	Reference
Both in power	0.447*** (0.094)	0.265*** (0.073)	Reference	Reference
Educational inequality	1.361*** (0.122)	1.365*** (0.123)	1.355** (0.123)	1.289** (0.119)
Average education	0.793* (0.084)	0.788* (0.084)	0.790* (0.084)	0.806* (0.087)
Wealth inequality	0.967 (0.020)	0.967 (0.020)	0.967 (0.020)	0.985 (0.021)
Average wealth	1.010 (0.022)	1.017 (0.022)	1.015 (0.022)	1.021 (0.022)
Population size inequality	0.990 (0.015)	0.989 (0.015)	0.990 (0.015)	0.994 (0.016)
Average population size	1.058* (0.027)	1.063* (0.027)	1.060* (0.027)	1.056* (0.027)
Elite share inequality	0.951 (0.025)	0.945 (0.025)	0.948 (0.025)	0.941 (0.026)
Average elite share	1.070** (0.023)	1.073*** (0.023)	1.071** (0.023)	1.053* (0.025)
Control factors				
Urbanization inequality	0.999 (0.009)	0.998 (0.009)	0.998 (0.009)	0.997 (0.009)
Average urbanization	1.004 (0.012)	1.001 (0.012)	1.002 (0.012)	1.002 (0.012)
Conflict occurred 1 year prior	15.007*** (3.528)	13.849*** (3.247)	13.594*** (3.182)	12.607*** (2.881)
Conflict occurred 2 years prior	4.028*** (1.163)	3.751*** (1.086)	3.705*** (1.070)	3.526*** (1.009)
Conflict occurred 3 years prior	2.958** (0.999)	2.811** (0.952)	2.752** (0.931)	2.587** (0.872)
Conflict occurred 4 years prior	2.341* (0.895)	2.287* (0.874)	2.262* (0.861)	2.145* (0.815)
Rule of law	0.145*** (0.056)	0.164*** (0.062)	0.157*** (0.059)	0.132*** (0.050)
Interactions				
Educational inequality * discriminated/in power				0.891 (0.137)
Wealth inequality * discriminated/in power				0.920* (0.033)
Population size inequality * discriminated/in power				0.985 (0.014)
Average elite share * discriminated/in power				1.106** (0.036)
Random-intercept parameters				
Country level	1.260*** (0.347)	1.150*** (0.347)	1.183*** (0.345)	1.091*** (0.338)
Ethnic dyad level	1.183*** (0.200)	1.257*** (0.203)	1.265*** (0.208)	1.286*** (0.200)
Omnibus test Chi ² (DF)	70.36 (19)	66.49 (22)	66.53 (18)	70.26 (22)
Observations	9,783	9,783	9,783	9,783
Conflict-year combinations	375	375	375	375

Coefficients are the log odds for the variables in the models and estimates for random-effects parameters, with standard errors in parentheses. * $p < .05$; ** $p \leq .01$; *** $p \leq .001$.

3.5 - Discussion

By disaggregating political exclusion, I seek to determine whether discriminatory policies by the state designed to prevent a group from accessing political power provide a stronger incentive for conflict than political exclusion without explicit discrimination. This is accomplished through first distinguishing between discriminated and non-discriminated groups that fell within the excluded category of the EPR dataset, and then conducting a dyadic analysis comparing these groups with groups in power.

In the first analysis, I replicated the findings of earlier group-level research (Cederman et al., 2013), which found politically-excluded groups to be more often associated with conflict than non-excluded groups. The analysis revealed that dyads of ethnic groups containing both in-power and excluded groups were significantly more conflict-prone than dyads where both groups are in power. Yet, when I subdivided the excluded groups into groups that are politically discriminated and groups that are not politically discriminated, it became apparent that *it is the discriminated groups that predominantly drive this effect*. Dyads incorporating excluded groups suffering from discrimination were significantly more prone to ethnic conflict than dyads with non-discriminated excluded groups.

This finding supports the argument that discrimination by the state is a critical factor driving politically excluded ethnic groups toward conflict (Gurr, 1993; Walter, 2006). Explaining the result in the context of the motivation and opportunity mechanisms, I posit that exclusion from power may create incentives for conflict, but these are generally insufficient to overcome the opportunity constraints stemming from lack of political access. However, when political exclusion is associated with acts of discrimination and repression, group grievances could be severe enough to outweigh the limitations they face and spur the group on toward conflict (Brockett, 2005).

We also find that economic inequalities and the average share of elites within the groups have significant moderating effects on the tendency of discriminated groups to engage in conflict, similarly to Alcorta et al. (2018). The risk of conflict between these groups and groups in power is significantly lower if there are wealth inequalities between the groups, and significantly higher if the share of elite positions occupied by members of both groups is higher. To understand how these interactions work, the findings need to be interpreted once more through their association with the conflict mechanisms. The direction of the first interaction suggests that inequalities between the groups may offset the positive effect of discrimination on conflict. I abide by Tilly's argument (1978) that despite severe grievances, discriminated groups who are subjected to economic constraints relative to the other group often do not have the financial resources or organizational capacity to mount a rebellion against the group in power. The economic inequalities will therefore reinforce the coercive control of the

group in power over the discriminated group (Gurr, 1993).

The positive association found between elite size and conflict outbreak highlights the pivotal role of ethnic entrepreneurs in a volatile political environment. In their jostle for dominance, elites seeking to advance their own interests can become an aggravating factor in the buildup to ethnic conflict. They might exploit their influence over other members of their community through indoctrination or providing financial incentives (Varshney, 2003). This role may be more critical when groups are discriminated, as the stronger resentment toward the state will make it more feasible for ethnic elites to blame groups in power for the predicament of their community.

There are a couple of limitations to the study that should be considered when reflecting upon these findings. First, the dyadic approach means it is not possible to isolate the group within the dyad. This implies that I can observe the presence and size of an inequality but cannot draw conclusions regarding its direction (Neumayer and Plümer, 2010). However, since it is often very difficult to determine who instigated the violence in conflict data, the direction of an inequality generally does not provide much additional insight on conflict incentives. Drawing upon a comprehensive set of ethnic dyads, I can compare differences between all possible ethnic group combinations within a country rather than just with the national average. This allows me to more directly capture inequalities between ethnic groups and understand how they are linked to intergroup conflict, which is often dyadic in nature.

Second, the data do not capture all the potential ethnic group conflicts during the period analysed. In order to be able to run the analyses, sometimes ethnic groups had to be combined into larger ethnic clusters because smaller ethnic groups were not consistently represented in the data across survey years (Nigeria for example has 400 ethnic groups). This means that conflicts between groups belonging to the same larger ethnic cluster could not be included. However, given the large number of ethnic groups distinguished in this database, the large majority of ethnic conflicts in the study period (88%) could be included in the analyses. Hence the information loss due to this issue is rather small.

3.6 - Conclusion

This study drew on the Ethnic Dyad Database, which contains 9,783 dyad year observations incorporating 155 ethnic groups for 28 countries in Sub-Saharan Africa. This research contributes to the literature on political exclusion by comparing the effects of excluded groups that face discrimination by the state designed to exclude them from political power versus groups that are excluded from power but do not face explicit discrimination in the public sphere. By separating these subcategories, I find that political exclusion alone is not a sufficient predictor of conflict outbreak.

Instead, conflict seems to be linked to excluded groups that are targeted by the state with discriminatory policies designed to prevent them from accessing political power. Interaction analysis reveals that economic inequalities between groups and the proportion of elites within the group can moderate this relationship. Discriminated groups seem to be less inclined to engage in conflict with in-power groups when there are large economic differences between them, whilst discriminated groups are more susceptible to conflict with groups in power when there is a larger presence of elites.

Political inequalities represent a complex interaction of incentives and opportunities that to a certain extent appear to hold each other in the balance. I postulate that the acute political incentives for conflict generated by discriminatory policies may outweigh the political limitations excluded groups encounter when initiating a rebellion. Motivations for conflict can be further enflamed by elites who wield influence on the other members of their group and seek to advance their own interests through collective mobilization. However, even strong incentives will not be enough to lead ethnic groups into conflict if they face additional economic constraints relative to the group in power. In such cases, a group's ability to successfully mobilize resources and finance a rebellion is limited.

Scholars have theorized about different types of grievances that may spur conflict. These results reveal the specifics in the relationship between political inequalities and ethnic conflict, which are better understood by disaggregating the types of exclusion and assessing their impact on both underlying mechanisms. This not only allows us to test the strength of different grievance arguments, but also to examine how the balance between the motivation and opportunity mechanisms may shift depending on conditions that occur jointly with political inequalities. The findings may offer useful insights for policymakers. The decline of ethnic conflict has been explained by the recent trend of ethnic groups achieving better political access (Cederman et al., 2017a). Although this is a positive development which benefits society as a whole, policies aimed specifically toward the prevention of violence might be more effective in placing the onus on reducing discriminatory practices and curbing the role of ethnic elites.

3.7 - Appendix

Table A.3.1 - List of ethnic conflicts derived from the UCDP database for 28 Sub-Saharan African countries, 1990-2013

Country	Dyad ID	Group A name	Group B name	Start	End
MLI	4320102	Bambara Mali	Malinké Mali	2012	2012
MLI	4320105	Bambara Mali	Sonrai/Songhai Mali	2013	2013
MLI	4320107	Bambara Mali	Tamasheq/Tuareg Mali	1990	1994
MLI	4320107	Bambara Mali	Tamasheq/Tuareg Mali	2013	2013
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2007	2009
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2012	2012
MLI	4320306	Peulh Mali	Dogon Mali	2012	2012
MLI	4320307	Peulh Mali	Tamasheq/Tuareg Mali	1997	1997
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	1994	1994
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2008	2008
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2012	2012
SEN	4330105	Wolof Senegal	Jola Senegal	1990	1990
SEN	4330105	Wolof Senegal	Jola Senegal	1992	1993
SEN	4330105	Wolof Senegal	Jola Senegal	1995	1995
SEN	4330105	Wolof Senegal	Jola Senegal	1997	1998
SEN	4330105	Wolof Senegal	Jola Senegal	2000	2003
SEN	4330105	Wolof Senegal	Jola Senegal	2011	2011
SEN	4330305	Serer Senegal	Jola Senegal	1990	1990
SEN	4330305	Serer Senegal	Jola Senegal	1992	1993
SEN	4330305	Serer Senegal	Jola Senegal	1995	1995
SEN	4330305	Serer Senegal	Jola Senegal	1997	1998
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1992	1993
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1995	1995
SEN	4330405	Mandinka/Malinke Senegal	Jola Senegal	1997	1998
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	1991	1991
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	1993	1993
TGO	4610104	Adja-Ewe Togo	Kabye/Tem Togo	2005	2005
NER	4360208	Djerma/Songhai Niger	Touareg Niger	1990	1992
NER	4360405	Hausa Niger	Kanuri/Toubou Niger	1995	1995
NER	4360405	Hausa Niger	Kanuri/Toubou Niger	1998	1998
NER	4360408	Hausa Niger	Touareg Niger	1994	1994
NER	4360408	Hausa Niger	Touareg Niger	1997	1997
NER	4360508	Kanuri/Toubou Niger	Touareg Niger	2007	2008
CIV	4370103	Akan Ivory Coast	Mand (north) Ivory Coast	2000	2000
CIV	4370103	Akan Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370105	Akan Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2000	2000
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2002	2005
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370204	Kru Ivory Coast	Mand (south) Ivory Coast	1994	1995
CIV	4370204	Kru Ivory Coast	Mand (south) Ivory Coast	2002	2003

Country	Dyad ID	Group A name	Group B name	Start	End
CIV	4370205	Kru Ivory Coast	Voltaic Ivory Coast	2002	2005
CIV	4370205	Kru Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370304	Mand (north) Ivory Coast	Mand (south) Ivory Coast	2005	2005
CIV	4370305	Mand (north) Ivory Coast	Voltaic Ivory Coast	2002	2003
GIN	4380203	Peulh Guinea	Malinke Guinea	2009	2009
LBR	4500513	Gio Liberia	Krahn Liberia	1999	2003
LBR	4500514	Gio Liberia	Mandigo Liberia	2000	2003
LBR	4501013	Krahn Liberia	Mandigo Liberia	1999	1999
LBR	4501014	Krahn Liberia	Mano Liberia	1999	2003
LBR	4501314	Mandigo Liberia	Mano Liberia	1990	1996
LBR	4501314	Mandigo Liberia	Mano Liberia	1999	2003
SLE	4510102	Temne Sierra Leone	Mende Sierra Leone	1991	1992
SLE	4510102	Temne Sierra Leone	Mende Sierra Leone	1997	1997
SLE	4510104	Temne Sierra Leone	Creole Sierra Leone	1992	1992
SLE	4510209	Mende Sierra Leone	Kono Sierra Leone	1991	1992
SLE	4510209	Mende Sierra Leone	Kono Sierra Leone	1997	1997
SLE	4510409	Creole Sierra Leone	Kono Sierra Leone	1992	1992
GHA	4520507	Mole-Dagbani Ghana	Gruma Ghana	1994	1995
CMR	4710103	Arab-Choa/Peulh/Haoussa/Kanuri Cameroon	Adamaoua-Oubangui Cameroon	1992	1994
CMR	4710104	Arab-Choa/Peulh/Haoussa/Kanuri Cameroon	Bantoide South-West Cameroon	1991	1991
CMR	4710108	Arab-Choa/Peulh/Haoussa/Kanuri Cameroon	Beti/Bassa/Mbam Cameroon	1994	1994
CMR	4710506	Grassfields Cameroon	Bamilike/Bamoun Cameroon	1998	1998
NGA	4750307	Fulani Nigeria	Igbo Nigeria	1991	1991
NGA	4750307	Fulani Nigeria	Igbo Nigeria	2006	2006
NGA	4750308	Fulani Nigeria	Ijaw/Izon Nigeria	2008	2008
NGA	4750312	Fulani Nigeria	Tiv Nigeria	2011	2013
NGA	4750313	Fulani Nigeria	Yoruba Nigeria	2001	2004
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	1991	1992
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	1999	2002
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2004	2004
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2006	2006
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2008	2008
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2010	2013
NGA	4750407	Hausa Nigeria	Igbo Nigeria	1991	1991
NGA	4750407	Hausa Nigeria	Igbo Nigeria	2000	2001
NGA	4750407	Hausa Nigeria	Igbo Nigeria	2006	2006
NGA	4750413	Hausa Nigeria	Yoruba Nigeria	1998	1999
NGA	4750413	Hausa Nigeria	Yoruba Nigeria	2001	2004
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	1991	1992
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	1999	2002
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2004	2004
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2006	2006
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2008	2008

Country	Dyad ID	Group A name	Group B name	Start	End
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2010	2010
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2012	2013
NGA	4750708	Igbo Nigeria	Ijaw/Izon Nigeria	1999	1999
NGA	4750712	Igbo Nigeria	Tiv Nigeria	1998	1998
NGA	4750713	Igbo Nigeria	Yoruba Nigeria	2003	2004
NGA	4750811	Ijaw/Izon Nigeria	Ogoni Nigeria	1993	1994
NGA	4750813	Ijaw/Izon Nigeria	Yoruba Nigeria	1998	1999
NGA	4750813	Ijaw/Izon Nigeria	Yoruba Nigeria	2003	2004
NGA	4750911	Kanuri/Berberi Nigeria	Ogoni Nigeria	1994	1994
NGA	4750911	Kanuri/Berberi Nigeria	Ogoni Nigeria	1998	1998
NGA	4751113	Ogoni Nigeria	Yoruba Nigeria	1999	1999
NGA	4751214	Tiv Nigeria	Middle Belt Nigeria	1991	1992
NGA	4751214	Tiv Nigeria	Middle Belt Nigeria	2001	2001
CAF	4820204	Sara CAR	Gbaya CAR	2002	2002
CAF	4820204	Sara CAR	Gbaya CAR	2006	2007
CAF	4820204	Sara CAR	Gbaya CAR	2012	2013
CAF	4820208	Sara CAR	Yakoma-Sango CAR	2001	2001
CAF	4820208	Sara CAR	Yakoma-Sango CAR	2013	2013
CAF	4820408	Gbaya CAR	Yakoma-Sango CAR	2011	2011
TCD	4830102	Gorane Chad	Arab Chad	1990	1990
TCD	4830203	Arab Chad	Ouaddai Chad	1999	1999
TCD	4830203	Arab Chad	Ouaddai Chad	2002	2002
TCD	4830203	Arab Chad	Ouaddai Chad	2004	2007
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	1993	1993
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	1997	1999
COG	4840106	Kongo Congo Brazaville	M'bochi Congo Brazaville	2002	2002
COD	4900106	Bakongo North and South Congo DR	Basele-K, Man. and Kivu Congo DR	2007	2008
COD	4900107	Bakongo North and South Congo DR	Kasai, Katanga and Tanganika Congo DR	2007	2008
COD	4900307	Cuvette central Congo DR	Basele-K, Man. and Kivu Congo DR	1998	2002
COD	4900307	Cuvette central Congo DR	Basele-K, Man. and Kivu Congo DR	2006	2006
COD	4900307	Cuvette central Congo DR	Kasai, Katanga and Tanganika Congo DR	1998	2000
COD	4900307	Cuvette central Congo DR	Kasai, Katanga and Tanganika Congo DR	2006	2006
COD	4900406	Ubangi and Itimbiri Congo DR	Basele-K, Man. and Kivu Congo DR	1990	1997
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	1996	2000
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2002	2004
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2006	2009
COD	4900607	Basele-K, Man. and Kivu Congo DR	Kasai, Katanga and Tanganika Congo DR	2012	2013
UGA	5000516	Baganda Uganda	Iteso Uganda	1990	1992
UGA	5001016	Banyakole Uganda	Iteso Uganda	1990	1992
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	1992	1994
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	1998	1998

Country	Dyad ID	Group A name	Group B name	Start	End
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	2007	2008
KEN	5010104	Kalenjin Kenya	Kisii Kenya	1992	1992
KEN	5010104	Kalenjin Kenya	Kisii Kenya	2008	2008
KEN	5010105	Kalenjin Kenya	Luhya Kenya	1992	1993
KEN	5010106	Kalenjin Kenya	Luo Kenya	1992	1992
KEN	5010110	Kalenjin Kenya	Somali Kenya	2011	2013
KEN	5010210	Kamba Kenya	Somali Kenya	2011	2013
KEN	5010305	Kikuyu Kenya	Luhya Kenya	2007	2009
KEN	5010306	Kikuyu Kenya	Luo Kenya	2007	2009
KEN	5010310	Kikuyu Kenya	Somali Kenya	2011	2013
KEN	5010410	Kisii Kenya	Somali Kenya	2011	2013
KEN	5010510	Luhya Kenya	Somali Kenya	2011	2013
KEN	5010610	Luo Kenya	Somali Kenya	2011	2013
KEN	5010910	Mijikenda/Swahili Kenya	Somali Kenya	2011	2013
RWA	5170102	Hutu Rwanda	Tutsi Rwanda	1990	2002
RWA	5170102	Hutu Rwanda	Tutsi Rwanda	2009	2012
ETH	5300106	Afar Ethiopia	Somalie Ethiopia	2002	2002
ETH	5300107	Afar Ethiopia	Tigray (Tigraway) Ethiopia	1996	1996
ETH	5300204	Amhara Ethiopia	Oromo Ethiopia	1990	1991
ETH	5300204	Amhara Ethiopia	Oromo Ethiopia	1999	2001
ETH	5300206	Amhara Ethiopia	Somalie Ethiopia	1991	1991
ETH	5300207	Amhara Ethiopia	Tigray (Tigraway) Ethiopia	1990	1991
ETH	5300209	Amhara Ethiopia	Nilotic Ethiopia	2003	2004
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	1991	1992
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	1998	1998
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2000	2000
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2003	2003
ETH	5300406	Oromo Ethiopia	Somalie Ethiopia	2005	2005
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1990	1992
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1994	1995
ETH	5300407	Oromo Ethiopia	Tigray (Tigraway) Ethiopia	1998	2013
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2001	2001
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2004	2004
ETH	5300409	Oromo Ethiopia	Nilotic Ethiopia	2008	2008
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2006	2006
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2008	2008
ETH	5300410	Oromo Ethiopia	Omotic Ethiopia	2013	2013
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1993	1994
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1996	1996
ETH	5300607	Somalie Ethiopia	Tigray (Tigraway) Ethiopia	1998	2013
ETH	5300709	Tigray (Tigraway) Ethiopia	Nilotic Ethiopia	2004	2004
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	1999	1999
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2002	2002
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2005	2005
ETH	5300910	Nilotic Ethiopia	Omotic Ethiopia	2009	2009

Country	Dyad ID	Group A name	Group B name	Start	End
AGO	5400304	Mbundu Angola	Kongo Angola	1991	1991
AGO	5400304	Mbundu Angola	Kongo Angola	1994	1994
AGO	5400304	Mbundu Angola	Kongo Angola	1996	1998
AGO	5400304	Mbundu Angola	Kongo Angola	2002	2004
AGO	5400304	Mbundu Angola	Kongo Angola	2007	2007
AGO	5400304	Mbundu Angola	Kongo Angola	2009	2009
MOZ	5410718	Shona Mozambique	Xitsonga Mozambique	1990	1992
MOZ	5411418	Cindau Mozambique	Xitsonga Mozambique	1990	1992
MOZ	5411418	Cindau Mozambique	Xitsonga Mozambique	2013	2013
ZWE	5520102	Black Zimbabwe	White Zimbabwe	2008	2008
ZAF	5600102	Black/African South Africa	Colored South Africa	1993	1993
ZAF	5600103	Black/African South Africa	White South Africa	1990	1994
ZAF	5600103	Black/African South Africa	White South Africa	1998	1998
ZAF	5600203	Colored South Africa	White South Africa	1990	1994

Chapter 4

The formation of collective grievances¹

¹ This Chapter has been submitted to a peer-reviewed scientific journal. Earlier versions of this Chapter were presented at several conferences: *European Consortium for Political Research General Conference (2017)*, *International Tricontinental Conference (2017)*, *European Political Science Association Annual Conference (2018)*, and the *Conference of Conflict Resolution and Peace Sciences (2018)*.

Abstract

Although the discrepancy between objective and perceived inequalities has been recognized in the literature, most studies do not distinguish between objective measures and subjective experiences. This means that collective grievances that influence individuals' decisions to mobilize for conflict are not captured well in previous analyses. In this chapter, I draw on data from the Afrobarometer surveys -- which include information on 79,914 individuals belonging to 239 ethnic groups living in 30 African countries -- to test a number of hypotheses about the relationship between individual and group characteristics and collective grievances. My results suggest that individual characteristics are as important, if not more important, than group characteristics in determining how individuals form their perceptions of collective grievances. In other words, perceptions are not just based on groups' actual situation, but are to a large extent shaped by individuals' backgrounds. In addition, my findings demonstrate that the salience of ethnic identity is intricately tied to how perceptions of collective grievances are formed.

4.1 - Introduction

Scholars investigating the relationship between conflict and inequality often argue that group inequalities lead to intergroup conflict because of the collective grievances experienced by relatively deprived groups (Østby, 2008; Stewart, 2008; Cederman et al., 2013). With this claim they make two critical assumptions that are not yet well tested. First, they assume that observed group inequalities are connected with perceived group grievances. Second, despite acknowledging that the salience of identity and socioeconomic background can vary per individual, they treat groups as uniform and group identities as salient. This research addresses these two assumptions by investigating the relationship between group deprivation, ethnic identity, individual socioeconomic characteristics, and perceived collective grievances, asking the question: *To what extent do individuals perceive relative deprivation as collective grievances at the individual level?*

To test a number of hypotheses about the relationships between individual and group characteristics and collective grievances, I draw on data from the Afrobarometer survey. Multilevel regression analysis is conducted on data for 79,914 individuals belonging to 239 ethnic groups and living in 30 African countries. The results indicate that respondents with a strong attachment to their ethnic identity, as well as those with less wealth or education, who are living in rural areas, younger, male, member of a community association and who get their news through newspapers are more likely to feel that their group is unfairly treated. Regarding characteristics of the groups, I find that when groups are smaller or poorer in comparison to other groups in the country, their members are more likely to perceive collective grievances. No significant effect is found for the size of the group's elites or for deprivation in education. An additional interaction analysis makes clear that highly-educated individuals belonging to smaller groups as well as rich individuals belonging to groups with lower levels of education or with a larger share of elites are less likely to experience collective grievances.

These empirical results indicate that both group and individual characteristics influence the perceptions of collective grievances among ethnic group members. The study thus makes a key contribution by finding that perceptions are not just based on groups' actual situation but also shaped by individuals' backgrounds. In addition, my findings demonstrate that the salience of ethnic identity is intricately tied to how perceptions of collective grievances are formed.

The chapter is organized as follows. The first section describes how the conflict-inequality nexus literature has focused mainly on objective inequalities, discusses the shift towards a perceptions-based approach, and provides a theoretical framework to explain how perceived collective grievances are formed. This framework incorporates group inequalities, identity salience and socioeconomic

background factors. From this theoretical framework five hypotheses regarding the relationship between these factors and perceptions of collective grievances are derived. The second section describes the data and methodological approach used to analyze the theoretical model and test the hypotheses. The third section presents the findings for the relationship between the independent variables and perceived collective grievances, as well as the conditions under which individual and group characteristics can influence perceptions of collective grievances. The fourth section discusses the implications and limitations of these findings, and the fifth section briefly summarizes the study and includes some final thoughts.

4.2 – The formation of collective grievances

The relationship between inequalities and ethnic conflict is well established in the conflict literature, mainly showing that larger socioeconomic and political inequalities between groups will increase the chance of conflict occurring (Langer, 2005; Østby, 2008; Cederman et al., 2013). Inequalities between groups are theorized to generate collective grievances in relatively deprived groups, and these grievances provide motivation for political action and potentially conflict (Gurr, 1993; Stewart, 2008). This conflict mechanism is outlined in Robinson's (1983) four-stage process regarding the development of consciousness of an inequality. The initial stage consists of individuals perceiving the existence of an inequality, which may be followed by a second stage where people experience inequality to be unfair or unjust. In the third stage, individuals realize that they can take action to address the inequalities, and in the fourth stage indeed action is undertaken to reduce the inequalities.² Collective grievances are thus formed when relatively deprived group members become aware of existing inequalities and believe their group is entitled to more than what it obtains.

Most empirical studies that investigate the relationship between inequalities and conflict examine group inequalities with 'objective' measures, such as differences between groups in education, in local economic activity, or in the number of assets and utilities that households have access to (Østby, 2008; Cederman et al., 2011; Cederman et al., 2013; Alcorta et al., 2018). However, the formation of grievances is not necessarily based on objective facts. Cederman et al. (2011, p. 481), for example, postulate that, "objective political and economic asymmetries can be transformed into grievances through a process of group comparison driven by collective emotions." This argument implies that the formation of grievances hinges on individuals' *perceptions*, which are subjective because they are coupled to individuals' emotions. Since perceptions are not only based on objective comparisons,

² The final two stages refer to the opportunity mechanism and fall outside the scope of this chapter since the focus is solely on examining how grievances are generated.

decisions to engage in violence could potentially be founded on 'erroneous' assumptions about a situation (Stewart, 2010).

Although the discrepancy between objective and perceived reality has been recognized in the literature, most studies do not distinguish empirically between objective measures and subjective experiences (Rustad, 2016). This means that the collective grievances that motivate individuals to mobilize for conflict are not captured well in these studies and we cannot be certain that the inferred causal chains from inequalities to conflict are valid (Basedau et al., 2017). Accordingly, there has been a recent push towards using subjective measures in conflict research (Langer et al., 2017). Langer and Smedts (2013) have indicated that there is a notable discrepancy between objective and subjective inequalities, and Rustad (2016) found that perceived inequalities are a more relevant indicator for support for violence than actual inequalities. Perceptions may strengthen the impact of group inequalities on people's support for violence by amplifying or mitigating group grievances (Miodownik and Nir, 2016). In contrast, a study of religious groups finds a relationship between political discrimination and collective grievances, but not between collective grievances and conflict (Basedau et al., 2017). These findings indicate that the causal chain proposed in grievance-based arguments does not necessarily hold at different stages of Robinson's (1983) process, and should be considered with care.

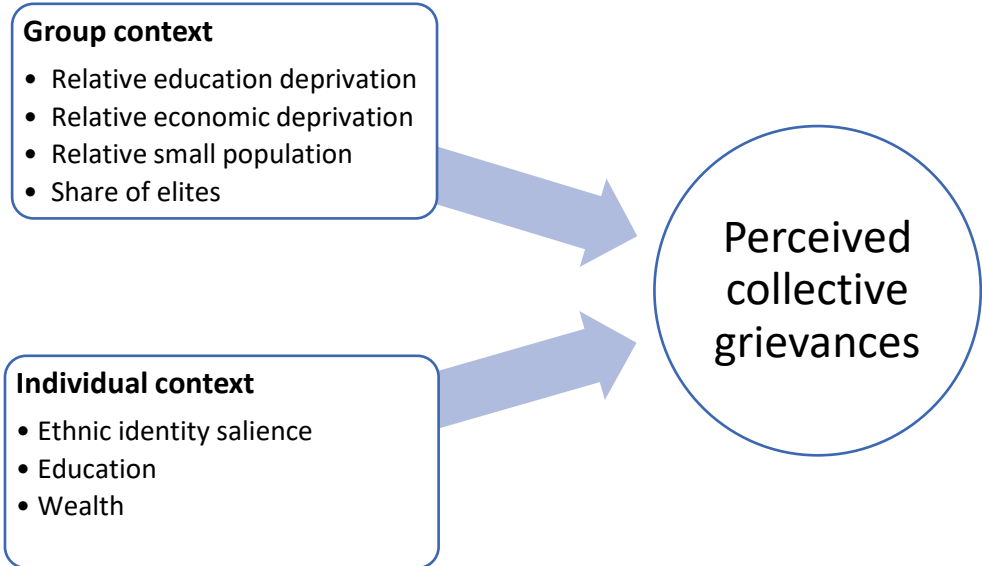
Focusing on the initial stage of the process, there are several factors that may disrupt the link between inequalities and grievances. First, if there is a lack of awareness or access to information, if inequalities are invisible, or if multiple types of inequalities occur simultaneously, it can be difficult for individuals to accurately judge how deprived their groups are relative to other groups (Langer and Mikami, 2013). Without 'objective' knowledge to rely on, people often fall back on anecdotal evidence or personal experiences to form their judgement. Lack of information makes them also susceptible to bias and inaccuracies and vulnerable to being deliberately misled by others (Langer and Smedts, 2013). Not everyone will be aware of the presence or extent of group inequalities. For instance, Langer and Ukiwo (2008) found that whilst individuals from ethnic minorities in Ghana were able to perceive their condition accurately, members of the dominant ethnic group did not correctly perceive its objective political status. Misperceptions might mean that group inequalities do not always translate to collective grievances, and vice versa.

Second, if the group is not cohesive or socially significant for its members, relative deprivation may not be experienced collectively (Stewart, 2005). In empirical research on inequalities and conflict, the recent focus on examining 'horizontal' - or group - inequalities means that groups are frequently taken as the unit of analysis. In these studies, group identities are usually assumed to be important for all

their members and individual socioeconomic characteristics are aggregated to the group level. Although it is necessary to treat groups as uniform to be able to observe group inequalities, not accounting for the variation between individuals within groups represents a major weakness in this approach. Individuals may differ substantially in socioeconomic status, age, gender, and how strongly they identify with their ethnic group (Taylor et al., 2010). Even if they can observe the existence of group inequalities, individual factors might influence their opinion on whether they perceive the relative deprivation of their group to be fair or unfair.

In Figure 4.A, the factors that this study considers to influence the formation of collective grievances are categorized in the theoretical framework by group and individual context. These factors are explained in more detail in the following sections.

Figure 4.A - Theoretical framework for determinants of perceived collective grievances



4.2.1 – Group context

According to Langer and Smedts (2013), the main factors determining how collective grievances are formed are the group characteristics shown in the upper-left box in Figure 4.A. These factors include relative group deprivation in education and wealth, the size of the population, and the share of elites within the group³. Although perceptions may differ from objective comparisons, they are usually based at least partially on the actual position of the group. Holmqvist (2012) found a weakly positive relationship between actual group ‘disadvantages’ and perceptions of inequality. Therefore, although

³ Political discrimination (Chapter 3) is another important group characteristic, but was excluded from the analysis due to the lack of available Ethnic Power Relations data (Vogt et al., 2015) for groups in the Afrobarometer surveys.

a group's advantage or disadvantage might be under or overreported, it is very unlikely that the information is erroneous to the extent that individuals are entirely oblivious of their group's position in society and believe that position to be altogether different from reality.

Differences in education and wealth are important socioeconomic inequalities between groups. Educational deprivation may induce perceptions of injustice because social services are assumed to be public goods, so people will expect them to be fairly distributed (Østby, 2008). Moreover, inequalities in education services can be highly visible. In rural areas, ethnic groups are often clustered together in villages. If the state selectively provides social services to some communities but not others, communities that do not benefit and are exposed to others are likely to harbour a collective sense of injustice against the groups in power.

Economic inequalities between groups are also expected to lead to conflict through the grievances they generate for relatively deprived groups (Stewart, 2008). However, the empirical findings on the relationship between economic inequalities and conflict have been mixed (Østby, 2008; Cederman et al., 2013; Huber and Mayoral, 2014; Alcorta et al., 2018). A potential reason for this may be that economic inequalities less likely lead to perceptions of unfair treatment because economic assets are not as visible as social goods and services (Alcorta et al., 2018). Most household assets are stored within the house, so are not as easily noticeable as public services like schools and health centres. When assets are visible they can be attributed to individual wealth rather than group wealth, since private goods do not usually benefit the community as a whole. Even when they are attributed to group wealth, it is possible that they are supposed to reflect lifestyle differences between groups. For this reason, no strong effects of economic deprivation on the perception of unfair treatment of one's group is expected.

The first hypothesis tests the general relationship between the two types of relative deprivation and perceived collective grievances:

H1: The more deprived an ethnic group is in regard to education or wealth relative to other groups in the country, the more likely its members will report that their ethnic group is unfairly treated.

Differences in size between ethnic groups are unlikely to trigger grievances as strongly as socioeconomic inequalities, because they can be seen as natural variations that are present in every society. However, there are instances when relative differences in population size might create feelings of resentment, such as when minority groups without much access to power are side-lined by state policies. The perception of unfair treatment might be all the more acute if marginalized groups are

relatively large but are not allocated the proportionate amount of resources or services they feel entitled to by the government. If politically excluded or discriminated groups are large in comparison to the groups in power, they are found to be more prone to conflict (Cederman et al., 2013; Buhaug et al., 2014). However, these cases are more likely to be the exception than the rule. Generally speaking, groups which are relatively smaller than other groups will be less represented in government because they have fewer votes, and consequently, political exclusion is likely to lead to the formation of collective grievances (Cederman et al., 2013). I therefore expect individuals from relatively smaller groups to perceive collective grievances more strongly:

H2: The smaller an ethnic group is relative to other groups in the country, the more likely its members will report that their ethnic group is unfairly treated.

An additional characteristic to consider is the role of elites within ethnic groups. Daloz (2010) defines elites as a small and selected group of citizens that controls relatively large amounts of wealth and power. Accordingly, they have been shown to wield a strong influence within their ethnic group (Fearon and Laitin, 2000; Huber and Mayoral, 2014). Elites might use this influence to advance their own economic and political interests by stirring up grievances and mobilizing their ethnic group towards collective action (Besançon, 2005). A positive association has been found between the share of elites in groups and the risk of ethnic conflict (Alcorta et al., forthcoming). The expectation is therefore that a larger percentage of elites within a group will increase the perception of collective grievances, because their influence on the group will be more solidified, increasing their ability to mobilize group members:

H3: The larger the share of elites in an ethnic group, the more likely its members will report their group to be unfairly treated.

4.2.2 – Individual context

As shown in the lower-left box in Figure 4.A, the salience of individuals' ethnic identity may directly and indirectly influence the extent to which individuals perceive inequalities between groups as collective grievances. The study of how social identities form and the impact they have on individual and group behaviour has a long tradition in social psychology (Robinson, 2014). Most theories start with the assumption that individuals are constantly categorizing other individuals into one of two categories: the in-group or out-group. Social categories are sets of people who are given a label, or labels, and who can be distinguished by two main features: (1) the rules of membership that decide who is considered a member of the category and; (2) the characteristics (beliefs, desires, moral

commitments, and physical attributes) thought to be typical of members of the category, or behaviours expected of them (Fearon and Laitin, 2000). Some of these characteristics are strongly fixed (skin colour, place of birth), whilst others are can potentially change over time (religion, class, language, etc.). These characteristics encompass personal and social traits, which can sometimes overlap. Individuals also may have some freedom of choice regarding which particular set of traits to highlight over others (Laitin, 1998).

In the collective action literature, identities must have social significance in order for groups to perceive collective grievances and to mobilize. Horowitz (1985) contended that group members must share some identifiable attributes that have continuity over time, such as race, appearance, language or religion. Observable characteristics place some constraints on being able to switch between identities and facilitate collective experiences. Early experiments demonstrated that such categorization, even based on artificial and temporary distinctions, can strongly influence individuals' perception and assessment of others, as well as cooperative behaviour (Billig and Tajfel, 1973). Cederman et al. (2011) connected the tendency of group members to make social comparisons between in-group and out-group categories with the salience of group identity. When identity groups are used as the unit of measurement, empirical studies tend to assume that identities are rigid and uniform (Østby, 2008; Cederman et al., 2011).

Scholars researching inequalities between groups (Langer, 2005; Huber and Mayoral, 2014; Kuhn and Weidmann, 2015) claim that identity can be used as a tool by elites for collective mobilization. Studies that take into account that identity salience may vary for individuals have found that, in societies with low ethnic polarization, the risk of conflict is higher when ethnic identity is salient (Bhavnani and Miodownik, 2009; Miodownik and Bhavnani, 2011). If individuals do not associate themselves with their ethnic group, or foster a national identity, they are less likely to regard the inequalities that they experience as injustices perpetrated against their group. It would then be more difficult for political leaders to mobilize the group towards collective action. For example, Hutus might feel more attached to their ethnic heritage than Xhosa, because the tribal subdivisions within the Xhosa are more prevalent than in the relatively homogeneous Hutu group. Moreover, the discrimination the Xhosa faced in South Africa during Apartheid was connected to their race rather than their ethnicity, so this experience may have strengthened their black identity over their ethnolinguistic identity. Therefore, one would expect Xhosa individuals to be less collectively aggrieved than Hutu individuals. Accordingly, for the salience of ethnic group identification, I formulate the following hypothesis:

H4: Members of relatively deprived or smaller groups are more likely to report that their group is treated unfairly if they identify strongly with their ethnic group.

Studies have shown that individual socioeconomic factors are important in determining how grievances are formed, because individuals' personal situation can affect how they perceive their own position in society (Langer and Smedts, 2013). For instance, in the Niger Delta, Oyefusi (2008) found that socioeconomic access and income are negatively related to personal grievances, whilst education, assets, and whether the individual belonged to the Ijaw ethnic group were positively related with personal grievances. The socioeconomic background of individuals does not only influence the formation of their own personal grievances, but may also distort individuals' perceptions of their group's position. Langer and Smedts (2013) suggest that if individuals' socioeconomic situations are different from their ethnic group's average, they are less likely to assess their group's situation correctly. Their empirical study found a positive correlation between individuals' (perceived) situation and their assessment of their ethnic group's position relative to the rest of the country. In other words, individuals who are relatively advantaged or perceive themselves to be relatively socioeconomically advantaged are more likely to perceive their group to be relatively advantaged compared to other ethnic groups.

If individuals' own socioeconomic background influences how they view the relative status of their group, it is possible that their background will also affect the perception of group grievances. This relationship is illustrated in the lower-left box in Figure 4.A, with individual socioeconomic characteristics acting as moderators to the relationship between group characteristics and perceived collective grievances, as well as being independent indicators. For example, members of a disadvantaged ethnic group who are employed in well-paying jobs, who can afford abundant assets and who live in an affluent neighbourhood, might not perceive the relative deprivation of the group, and subsequently not share the group's collective grievances. Members of a disadvantaged group who are more disadvantaged than the average may develop even stronger resentments, and by linking their misfortune to their group might (mis)perceive collective grievances.

The variation in the education level of individuals in a group is another important reason to why perceptions of grievances may differ between individuals (Robinson, 1983). Access to education can provide a direct and positive impact on people's lives by providing individuals with more opportunities (Aoki et al., 2002). Education also influences how individuals orient their values through both socialization and sorting processes (Wimmer, 2013). National education rewards behaviour and norms valued by the state, and individuals who do not conform are filtered out from institutions of higher education (Bourdieu and Passeron, 1990). Since education is usually provided by the state, the system will often seek to construct a national identity in which individuals adhere to mainstream values (Wimmer, 2013), such as the nationalization policy implemented within the education system in

Botswana or the focus that Tanzania placed on a national history and language in the public school curriculum as part of its social integration approach (Wangwe, 2005; Dryden-Peterson and Mulimbi, 2017). Hence, an increase in education is likely to reduce the likelihood that individuals perceive collective grievances, even when their ethnic groups are discriminated in objective terms. This leads us to hypothesize that socioeconomic backgrounds of individuals will distort their perceptions of collective grievances:

H5: Members of relatively deprived or smaller groups are less likely to report that their ethnic group is treated unfairly if they are wealthier or more educated.

4.3 – Data and Methods

4.3.1 - Data

To test the hypotheses, I use data for 30 African countries derived from rounds 5 and 6 of the Afrobarometer surveys (2012 and 2014). Afrobarometer collects data on public attitude on democracy, governance, economic conditions, and related issues in African countries. The combined dataset contains information on 79,914 respondents, using clustered, stratified, and area probability samples across multiple stages with random selection methods at every stage. Sampling was done with probability proportional to the district's population in order to improve the chance of more populous geographical units being represented in the survey. Notably, the surveys include questions on ethnic identity, which allows for the aggregation of individual characteristics to the ethnic group level.

Group-level data are created by aggregating the socioeconomic indicators of individuals to the ethnic group level. Ethnic identity was determined by asking what the respondent's ethnic group or tribe was. The respondent was able to choose from a list of predefined categories, or select 'other' and fill in their own category. When ethnic groups contained only a small number of observations, they were incorporated into larger clusters of ethnolinguistically similar groups (Joshua Project, 2018; Olson, 1996; Simons and Fennig, 2018).⁴ In total there are data for 239 ethnic groups (see Table A.4.1 in the Appendix for the full list).

4.3.2 - Methods

The data are analysed with multilevel ordered logit regression analysis, using random effects to control for clustering of individuals within ethnic groups (Hox, 2010). To address the clustering within

⁴ If small ethnic groups did not share any similarities with other groups and consisted of less than 1% of the observations in a country, they were left out of the analysis.

countries, country-level fixed effects dummies are included in the models. The first regression model represents the baseline model, containing main effects of explanatory variables. The second regression model includes the interaction effects of individual socioeconomic characteristics and identity variables. Only significant interactions are included in the model.

For the dependent variable, a measure of *perceived collective grievances* is used, whereby respondents are asked how often they feel that the government treats their ethnic group unfairly. The categories of responses are: 'never' (0), 'sometimes' (1), 'often' (2) and 'always' (3). By examining the overall perceptions of collective grievances, I am able to examine the second stage of Robinson's (1983) four-stage process of inequality - whether individuals believe inequalities to be fair or unfair, or whether they nurture a grievance as a result of an inequality. Due to the ordinal nature of the dependent variable, ordered logit model are used for the analyses.

The identity variable is based on a question on the relative importance of ethnic and national identification, and asks respondents "suppose that you had to choose between being a [respondent's nationality] and being a [respondent's ethnic group]. Which of these two groups do you feel most strongly attached to?" The possible responses were "only national" (0), "more national than ethnic" (1), "equally national and ethnic"(2), "more ethnic than national"(3), or "only ethnic" (4). Thus, the identity variable is a relative measure of national group identification versus ethnic group identification.

The respondent's educational level is measured on a nine-point scale ranging from no formal schooling to postgraduate education. Each category in the scale is recoded into an approximate number of accumulated years of schooling that the educational level would require. Individual wealth is measured by the International Wealth Index (IWI); an economic welfare index that is based on a weighted combination of consumer durables, housing characteristics and public utilities (Smits and Steendijk, 2015). IWI scores run from 0 to 100, with 0 representing households which have none of the assets and lowest quality housing/public utilities and 100 representing households having all the included assets, as well as the highest quality housing and public utilities.

To examine the effects of relative deprivation, indicators for the level of group deprivation in education and wealth are constructed. The individual characteristics described above are aggregated to the ethnic group and to the national level by computing the group and national mean. Group deprivation in education and wealth is determined by subtracting the group mean from the national mean for these variables. The resulting variables indicate to what extent groups are more or less educated or wealthier or poorer than the country average. The relative population size variable is also relative to

other groups in the country – it is determined by subtracting the size of the group from the mean group size of the country. For the size of the group's elite, data are extracted from the respondents' occupational level, which is only available for round 6. The proportion of individuals in each ethnic group working in high-skilled non-agricultural jobs is taken as their average share of elites.

The analysis controls for several individual background characteristics, including the respondent's gender (0 for male, 1 for female), age, and membership in formal associations (*religious* and *community*). Associational membership is measured with ordinal scales, consisting of non-member (0), inactive member (1), active member (2) and official leader (3) categories. Access to information is measured by urbanization of place of living and frequency of media consumption. The survey records whether the respondent resides in a rural (0), semi-rural (0.5) or urban area (1), which serves as a substitute to account for their exposure to other people outside of their community. This control is important because individuals who live in rural areas are usually more isolated than city dwellers and might not have sufficient access to information to form an accurate opinion on the relative status of their group. Controls for media consumption are included, measured by the frequency with which individuals receive their news from TV and from newspapers. Categories for this scale consist of never (0), less than once a month (1), a few times a month (2), a few times a week (3) and every day (4).

Existing conflict might create incentives for individuals to engage in violence, so a dummy variable is included to control for whether an ethnic group has been involved in conflict in the five years prior to the observation of the first survey (2012). The observation is coded as 1 if the group is classified as being involved in conflict with at least 25 battle deaths in any of the years between 2007 and 2011, according to the Uppsala Conflict Data Program (Eck et al., 2007; Sundberg et al., 2012; Allansson et al., 2017). Table A.4.2 in the Appendix presents the complete list of conflict observations. If the group has not engaged in conflict within that period, the observation is coded as 0. To control for missing values on the variables in the analysis, the dummy variable adjustment procedure is used (Allison, 2001).

4.4 - Results

The variables used in the analysis are described in Table 4.A. Overall, most people in the sample do not report experiencing their group to be treated very unfairly by the government. The average is 0.64 on a scale of 0 to 3, with 0 representing individuals who never experience their group being treated unfairly and 3 representing individuals who always experience unfair treatment. On the individual level, most people identify more strongly with their national identity than their ethnic identity, with the identity variable averaging 1.24 on a range of 0 to 4. The average number of years of education is

7.03, and individuals have a mean wealth of 48.12 on the IWI scale (which ranges from 0-100). The average age of the respondent is 37.16 years, 38% of them lives in urban areas, and the sample is evenly split between men and women. Individuals are on average more engaged with religious groups (0.89) than with community groups (0.68), and more frequently watch TV (1.83) than they read the newspapers (0.97).

With respect to group level variables, the educational levels of groups range from 5.43 years below to 5.09 years above the national average. Group levels of wealth vary from -31.88 to +24.57 on the IWI scale relative to the country mean. The average ethnic group deviates from the average group size in the country by 509.04 people. The share of elites is on average 15.21% of the group, and the likelihood that an ethnic group has been involved in a violent conflict over the past five years is 19%.

Table 4.A - Descriptive statistics summary table for selected independent and dependent variables in 30 African countries

Variables	Mean	Std. Deviation	Minimum	Maximum
Perceived collective grievances	0.64	0.94	0	3
Individual				
Ethnic identity salience	1.24	1.17	0	4
Education (years)	7.03	5.01	0	17
Wealth (IWI)	48.12	26.20	0	100
Group				
Education deprivation (years)	-0.02	1.10	-5.43	5.09
Wealth deprivation (IWI)	-0.35	7.58	-31.88	24.57
Small population size	509.04	783.62	-2748.80	945.75
Average share of elites (%)	15.21	10.71	0	64.3
Individual control factors				
Urbanized (%)	0.38	0.48	0	1
Female (%)	0.50	0.50	0	1
Age (years)	37.16	14.48	18	105
Religious association	0.89	1.00	0	3
Voluntary or community association	0.69	0.96	0	3
TV	1.83	1.79	0	4
Newspapers	0.97	1.40	0	4
Group control factors				
Conflict in past five years (%)	0.19	0.39	0	1

Source: Afrobarometer Surveys Rounds 5 and 6 (2012 and 2014)

The results for the regression analysis with perceived collective grievances as the dependent variable are presented in Table 4.B. Model 1 represents the results for the bivariate analysis, Model 2 is the baseline model for the multivariate analysis, and Model 3 includes the significant interaction effects between group characteristics, identity salience and individual socioeconomic indicators. Although the significance varies between the bivariate and multivariate analyses, the direction of the coefficients

for the main and control variables are mostly the same for the three models. The few exceptions are for individual education and urbanization, which are only significant in the bivariate model, and for getting news through newspapers, which is only significant for the multivariate models. Since the multivariate models provide a more complete analysis and most coefficients are consistent across the models, the rest of this section will concentrate on the multivariate analyses.

The strongest effect in the model is for the salience of ethnic identity - individuals who identify strongly with their ethnic group are significantly more likely to perceive collective grievances. For the other variables on the individual level, I observe in bivariate model that an increase in the level of education has a negative and significant effect on individuals' perception of collective grievances, although the coefficient loses its significance in the multivariate models. This is probably due to a high correlation between individual education and other independent variables, which once included in the model supplant the effect of education. An increase in wealth is significantly and negatively related to the perception regarding the treatment of the ethnic group by the government. Women and older individuals are less likely to feel their group is unfairly treated. Community group membership is positively associated with perceived collective grievances, whereas religious group membership has no significant relationship. Interestingly, the sources of news used by the respondents have opposite relationships with the perception of collective grievances. People who watch television more often are less likely to feel their group is unfairly treated, whereas people who get their news through newspapers more often express this viewpoint. Controls for urbanization and the involvement of the ethnic group in conflict in the past five years have no significant effect in any of the models.

Regarding group level characteristics, it can be observed that members of groups that are relatively deprived in wealth or of relatively small groups tend to have significantly higher levels of collective grievances. This result is in line with the first and second hypothesis. Relative group deprivation in education and the share of elites in the group are not significantly associated with perceived collective grievances. Hence no direct support for the third and fourth hypothesis is found.

Our interaction analysis (Model 3) reveals that in addition to its independent effect, the salience of ethnic identity is also an important moderating factor that conditions the effect of educational deprivation and population size. However, contrary to the prediction of the fourth hypothesis, I find that in lowly educated and smaller groups a strong ethnic identity less easily leads to the perception of grievances. There is also a significant positive interaction between ethnic identity and the size of a group's elite. This interaction links back to the third hypothesis, by indicating that individuals who strongly identify with their ethnic group might be more easily moved by their elites towards grievances.

Table 4.B - Multilevel ordered logit coefficients for bivariate and multivariate associations between selected independent variables and perceived collective grievances in 30 African countries

Variables	Model 1	Model 2	Model 3
Individual			
Ethnic identity salience	0.041*** (0.005)	0.414*** (0.013)	0.398*** (0.016)
Education years	-0.003*** (0.001)	-0.000 (0.001)	-0.000 (0.001)
Wealth	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Group			
Education deprivation	0.002 (0.009)	-0.024 (0.021)	-0.025 (0.021)
Wealth deprivation	0.004* (0.002)	0.008** (0.003)	0.008** (0.003)
Small population size	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)
Share of elites	0.040 (0.037)	0.048 (0.040)	0.037 (0.040)
Individual control factors			
Urbanized	-0.057*** (0.009)	-0.016 (0.010)	-0.017 (0.010)
Female	-0.033*** (0.008)	-0.040*** (0.008)	-0.038*** (0.008)
Age	-0.001* (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Religious association	0.008 (0.004)	0.003 (0.004)	0.003 (0.004)
Community association	0.019*** (0.004)	0.018*** (0.005)	0.018*** (0.005)
TV	-0.021*** (0.003)	-0.013*** (0.003)	-0.013*** (0.003)
Newspapers	-0.002 (0.003)	0.015*** (0.004)	0.015*** (0.004)
Group control factors			
Conflict in past five years	-0.014 (0.090)	-0.012 (0.086)	-0.006 (0.086)
Interactions			
Ethnic identity salience * education deprivation			-0.049*** (0.012)
Ethnic identity salience * wealth deprivation			N.S.
Ethnic identity salience * small population size			-0.000* (0.000)
Ethnic identity salience * average share of elites			0.005*** (0.001)
Individual education * education deprivation			N.S.
Individual education * wealth deprivation			N.S.
Individual education * small population size			-0.000* (0.000)
Individual education * average share of elites			N.S.
Individual wealth * education deprivation			-0.001** (0.000)
Individual wealth * wealth deprivation			N.S.
Individual wealth * small population size			N.S.
Individual wealth * average share of elites			-0.002*** (0.001)
Observations	79,914	79,914	79,914

* $p < .05$; ** $p \leq .01$; *** $p \leq .001$. Standard errors in parentheses. Fixed effects country and missing dummies not reported. Model 1 represents the bivariate analysis, where each coefficient was estimated separately.

The findings also provide some support for the fifth hypothesis, which posited that individuals belonging to smaller or socioeconomically deprived groups might less likely perceive their ethnic group to be treated unfairly if those individuals themselves are wealthier or more highly-educated. Specifically, I find that more highly-educated individuals from relatively small groups and wealthier individuals belonging to educationally deprived groups are less likely to perceive collective grievances. Finally, individuals in groups with a large share of elites are less likely to feel that their group is unfairly

treated if they are individually wealthy.

4.5 - Discussion

Most research studying the relationship between inequalities and conflict has used objectively observed data, when in fact subjective perceptions may be better predictors of violence (Rustad, 2016). In order to gain insight into the link between objective measures and subjective perceptions, in this chapter I investigate how group and individual characteristics shape perceptions of collective grievances. Specifically, I examine how relative deprivation and the presence of elites on the group level, and the salience of identity and socioeconomic factors on the individual level, are associated with perceived unfair treatment by the state towards an individual's ethnic group. Overall, the findings provide support for the claim that there is a positive relationship between objective observations and subjective perceptions (Holmqvist, 2012; Langer and Smedts, 2013; Basedau et al., 2017), as relative group deprivation tends to explain the existence of collective grievances to a certain extent. However, the findings also highlight the importance of individual characteristics in the formation of collective grievances, which might explain why the link between objective comparisons and subjective perceptions has not yet been conclusively established.

Regarding the effects of relative group deprivation, this chapter presents some interesting findings. In the literature on inequalities and conflict, differences between groups are supposed to increase the risk of conflict through the grievances they generate within the deprived groups (Murshed and Tadjoeeddin, 2009; Østby, 2013). In line with this argument, relative deprivation with regard to wealth, education or population size was expected to be positively associated with individuals' perception of collective grievances. Our findings show that there is indeed a link between deprivation and grievances, but that this link is not straightforward. Individuals belonging to groups that are poorer or smaller than other groups in the country indeed do feel their group to be more unfairly treated by the government, but individuals belonging to groups with a relatively low educational level do not.

Salience of ethnic identity is found to be one of the strongest contributing factors to perceived collective grievances. This finding empirically corroborates a core assumption in the literature that identities need to be salient in order for groups to have the motivation to mobilize (Horowitz, 1985; Stewart, 2008; Cederman et al., 2013). Identifying with the group means individuals are likely to care more about their group's status, and this attachment can increase the perceived distances across ethnic groups (Sambanis and Shayo, 2013). The effect of identity salience is significant as an independent factor, which means that individuals who are strongly attached to their ethnic identity are more likely to feel their group is aggrieved than individuals who do not identify with their ethnic

identity, regardless of whether their group is actually deprived or not. Interestingly, salience of ethnic identity is less associated with grievances if the group is relatively small or has a low educational level. This might be due to the fact that individuals with a low educational level and members of small groups already tend to perceive collective grievances more strongly than others (as the main effects of these variables show), so that there is less room for identity to make a difference. At the same time, I find that the effect of identity is stronger in groups with a larger elite.

Similarly to previous chapters, elites play a pivotal role. Interestingly, the effect of a large share of elites on individual perceptions of collective grievances is contingent on characteristics of the individual. In groups with a large share of elites, individuals who are strongly attached to their ethnic identity more easily tend to feel that their group is unfairly treated. This seems to suggest that elites are particularly able to manipulate the perceptions of the group members with strong attachments to their group. At the same time it can be seen that wealthier individuals are less likely to feel their group is unfairly treated if they belong to a group with a large share of elites than in groups with a small elite. This might be due to the fact that individuals with a certain income have a higher chance of belonging to their groups elite if the size of the elite is larger. Since the results indicate that on its own, the share of elites has no relationship with collective grievances, the division between rich and poor within an ethnic group is an important one to make. This division is argued in earlier studies to be a central factor in understanding within-group incentives for conflict (Esteban and Ray, 2008; Huber and Mayoral, 2014), poverty might leave individuals vulnerable to manipulation by their own elites (Humphreys and Weinstein, 2008).

Two important limitations should be noted. First, the Afrobarometers do not survey the same individuals over time, which means that it is not possible to control for potential endogeneity between ethnic identity and collective grievances. It is possible that ethnic identities not only shape collective grievances, but are themselves also constructed on the basis of collective experiences (such as a shared sense of deprivation or injustice). For example, Higashijima and Houle (2018) find that group inequalities strengthen ethnic identity, although they acknowledge that they suffer from the same limitations on being able to determine causality. However, the purpose of this chapter is not to determine in which direction the relationship goes, but rather to establish that the relationship exists. Whether group inequalities create ethnic identities or vice versa, it is important to note that the presence of both can increase the perceptions of unfair treatment against one's ethnic group.

Second, prior conflict between groups may influence their members' perceptions of collective grievances (Cederman et al., 2013). In the analysis, I included a control for whether the group had been in conflict in the past five years. Nevertheless, this control only accounted for the presence of ethnic

conflict of that particular ethnic group, and does not consider other types of violence that may influence individual perceptions. If data becomes available that would allow for a better comparability across time, future research will be able to further explore the effects of conflict on grievances.

4.6 - Conclusion

The aim of this chapter was to determine how individuals form collective grievances, in order to observe to what extent and in which ways subjective perceptions are derived from objective group comparisons. I postulated that the process is influenced by a combination of group and individual characteristics, namely relative deprivation and the influence of elites on the group level, and identity salience and socioeconomic background on the individual level. To test my arguments, I drew upon observations from 79,914 individuals across 30 countries from the Afrobarometer surveys.

The study contributes to the literature in two important ways. First, to my knowledge, this is the first large-N empirical test of the motivation mechanism for ethnic groups in the conflict-inequality literature. The findings indicate that individuals in groups who are relatively deprived base their collective grievances more easily on differences in wealth and population size than on differences in education. This suggests that the causal chain between inequalities and grievances as theorized in the literature does not always apply. Second, perceptions of collective grievances are substantially influenced by individual characteristics, perhaps even more so than by group characteristics. This suggests that -- possibly due to a lack of correct information -- individuals tend to base their perceptions of the situation of their group in part on their own personal situation. Third, our analyses make clear that individuals' attachment to their ethnic identity and their socioeconomic background are key factors in shaping collective grievances, both as independent factors and in combination with relative deprivation.

The prominence of individual characteristics as explanatory factors might explain why the link between inequalities and grievances is less robust than expected on the basis of the literature (Østby, 2008; Cederman et al., 2013). To understand how people form grievances severe enough to mobilize towards conflict, scholars had moved towards the study of groups. But when objective measures are aggregated to the group level, groups become just a sum of their parts. Therefore, it is important to also account for variation in some important individual characteristics. The increased availability of public opinion data makes it possible for scholars to shift the focus towards perceptions-based indicators, and this study takes an initial but important step in this direction.

4.7 - Appendix

Table A.4.1 - List of ethnic group clusters derived from the Afrobarometer Surveys

Bambara Mali	Temne Sierra Leone	Acholi Uganda	Shona Zimbabwe Chewa/Sena
Malinké Mali	Mende Sierra Leone	Alur Uganda	Zimbabwe
Peulh Mali	Fula Sierra Leone	Adhola Uganda	Tonga Zimbabwe
Sarakolé/Soninké/ Marka Mali	Creole Sierra Leone	Baganda Uganda	Ndebele Zimbabwe
Sonrai/Songhai Mali	Mandingo Sierra Leone	Bagisu Uganda	Chewa Malawi
Dogon Mali	Loko Sierra Leone	Bagwere Uganda	Tumbuka Malawi
Tamasheq/Tuareg Mali	Sherbro Sierra Leone	Bakiga Uganda	Lomwe Malawi
Senoufo/Minianka Mali	Limba Sierra Leone	Bakonjo Uganda	Tonga Malawi
Bobo Mali	Kono Sierra Leone	Banyakole Uganda	Yao Malawi
Wolof Senegal	Akan Ghana	Banyoro Uganda	Nkonde Malawi†
Pular Senegal	Ga/Dangbe Ghana	Basoga Uganda	Sena Malawi
Serer Senegal	Ewe/Anglo Ghana	Batoro Uganda	Ngoni Malawi
Mandinka/Bambara Senegal	Guan Ghana*	Iteso Uganda	Ndali Malawi†
Soninke Senegal	Dagomba Ghana	Karimojong Uganda	Manganka/Nyanja Malawi
Diola Senegal	Grussi Ghana	Lango Uganda	Black/African South Africa
Adja Benin	Gruma Ghana	Lugbara Uganda	Coloured South Africa
Bariba Benin	Hausa Ghana	Madi Uganda	White South Africa
Dendi Benin	Dagarti Ghana	Kalenjin Kenya	Asian/Indian South Africa
Fon Benin	Adja-Ewe Togo	Kamba Kenya	Afrikaans Namibia
Yoa Benin	Akposso/Akebou Togo	Kikuyu Kenya	Damara>Nama
Ditamari Benin	Ana-Ife Togo	Kisii Kenya	Namibia
Peulh Benin	Kabye/Tem Togo	Luhya Kenya	Herero Namibia
Yoruba Benin	Para-Gourma/Akan Togo	Luo Kenya	Kavango languages Namibia
Djerma/Songhai Niger	Arab- Choa/Peulh/Haoussa/Kanuri Cameroon	Maasai/Samburu Kenya	Caprivi languages Namibia
Hausa Niger	Biu-Mandara Cameroon	Meru/Embu Kenya	Oshiwambo Namibia
Kanuri/Toubou Niger	Cameroon Adamaoua-Oubangui Cameroon	Mijikenda Kenya	Mokoena Lesotho
Peul Niger	Bantoïde South-West Cameroon	Somali Kenya	Motaung Lesotho
Touareg Niger	Grassfields Cameroon	Taita Kenya†	Mohlakoana/Moteban g Lesotho
Sousou Guinea	Bamilike/Bamoun Cameroon	Turkana Kenya	Mofokeng Lesotho
			Mosiea Lesotho

Peulh Guinea	Côtier/Ngoe/Oroko Cameroon	Central Tanzania Central Lakes	Motsoeneng Lesotho
Malinke Guinea	Beti/Bassa/Mbam Cameroon	Tanzania East Coastal	Motlounng Lesotho
Kissi Guinea	Ibibio/Efik Nigeria	Tanzania	Mophuthi Lesotho*
Toma Guinea	Bini/Edo/Urhobo Nigeria	Omotic Tanzania Kikuyu/Kamba	Lephuthing Lesotho
Guerze Guinea*	Fulani Nigeria	Tanzania†	Mophuthi Lesotho
Bobo Burkina Faso	Hausa Nigeria	Nguni Tanzania Makua/Yao	Motlokoa Lesotho
Dioula Burkina Faso Fulfulde/Peul	Egbira/Igbira/Ibira Nigeria	Tanzania	Letebele Lesotho
Burkina Faso Gourmantché	Igala/Igbala Nigeria	Nilotic Tanzania Central East	Lekholokoe Lesotho
Burkina Faso Gourounsi Burkina Faso	Igbo Nigeria Ijaw/Izon Nigeria	Tanzania Swahili Tanzania Makonde	Lekhoakhoa Lesotho Mothepe Lesotho
Lobi Burkina Faso	Kanuri/Berberi Nigeria	Mozambique	Mokhatla Lesotho
Mossi Burkina Faso	Nupe Nigeria	Bemba Zambia	Tswana Botswana
Senufo Burkina Faso	Tiv Nigeria	Lala Zambia	Basarwa Botswana
Bissa Burkina Faso	Yoruba Nigeria	Bisa Zambia	Kalanga Botswana
Dagara Burkina Faso	Middle Belt Nigeria	Lamba Zambia	Kgalagadi Botswana
Dafing Burkina Faso	Fang Gabon*	Tonga Zambia	Coastal Madagascar Highlanders
Samo Burkina Faso	Kota-Kele Gabon*	Lenje Zambia	Madagascar Afro-Mauritian (Creole) Mauritius
Bassa Liberia	Mbede-Teke Gabon*	Luvale Zambia	Hindu Mauritius
Gbandi Liberia	Myene Gabon*	Lunda Zambia	Marathi Mauritius
Belle Liberia*	Nzabi-Duma Gabon*	Kaonde Zambia	Muslim Mauritius
Dei Liberia*	Okande-Tsogho Gabon*	Lozi Zambia	Tamil Mauritius
Gio Liberia	Shira-Punu/Vili Gabon*	Chewa Zambia	Telegu Mauritius
Gola Liberia	Emakhuwa Mozambique	Nsenga Zambia	Arab Morocco*
Grebo Liberia	Changana Mozambique	Ngoni Zambia Mambwe	Rifi Morocco*
Kissi Liberia	Sena Mozambique	Zambia Namwanga	Soussi Morocco*
Kpelle Liberia	Elomwe Mozambique	Zambia	Chalh Morocco*
Krahn Liberia	Chuabo Mozambique	Tumbuka Zambia	Sahrahoui Morocco*
Kru Liberia	Cibalke Mozambique†	Akan Ivory Coast	Arab Algeria*
Lorma Liberia	Bitonga Mozambique	Kru Ivory Coast Mand (north)	Chaouli Algeria*
Mandingo Liberia	Nyanja Mozambique	Ivory Coast Mand (south)	Berber Algeria*
Mano Liberia	Chope Mozambique	Ivory Coast Voltaic Ivory Coast	Hutu Burundi Tutsi Burundi
Mende Liberia	Ndau Mozambique		
Vai Liberia			

* Only included in the analysis for Chapter 4, † only included in the analysis for Chapter 5.

Table A.4.2 - List of ethnic conflicts derived from the UCDP database for 30 Sub-Saharan African countries, 2007-2011

Country	Dyad ID	Group A name	Group B name	Start	End
MLI	4320207	Malinké Mali	Tamasheq/Tuareg Mali	2007	2009
MLI	4320507	Sonrai/Songhai Mali	Tamasheq/Tuareg Mali	2008	2008
SEN	4330105	Wolof Senegal	Jola Senegal	2011	2011
NER	4360508	Kanuri/Toubou Niger	Touareg Niger	2007	2008
CIV	4370103	Akan Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370105	Akan Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370106	Akan Ivory Coast	Burkina Faso Ivory Coast	2011	2011
CIV	4370203	Kru Ivory Coast	Mand (north) Ivory Coast	2011	2011
CIV	4370205	Kru Ivory Coast	Voltaic Ivory Coast	2011	2011
CIV	4370206	Kru Ivory Coast	Burkina Faso Ivory Coast	2011	2011
GIN	4380203	Peulh Guinea	Malinke Guinea	2009	2009
GIN	4380206	Peulh Guinea	Guerze Guinea	2009	2009
GIN	4380306	Malinke Guinea	Guerze Guinea	2011	2011
NGA	4750308	Fulani Nigeria	Ijaw/Izon Nigeria	2008	2008
NGA	4750309	Fulani Nigeria	Kanuri/Berberi Nigeria	2009	2009
NGA	4750312	Fulani Nigeria	Tiv Nigeria	2011	2011
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2008	2008
NGA	4750314	Fulani Nigeria	Middle Belt Nigeria	2010	2011
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2008	2008
NGA	4750414	Hausa Nigeria	Middle Belt Nigeria	2010	2010
NGA	4750809	Ijaw/Izon Nigeria	Kanuri/Berberi Nigeria	2011	2011
NGA	4750914	Kanuri/Berberi Nigeria	Middle Belt Nigeria	2011	2011
UGA	5000105	Acholi Uganda	Baganda Uganda	2008	2011
UGA	5000110	Acholi Uganda	Banyakole Uganda	2008	2011
UGA	5000116	Acholi Uganda	Iteso Uganda	2003	2007
UGA	5000118	Acholi Uganda	Lango Uganda	2003	2007
UGA	5000509	Baganda Uganda	Bakonjo Uganda	2007	2007
UGA	5000509	Baganda Uganda	Bakonjo Uganda	2010	2011
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	2007	2007
UGA	5000910	Bakonjo Uganda	Banyakole Uganda	2010	2011
KEN	5010103	Kalenjin Kenya	Kikuyu Kenya	2007	2008
KEN	5010104	Kalenjin Kenya	Kisii Kenya	2008	2008
KEN	5010107	Kalenjin Kenya	Masai Kenya	2009	2009
KEN	5010110	Kalenjin Kenya	Somali Kenya	2011	2011
KEN	5010112	Kalenjin Kenya	Turkana Kenya	2008	2008
KEN	5010210	Kamba Kenya	Somali Kenya	2011	2011
KEN	5010305	Kikuyu Kenya	Luhya Kenya	2007	2009
KEN	5010306	Kikuyu Kenya	Luo Kenya	2007	2009
KEN	5010310	Kikuyu Kenya	Somali Kenya	2011	2011
KEN	5010410	Kisii Kenya	Somali Kenya	2011	2011
KEN	5010510	Luhya Kenya	Somali Kenya	2011	2011
KEN	5010610	Luo Kenya	Somali Kenya	2011	2011

Country	Dyad ID	Group A name	Group B name	Start	End
KEN	5010710	Masai Kenya	Somali Kenya	2011	2011
KEN	5010712	Masai Kenya	Turkana Kenya	2008	2008
KEN	5010810	Meru/Embu Kenya	Somali Kenya	2011	2011
KEN	5010910	Mijikenda/Swahili Kenya	Somali Kenya	2011	2011
KEN	5011011	Somali Kenya	Taita/Taveta Kenya	2011	2011
KEN	5011012	Somali Kenya	Turkana Kenya	2011	2011
KEN	5011013	Somali Kenya	Kuria Kenya	2011	2011
BUI	5160102	Hutu Burundi	Tutsi Burundi	2007	2008
MAG	5800102	Coastal Madagascar	Highlanders Madagascar	2009	2009

Chapter 5

Social capital and violence¹

¹ This Chapter has been submitted to a peer-reviewed scientific journal. An earlier version of this Chapter was presented at: *Conference of Conflict Resolution and Peace Sciences (2018)*.

Abstract

Social capital has been promoted in research and policy circles as a factor that helps to achieve social transformation and economic development. There is also, however, a potential 'dark side' to social capital. In this chapter, I investigate whether structural and cognitive social capital have different relationships with two measures of political violence: support for violence and participation in violence. Structural social capital in the form of associational membership allows an easier diffusion of grievances and facilitates collective mobilization. Cognitive social capital provides social cohesion within a community, with trust between neighbours -- particularized trust -- and a shared identity likely bringing people together. Connecting these arguments to political violence, I argue that higher levels of structural social capital will be associated to more support for and participation in violence, whilst higher levels of cognitive social capital will be associated to less support for and participation in violence. Using Afrobarometer data for 27 countries in Africa, I find that indicators of structural and cognitive social capital have contrasting relationships with self-reported data on support for and participation in violence. While particularized trust and national identity are negatively associated with violence, religious and community associational membership are positively associated with violence. In addition, I find that the strength of attachment to a social identity, regardless of it being ethnic or national, is an important indicator of violence.

5.1 - Introduction

It is generally assumed that societies that have experienced high-levels of violence suffer from weak social capital (Blattman and Miguel, 2010; Cassar et al., 2013; Grosjean, 2014), and that a key part of achieving social transformation is to increase the density of social ties (Colletta and Cullen, 2000; de Luca and Verpoorten, 2015). This belief is widely held in policy circles. The World Development Report 2011, for example, considers the destruction of social capital to be one of the costs of violence and advocates for community-driven development programs in order to reconstruct social capital and strengthen social cohesion, especially in areas affected by conflict (World Bank, 2011).

There is also, however, a potential 'dark side' to social capital (McDougall and Banjade, 2015; Villalonga-Olives and Kawachi, 2017). Portes (1998) notes that increased social capital can lead to negative consequences, such as constraints on individual freedom, downward levelling norms,² and the social exclusion of persons not perceived to be members of the community. Instead of increasing trust and social cohesion, social capital may contribute to violence. A study on social capital and adolescent behaviour, for example found that higher levels of participation in sports and club organizations actually *increased* tendencies towards fighting and the use of weapons (Wright and Fitzpatrick, 2006). Another study on social capital and violence amongst young men in Beirut found that different indicators of social capital have ambiguous relationships with violence (El Hajj et al., 2011). This raises the question: *how can the divergent effects of social capital on individual violence be explained?*

Recent research indicates that it is important to distinguish between the *structural* and *cognitive* dimensions of social capital when studying its relationship to violence (Dinesen et al., 2013; Hansen-Nord et al., 2014; Vazquez-Rodriguez and Lombe, 2017). Structural social capital consists of social networks accompanied with procedures and regulations (Uphoff, 2000). Examples include membership in trade unions, religious groups and political organizations, to name a few. Cognitive social capital, on the other hand, refers to "shared norms, values, attitudes, and beliefs" (Dasgupta and Serageldin, 2000). For example, a national identity might encourage common normative beliefs, such as the freedom of speech in the United States or 'liberté, égalité, fraternité' in France. Similarly, members of religious groups will expect each other to adhere to their normative beliefs (Wimberley, 1989).

² In some instances, group solidarity is formed through a collective experience of adversity or rebellion. Since social cohesion depends on this shared belief, in order to sustain itself, the norms of a disadvantaged group will be made to reinforce the status quo, and push successful individuals out (Portes, 1998).

Both forms of social capital are often interlinked and mutually reinforcing of each other (Uphoff and Wijayarathna, 2000). However, there is some evidence that these two types of social capital may have different effects on communal affectations of violence (Brune and Bossert, 2009). Case studies carried out in Guatemala (Dinesen et al., 2013) and Honduras (Hansen-Nord et al., 2014) on the link between social capital and exposure to violence revealed a negative relationship between cognitive social capital and violence but a positive relationship between structural social capital and violence.

In this chapter, I investigate whether structural and cognitive social capital have opposite relationships with violence across 27 countries in Africa. I use cross-national, individual-level data from the Afrobarometer; a unique public opinion survey that allows the testing of the relationship of multiple social capital indicators with violence. In contrast to previous studies (eg. Dinesen et al., 2013, Kasara, 2017), which focus only on exposure to violence, I compare both direct and indirect measures of violence by examining individual self-reported support and use of violence. I find that measures for structural social capital, consisting of associational membership in religious and community groups, are positively associated with violence. Indicators of cognitive social capital are a mixed bag, with particularized trust and national identity having a negative relationship but generalized trust and the strength of attachment to any social identity having a positive relationship with violence.

The study contributes to the literature on social capital and violence in three ways. First, the research is innovative because it examines how social capital is related to reported perpetrators of violence, whereas most research in this field has focused on less direct measures, such as exposure to violence. Second, the research is focused on countries across Africa, a region which has been relatively underexplored in the social capital literature. Third, aside from the contrasting relationships that structural and cognitive relationships have with violence, I find that the salience of identity is strongly associated to violence, regardless of whether it is ethnic or national. Social identities are key to determining individual behaviour because they are intrinsic to people's own personal identity and the bonds they create have a strong emotional significance. The more that individuals are attached to a social identity, the more likely they will be prepared to 'defend' it.

The rest of this chapter is organized into five sections. The first section discusses the literature on the relationship between social capital and violence. In this section, I explore the dimensions of structural and cognitive social capital in more detail and propose hypotheses regarding their association to violence. The second section explains the sources of data and methodology used to conduct the analysis. The third section presents the empirical results of the bivariate and multivariate analysis, while the fourth section discusses the relevance and context of these findings. Finally, the fifth section summarizes the study and the implications of its findings.

5.2 - Social capital and violence

In the social science literature, research on social capital, defined as the resources available to individuals and groups that arise from their formal and informal social networks (Putnam, 1993), has generally focused on the positive attributes of social capital, such as its potential to minimize the risk of crime and violence by changing patterns of behaviour and/or increasing security (Rosenfeld, 2001; Avdeenko and Gilligan, 2015; Hansen-Nord et al., 2016). Social capital is believed to decrease the costs of social transactions and strengthen communal ties (Lederman et al., 2002). Civic engagement and interpersonal trust are thought to have a mutually reinforcing relationship (Brehm and Rahn, 1997) and neighbourhood-based trust was found to be associated with lower rates of criminal violence (Sampson and Raudenbusch, 1999).

However, social capital may also be conflict promoting,³ as it might actually encourage exclusionary behaviour (Portes, 1998). Strong ties between members of a group might bar others from access. Participation in groups or communities often requires members to conform with the group, increasing social control and potentially restricting personal freedoms and individual thinking. In the years preceding the Rwandan genocide, for example, one of the Hutu Ten Commandments stated that 'Hutus must be firm and vigilant against their common Tutsi enemy' or would otherwise be considered as traitors themselves (Lemarchand, 1996). Finally, when group solidarity is based on a common negative experience, downward levelling norms might also play a role. For instance, Rubio (1997) blames 'perverse' social capital for the violence and criminality pervasiveness in Colombia, and Ostrom and Ahn (2009) argued that criminal organizations rely on the cohesive power of social capital in order to operate.

As the literature suggests, the nature of the relationship between social capital and violence is ambiguous, which might explain why the empirical research on social capital and violence has found mixed results. For example, an early study on crime found that associational membership was positively associated with crime rates in some cases and negatively associated in others (Lederman et al., 2002). In his examination of Hindu-Muslim conflict in India, Varshney (2001) found that if associational membership was organized along intra-ethnic lines, it could exacerbate ethnic violence. When studying the effect of social capital on young men in Beirut, El Hajj et al. (2011) found that some social capital indicators, such as group membership, trust in people from the area, social support and

³ The relationship between social capital and conflict has been theorized to work in both directions. Scholars have argued that conflict may erode or shape social capital into new forms (Deng, 2010; De Luca and Verpoorten, 2015; Cassar et al., 2013) and these new forms of social relations can potentially become the basis for further conflicts (Rohner et al., 2013; Schaub, 2014). This research is constrained to examining the ambiguous relationship between dimensions of social capital and violence.

the reciprocal exchange of non-material favours, were positively associated with physical fighting. Other social capital indicators, such as the relationship between social networks and fighting, had ambiguous effects.

An explanation for the unclear relationship with violence is that social capital is a broad term that has been measured with a diverse raft of indicators. To understand the relationship social capital shares with violence more clearly, it is useful to examine two dimensions of social capital: the social network approach, (*structural* social capital) and the social cohesion approach (*cognitive* social capital) (Uphoff, 2000). Structural social capital consists of social networks, both formal and informal, which are accompanied by procedures and rules. Examples of structured social capital include sports clubs, trade unions and religious organizations (de Silva et al., 2006; Bhavnani and Backer, 2007). Cognitive social capital refers to shared norms, values, attitudes, and beliefs (Krishna and Shrader, 2000). Commonly used indicators of cognitive social capital include trust among community members for obtaining credit (Dowla, 2006) or improving access to water (Bisung et al., 2014), and the adherence to a national identity (Langer et al., 2017). Both dimensions of social capital are often tied together, and can reinforce each other (Uphoff and Wijayaratra 2000). However, there is a clear difference between these dimensions. Structural social capital is considered to be the set of resources available to individuals through their access to social networks. Cognitive social capital, on the other hand, is regarded as an valuable asset for both the individual and the community because it measures the integration of the group and forms the basis for social bonds and collaboration.

These dimensions have been found to have different effects (Brune and Bossert, 2009), with cognitive social capital related to an improvement in public health behaviour, whereas structural social capital was associated to increased collective action. When examining social capital in the context of exposure to violence in Latin American countries, scholars found that structural and cognitive social capital appear to have opposite associations with violence, with structural social capital increasing and cognitive social capital reducing the exposure to violence (Dinesen et al., 2013; Hansen-Nord et al., 2014). The differences in these dimensions of social capital with respect to their relationship with violence are explained in more detail below.

5.2.1 - Structural social capital

The expectation is that there is a positive relationship between structural social capital and individual-level violence. Structural social capital characterizes the social network approach to social capital because it refers to the resources accessible to people through formal and informal networks (Dinesen et al., 2013). This manifests through associational membership in formal and informal organizations,

or everyday civic engagement (de Silva et al., 2006). Varshney (2001) argues that associational life has a stronger influence on peace or violence than everyday civic engagement for two reasons. First, associational membership serves to organize communities and provides dedicated platforms for engagement. Second, associations often have objectives that go beyond daily interactions. This imparts in them a robustness that allows associations to withstand exogenous shocks and to have an influence on politics. The relationship with peace and violence, however, will depend on the ethnic dimension of the association: if associational membership is interethnic, it can provide a constraint against the polarization of communities, but if it is intra-ethnic, it will only reinforce the divisions within a society.

The relationship between structural social capital and violence is also contingent on the purpose of the organization (Portes, 1998). Members of organizations may cooperate for benign or malicious reasons, such as the mafia, and even originally benign cooperative ventures can over time become a basis for organised violence (Schaub, 2014). The build-up of social capital within groups may have particularly negative consequences, if groups promote exclusionary practices based on hate and intolerance towards other groups (Fukuyama, 1999). Under such circumstances, individuals who might otherwise be peaceful citizens could be persuaded by other group members to adopt more violent behaviour (El Hajj et al., 2011).

Several studies have found membership and cooperation within communal organizations to increase the risk of violence (Schaub, 2014; Dinesen et al., 2013; Hansen-Nord et al., 2014). Groups containing pro-social individuals who are willing to cooperate with each other are usually more capable of survival in inter-group conflict (Grosjean, 2014). Information on opportunities diffuses through the network so that better connected individuals will have access to more information and will obtain it faster (Shahabuddin McDoom, 2014).

Factors such as the size of individuals' networks can affect their participation in violent collective action, since the more connections a person has, the more opportunities for participation will be presented to them. Furthermore, people who are more actively engaged in the civic society through e.g. political activities, experience more "time at risk", and are thus more exposed to violence compared to people who participate less in such community activities (Hansen-Nord et al., 2014). Active participation in civil society might also mean that individuals are targeted more by the authorities or other individuals because of their political engagement (Piquet Carneiro, 2000), which could increase the risk of them being involved in violent encounters.

An important consideration is that associational membership is only likely to have an effect on

individuals, if their involvement in an organization is relatively frequent (Bhavnani and Backer, 2007). People who belong to an organization but do not participate often in its activities are not strongly subjected to its influence. The more active an individual is, the more likely they will be influenced by the organization, and the more predisposed they will be to engage in collective action for its cause. This relationship is mutual, as the individual is likely to assert their own values and interests – whether positive or negative - on others in the organization as their influence and participation grows. Elite manipulation theory stipulates that groups can be exploited by their leaders, who may use their power to mobilize the group in order to advance their own interests (Fearon and Laitin, 2000). Taking these arguments into account, the prediction is therefore that:

H1: Individuals that self-report that they are members of religious groups and voluntary associations or community groups are more likely to support or use violence.

5.2.2 - Cognitive social capital

In contrast to structural social capital, I predict that cognitive social capital indicators of trust and adherence to national identity will be negatively related to violence. According to the social cohesion approach popularized by Coleman (1990) and Putnam (2000), cognitive social capital comprises the shared beliefs, values, trusts and norms between people that stimulate cooperation (Uphoff, 2000). In an effort to measure social cohesion, Langer et al. (2017) recently proposed an perceptions-based index incorporating three components: inequality, the level of trust and adherence to a national identity. Of these, trust and identity are most frequently used as indicators of cognitive social capital (de Silva et al., 2006; Mitchell and Bossert, 2007; El Hajj et al., 2011).

Trust enables individuals to take risks in dealing with others, solve collective action problems, or act in ways that are contrary to self-interest (Levi, 1998). The concept of trust can be categorized into generalized trust, particularized trust, and strategic trust (Smith, 2010). Generalized and particularized trust refer to trust in society and trust in people within individuals' direct environment, and both have a moral foundation because they require people to have faith in others (Uslaner, 2002). Strategic trust is more related to rational choice theory, as it refers to individuals' expectations that others will act with their own best interests in mind (Hardin, 2002). This chapter shall focus mainly on the two types of moralistic trust, since these are the most commonly used measures of trust in social science research (Carpiano and Fitterer, 2014) and rational choice theories on trust do not often apply outside of prisoner dilemma settings (Abbott and Freeth, 2008).

Generalized trust is defined as individuals' evaluation of the trustworthiness of the average person in

society, and has been hypothesized to connect people in social spheres with people unlike themselves (Glanville and Paxton, 2007). This concept reflects more the individuals' beliefs about the moral standing of their society than about any specific relationships (Sztompka, 1999). In the context of violence, higher levels of generalized trust are likely to reduce the risk of communal violence by mitigating any potential incentives for conflict between groups. Low generalized trust in society has the opposite effect and is associated with the potential for social conflict in countries (Delhey and Newton, 2005). When the level of trust between groups in a country is low, it is also easier for political leaders to obtain support for violent collective action (Kasara, 2017).

Particularized trust concerns trust in networks of close relations (Uslaner, 2002), such as trust in family members, neighbours, or in-group members, and is considered to reflect the resources and relationships available in individuals' close networks (de Silva et al., 2006). Particularized trust symbolizes the belief that specific people or groups are trustworthy, which might be especially relevant when individuals are only exposed to people from their own community; i.e., in rural areas. Despite particularized trust being more relational than generalized trust, empirical evidence on the relationship between particularized trust and conflict has found similar results as for generalized trust. Vial et al. (2010), for example, report higher rates of violence when trust between neighbours is low, and Cuesta and Alda (2012) find a negative relationship between interpersonal trust and victimization in communities. An increase in either particularized or generalized trust is therefore expected to be correlated to a decrease in violence because it strengthens the relationship of mutual protection within a community, which forms the premise for the second hypothesis:

H2: Individuals that self-report higher levels of particularized and generalized trust are less likely to use violence.

Putnam (2000) argued that overarching identities are required to restore social capital in America. A shared sense of belonging can promote social cohesion (Holtug, 2017). The formation of a national identity functions as a form of social cohesion by superseding divisions between sub-national identities, such as ethnicity (Charnysh et al., 2015). Examining social identification and conflict, Sambanis and Shayo (2013) find that when individuals identify more with the nation than with their ethnic group, the chance of conflict is reduced.

In states where the conditions fail to foster a national identity – and make ethnic identity relatively more salient – the lack of solidarity within the national community and the more salient ethno-political cleavages in society are also likely to increase the risk of social fragmentation, exclusion and oppression, which may potentially degenerate into conflict between individuals and groups. The case of Rwanda illustrates the complex and important role of social cohesion with respect to violence. The

interethnic conflict between Hutus and Tutsis in 1994 destroyed the social fabric of society, whilst simultaneously strengthening the intra-Hutu bonds that helped make the genocide possible (Colletta and Cullen, 2000). In its aftermath, Rwandan policymakers have pursued policies of nation-building and de-ethnicisation with the aim of achieving social cohesion (Purdeková, 2008). Consequently, the following hypothesis tests for the theorized inverse relationship between the formation of a national identity and violence.

H3a: Individuals who self-report that they identify with the nation state are less likely to support and use violence.

In addition, the salience of individuals' social identity can determine how strongly they share the norms and beliefs of their community, and how much they perceive the collective grievances experienced by their particular group to be for themselves (Wimberley, 1989; Langer et al., 2017). Ethnic conflict is thought to be spurred on by collective grievances, but only if members of a disadvantaged group identify strongly with it (Stewart, 2008). Strength of identity might also be an important factor that affects the perceptions of collective grievances and potentially the risk of violence (Charnysh et al., 2015). Individuals' perception of their fate being dependent on the nation fate has been shown to increase along with the strength of their behavioural identification with the nation (Robinson, 2016). Overlapping identities can mitigate the relationship by diluting the extent that individuals value their association to one particular identity. This would signify that when grievances are not shared by the group's members, it will be more difficult to mobilize an individual towards (violent) collective action in support of the group or country. The following hypothesis examines whether the salience of identity is related to violence:

H3b: Individuals who self-report that they more strongly identify with either the nation state or their ethnic group are more likely to support and use violence.

5.3 - Data and Methods

5.3.1 - Data

To test the predictions, I utilize cross-sectional data for 40,455 individuals living in 27 African countries derived from the fifth round of the Afrobarometer surveys, held in 2012. This survey provides information on public opinions in African countries on issues such as democracy, governance and economic conditions (Afrobarometer, 2012). For the survey, a sample of 1200 or 2400 randomly selected individuals were interviewed in each country. Sampling is conducted at all stages with the

probability comparable to population size of the district so that larger and more populated geographical regions have a greater probability of being selected in the sample. The surveys reduce the likelihood that distinctive ethnic groups are left out of the sample by stratifying the sample according to the subnational area. The fifth round of surveys is utilized because it is the only round which discerns between ethnic identities and includes variables on support for and the use of violence.

To examine the relationship between social capital and violence, I employ both an indirect and direct measure: *support for violence* and *use of violence*. The first variable measures the reported attitude towards violence. Respondents are read two statements: “Statement 1 - the use of violence is never justified in [respondent’s country] politics today” and “Statement 2 – In this country, it is sometimes necessary to use violence in support of a just cause”, and subsequently asked with which statement they agree more. Answers are on a five-point scale, ranging from agreeing entirely with the first statement to agreeing with entirely with the second statement, and the midway point being ‘agreeing with neither’. This measure is an indirect indicator of violence since it does not consider actual or prospective behaviour. Nevertheless, it is conceivable that respondents who approve of violence are more likely to use violence than those who cannot justify its use. Collective attitudes of a society might discourage violent behaviour through the norms that people observe and internalize. In contrast, a lack of social standards could facilitate rebel recruitment and violent behaviour within a community. This is found to be the case in Sub-Saharan Africa, where regions with high levels of popular acceptance of violence have higher levels of conflict (Linke et al., 2015).

Most measures of violence in studies on social capital tend to be indirect (Schaub, 2014; Kasara, 2017; Dinesen et al., 2013; Hansen-Nord et al., 2014). Quite uniquely, the Afrobarometer survey also provides a direct indicator, which consists of the reported participation of the respondents in political violence by asking them whether they have personally engaged in the use of force or violence for a political cause. Responses are structured to capture the frequency of individuals’ actions in the following order – never (0), never but would if they had the chance (1), once or twice (2), several times (3), and often (4). This variable gauges individuals’ violent behaviour by asking the respondent to report whether they have used violence for a political cause. Because of the social stigma against violence (Table 5.A shows that almost 81% of the respondents in the survey do not support the use of violence), it is possible that the reported use of violence is under-reported.

Structural social capital is measured through the membership of individuals in two types of formal associations: *members of religious groups* (outside of regular worship services) and *members of voluntary association or community groups*. Respondents can select one of four possible responses on an ordinal scale including non-member (0), inactive member (1), active member (2), and official leader

(3). Given that these categories do not correspond to a linear scale, they were also transformed into sets of dummy variables, with a separate dummy for each category.

Cognitive social capital is measured through several indicators for trust and shared identity. Two indicators for trust are included: particularized trust and generalized trust. The *particularized trust* variable measures whether respondents do not trust their neighbours (0), whether they trust them just a little (1), somewhat (2) or a lot (3). The *generalized trust* variable is dichotomous measuring trust in society in general. Particularized trust provides a more direct and accurate measurement of how trust functions as social capital within individuals' direct environment, whereas generalized trust is an "affective orientation" towards others that indicates their level of tolerance (Rudolph and Popp, 2010).

The measure for identity is gauged by asking the respondents whether they were more strongly attached to their own ethnic group or their nationality. Thus, the variable represents a spectrum, with identification to the nation state on one end and identification with the ethnic group on the other. To examine the socially cohesive effect of a shared identity and the importance of identity salience, the measure is split up into two variables: *national identity* and *identity salience*. *National identity* is measured by whether the respondent feels mainly or only ethnic (0), equally ethnic and national (1), or mainly or only national (2). *Identity salience* indicates the strength of the attachment individuals have to their identity, be it ethnic or national. The variable is categorised as 0 if the respondent does not feel more attached to one or the other, 1 if they feel more attached to their ethnic or the national identity, and 2 if they feel only ethnic or only national.

Several control variables were included at both the individual and group level. At the individual level, I control for age, education and wealth level, whether the individual lives in a rural (0), semi-rural (0.5) or urban environment (1), and the effect of perceived collective grievances with a measure of perceived unfair treatment against respondents' ethnic group on a scale of 0 (never) to 3 (always). Education is measured in terms of years of schooling received, and the measure for wealth ranges from 0 till 100, based on an index from assets, housing characteristics and public utilities (Smits and Steendijk, 2015).

At the group level I incorporate several controls for socioeconomic and demographic characteristics of ethnic groups. The group-level controls are created by aggregating data to the group level for all ethnic groups that were available in the survey. Ethnic groups for which only a few observations were available (less than 1%) are incorporated into larger ethnolinguistically similar clusters, or omitted from the analysis (the complete list is included in Table A.4.1 of the Appendix in Chapter 4. Relative

deprivation in education and wealth is measured by subtracting the national averages of these variables from the ethnic group averages. Small population sizes are obtained by calculating the relative difference in size of the ethnic group with the country average. Finally, using UCDP data I include a dichotomous variable to control for whether the respondent's ethnic group has been involved in conflict in the five years prior to the survey (2007-2011). The conflicts in this time period were derived from the list of conflicts in Table A.4.2 of the Appendix of Chapter 4.

5.3.2 - Methods

To test the hypotheses, I employ an ordered logistic multilevel regression analysis. Two-level versions of the models are used to address the nesting of respondents within ethnic groups. Clustering at national level is taken into account by including fixed-effects country dummies in all models. Separate models are estimated for the two dependent variables, support for and the use of violence. The choice for ordered logit models is due to the nature of the dependent variables, which are ordered but the differences in categories cannot be clearly distinguished linearly. Separate models with dummies are used to test for specific effects of the different categories in the structural social capital variables. I test for nonlinearity of the individual-level variables by including quadratic terms in the models and keeping them in case of significant nonlinearity.

Missing values on the variables are addressed by utilizing the dummy variable adjustment procedure (Allison, 2001). As a robustness test, I study effects of previous conflicts by including a dummy variable indicating whether the ethnic group of the respondent was involved in ethnic conflict in the last five years. This information is derived from the Armed Conflict, One-Sided and Non-State datasets from the Uppsala Conflict Data Program (Sundberg et al., 2012; Eck et al., 2007; Allansson et al., 2017).

5.4 - Results

The descriptive summary in Table 5.A provides details on the variables included in the analysis. On average, most individuals agree with the statement that violence is never justified (47%). Overall there are far more people willing to justify violence than those that actually commit acts of violence. The number of individuals that report having committed acts of violence is quite low, consisting of just 3% of the respondents. This is not surprising given the stigma that most of society has against the use of violence; a belief which is illustrated by the lack of support for violence in the first outcome variable (only 19% justify its use under certain circumstances).

Table 5.A - Descriptive statistics summary table for selected independent and dependent variables in 27 African countries

Variables	Mean	Std. Deviation	Minimum	Maximum
Violence				
Support for violence	1.02	1.28	0	4
<i>Agree very strongly with Statement 1 (%)</i>	0.47	0.50	0	1
<i>Agree with Statement 1 (%)</i>	0.31	0.46	0	1
<i>Agree with neither statement (%)</i>	0.03	0.17	0	1
<i>Agree with Statement 2 (%)</i>	0.11	0.32	0	1
<i>Agree very strongly with Statement 2 (%)</i>	0.08	0.27	0	1
Used force or violence for a political cause	0.15	0.54	0	4
<i>Never (%)</i>	0.90	0.30	0	1
<i>Never, but would consider (%)</i>	0.07	0.25	0	1
<i>A few times (%)</i>	0.02	0.12	0	1
<i>Sometimes (%)</i>	0.01	0.01	0	1
<i>Often (%)</i>	0.01	0.01	0	1
Structural social capital				
Religious association	0.90	1.00	0	3
<i>Non-member (%)</i>	0.50	0.50	0	1
<i>Inactive member (%)</i>	0.17	0.37	0	1
<i>Active member (%)</i>	0.28	0.45	0	1
<i>Leader (%)</i>	0.06	0.24	0	1
Voluntary or community association	0.69	0.97	0	3
<i>Non-member (%)</i>	0.62	0.49	0	1
<i>Inactive member (%)</i>	0.14	0.34	0	1
<i>Active member (%)</i>	0.19	0.39	0	1
<i>Leader (%)</i>	0.06	0.23	0	1
Cognitive social capital				
Particularized trust	1.79	1.01	0	3
<i>Not at all (%)</i>	0.13	0.34	0	1
<i>Just a little (%)</i>	0.25	0.43	0	1
<i>Somewhat (%)</i>	0.33	0.47	0	1
<i>A lot (%)</i>	0.30	0.46	0	1
Generalized trust	0.19	0.39	0	1
Identity salience	1.03	0.92	0	2
<i>Weak (%)</i>	0.40	0.49	0	1
<i>Intermediate (%)</i>	0.16	0.37	0	1
<i>Strong (%)</i>	0.44	0.50	0	1
National identity	2.38	0.67	0	2
<i>Ethnic (%)</i>	0.11	0.31	0	1
<i>Both (%)</i>	0.40	0.49	0	1
<i>National (%)</i>	0.49	0.50	0	1
Individual control factors				
Perceived collective grievances	0.64	0.94	0	3
<i>Never (%)</i>	0.61	0.49	0	1
<i>Sometimes (%)</i>	0.22	0.41	0	1
<i>Often (%)</i>	0.10	0.31	0	1
<i>Always (%)</i>	0.07	0.26	0	1
Education (years)	6.74	4.92	0	17
Wealth (IWI)	48.03	24.98	0	100
Urbanized (%)	0.36	0.48	0	1
Female (%)	0.50	0.50	0	1
Age (years)	37.05	14.51	18	105
Group control factors				
Education deprivation (years)	0.05	1.20	-6.47	4.96
Wealth deprivation (IWI)	0.28	8.51	-27.50	42.85
Small population size	-308.32	395.59	-1473	403.80
Conflict in past five years (%)	0.19	0.39	0	1

Source: Afrobarometer Surveys Round 5. Response categories provided in italics. For the variable on support for violence, Statement 1 is: "the use of violence is never justified in [respondent's country] politics today" and Statement 2 s:- "In this country, it is sometimes necessary to use violence in support of a just cause."

Measures of structural social capital indicate that more individuals are members of religious groups than community groups. Individuals are about equally likely to be part of religious associations as not, with 50% being members, of which 28% self-classify as an active member and 6% as a leader. On average, respondents tend to be less involved in community associations, with only 38% reporting that they are a member, of which only 19% self-classify as an active member and 6% as a leader.

For the measures of cognitive social capital, trust in one's neighbour is quite high, while generalized trust is low. On average, individuals report that they are quite trusting of their neighbours; 62% trust their neighbours somewhat and 30% trust them a lot. However, only 19% of the respondents agree that most people in society can be trusted, with the large majority believing that one must be very careful (81%). Responses to the national identity variable suggest that almost half of the respondents (49%) identify themselves more nationally than ethnically, while responses to the identity salience variable suggest that the results for salience of identity (to either the nation or their ethnic group) are polarized, with 40% having a weak attachment and 44% having a strong attachment to their identity.

With respect to the control variables, most individuals have never perceived any form of unfair treatment towards their ethnic group (61%), whereas about 18% experience frequent or consistent unfair treatment. On average, respondents have received 6.7 years of education and have a wealth score of 48 on the 100-point IWI scale. Respondents live mainly in rural areas (only 36% are urbanized), are equally likely to be male or female (50%), and are on average 37 years old. The descriptive statistics for the group level controls illustrate that education deprivation ranges from 6.5 years below to 5 years above the national average, whilst wealth deprivation varies from -27.5 to 42.9 on the IWI scale. Group sizes range from 1473 people fewer than the country mean to 403.8 more than the country mean in the sample population. 19% of groups have been involved in conflict over the past five years.

The results of the bivariate regression analyses are presented in Table 5.B and the multivariate regression models are presented in Table 5.C. In Table 5.B, Model 1 represents the analysis with the reported support for violence as the outcome variable, whilst Model 2 presents the regression results for the reported use of violence as the outcome variable. Models 3 and 4 in Table 5.C display the regression coefficients for both dependent variables relating to the baseline model, whilst Models 5 and 6 introduce dummy variables for the subcategories in the associational membership indicators, using non-members of religious and communal associations as the reference categories.

Table 5.B - Multilevel ordered logit coefficients for bivariate associations between selected independent variables and support for and use of violence in 27 African countries

Variables	Support for violence	Use of violence
	Model 1	Model 2
Structural social capital		
Religious membership	-0.001 (0.006)	0.062*** (0.007)
<i>Non-member</i>	Reference	Reference
<i>Inactive member</i>	0.051** (0.016)	0.176*** (0.018)
<i>Active member</i>	-0.010 (0.014)	0.036*** (0.016)
<i>Leader</i>	-0.005 (0.024)	0.015*** (0.027)
Community membership	0.021*** (0.006)	0.113*** (0.007)
<i>Non-member</i>	Reference	Reference
<i>Inactive member</i>	0.035* (0.016)	0.217*** (0.019)
<i>Active member</i>	0.053*** (0.015)	0.229*** (0.017)
<i>Leader</i>	0.039 (0.024)	0.311*** (0.026)
Cognitive social capital		
Particularized trust	-0.030*** (0.006)	-0.026*** (0.007)
Generalized trust	-0.014 (0.014)	0.055** (0.016)
Identity salience	0.041*** (0.007)	0.051*** (0.009)
National identity	-0.028** (0.010)	-0.020 (0.012)
Individual control factors		
Perceived collective grievances	0.148*** (0.019)	0.104*** (0.022)
Perceived collective grievances	-0.036*** (0.007)	-0.010 (0.008)
Education	0.003** (0.001)	0.001 (0.001)
Wealth	0.002* (0.001)	0.004*** (0.001)
Wealth ²	-0.000* (0.000)	-0.000*** (0.000)
Urbanization	-0.021 (0.012)	-0.025 (0.014)
Female	-0.025* (0.011)	-0.086*** (0.013)
Age	-0.003*** (0.000)	-0.002*** (0.000)
Group control factors		
Education deprivation	0.013 (0.011)	-0.004 (0.011)
Wealth deprivation	0.003 (0.002)	0.001 (0.002)
Small population size	-0.000 (0.000)	-0.000 (0.000)
Conflict in past five years	0.061 (0.059)	-0.053 (0.061)

* $p < .05$; ** $p \leq .01$; *** $p \leq .001$. Standard errors in parentheses. Fixed-effects country and missing dummies not reported. Models were estimated for each variable separately, but for both structural social capital variables all subcategories were estimated simultaneously, with non-members as the reference category.

In the bivariate analysis in Table 5.B, the coefficients may vary in strength between the models, but the significant effects on indirect and direct violence variables do not contradict each other. For the first structural social capital variable, religious membership is significantly and positively related to the reported use of violence in Model 2. Looking separately at the categories of this variable, I observe in Model 1 that inactive members are significantly more likely than non-members to both support violence, but active members and leaders show no significant difference in support. All members of religious groups are significantly more likely to use violence than non-members, although this positive effect varies in strength across members, with active members being reportedly most likely to use

violence. For the second structural social capital variable on community association I see that overall membership is positively correlated to the support for and use of violence in both models. Splitting the variable up into categories, I observe in Model 1 that inactive and active members are significantly more likely to support violence than non-members. All members of community associations are significantly more prone to using violence than non-members, with increasing likelihood the more active members are, and communal leaders being the most violent (Model 2).

Cognitive social capital indicators are all significant in the bivariate models, except for generalized trust in Model 1 and national identity in Model 2. Particularized trust is negatively correlated with support for and the use of violence, whereas generalized trust has a positive effect on the use of violence in Model 2. Identity salience is positively correlated to both outcome variables, with national identity being negatively associated only to support for violence. Control variables such as higher perceived collective grievances, wealth and education are positively correlated to the outcome variables, although the large quadratic term for perceived collective grievances suggests an inverted-U relationship with support for violence. The models in Table 5.B show that women and older people are less likely support violence or use force, whilst urbanization and group involvement in ethnic conflict in the past five years have no significant relationship with either variable. All socioeconomic characteristics on the group level were insignificant for both dependent variables.

Turning to the multivariate analysis in Table 5.C, the relationships with the direct and indirect forms of violence exhibit a similar consistency as in the bivariate analysis. Model 4 shows that religious membership is significantly and positively correlated with the use of violence. When I look more in detail at the subcategories in Models 5 and 6, I observe that, in line with the bivariate analysis, inactive members of religious groups are significantly more likely to support and use violence than non-members. Active members and leaders of these groups are also more likely than non-members to use violence, although this effect is weaker. Community membership has a positive correlation with both outcome variables in Models 3 and 4. In Model 5, active members and leaders of community groups are significantly more likely to justify violence than non-members, whilst in Model 6, it is evident that each stepwise increase in participation is progressively more associated to the use of violence, with community leaders being the most violent category. Overall, the coefficients for both the associational membership variables provide strong support for the first hypothesis, which posits that being a self-reported member of a religious or community association will be positively associated with the use of violence.

Table 5.C - Multilevel ordered logit coefficients for multivariate associations between selected independent variables and support for and use of violence in 27 African countries

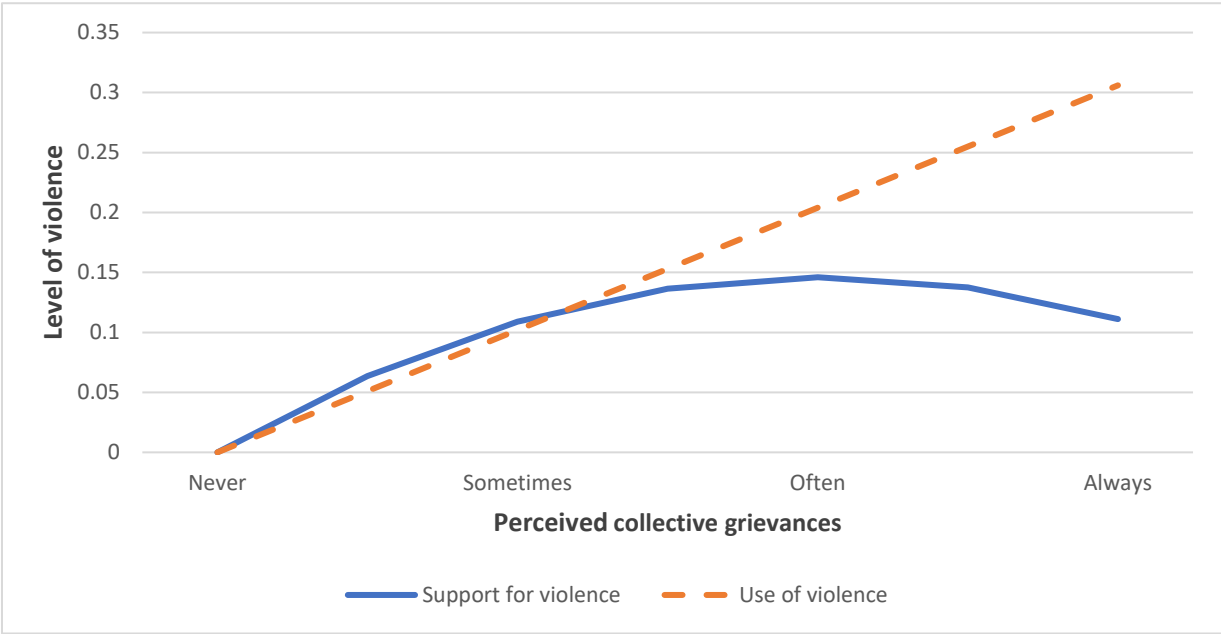
Variables	Support for violence	Use of violence	Support for violence	Use of violence
	3	4	5	6
Structural social capital				
Religious membership	-0.006 (0.006)	0.030*** (0.007)		
<i>Non-member</i>			Reference	Reference
<i>Inactive member</i>			0.046** (0.016)	0.130*** (0.019)
<i>Active member</i>			-0.025 (0.014)	0.065*** (0.017)
<i>Leader</i>			-0.000 (0.024)	0.061* (0.028)
Community membership	0.028*** (0.006)	0.107*** (0.007)		
<i>Non-member</i>			Reference	Reference
<i>Inactive member</i>			0.028 (0.017)	0.181*** (0.019)
<i>Active member</i>			0.070*** (0.015)	0.215*** (0.018)
<i>Leader</i>			0.057* (0.025)	0.304*** (0.028)
Cognitive social capital				
Particularized trust	-0.027*** (0.006)	-0.035*** (0.007)	-0.028*** (0.006)	-0.035*** (0.007)
Generalized trust	0.007 (0.015)	0.077*** (0.017)	0.006 (0.015)	0.076*** (0.017)
Identity salience	0.040*** (0.007)	0.048*** (0.009)	0.040*** (0.007)	0.047*** (0.009)
National identity	-0.019 (0.010)	-0.009 (0.012)	-0.019* (0.010)	-0.009 (0.012)
Individual controls				
Perceived collective grievances	0.144*** (0.019)	0.102*** (0.022)	0.143*** (0.019)	0.101*** (0.022)
Perceived collective grievances	-0.036*** (0.007)	-0.011 (0.008)	-0.035*** (0.007)	-0.010 (0.008)
Education	-0.001 (0.001)	-0.006*** (0.002)	-0.001 (0.001)	-0.006*** (0.002)
Wealth	0.001 (0.001)	0.005*** (0.001)	0.001 (0.001)	0.004*** (0.001)
Wealth ²	-0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)
Urbanized	0.020 (0.014)	-0.015 (0.017)	0.021 (0.014)	-0.013 (0.017)
Female	-0.032** (0.011)	-0.089*** (0.013)	-0.032** (0.011)	-0.093*** (0.013)
Age	-0.003*** (0.000)	-0.004*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
Group controls				
Education deprivation	0.004 (0.015)	-0.009 (0.016)	0.004 (0.015)	-0.007 (0.016)
Wealth deprivation	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)
Small population size	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Conflict in past 5 years	0.028 (0.061)	-0.042 (0.064)	0.028 (0.062)	-0.039 (0.064)
Observations	40308	40455	40308	40455

* $p < .05$; ** $p \leq .01$; *** $p \leq .001$. Standard errors in parentheses. Fixed effects country and missing dummies not reported. For structural social capital variables, non-members are used as the reference category.

With respect to indicators of cognitive social capital, the results are more nuanced. I find a negative relationship between particularized trust and both support for and the use of violence in all model specifications. However, this is not the case for generalized trust, which is positively and significantly associated to the use of violence in Model 4 and 6, but has no significant effect on support for violence in Models 3 and 5. Particularized trust is the most consistent result, providing strong support for the second hypothesis on self-reported trust measures being negatively associated with violence.

The national identity variable does not offer strong evidence for H3a in Table 5.C. Although the direction of the national identity coefficients is negative, similarly to the bivariate models, the effect is only significant for the full model with respect to the support for violence (Model 5). I find support for the hypothesis on identity salience (H3b), as identity salience is highly significant in Models 3-6, and positively associated to both violence variables. The support for and use of violence increases the more attached individuals are to their identity. Because the national identity variable is mainly insignificant in Models 3, 4 and 6, the effect of identity salience in these instances is irrespective of whether it is ethnic or national. When both identities overlap and the respondent does not have strong sentiment for either type, both their support for and use of violence decrease significantly.

Figure 5.A - Predicted relationship between perceived collective grievances and violence



Regarding the control variables, perceived collective grievances has a strong and positive association throughout all model specifications in Table 5.C, and its relationship with both violence variables is illustrated in Figure 5.A. The more that individuals perceive their group to be unfairly treated, the more likely they will engage in violence. The relationship between perceived collective grievances and support for violence is nonlinear, with the effect peaking when individuals feel their groups is often discriminated, but decreasing when individuals feel their group is always discriminated. In Models 4 and 6 of Table 5.C, an increase in education is negatively correlated whilst an increase in wealth is positively correlated to the use of violence, with the effect of wealth increasing exponentially for each additional point increase on the IWI scale (ranging from 0 to 100). The relationship for education in the multivariate regression differs in direction to the bivariate analysis, likely because the social capital and other socioeconomic controls capture some of the effect of confounding factors. All the controls for

age, gender, urbanization and prior conflict in the multivariate models have similar effects as those in the bivariate models. Finally, I find no significant relationships between relative deprivation or differences in size and reported violence.

5.5 - Discussion

The aim of this chapter was to explore the relationship between social capital and violence by differentiating between the structural and cognitive components of social capital and empirically testing their association with individuals' reported attitudes towards violence and their use of violence. The results show a strong positive relationship between structural social capital and violence, as more active membership in religious and community associations increased the risk of violence. The results were consistent for both forms of reported violence, and were generally in line with prior research (El Hajj et al., 2011; Dinesen et al., 2013; Hansen-Nord et al., 2014).

Access to organized networks is theorized to provide individuals more opportunities to engage in collective action, and any grievances experienced by group members may be quickly diffused through the network. This might especially be the case when leaders wield their influence within groups (Fearon and Laitin, 2000). De Figueiredo and Weingast's study (1999) provides a possible explanation for the violent behavior of community leaders. In their model of ethnic war, ethnic "entrepreneurs" might utilize violence to instill fear in other members of their ethnic group in order to manipulate and mobilize them into conflicts that benefit their own material interests and political aspirations. Interestingly, although religious leaders are not significantly more likely to approve of violence than non-members, both religious and community leaders are more likely to engage in violence, which is a discouraging sign of religious leaders not practicing what they preach.

The evidence for a negative association between cognitive social capital and violence is less strong, as I obtain contradictory results for the trust variables and insignificant effects for national identity. The negative correlation between particularized trust and violence corresponds to the hypothesis on cognitive social capital, as well as prior research on trust on the neighbourhood level (Vial et al., 2010; Dinesen et al., 2013). In contrast to expectations and results of other studies (Delhey and Newton, 2005; Kasara, 2017), I find a positive association between generalized trust and reported violence. However, this result is less consistent across the models than that for the particularized trust variable, which was significant for both support for and the use of violence.

This inconsistency has been noted in other studies as well. Beugelsdijk (2006), for example, asserts that macro measures of trust are less fine-grained or elaborate than micro measures, as they may be

capturing an abstract confidence in society and its institutions rather than trust in people. Research comparing generalized and particularized trust finds that trust in neighbours is more strongly connected to community-based social capital than trust in 'others'. As Aghajanian (2016) points out, groups might trust their own members but not members of others outside of their immediate community, so measures of general trust may not be very robust indicators of social capital. Furthermore, by asking whether the respondent trusts in 'most' people, the generalized trust question can be interpreted differently by each individual. This is known as the trust radius problem, and varies significantly across countries, making cross-country comparison difficult (Delhey et al., 2011). Nevertheless, the result for the generalized trust variable remains quite puzzling and deserves more attention in further research.

The other important finding in this study is that how *closely* individuals associate with their identity is an important indicator of their support for and participation in violence. This finding is notable because identity salience has been found to determine the degree to which individuals adhere to the normative expectations of their group (Wimberley, 1989; Langer et al., 2017). The strength of attachment to one's identity may determine how intensely individuals perceive collective grievances, and therefore how easily they may be mobilized towards violent collective action. The effect of identity salience appears to be contingent on individuals' identity being national only with respect to support for violence, in contrast to previous findings that find a direct relationship with violence (Sambanis and Shayo, 2013; Charnysh et al., 2015).

One explanation for why there is no direct link between the type of identity and participation in violence could be found in the nature of the violence itself. Identity conflicts are not always between competing identities on the ethnic level, but may also be a struggle between the ethnic and the national. For example, secessionist conflicts often occur between members of an ethnic group/region and the government, such as the Tuareg conflict in Mali or the Biafra rebellion in Nigeria. Supporters of the government involved in counter-protests or other forms of violence are likely to associate themselves with their national identity, rather than their ethnic group. This strong attachment to their national identity and the fear that this identity would be under threat has often led groups to engage in protest, for example the anti-independence Catalans in Spain or the nationalist rallies in the USA. Another factor could be that when there is a dominant ethnic group in the country, the 'national' identity is appropriated by that group, such as the Tswana in Botswana or the Han in China. Members of these groups will perceive their ethnic identity to be synonymous with the national identity due to their monopoly on power and society in general (Staerklé et al., 2010). They view an attack against their ethnic group as an attack against the nation. This means that the variable comparing ethnic

identity and national identity could actually be capturing the ethnic identity for both minority and majority groups in a country.

The story drawn from the control variables is that the types of individuals most prone to violent attitudes and behaviour are young, uneducated men. This is consistent with the findings of cross-national research on youth bulges and conflict (Urdal, 2006). Measures of relative deprivation in education and wealth are mostly insignificant, despite evidence for the Sub-Saharan African region suggesting that socioeconomic and political factors are salient indicators of conflict (Alcorta et al., 2018). However, perceived collective grievances are found to be significantly and positively correlated to violence both measures of violence. Although this highlights the motivation mechanism linking collective grievances with conflict described in the earlier chapters, the results suggest that perceived collective grievances in fact matter more than objective comparisons in motivating individuals to engage in violence, in line with more recent studies (Rustad, 2016; Miodownik and Nir, 2016).

Given that only cross-sectional data were available, these results cannot be interpreted in causal terms. The study's main aim is to determine the relationship between social capital and violence, however it frames the hypotheses in the direction of social capital influencing conflict. The logic behind this reasoning is that social capital can be viewed as the social relations through which groups may mobilize towards conflict (Schaub, 2014). Nevertheless, the inability to make causal inferences means that this relationship could function in either direction. The literature on social capital suggests that the opposite direction is also possible. For instance, violence might foment discord and reduce trust between members within a community, subsequently reducing the level of cognitive social capital (McIlwaine and Moser, 2001; de Luca and Verpoorten, 2015), although the literature examining the effects of conflict questions whether conflict actually has an erosive effect (Deng, 2010; Goodhand et al., 2000; Cassar et al., 2013). The causal relationship might run both ways in an endogenous relationship – high levels of structural social capital could raise the risk of violence breaking out, and high levels of violence over time might lead to the erosion or alteration of social capital (Rohner et al., 2013; Schaub, 2014; Ingelaere and Verpoorten, 2016). In the multivariate analysis this effect is controlled for with the dummy on whether the group has been involved in conflict in the past. However, it is limited to the group level and does not capture any individual-level violence or (inter)national conflict which may affect the respondent. Further research integrating conflict events data with the Afrobarometer surveys might be able to incorporate more robust controls for prior conflict.

5.6 - Conclusion

In this study I drew on 40,455 individual level observations from 27 different countries in round five of the Afrobarometer Surveys. This research contributes to the literature on the 'dark side' of social capital by examining the relationship between two dimensions of social capital -- structural and cognitive -- and violence. Prior research disaggregating social capital by its different dimensions (Dinesen et al., 2013; Hansen-Nord et al., 2014) was limited to examining passive violence by measuring the respondents' exposure to violence, whereas this research expands on their findings by analyzing individuals' support for and use of violence. I find a positive relationship between structural social capital and violence, whilst cognitive social capital and conflict are mostly negatively related. These findings highlight the importance of disaggregating social capital by its cognitive and structural dimensions in order to understand its relationship with violence. Additionally, I find that identity salience is a relevant factor in determining both attitudes towards violence and violent behaviour. Policymakers looking to curtail violence within their communities should take note of the complex effects that strengthening civil society and social identities may have, and consider a multifaceted approach.

Chapter 6

Conclusion

6.1 - Introduction

In the quest to understand why ethnic conflict occurs, scholars of conflict studies have identified horizontal inequalities as a key determinant. However, findings on the relationship between horizontal inequalities and conflict have not always been consistent, with the literature disagreeing on the use of motivation- or opportunity-based arguments to explain this link. What most scholars have failed to account for empirically is the simultaneous presence of both mechanisms. This gap in the literature has created a demand for research that systematically investigates the relationship between horizontal inequalities and conflict while integrating both arguments (motivation and opportunity) into one theoretical framework. In this thesis, such an approach was employed throughout the first two empirical chapters for social, economic, population size, and political inequalities. In these chapters, the effects of horizontal inequalities on ethnic conflict were studied both independently and in unison, with moderating factors at the national and subnational level also taken into account.

In the other two empirical chapters of the thesis, I focused on how group and individual characteristics influence perceptions and decisions at the individual level. My original ambition was to investigate whether relative deprivation worked through the theorized mechanisms by examining their effect on the formation of collective grievances and violence. However, the critical role of perceptions and identity salience in determining collective grievances in Chapter 4 led me to consider whether there are other not easily observable factors that might influence people's behaviour. One 'hidden' factor was social capital. In the theory it has mainly been considered as a protective factor against violence, but due to its role in mobilizing communities it could also have substantial influence on commencing violence. Chapter 5 therefore sought to explore the relationship of different social capital indicators with violent affectations and behaviour.

In the following section, I provide an overview of the thesis' research questions and provide a summary of the results per question. This is followed by a discussion of the major findings and the contribution of my research to the literature on conflict. Next, I reflect on the limitations of the study and offer suggestions for further research. I finish with concluding remarks that highlight the main takeaways of this thesis.

6.2 – Summary of results

Table 6.A - Significant results for multivariate associations between selected independent variables and ethnic conflict incidence, perceived collective grievances and reported violence.

RQ	Dependent variable	Independent variables	Model 1	Model 2
1	Ethnic conflict	Educational inequality	+	+
		Wealth inequality	-	-
		Population size inequality	-	-
		Educational inequality * average wealth		+
		Average education * democracy level		+
		Average elite share * rule of law		+
		Average urbanization * democracy level		-
2	Ethnic conflict	Discriminated/in power	Reference	+
		Not discriminated/in power	-	Reference
		Both discriminated	O	Reference
		Both not discriminated	-	Reference
		Discriminated/not discriminated	-	Reference
		Both in power	-	Reference
		Educational inequality * discriminated/in power		O
3	Perceived collective grievances	Wealth inequality * discriminated/in power		-
		Population size inequality * discriminated/in power		N.S.
		Average elite share * discriminated/in power		+
		Ethnic Identity	+	+
		Education years	O	O
		Wealth	-	-
		Education deprivation	O	O
		Wealth deprivation	+	+
		Small population size	+	+
		Share of elites	O	O
		Ethnic identity * education deprivation		-
		Ethnic identity * small population size		-
		Ethnic identity * average share of elites		+
Individual education * small population size		-		
Individual wealth * education deprivation		-		
Individual wealth * average share of elites		-		
4	Violence	Religious membership	O	+
		Community membership	+	+
		Particularized trust	-	-
		Generalized trust	O	+
		Identity salience	+	+
		National identity	O*	O
		Perceived discrimination	+	+
		Education deprivation	O	O
		Wealth deprivation	O	O
		Small population size	O	O

The models included represent selected multivariate analyses conducted in the theses. A positive/negative sign represents a significantly higher/lower likelihood of ethnic conflict/perceived discrimination/violence. Insignificant effects are marked with an 'O'. *Coefficient is significantly positive in the bivariate model and the model with subcategories for structural social capital variables.

Table 6.A provides an overview of the analyses that were conducted in the empirical chapters to address the research questions of this thesis. To keep the table concise, only the two main multivariate models were included per question. For RQs 1-3, Model 1 represents the full model and Model 2 represents the interaction model. For RQ 4, the baseline models from Table 5.C are included. Here, Model 1 represents the analysis with reported support for violence as dependent variable, and Model 2 represents the analysis with reported use of violence as dependent variable.

Socioeconomic inequalities and ethnic conflict

RQ1 In which way and to what extent do educational, economic and population size inequalities between ethnic groups influence the risk of conflict incidence between the groups?

In Chapter 2, I examined the relationships of educational, economic and population size inequalities between groups with conflict incidence in the context of motivation and opportunity mechanisms. I hypothesized that by inducing strong grievances, educational inequalities are more likely to incentivize disadvantaged ethnic group members to engage in conflict, in spite of the limited opportunities that educational inequalities might represent. I did not expect economic and population inequalities to lead to ethnic conflict because the grievances formed are unlikely to outweigh the limited opportunities for conflict.

To test these hypotheses, I performed a multilevel logistic regression analysis on socioeconomic panel data derived from the DHS surveys, using ethnic group dyads as the unit of analysis. The results from the analysis on this 'Ethnic Dyad Database' are shown in the RQ1 section of Table 6.A. The first model indicates that educational inequalities are positively associated with ethnic conflict incidence, whereas economic and population size inequalities are negatively associated with ethnic conflict incidence. I also investigate the interactions of horizontal inequalities with economic and political context factors at the group and national level in the second model. The main findings here show the association between educational inequalities and conflict is stronger when the groups in the dyad are jointly wealthier. In addition, a higher joint educational level for groups is associated with less conflict, particularly under more autocratic regimes.

Political discrimination and ethnic conflict

RQ2 To what extent and under which conditions is the effect of political exclusion on ethnic conflict attributable to political discrimination against ethnic groups?

The literature has found overwhelming evidence for a positive relationship between political

inequalities and ethnic conflict, but tends to merge the effects of political exclusion and discrimination together. Chapter 3 focused on discerning between discriminated and non-discriminated excluded groups, and investigating whether these groups had a different likelihood of engaging in conflict. I hypothesized that discriminated groups will be more likely to engage in conflict than non-discriminated groups because the stronger grievances that members of discriminated groups nurture are likely to outweigh the opportunity constraints that they face. Furthermore, I assumed that socioeconomic horizontal inequalities and the share of elites might moderate the relationship between discrimination and conflict by altering the balance between the motivation and opportunity mechanisms.

To test these hypotheses, a multilevel logistic regression analysis is conducted using panel data from the Ethnic Dyad Database. Additional political data from the EPR database is integrated into the existing dataset. The results show that discriminated groups are the driving force for the positive association between political exclusion and conflict. The first model for RQ2 in Table 6.A shows that when political exclusion is split up into subcategories, dyads containing discriminated groups and groups in power are significantly more likely to engage in conflict than any other dyad. In fact, the analysis in Chapter 3 shows that excluded groups who face active, intentional, and targeted discrimination by the state are more than twice as likely to be involved in conflict than excluded groups who do not face explicit discrimination. The second model presents the effects of moderating conditions on the relationship between political discrimination and conflict. Discriminated groups that simultaneously experience economic inequalities are less likely to be engaged in conflict. An increased share of elites within discriminated groups could precipitate the chances of the groups being involved in conflict.

The formation of collective grievances

RQ3 To what extent and under which conditions do individuals perceive relative group deprivation as collective grievances?

In the previous Chapters, the relationship between group inequalities and conflict is theorized to function in part through the motivation mechanism, which suggests that members of groups that are relatively deprived may harbour collective grievances against more advantaged groups. Although this mechanism is well established in the conflict-inequality literature, the claim that relative deprivation of ethnic groups will be perceived as group grievances by its members has yet to be empirically tested. To address this question, Chapter 4 examined how group characteristics, such as relative group deprivation and the share of elites, are related to individual perceptions of collective grievances. Furthermore, it investigated how individual characteristics, such as an individual's salience of identity and socioeconomic background, may moderate the relationship between group characteristics and

collective grievances.

For the analysis shown in RQ3 of Table 6.A, multilevel ordered logit regressions are run on cross-sectional data taken from rounds 5 and 6 of the Afrobarometer surveys, with individuals taken as the unit of analysis. In the first model I find some support for the theorized link between relative group deprivation and collective grievances. Individuals from groups who are relatively deprived or who have a relatively small population size are more likely to perceive collective grievances, but individuals from groups relatively deprived in education or with a large share of elites are not significantly more likely to feel aggrieved. The analysis highlights the importance of individual characteristics in the formation of grievances, as individuals who are poor or are strongly attached to their ethnicity are more likely to perceive collective grievances. The second model indicates that individual characteristics also have a strong moderating effect on the relationship between group characteristics and perceived collective grievances. Individuals whose ethnic identity is salient are less likely to feel that their group is unfairly treated if their ethnic group is relatively deprived in education or wealth, but are more likely to feel their group is unfairly treated if their group contains a larger share of elites. Finally, highly-educated individuals belonging to smaller groups and rich individuals belonging to less educated groups or groups with a large share of elites are less likely to experience collective grievances.

Social capital and violence

RQ4 In which ways are the cognitive and structural dimensions of social capital associated to the reported support for and use of political violence?

Research on the determinants of conflict has thus far paid little attention to the impact of intangible factors. Chapter 5 turned the attention toward social capital, an important element within communities that has been found to have an ambiguous relationship with violence. In this chapter, I distinguished between two dimensions of social capital, investigating their relationship with self-reported support of and propensity for violence. In the context of the theoretical framework, structural social capital is theorized to allow easier diffusion of grievances and facilitate more opportunities for collective mobilization. Cognitive social capital is assumed to bring a community closer together, which is likely to reduce divisions and grievances.

As with the previous analysis, to address RQ4 a multilevel ordered logit regression analysis is performed on round 5 of the Afrobarometer surveys. The results in Table 6.A show that structural and cognitive social capital are to some extent oppositely related with indicators of violence. The structural social capital indicators of religious and community association membership are mostly positively correlated with attitudes towards violence and with violent behaviour. The exception is for the

relationship between religious association membership and support for violence, although the more detailed analysis in Chapter 5 shows that the relationship is significant for inactive members of religious associations. For cognitive social capital indicators, the relationship is more complex. Particularized trust is consistently negatively correlated with support for and use of violence. However, generalized trust is insignificant for support for violence, and positively associated with the use of violence. The salience of identity is positively correlated with either form of violence and the attachment to a national identity has no effect on the support for violence, although this coefficient is found to be positive in other model specifications in Chapter 5. In addition, the dependent variable in RQ3, perceived collective grievances, is positively associated with both measures of violence.

6.3 – Discussion

In summary, the results in Chapters 2 and 3 show that inequalities between groups are indeed related to conflict, but not necessarily in the manner that has been recognized in the literature thus far. On the one hand, educational and political inequalities between groups are positively associated with conflict, with political discrimination being a particularly strong indicator. On the other hand, economic and population size inequalities between groups are negatively associated with conflict. Furthermore, the effects of group inequalities can vary depending on group characteristics and the national environment, such as the proportion of elites within the group, or the level of democracy and the rule of law in the country.

The role of elites is also emphasized throughout the thesis. An increase in elite share is shown to have an independent positive effect on the risk of conflict incidence in Chapters 2 and 3, and it can also exacerbate tensions in dyads where one group suffers from discrimination and the other is in power. The results for Chapter 4 show that elites can generate stronger collective grievances for individuals who closely identify with their ethnic group. Finally, the role of elites is also evident in Chapter 5 where the relationship between leaders of associations and violence is also shown to be mostly positive, especially for community organizations. The findings throughout the chapters underline the key role that elites have in influencing group sentiment and mobilizing its members. If elites have nefarious purposes and members of their group are strongly attached to their ethnic identity, elites will be able to manipulate their ethnic group towards engaging in conflict.

The salience of identity is a critical element underpinning the research throughout this thesis. The group-level analysis in the first two empirical chapters assumed ethnic identity to be salient for ethnic group members. Group characteristics would be expected to be important for individuals who identify

with their group. When taking into account in the last two empirical chapters that the salience of identity varies per individual, it is possible to observe that individual characteristics have a substantial influence on perceptions and decision-making. Group characteristics are therefore less important if we consider individuals who have a national identity, or multiple social identities. Although individuals' social identity will always form an integral part of their personal identity, in a globalized world where individuals across countries are interconnected on different levels, traditional forms of identity may gradually lose their importance and new identities may take their place. It is vital that research based on social identities keeps this in mind.

The relationship between group characteristics and conflict is theorized to work through the motivation and opportunity mechanisms. However, when examining whether the motivation mechanism functions on the individual level, I do not find the expected relationship for all group characteristics and collective grievances. Members of small groups or groups relatively deprived in wealth are more likely to feel their group is treated unfairly. However, the coefficient is not significant for relative group deprivation in education, and when individuals consider their ethnic identity to be salient, the effect of education deprivation on perceived collective grievances is negative. The finding for relative deprivation in education raises questions about the motivation mechanism linking horizontal inequalities and conflict (Stewart, 2008; Cederman et al., 2013; Alcorta et al., 2018).

There could be several explanations for the discrepancy in results for the relationship between relative deprivation and collective grievances. One reason could be that the chapters do not analyse the same concepts. Chapter 4 operationalizes inequalities as the extent to which groups deviate from the national average, which is a general indicator of inequalities that makes it possible to identify whether they are relatively advantaged or deprived. Chapters 2 and 3 use a dyadic analysis to compare inequalities between groups. This means the analysis in these chapters cannot examine the 'direction' of the inequality, but does allow for a direct comparison between the two groups in question. Furthermore, the dependent variable used in this study specifically refers to unfair treatment by the government, which is not necessarily related to the collective grievances that may be generated from horizontal inequalities between two ethnic groups if neither of these are in power. Nevertheless, even if the government may not be responsible for the disparities between groups, the incumbent could be blamed for the deprivation that the group members face (Giugni and Grasso, 2017).

We must also consider the possibility that the link between inequalities and grievances might not always hold, and that the real world is more complicated than our theoretical models are able to account for. The conflict mechanism has been used extensively in the literature (Gurr, 1993; Stewart, 2008; Østby, 2013) and in this thesis to explain group incentives for conflict, but the line of reasoning

behind it was based on data that could be objectively measured. However, recent studies showing that perceived inequalities outweigh actual inequalities in the decision to engage in violence suggest that scholars have to reconsider their reliance on 'objective' data and move towards understanding people's perceptions (Rustad, 2016). Indeed, the research conducted in this thesis underscores this paradigm shift, as in Chapter 5 perceived collective grievances are found to influence individuals' decisions to engage in violence far more than objective measures of relative deprivation. Furthermore, the findings in Chapter 4 indicate that individual characteristics are as, if not more important, than group characteristics in determining collective grievances. At the individual level, group deprivation is to some extent a source of grievance, but identity salience is a driving factor in the relationship.

As has previously been argued in this thesis, motivations are not sufficient for group members to engage in conflict – opportunities must also be present. Robinson (1983) pointed out that recognizing inequalities and determining whether they are fair or unfair are only the first stages of the process in the relationship between inequalities and conflict. The final stages consist of individuals recognising they have the ability to address these differences, and subsequently undertaking action. Both motivation and opportunity mechanisms are incorporated in the final analysis in Chapter 5. Here we observe that perceived collective grievances and identity salience can motivate individuals to participate in violence, and structural social capital in the form of associational membership can provide individuals with access to platforms through which grievances can be diffused and collective mobilization can be stimulated. Group characteristics have no significant effect in these models, but individual characteristics are significantly and positively related to the reported support for and use of violence.

6.4 - Contribution to research

This thesis contributes to the conflict literature in several impactful ways. First of all, the results suggest the need to disaggregate key theoretical concepts. By dissecting the various types of horizontal inequalities, we are able to distinguish the effects on conflict more clearly. My results show ethnic group members might perceive and react to educational inequalities differently than to economic, population size, or political inequalities. Some resources are public whilst others are private, and some resources are more visible than others. How such inequalities are experienced on the collective level can determine how group members perceive relative deprivation. With respect to political inequalities, it stands to reason that for groups that are excluded from power, politically discriminated groups are more likely to be involved in conflict, because they are more directly impacted than groups who only lack representation in the national government. And it is not so surprising to discover that indicators

of social capital have opposing effects on violence. While some aspects of social capital create social cohesion within communities, others provide opportunities for individuals to engage in collective action—including violent collective action. Yet, these assertions are only possible to verify when breaking down the concepts involved and meticulously examining the relationship between their different components and conflict.

Second, this research contributes methodologically by utilizing different units of analysis. In the past, research on inequalities and conflict was conducted on the national level (Collier and Hoeffler, 2004; Besançon, 2005). These studies were incapable of capturing the dynamics of conflict that often occur on the subnational level, and this shortcoming is what led to the study of horizontal inequalities in the first place (Stewart, 2008). The first two empirical chapters in the thesis improve upon earlier work on horizontal inequalities by including all ethnic groups for which enough information was available and by using ethnic dyads as the unit of analysis. Whereas other scholars focused only on the major ethnic groups (Østby, 2008), or used indirect measures, such as the difference with the national or regional average (Cederman et al., 2013; Fjelde and Østby, 2014). This dyadic approach allows us to directly compare differences between most groups within a country. This offers the advantage that more richness is added to the findings and that the determinants of small-scale local conflicts are also captured. By directly measuring the socioeconomic characteristics of group members, this study is able to capture a more complex relationship between different types of horizontal inequalities and conflict outbreak.

Third, the thesis creates a framework linking the ethnic group level to the individual level, and examines in the final two empirical chapters how the different levels intertwine to influence grievances and conflict. The assumption that groups are unitary actors is convenient when conducting empirical research at the group level, but is not completely accurate. Groups are not uniform; instead, they consist of a collection of individuals whose perceptions, opinions, and beliefs may diverge. It would behoove us as scholars to take into account individual variation for characteristics such as socioeconomic background and identity salience when analysing the effects of group characteristics on conflict. By doing so, this research emphasizes the importance of individual characteristics in influencing a person's decision to engage in violence.

Fourth, this research makes inroads into studying the relationship between intangible characteristics and conflict. As was mentioned in the introduction, concepts such as perceived grievances, identity salience and social capital could be considered the 'dark matter' of conflict studies. Traditionally scholars have not been able to observe these phenomena, but they acknowledge their existence and influence on conflict (Blattman and Miguel, 2010; Stewart, 2008). With the increasing availability of

household surveys, the field is gradually integrating these previously hidden characteristics into formal conflict analysis models. Adopting this approach has allowed this thesis to test for the presence of the motivation mechanism, shed a new light on the role of identity in conflict, and examine the direct relationship between social capital and violent behaviour. The further we explore these new avenues of research, the more old theories can be reassessed and new ones can be developed. Much like dark matter, we find that the intangible characteristics of perceptions, identity salience, and social capital have a more prominent function in shaping conflict than was previously understood.

6.5 - Limitations and recommendations for future research

As in every research, this thesis has its share of limitations. Returning to the theoretical framework in Figure 1.B, in this thesis I was able to test the motivation mechanism extensively, but for the opportunity mechanism I was constrained to examining wealth differences between groups and structural social capital. Information on opportunities is difficult to obtain because, to the author's knowledge, only the Minorities at Risk Organizational Behaviour (MAROB) database covers the support, resources and strategies that ethnic organizations have at their disposal (Wilkenfeld et al., 2011). However, this dataset is limited to the Middle East and North Africa, and was only collected till 2004, so it does not overlap well with the geographical coverage of the data used in this research.¹ The Nonviolent and Violent Campaigns and Outcomes (NAVCO) 2.0 dataset (Chenoweth and Lewis, 2013) provides limited coverage of organizational resources for actors in some African countries, but coverage ends in 2006 and actors are not coded by their ethnicity. Without more data on how inequalities and individual factors might influence the opportunities of groups to engage in conflict, for the moment examining the role of the opportunity mechanism in conflict is limited to the current analysis.

It is also important to discuss the spatial controls for ethnic dyads. In the first two empirical chapters, (differences in) urbanization levels of ethnic groups were used to control for geographic concentration of ethnic groups. These are proxy variables and provide only a rough approximation of how or where ethnic groups are geographically located. There have been recent advances in geocoding for both the DHS and EPR data (ICF, 1990-2014; Wucherpfennig et al., 2011),² which would allow for the mapping of ethnic groups according to the region they inhabit and could be matched to the location of conflict events in the UCDP databases. However, the coverage is not as extensive as for non-geocoded data.

¹ Morocco and Algeria are included in the MAROB dataset, but the coverage in the Afrobarometer surveys only starts in 2005.

² Geographic Information Systems (GIS) for DHS (ICF, 2018) and GeoEPR for the EPR dataset (Wucherpfennig et al., 2011).

As coverage improves over time, future research integrating these spatial controls would provide a strong robustness check for the analyses.

Another constraint was also one of its strengths: multiple sources of data. The thesis draws on multiple data sources including: Demographic and Health Surveys, Ethnic Power Relations Dataset, World Governance Indicators, and Afrobarometer data. While this allows me to incorporate individual, group and national characteristics, such as different types of group inequalities and individual perceptions, into one model, there are also drawbacks of merging datasets. The ethnic groups in the DHS and EPR databases are not identical, so merging the political data with the socioeconomic data in Chapter 3 generated missing cases and substantially reduced the number of observations. This meant that the power of the DHS dataset was not fully utilized in this analysis. Despite containing fewer observations, the findings for political inequalities are still robust.

In addition, the Afrobarometer database has its limitations. Since the survey design has changed substantially over the years, the questions used for this research are only included in one or two survey years, which makes it impossible to track perceptions and behaviour over time. This restricts the analysis to examining the direction and significance of the relationships between independent and dependent variables. Despite their constraints, to date the Afrobarometer surveys are still the only cross-national database on African countries that include information for individuals on their ethnic identity, perceptions and participation in violence. It therefore remains a valuable source of information for scholars exploring the impact of intangible characteristics.

A final concern is with the definitions for the dependent variables for violence in this research. In the first two analyses, I study the effects of horizontal inequalities on ethnic conflict. This type of conflict involves one or more groups classified by a marker of ethnicity, and is a subset within all armed conflicts, defined by the Uppsala Conflict Data Program as the use of armed force between two or more actors resulting in 25 battle deaths in one year. However, in Chapter 5 of the thesis, I address political violence more broadly by investigating individuals' reported support for and use of political violence. These dependent variables capture affectivity towards violence, but do not differentiate between the subsets of political violence. Since they are likely to encompass non-ethnic violence and low-level conflicts (under 25 deaths), it is difficult to link the results of Chapter 5 directly back to the first two empirical chapters. Nevertheless, the strong and highly significant correlation between identity salience and use of violence in Chapter 5 suggests that the political violence measured in the Afrobarometer is often linked to identity. With the advent of more detailed conflict event data for smaller conflicts such as in the Social Conflict Analysis Database, future research will be able to investigate the effect of horizontal inequalities on different scales and types of conflict.

6.6 - Final remarks

The findings of this thesis can be summarized in three points. First, they teach us that to better comprehend the factors that shape conflict, it is important to break down these factors and disaggregate their effects. This holds true for horizontal inequalities, political exclusion, and social capital. The relationship between these factors and conflict can be explained through the motivation and opportunity mechanisms. In this thesis I argue that the nature of this relationship is likely due to the extent of the association with either mechanism. Second, the research also highlights the importance of intangible characteristics. Often perception and 'reality' do not match with each other, so how scholars operationalize inequalities will be critical to their effect on decisions to engage in violence. The discrepancy between objective and subjective differences must be taken into consideration when conducting analysis on the effects of inequalities. Third, individual factors should not be underestimated. Attachment to ethnic identity is a strong indicator of grievances, violent affectations and behaviour. States seeking to reduce domestic conflict risk would benefit from social cohesion within their society, which would serve to reduce subnational divisions and increase 'good' social capital. This can be done by constructing a national identity through the education system, such as in Botswana (Dryden-Peterson and Mulimbi, 2017) or by promoting other policies of social integration, such as villagization in Tanzania (Wangwe, 2005). Finally, above all else, this research has established that human behaviour is complex and cannot be fully understood from the perspective of just one discipline. Scholars need to take a multidisciplinary approach and combine elements from all the social sciences, if they wish to improve their understanding of why individuals and groups make the decision to engage in violence.

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Summary

Scholars have long sought to understand why and how ethnic conflict occurs, and why it persists. Despite the rapid expansion of the field of conflict studies in the past few decades, there is still much we do not yet fully understand, and there are important issues that have not been addressed. First, to date there is no definitive consensus on the nature of the connection between horizontal inequalities -- differences between culturally defined groups -- and ethnic conflict. Quantitative studies have shown socioeconomic and political horizontal inequalities to be positively associated to ethnic conflict in some cases, but unrelated in others. The diversity of the findings implies that horizontal inequalities and conflict share a complex relationship, and the underlying mechanisms require further investigation. Second, the positive relationship between political inequalities and conflict is often attributed to the grievances formed when groups are excluded from political access, despite strong evidence pointing specifically toward political discrimination by the state (repression) as the main cause of rebellion. Third, researchers studying inequalities have mainly relied on information that has been 'objectively' measured. However, they acknowledge that people develop grievances based on their own perceptions, rather than the information at academics' disposal. Perceptions may be shaped by 'objective' inequalities, but are also likely to be influenced by other factors at the individual level, such as how strongly individuals identify with their ethnic group, their personal wealth, or their educational background. Fourth, grievances alone are usually insufficient to mobilize individuals toward violence. Social capital, which functions as the glue that holds communities together, is often required for individuals to commit to a larger cause and mobilize collectively. Most of the literature on social capital has touted its positive effects for development and governance, but its role in the context of violent collective action is ambiguous and remains understudied.

Despite acknowledging the substantial role that perceptions, identities, and social capital have in shaping conflict, due to their intangible nature, scholars do not yet have much empirical evidence to support their claims. These concepts could be considered the 'dark matter' of conflict, to borrow a term from astrophysics. Dark matter accounts for a significant proportion of all matter in the universe, but because its properties do not interact with ordinary matter such as light, it cannot be observed with the instruments currently at our disposal. Nevertheless, its presence and effect on gravitational forces is undisputed in theories of astrophysics. In a similar way, how individuals perceive inequalities is far more difficult to observe than the inequalities themselves, but perceptions are critical to understanding whether inequalities lead to violence or not. Categorizing people according to a preconceived notion of identity can be problematic because identity can have a different meaning for every individual, but how individuals associate with their identity will undoubtedly have an effect on the way they view the status of their identity group. How social

capital is measured remains a topic of ongoing debate, but it is evident that the glue that holds a community together can influence how communities respond to difficult circumstances.

The aim of this thesis was to analyze the relationship between inequalities and conflict in a systematic manner, and to reassess the theoretical assumptions made by the conflict literature at the group and individual level by accounting for this 'dark matter'. In order to achieve this, I tackled the problems outlined above using a three-pronged approach that consists of 1) disaggregating the concepts by their components, 2) constructing a framework that links the individual and group levels of analysis, and 3) exploring the role of intangible characteristics such as perceptions, identity salience, and social capital. The structure of the thesis is as follows: in the first two chapters, the effects of socioeconomic and political horizontal inequalities on ethnic conflict were studied both independently and in unison, with moderating factors at the national and subnational level also taken into account. In the other two empirical chapters of the thesis, I focused on how group and individual characteristics influence perceptions and decisions at the individual level. The chapters are described in further detail below.

In Chapter 2, I examined the relationships of educational, economic and population size inequalities between groups with conflict incidence in the context of motivation and opportunity mechanisms. I hypothesized that by inducing strong grievances, educational inequalities are more likely to incentivize disadvantaged ethnic group members to engage in conflict, in spite of the limited opportunities that educational inequalities might represent. I did not expect economic and population inequalities to lead to ethnic conflict because the grievances formed are unlikely to outweigh the limited opportunities for conflict. To test these hypotheses, I performed a multilevel logistic regression analysis on socioeconomic panel data derived from the DHS surveys, using ethnic group dyads as the unit of analysis. I find that educational inequalities are positively associated with ethnic conflict incidence, whereas economic and population size inequalities are negatively associated with ethnic conflict incidence. I also investigate the interactions of horizontal inequalities with economic and political context factors at the group and national level. The main findings for these interactions show the association between educational inequalities and conflict is stronger when the groups in the dyad are jointly wealthier. In addition, a higher joint educational level for groups is associated with less conflict, particularly under more autocratic regimes.

The literature has found overwhelming evidence for a positive relationship between political inequalities and ethnic conflict, but tends to merge the effects of political exclusion and discrimination together. Chapter 3 focused on discerning between discriminated and non-discriminated excluded groups, and investigating whether these groups had a different likelihood of

engaging in conflict. I hypothesized that discriminated groups will be more likely to engage in conflict than non-discriminated groups because the stronger grievances that members of discriminated groups nurture are likely to outweigh the opportunity constraints that they face. Furthermore, I assumed that socioeconomic horizontal inequalities and the share of elites might moderate the relationship between discrimination and conflict by altering the balance between the motivation and opportunity mechanisms. To test these hypotheses, a multilevel logistic regression analysis is conducted using panel data from the Ethnic Dyad Database. Additional political data from the EPR database is integrated into the existing dataset. The results show that discriminated groups are the driving force for the positive association between political exclusion and conflict. When political exclusion is split up into subcategories, dyads containing discriminated groups and groups in power are significantly more likely to engage in conflict than any other dyad. In fact, the analysis in Chapter 3 shows that excluded groups who face active, intentional, and targeted discrimination by the state are more than twice as likely to be involved in conflict than excluded groups who do not face explicit discrimination. Furthermore, discriminated groups that simultaneously experience economic inequalities are less likely to be engaged in conflict. An increased share of elites within discriminated groups could precipitate the chances of the groups being involved in conflict.

In the previous chapters, the relationship between group inequalities and conflict is theorized to function in part through the motivation mechanism, which suggests that members of groups that are relatively deprived may harbour collective grievances against more advantaged groups. Although this mechanism is well established in the conflict-inequality literature, the claim that relative deprivation of ethnic groups will be perceived as group grievances by its members has yet to be empirically tested. To address this question, Chapter 4 examined how group characteristics, such as relative group deprivation and the share of elites, are related to individual perceptions of collective grievances. Furthermore, it investigated how individual characteristics, such as an individual's salience of identity and socioeconomic background, may moderate the relationship between group characteristics and collective grievances. Multilevel ordered logit regressions are run on cross-sectional data taken from rounds 5 and 6 of the Afrobarometer surveys, with individuals taken as the unit of analysis. The findings provide some support for the theorized link between relative group deprivation and collective grievances. Individuals from groups who are relatively deprived or who have a relatively small population size are more likely to perceive collective grievances, but individuals from groups relatively deprived in education or with a large share of elites are not significantly more likely to feel aggrieved. The analysis highlights the importance of individual characteristics in the formation of grievances, as individuals who are poor or are strongly attached to their ethnicity are more likely to perceive collective grievances. Individual characteristics also have a

strong moderating effect on the relationship between group characteristics and perceived collective grievances. Individuals whose ethnic identity is salient are less likely to feel that their group is unfairly treated if their ethnic group is relatively deprived in education or wealth, but are more likely to feel their group is unfairly treated if their group contains a larger share of elites. Finally, highly-educated individuals belonging to smaller groups and rich individuals belonging to less educated groups or groups with a large share of elites are less likely to experience collective grievances.

Research on the determinants of conflict has thus far paid little attention to the impact of intangible factors. Chapter 5 turned the attention toward social capital, an important element within communities that has been found to have an ambiguous relationship with violence. In this chapter, I distinguished between two dimensions of social capital, investigating their relationship with self-reported support of and propensity for violence. In the context of the theoretical framework, structural social capital is theorized to allow easier diffusion of grievances and facilitate more opportunities for collective mobilization. Cognitive social capital is assumed to bring a community closer together, which is likely to reduce divisions and grievances. A multilevel ordered logit regression analysis is performed on round 5 of the Afrobarometer surveys. The results show that structural and cognitive social capital are to some extent oppositely related with indicators of violence. The structural social capital indicators of religious and community association membership are mostly positively correlated with attitudes towards violence and with violent behaviour. The exception is for the relationship between religious association membership and support for violence, although the more detailed analysis in Chapter 5 shows that the relationship is significant for inactive members of religious associations. For cognitive social capital indicators, the relationship is more complex. Particularized trust is consistently negatively correlated with support for and use of violence. However, generalized trust is insignificant for support for violence, and positively associated with the use of violence. The salience of identity is positively correlated with either form of violence and the attachment to a national identity has no effect on the support for violence, although this coefficient is found to be positive in other model specifications in Chapter 5. In addition, perceived collective grievances are positively associated with both measures of violence.

The findings of this thesis can be summarized in three points. First, they teach us that to better comprehend the factors that shape conflict, it is important to break down these factors and disaggregate their effects. This holds true for horizontal inequalities, political exclusion, and social capital. The relationship between these factors and conflict can be explained through the motivation and opportunity mechanisms. In this thesis I argue that the nature of this relationship is likely due to the extent of the association with either mechanism. Second, the research also highlights the

importance of intangible characteristics. Often perception and 'reality' do not match with each other, so how scholars operationalize inequalities will be critical to their effect on decisions to engage in violence. The discrepancy between objective and subjective differences must be taken into consideration when conducting analysis on the effects of inequalities. Third, individual factors should not be underestimated. Attachment to ethnic identity is a strong indicator of grievances, violent affectations and behaviour. States seeking to reduce domestic conflict risk would benefit from social cohesion within their society, which would serve to reduce subnational divisions and increase 'good' social capital. This can be done by constructing a national identity through the education system, such as in Botswana, or by promoting other policies of social integration, such as villagization in Tanzania. Finally, above all else, this research has established that human behaviour is complex and cannot be fully understood from the perspective of just one discipline. Scholars need to take a multidisciplinary approach and combine elements from all the social sciences if they wish to improve their understanding of why individuals and groups make the decision to engage in violence.

Samenvatting

Wetenschappers hebben lang geprobeerd te begrijpen waarom en hoe etnisch conflict ontstaat en waarom het blijft voortbestaan. Ondanks de snelle uitbreiding van conflictstudies in de afgelopen decennia, is er nog veel dat we nog niet volledig begrijpen, en er zijn belangrijke kwesties die niet zijn aangekaart. Ten eerste is er tot op heden geen definitieve consensus over de aard van het verband tussen horizontale ongelijkheden - verschillen tussen cultureel gedefinieerde groepen - en etnische conflicten. Kwantitatieve studies hebben aangetoond dat sociaaleconomische en politieke horizontale ongelijkheden in sommige gevallen positief worden geassocieerd met etnische conflicten, maar in andere gevallen niet. De diversiteit van de bevindingen impliceert dat horizontale ongelijkheden en conflicten een complexe relatie delen, en de onderliggende mechanismen vereisen verder onderzoek. Ten tweede wordt de positieve relatie tussen politieke ongelijkheden en conflicten vaak toegeschreven aan de wrokgevoelens die ontstaan wanneer groepen worden uitgesloten van politieke toegang, ondanks krachtig bewijs dat specifiek wijst op politieke discriminatie door de staat (repressie) als de belangrijkste oorzaak van rebellie. Ten derde hebben onderzoekers die ongelijkheden bestudeerden voornamelijk vertrouwd op informatie die 'objectief' is gemeten. Ze erkennen echter dat mensen wrokgevoelens ontwikkelen op basis van hun eigen perceptie, in plaats van de informatie waarover academici beschikken. Percepties kunnen worden gevormd door 'objectieve' ongelijkheden, maar worden waarschijnlijk ook beïnvloed door andere factoren op individueel niveau, zoals hoe sterk individuen zich identificeren met hun etnische groep, hun persoonlijke rijkdom of hun educatieve achtergrond. Ten vierde zijn wrokgevoelens alleen onvoldoende om individuen te mobiliseren voor geweld. Sociaal kapitaal, dat fungeert als de lijm die gemeenschappen bij elkaar houdt, is vaak vereist voor individuen om zich in te zetten voor een groter doel en collectief te mobiliseren. De meeste literatuur over sociaal kapitaal heeft de positieve effecten aangeprezen voor ontwikkeling en bestuur, maar de rol ervan in de context van gewelddadige collectieve actie is dubbelzinnig en is nog te weinig onderzocht.

Ondanks het erkennen van de substantiële rol die percepties, identiteiten en sociaal kapitaal spelen bij het vormgeven van conflicten, hebben geleerden vanwege hun ongrijpbare aard nog niet veel empirisch bewijs om hun beweringen te ondersteunen. Deze concepten kunnen worden beschouwd als de 'donkere materie' van conflict, om een term te lenen van astrofysica. Donkere materie is verantwoordelijk voor een aanzienlijk deel van alle materie in het universum, maar omdat de eigenschappen ervan niet in wisselwerking staan met gewone materie zoals licht, kan het niet worden waargenomen met de instrumenten die momenteel tot onze beschikking staan. Desalniettemin is de aanwezigheid en het effect ervan op zwaartekrachten onbetwist in theorieën over astrofysica. Op dezelfde manier is de manier waarop individuen ongelijkheden waarnemen, veel moeilijker waar te nemen dan de ongelijkheden zelf, maar percepties zijn van cruciaal belang om te begrijpen of

ongelijkheden tot geweld leiden of niet. Het categoriseren van mensen volgens een vooropgezet idee van identiteit kan problematisch zijn omdat identiteit voor elk individu een andere betekenis kan hebben, maar hoe individuen omgaan met hun identiteit zal ongetwijfeld een effect hebben op de manier waarop zij de status van hun identiteitsgroep bekijken. Hoe sociaal kapitaal wordt gemeten blijft een onderwerp van voortdurend debat, maar het is duidelijk dat de lijm die een gemeenschap bij elkaar houdt, beïnvloedt hoe gemeenschappen reageren op moeilijke omstandigheden.

Het doel van dit proefschrift is om de relatie tussen ongelijkheden en conflicten op een systematische manier te analyseren en de theoretische veronderstellingen van de conflictliteratuur op groeps- en individueel niveau opnieuw te beoordelen door rekening te houden met deze 'donkere materie'. Om dit te bereiken, pak ik de hierboven geschetste problemen aan met behulp van een driedelige aanpak die bestaat uit 1) het uitsplitsen van de concepten op basis van hun componenten, 2) het construeren van een raamwerk dat de individuele en groepsniveaus verbindt, en 3) het verkennen van de rol van ongreepbare kenmerken zoals percepties, opvallende identiteit en sociaal kapitaal. De structuur van het proefschrift is als volgt: in de eerste twee hoofdstukken werden de effecten van sociaaleconomische en politieke horizontale ongelijkheden op etnische conflicten zowel onafhankelijk als in samenhang bestudeerd, waarbij ook rekening wordt gehouden met modererende factoren op nationaal en subnationaal niveau. In de andere twee empirische hoofdstukken van het proefschrift heb ik me gericht op hoe groeps- en individuele kenmerken percepties en beslissingen op individueel niveau beïnvloeden. De hoofdstukken worden hieronder nader beschreven.

In hoofdstuk 2 heb ik de relaties onderzocht tussen ongelijkheden op onderwijs-, economisch en bevolkingsniveau tussen groepen met het voorval van conflict tussen hen in de context van motivatie- en kansenmechanismen. Ik veronderstel dat door het induceren van sterke wrokgevoelens, educatieve ongelijkheden eerder kansarme etnische groepsleden ertoe aanzetten om in conflict te raken, ondanks de beperkte kansen die educatieve ongelijkheden kunnen bieden. Ik had niet verwacht dat economische en bevolkingsongelijkheid tot etnische conflicten zou leiden, omdat de gevormde wrokgevoelens waarschijnlijk niet opwegen tegen de beperkte mogelijkheden voor conflicten. Om deze hypothesen te testen, heb ik een multilevel logistische regressieanalyse uitgevoerd op sociaaleconomische panelgegevens afgeleid van de DHS-enquêtes, met behulp van etnische groepsdyaden als analyse-eenheid. Uit de analyse blijkt dat opleidingsongelijkheden positief worden geassocieerd met etnische conflictincidentie, terwijl economische en populatiegrootte ongelijkheden negatief worden geassocieerd met etnische conflictincidentie. Ik onderzoek ook de interacties van horizontale ongelijkheden met economische en politieke contextfactoren op groeps- en nationaal niveau. De belangrijkste bevindingen voor deze interacties laten zien dat het verband tussen

onderwijsongelijkheid en conflict sterker is wanneer de groepen in de dyade gezamenlijk rijker zijn. Bovendien wordt een hoger gezamenlijk opleidingsniveau voor groepen geassocieerd met minder conflicten, vooral onder meer autocratische regimes.

De literatuur heeft overweldigend bewijs gevonden voor een positieve relatie tussen politieke ongelijkheden en etnische conflicten, maar neigt ertoe de effecten van politieke uitsluiting en discriminatie samen te voegen. Hoofdstuk 3 was gericht op het onderscheiden van gediscrimineerde en niet-gediscrimineerde uitgesloten groepen en het onderzoeken of deze groepen een andere kans hadden om een conflict aan te gaan. Ik veronderstelde dat gediscrimineerde groepen eerder in conflict zullen raken dan niet-gediscrimineerde groepen, omdat de sterkere wrokgevoelens die leden van gediscrimineerde groepen koesteren waarschijnlijk groter zullen zijn dan de kansenbeperkingen waarmee zij worden geconfronteerd. Verder ging ik ervan uit dat sociaaleconomische horizontale ongelijkheden en het aandeel van elites de relatie tussen discriminatie en conflict zouden kunnen matigen door het evenwicht tussen de motivatie- en kansenmechanismen te veranderen. Om deze hypothesen te testen, wordt een multilevel logistische regressieanalyse uitgevoerd met paneldata uit de Ethnic Dyad Database. Aanvullende politieke gegevens uit de EPR-database zijn geïntegreerd in de bestaande dataset. De resultaten laten zien dat gediscrimineerde groepen de motor zijn voor de positieve associatie tussen politieke uitsluiting en conflict. Wanneer politieke uitsluiting wordt opgesplitst in subcategorieën, zijn dyades met gediscrimineerde groepen en groepen aan de macht aanzienlijk vaker in conflict dan welke andere dyade. Uit de analyse in hoofdstuk 3 blijkt zelfs dat uitgesloten groepen die te maken hebben met actieve, opzettelijke en gerichte discriminatie door de staat meer dan twee keer zoveel kans hebben om in een conflict te worden betrokken dan uitgesloten groepen die niet worden geconfronteerd met expliciete discriminatie. Bovendien is het minder waarschijnlijk dat gediscrimineerde groepen die tegelijkertijd economische ongelijkheden ervaren, in conflict raken. Een groter aandeel elites binnen gediscrimineerde groepen zou de kans kunnen vergroten dat de groepen bij conflicten betrokken raken.

In de vorige hoofdstukken wordt de relatie tussen groepsongelijkheden en conflicten verondersteld om gedeeltelijk via het motivatiemechanisme te functioneren. Deze mechanisme suggereert dat leden van groepen die relatief achtergesteld zijn, collectieve wrokgevoelens kunnen hebben tegen meer bevoordeelde groepen. Hoewel dit mechanisme goed vastgesteld is in de literatuur over conflictongelijkheid, moet de bewering dat relatieve deprivatie van etnische groepen door haar leden als collectieve wrokgevoelens wordt gezien, nog empirisch worden getest. Om deze vraag te beantwoorden, onderzoekt hoofdstuk 4 hoe groepskenmerken, zoals relatieve groepsgebrek en het aandeel van elites, gerelateerd zijn aan individuele percepties van collectieve wrokgevoelens. Verder

onderzoekt het hoe individuele kenmerken, zoals iemands opvattingen over identiteit en sociaaleconomische achtergrond, de relatie tussen groepskenmerken en collectieve wrokgevoelens kunnen matigen. Multilevel geordende logit-regressies worden uitgevoerd op transversale gegevens uit rondes 5 en 6 van de Afrobarometer-enquêtes, met individuen als analyse-eenheid. De bevindingen bieden enige ondersteuning voor het theoretische verband tussen relatieve achterstelling van groepen en collectieve wrokgevoelens. Individuen uit groepen die relatief achtergesteld zijn of die een relatief kleine populatiegrootte hebben, hebben meer kans om collectieve wrokgevoelens waar te nemen, maar individuen uit groepen die relatief achtergesteld zijn in het onderwijs of met een groot deel van de elites, hebben geen significant grotere kans om wrokgevoelens te hebben. De analyse benadrukt het belang van individuele kenmerken bij de vorming van wrokgevoelens, omdat personen die arm zijn of sterk gehecht zijn aan hun etniciteit, vaker collectieve wrokgevoelens ervaren. Individuele kenmerken hebben ook een sterk modererend effect op de relatie tussen groepskenmerken en waargenomen collectieve wrokgevoelens. Personen met een opvallende etnische identiteit hebben minder vaak het gevoel dat hun groep oneerlijk wordt behandeld als hun etnische groep relatief weinig onderwijs of rijkdom heeft, maar hebben meer kans dat hun groep oneerlijk wordt behandeld als hun groep een groter aandeel elites bevat. Ten slotte hebben hoogopgeleide personen die tot kleinere groepen behoren en rijke personen die tot lager opgeleide groepen behoren of groepen met een groot aandeel elites, minder kans om collectieve wrokgevoelens te ervaren.

Onderzoek naar de determinanten van conflict heeft tot nu toe weinig aandacht besteed aan de impact van immateriële factoren. Hoofdstuk 5 richtte de aandacht op sociaal kapitaal, een belangrijk element binnen gemeenschappen dat een dubbelzinnige relatie met geweld bleken te hebben. In dit hoofdstuk heb ik onderscheid gemaakt tussen twee dimensies van sociaal kapitaal en hun relatie onderzocht met zelf-gerapporteerde steun voor- en neiging tot geweld. In de context van het theoretische kader wordt structureel sociaal kapitaal getheoretiseerd om een gemakkelijkere verspreiding van wrokgevoelens te faciliteren en meer mogelijkheden voor collectieve mobilisatie te creëren. Verondersteld wordt dat cognitief sociaal kapitaal een gemeenschap dichter bij elkaar kan brengen, wat waarschijnlijk verdeeldheid en wrokgevoelens vermindert. Een multilevel geordende logit-regressieanalyse wordt uitgevoerd op ronde 5 van de Afrobarometer-enquêtes. De resultaten tonen dat structureel en cognitief sociaal kapitaal tot op zekere hoogte een tegengestelde relatie hebben met indicatoren van geweld. De structurele indicatoren voor sociaal kapitaal van lidmaatschap van religieuze en gemeenschapsverenigingen zijn meestal positief gecorreleerd met steun voor geweld en met gewelddadig gedrag. De uitzondering is voor de relatie tussen lidmaatschap van religieuze verenigingen en steun voor geweld, hoewel de meer gedetailleerde analyse in hoofdstuk 5 laat zien dat de relatie significant is voor inactieve leden van religieuze verenigingen. Voor cognitieve

indicatoren van sociaal kapitaal is de relatie complexer. Bijzonder vertrouwen is consistent negatief gecorreleerd met steun voor en gebruik van geweld. Algemeen vertrouwen is echter onbeduidend voor steun voor geweld en wordt positief geassocieerd met het gebruik van geweld. Het belang van identiteit is positief gecorreleerd met beide vormen van geweld en de gehechtheid aan een nationale identiteit heeft geen effect op de ondersteuning van geweld, hoewel deze coëfficiënt positief is bevonden in andere modelspecificaties in hoofdstuk 5. Bovendien, waargenomen collectieve wrokgevoelens worden positief geassocieerd met beide maten van geweld.

De bevindingen van dit proefschrift kunnen in drie punten worden samengevat. Ten eerste leren ze ons dat het, om de factoren die conflict vormen, beter te begrijpen, belangrijk is om deze factoren op te splitsen en hun effecten op te splitsen. Dit geldt voor horizontale ongelijkheden, politieke uitsluiting en sociaal kapitaal. De relatie tussen deze factoren en conflicten kan worden verklaard door de motivatie- en kansenmechanismen. In dit proefschrift beargumenteer ik dat de aard van deze relatie waarschijnlijk te wijten is aan de mate van associatie met beide mechanismen. Ten tweede benadrukt het onderzoek ook het belang van immateriële kenmerken. Vaak komen perceptie en 'realiteit' niet overeen, dus de manier waarop wetenschappers ongelijkheden operationaliseren, is van cruciaal belang voor hun effect op beslissingen om geweld aan te gaan. De discrepantie tussen objectieve en subjectieve verschillen moet in acht genomen worden bij het uitvoeren van een analyse van de effecten van ongelijkheden. Ten derde mogen individuele factoren niet worden onderschat. Gehechtheid aan etnische identiteit is een sterke indicator van wrokgevoelens, steun voor- en neiging tot- geweld. Staten die het binnenlandse conflictrisico willen verminderen, zouden baat hebben bij de sociale cohesie binnen hun samenleving, die zou dienen om subnationale divisies te verminderen en 'goed' sociaal kapitaal te vergroten. Dit kan door een nationale identiteit op te bouwen via het onderwijssysteem, zoals in Botswana, of door ander beleid bedoeld om sociale integratie te bevorderen, zoals de dorpsontwikkelingsbeleid in Tanzania. Ten slotte heeft dit onderzoek bovenal aangetoond dat menselijk gedrag complex is en niet volledig kan worden begrepen vanuit het perspectief van slechts één discipline. Geleerden moeten een multidisciplinaire benadering volgen en elementen uit alle sociale wetenschappen combineren, als ze hun begrip van waarom individuen en groepen de beslissing willen nemen om geweld te gebruiken, willen verbeteren.

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Curriculum Vitae

Ludovico Alcorta was born in Haywards Heath (UK) on July 23rd, 1986, and attended secondary school at Jeanne d’Arc College in Maastricht, where he obtained his International Baccalaureate. He started his academic trajectory in International Economics at Tilburg University, and was an exchange student at the Universidad del Pacífico in Lima. After obtaining his BSc degree in 2013, he continued with a MSc in International Relations at the University of Amsterdam, for which he graduated cum laude in 2014. He started his PhD research in the same year for an interdisciplinary project organised jointly by the Department of Economics and the Centre for International Conflict – Analysis and Management at Radboud University, entitled ‘Micro and Macro-Level Determinants of Conflict Escalation in a Globalizing World’. During the period 2014-2019 he also tutored, supervised, and assessed bachelor and master students at the Radboud University and at the Amsterdam University of Applied Sciences. Alongside his academic duties, in 2018 and 2019 Ludovico worked as a facilitator for the Austrian Study Centre for Peace and Conflict Resolution and as an election observer for the OSCE in Armenia and the EU in Mozambique. As of January 2020, he will be joining Forcier Consulting as Director of Research for Southern Africa in Mozambique.