



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

**Give to AgEcon Search**

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

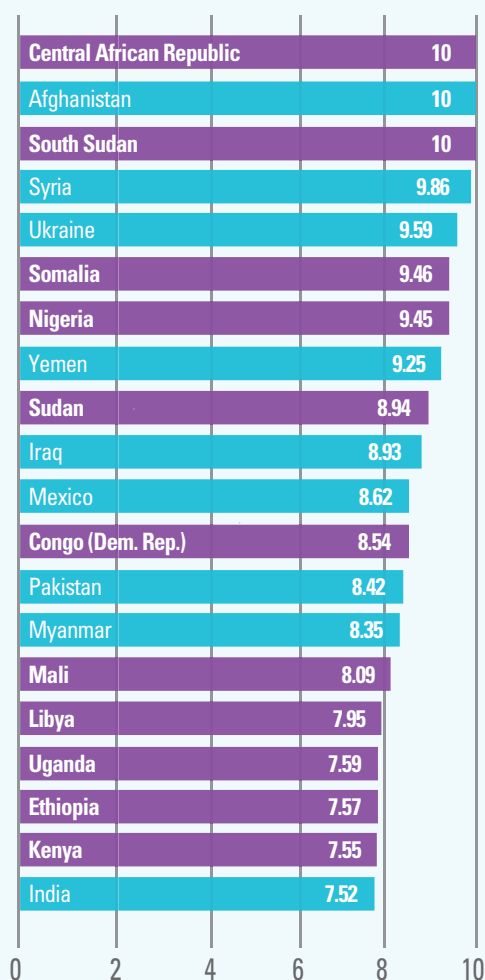
# Inequality intensity and poverty drive conflicts in sub-Saharan Africa

**Intensity of conflict fell from 55 per cent in 2002 to 24 per cent in 2011**

Of all global conflicts, substantial improvements were seen in

**Seychelles      Zimbabwe**  
**Cabo Verde      Côte d'Ivoire**

**Africa accounts for 11 of the 20 countries with the highest likelihood of conflict globally**



## 7 highlights about the conflict-inequality relationship in Africa

- 1 Most countries with a poverty headcount of more than 60.0 per cent experienced intense conflicts.
- 2 The influence of more democratic governance leads to more peaceful societies.
- 3 Ethnic and religious polarization plays a strong role in driving conflicts. For instance, a 1.0 per cent rise in religious polarization index could increase conflicts by between 1.19 and 2.53 per cent.
- 4 The measurement of conflicts matters in determining the impact of inequality. Conflict measured as death per capita reveals the impact; the cumulative conflict and conflict intensity do not.
- 5 Contrary to expectation, vertical inequality does not drive conflicts in Africa, but inequality intensity does. Three of the most stable countries in Africa have Gini coefficients of more than 0.60 (Botswana, Seychelles and South Africa).
- 6 Multi-dimensional poverty drives the various measures of conflicts in Africa.
- 7 Additional research on within-group income inequality and conflict triggers is needed.

# 10 Inequalities and Conflict in Africa: An empirical investigation

AYODELE ODUSOLA, AMARAKOON BANDARA, ROGERS DHLIWAYO AND BECAYE DIARRA

## 10.1 Introduction

Inequalities and poverty are important drivers of social exclusion, while conflict, social unrest and instability are its manifestation. The preponderance of conflicts in poor and unequal societies has long been documented in the literature.<sup>1</sup> As Nagel succinctly argues, “political discontent and its consequences – protest, instability, violence, revolution – depend not only on the absolute level of economic well-being, but also on the distribution of wealth” (Nagel, 1974:453). According to the Kuznets’ inverted-U theory, a high level of income inequality radicalises the proletariat, enhances class polarisation and reduces the tolerance of the bourgeoisie for low-income group participation in political and decision-making processes (Muller, 1997).

Inequality and conflict create a vicious cycle that tends to perpetuate itself and further propagates underdevelopment. Risk of conflict is higher in poor and unequal countries than in rich and less unequal ones, as a wide gap between a group’s expected and actual economic well-being can promote conflict.<sup>2</sup> Societies characterised by high levels of poverty, inequality and unemployment serve as breeding grounds for rebels and radicalised groups. And yet, poverty and inequality are costs of pronounced conflicts and instabilities. Inequalities (income and non-income) and conflicts are not only bicausally linked, but are also impediments to national and human development. Adopting a bicausal approach implies studying symptoms and outcomes. Indeed, studying what drives and reinforces inequality and how this could affect conflict is vital to breaking the vicious circle.

Inequality, across and within countries, communities and groups, has become a major yardstick for measuring social cohesion and has often come with a degree of power that is difficult to ignore in measuring development outcomes. The prevalence of inequality is an important measure of economic and social exclusion, which often manifests in the form of conflict and

<sup>1</sup> The literature is replete with various dimensions of the debate. For instance, Nagel (1974) focuses on the link among poverty, inequality and conflicts; Lichbach (1989) explores the economic inequality-political conflict nexus; Cramer (2005) reviews the theoretical and empirical weaknesses of the various approaches; and Willems (2012) examines the role of citizenship and property rights in explaining the inequality-conflicts relationship.

<sup>2</sup> As argued by Humphreys (2002), countries with a GDP per capita of \$250 have a 15.0 per cent chance of descending into conflict as opposed to 4.0 per cent for countries with a per capita income of \$1,250 or more. Sambanis (2004) and Holmqvist (2012) also examined why probability of conflicts and civil wars is higher in poor and unequal communities. Collier and Hoeffler (2004) vividly point out the role of income inequality in propagating conflicts.

instability. Despite the avalanche of literature on the link between inequality and conflict, the debate about how they are linked and the impact of this relationship remains unresolved. The inconclusive debate has been associated with varying definitions of inequality and conflict, different methodology and limited quality of comparable data in Africa.

This chapter contributes to deepening the understanding of the interlinkages between inequality and conflict in Africa. It aims to shed more light on how and when inequalities could lead to conflict. Providing a detailed understanding of this in Africa could help articulate policies that can contribute to preventing conflicts and wars on the continent. The chapter uses a composite measure of inequality (economic and non-economic inequalities) to provide broader perspectives to understanding the dynamics of poverty and conflicts in Africa. This offers opportunities to look at the ways inequalities are addressed, using a non-conventional approach, to unleash inclusiveness and social cohesion and prevent conflicts in Africa.

This chapter aims to effectively contribute to shifting the frontiers of the inequality-conflict debate in Africa and is divided into five sections. Following the introduction, Section 10.2 provides an overview and trends of inequality and conflicts in Africa. Section 10.3 reviews the theoretical and literature on the relationship between inequality and conflicts. Section 10.4 delves into the framework of analysis and empirical investigation of the linkage, while Section 10.5 provides policy implications and conclusions.

## 10.2 Overview and trends in income inequality and conflicts in Africa

Africa has experienced two decades of robust economic growth, with gross domestic product (GDP) growth averaging 4.4 per cent a year during 1995–2014, particularly when contrasted with performance in the 1980s and early 1990s. Despite this growth, and although poverty levels have decreased, income inequality has remained almost unchanged.<sup>3</sup>

The proportion of Africans living in extreme poverty (less than \$1.90 per day) has continued to decline. The proportion of people living on less than US\$1.25 a day in sub-Saharan Africa (SSA) decreased from 57.0 per cent in 1990 to 43.0 per cent in 2012, around a 25.0 per cent decline. With more countries using comparable consumption surveys, poverty headcounts could be lower than estimated, at 37.0 per cent.<sup>4</sup> Notwithstanding, the absolute number of people living below the poverty line rose from 280 million in 1990 to 330 million in 2012 (Beegle et al., 2016).

This progress in the decline of the poverty rate is marginal when compared to other developing regions. East Asia and the Pacific succeeded in reducing poverty from 1990 to 2012 by 88.1 per cent and Latin America and the Caribbean by 68.6 per cent, while the Middle East and North Africa also achieved a 54.8 per cent reduction (see figure 10.1). Low- and middle-income countries as well as lower middle-income countries achieved 66.4 per cent and 58.2 per cent reductions, respectively. The remarkable progress in China and India contributed to the global achievement of 65.7 per cent.

Six countries have made giant strides – Tunisia (79.7 per cent), Mauritania (73.5 per cent), Guinea (61.8 per cent), Namibia (57.3 per cent), Uganda (51.2 per cent) and Ethiopia (50.6 per cent). Four

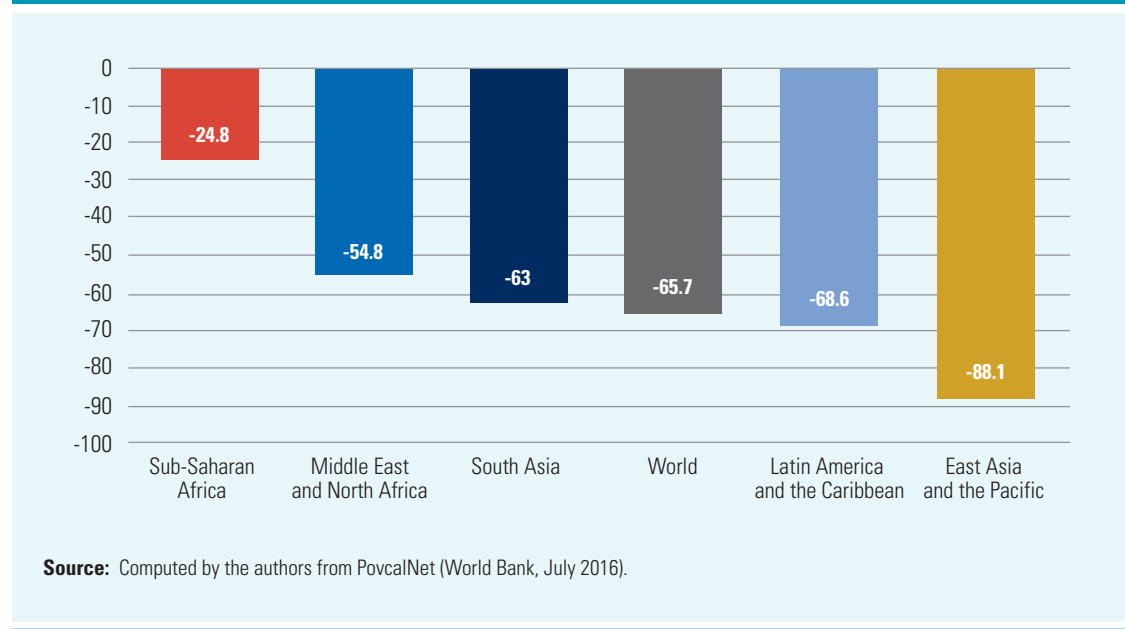
<sup>3</sup> This is based on the latest World Bank estimates, which in turn are based on an international poverty line of \$1.90 per day in 2011 purchasing power parity (PPP) US dollars, where poverty declined from 56 per cent in 1990 to 43 per cent in 2012.

<sup>4</sup> See Beegle et al. (2016) for a detailed analysis of the adjustment in poverty trends.

others – Swaziland, South Africa, Botswana and Ghana – are less than 5 percentage points away from reaching the target of 50 per cent reduction in their poverty headcount. However, the poverty situation worsened in Madagascar, Zambia, Kenya, Guinea-Bissau, Côte d'Ivoire, Malawi and Morocco, among others. There were also setbacks in Kenya and Guinea-Bissau (over 50 per cent) and in others (between 11 and 35 per cent). Interestingly, all of the countries that experienced a rise in the poverty rate had a fragility index of over 80 out of 120 points except Morocco whose poverty rate, at 3.12 per cent of the population, was very low.

Limited progress was achieved in fragile countries and rural areas and the number of chronically poor remains substantial. Kenya, Madagascar and Malawi account for a large proportion of chronically poor people. As shown in Beegle et al. (2016), an almost equal proportion of people moved into poverty as those who moved out of it.

**FIGURE 10.1** Percentage change in poverty, by region, 2012



Although the role of inequality in driving conflicts and fragility remains inconclusive (Cramer, 2005), income inequality affects how economic growth translates into poverty reduction. Most policymakers in Africa see inequality as a serious development challenge that must be tackled head on (Beegle et al., 2016). Along these lines, how do African countries perform on inequality?<sup>5</sup>

The paucity of data makes it difficult to obtain a credible trend aggregate for the continent as a whole. Evidence from Bhorat, Naidoo and Pillay (2016) shows that income inequality declined by about 11.0 per cent, with the Gini coefficient falling from 0.48 in 1990-1994 to 0.43 in 2010-2013.<sup>6</sup> Based

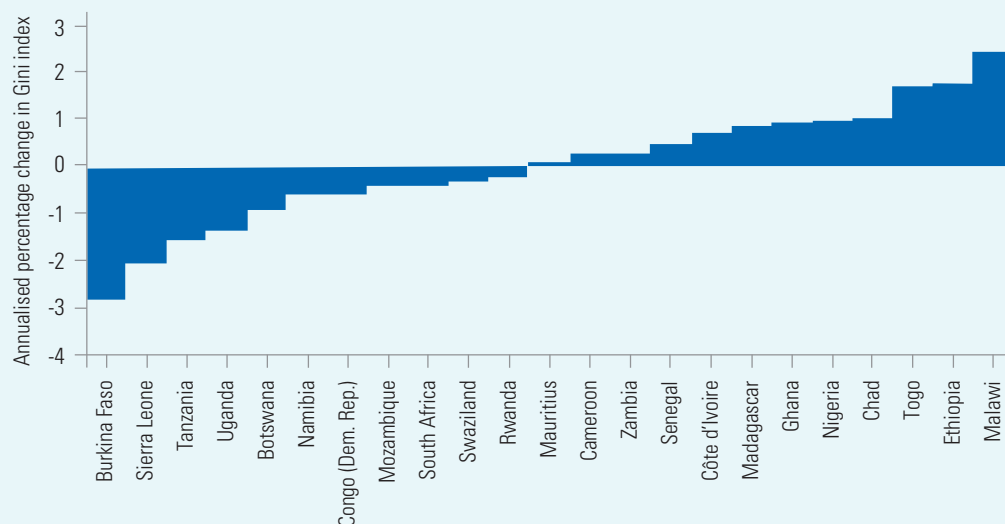
<sup>5</sup> A unique aspect of income inequality in Africa is that almost all countries use consumption surveys, while many other countries use income surveys, which often produce higher inequality results than the consumption surveys.

<sup>6</sup> Evidence from Beegle et al. (2016) contradicts this evidence from UNU-WIDER, as quoted by Bhorat, Naidoo and Pillay (2016). It shows that the Gini rose by 8.6 per cent from 0.52 in 1993 to 0.56 in 2008. Cornia and Martorano (2016) provide copious reasons for this possible variation in inequality measurement in Africa.

on the evidence from Chapter 7 of this book, seven of the 10 most unequal countries are from Africa (South Africa, Namibia, Botswana, Central African Republic, Comoros, Zambia and Lesotho). The impact on the continental average would have been high if not for the low population of the affected countries (except South Africa and Zambia, which have more than 5 million). However, when these seven outliers are used as a control, the Gini coefficient of income inequality for Africa compares favourably with other developing economies. Moreover, out of the 50 most unequal countries in the world, 23 are from the African continent, accounting for 46 per cent of the countries.

High income inequality is concentrated in Southern Africa, where the Gini coefficient is over 0.5. However, it is also relatively high in Central Africa. The results in East Africa are mixed, while West Africa is the least unequal. Cornia and Martorano (2016) and Bhorat et al. (2016) provide some historical root causes of inequality on the continent, especially land accumulation during the colonial era. Large-scale plantations in Southern and East Africa compared to family holding land tenure systems in West and Central Africa account for differences in inequality, among other factors. Income inequality has remained broadly unchanged regionally because the Gini coefficient fell in about one half of the countries and rose in the other half; it fell significantly in Burkina Faso, Sierra Leone, United Republic of Tanzania, Uganda and Botswana, but rose substantially in Malawi, Ethiopia, Togo, Chad and Nigeria (see figure 10.2).

**FIGURE 10.2** Income inequality trends in African countries



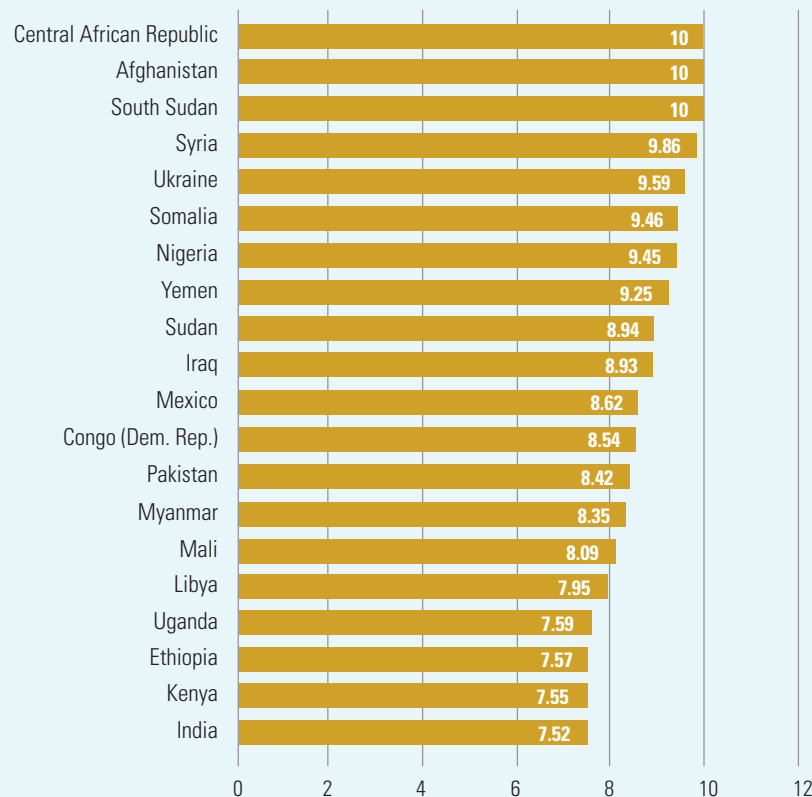
**Source:** Bhorat, Naidoo and Pillay (2016).

How has the continent performed with regard to conflicts and fragility? Africa is one of the continents most prone to conflicts over the past decades. The good news is that the intensity of conflict is falling. SSA accounted for 55 per cent of the world's conflicts in 2002, but this figure declined to 24 per cent in 2011.<sup>7</sup> Yet, 11 of the top 20 countries with the most likelihood of conflicts are from Africa

<sup>7</sup> Computed from the Conflicts Barometer 2011.

(see figure 10.3). According to the 2016 Fragile States Index, only one of the 53 countries considered sustainable and stable is in Africa (Mauritius), while those belonging to the alert, high alert and very high alert categories are disproportionately (about 71 per cent of the global total) represented on the continent (figure 10.4).<sup>8</sup>

**FIGURE 10.3** Top 20 countries with highest likelihood of conflict globally (Global Conflict Risk Index intensity)



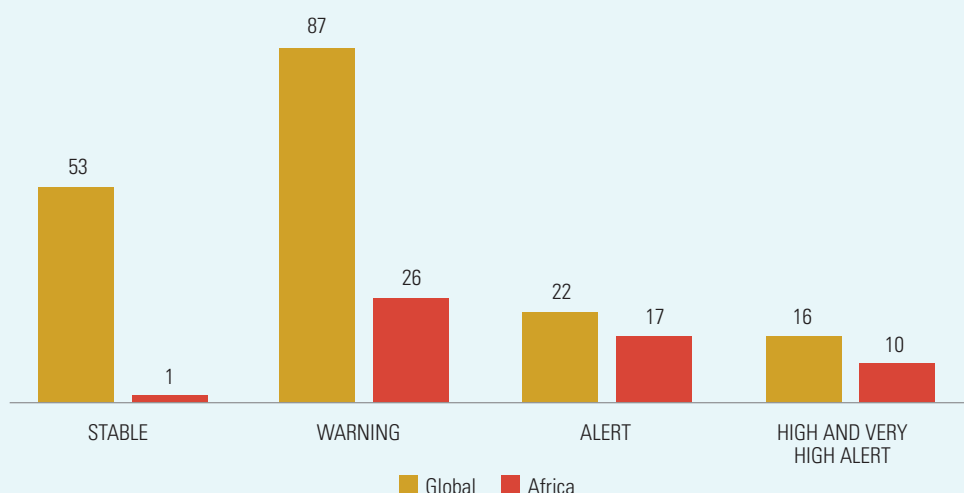
**Source:** Computed from Smidt et al. (2016).

Some countries made giant strides over the past decade (2007-2016). Seychelles made significant improvement, while another three countries – Cabo Verde, Zimbabwe and Côte d'Ivoire – showed strong improvements (table 10.1). As shown in table 10.1, six countries improved their performance by 2.0-5.9 points while another four enhanced their index from 0.5 to 1.9 points. This improvement notwithstanding, the index of 35 African countries worsened. Senegal, Mali, Libya, Eritrea, South Africa, Central African Republic, Guinea-Bissau, Mozambique and The Gambia lost more than 10 points from 2007 to 2016.

<sup>8</sup> Those categorized by the Fragile States Index 2016 as high alert are Zimbabwe, Burundi, Nigeria and Guinea and very high alert are Democratic Republic of the Congo, Chad, Sudan, Central African Republic, South Sudan and Somalia (The Fund for Peace, 2016).

The growth of violent extremism in some parts of the continent complicates the conflict situation in Africa. For instance, from 2011 to 2015, over 24,000 fatalities and 1.2 million displaced persons resulted from religiously inclined, extreme fundamentalism. The conflict situation in Africa has been substantially worsened by: Al-Shabaab, operating predominantly in Somalia and Kenya; Boko Haram, functioning in the Chad Basin region; the Movement for Unity and Jihad in West Africa, terrorizing the Sahelian states; the Ansar Dine, wreaking havoc predominantly in Mali; and Al-Shabaab Hizb al Islam, terrifying the people of Somalia.

**FIGURE 10.4** Overview of Africa's performance in the 2016 Fragile States Index



**Source:** Fund for Peace [fsi.fundforpeace.org/](http://fsi.fundforpeace.org/)

Correlation analysis between index of inequality and conflicts provides some insights into the relationship (table 10.2). The relationship between the Gini coefficient and the various indices of conflicts appears to be negative, ranging from 0.333 to 0.401. As evident in the 2016 Fragile States Index, three of the four most stable countries in Africa have Gini coefficients of more than 0.6 (Botswana, Seychelles and South Africa) and only Mauritius, the most stable country in Africa, has a Gini of 0.359.<sup>9</sup> It could be argued that high inequality provides opportunity for resources of the state or those of very rich people to overpower collective actions.

Relative deprivation, however, tends to have some role to play. Inequality intensity, depicted by the income share of the lowest 10 per cent in the highest 10 per cent of the population, tends to have a positive relationship with the various indicators of conflicts, ranging from a correlation index of 0.292 to 0.315, especially group grievances. Population in multidimensional poverty, intensity of multidimensional poverty and population in severe multi-dimensional deprivation also tend to drive the various measures of conflicts (table 10.2). The role of poverty in driving conflicts in Africa is also evident in figure 10.5, where most countries with a poverty headcount of more than 60 per cent experienced or are experiencing serious or intense conflicts. Burundi, Central African Republic and Democratic Republic of the Congo are good examples.

<sup>9</sup>This is based on the World Development Indicator: <http://data.worldbank.org/indicator/SI.POV.GINI>



**TABLE 10.1** Improvement or worsening in the Fragile States Index, 2007-2016

Status		Points gained or lost	No. of African countries relative to total	Countries
1	Significant improvement	≥10 points gained	1 out of 6 countries	Seychelles
2	Strong improvement	6-9.9 points gained	3 out of 38 countries	Cabo Verde, Zimbabwe and Côte d'Ivoire
3	Some improvement	2-5.9 points gained	6 out of 33 countries	Sao Tome and Principe, Equatorial Guinea, Botswana, Malawi, Sierra Leone and Sudan
4	Marginal improvement	0.5-1.9 points gained	4 out of 14 countries	Togo, Republic of the Congo, Gabon and Morocco
5	Insignificant change	Between 0.5 points lost and 0.5 points gained	4 out of 16 countries	Mauritius, Burkina Faso, Lesotho and Namibia
6	Marginal worsening	0.5 -1.9 points lost	4 out of 17 countries	Ethiopia, Uganda, Chad and Egypt
7	Some worsening	2.0-5.9 points lost	11 out of 24 countries	Comoros, Zambia, Angola, Burundi, Democratic Republic of the Congo, Somalia, Liberia, Tanzania, Guinea, Algeria and Rwanda
8	Worsening	6.0-9.9 points lost	11 out of 17 countries	Djibouti, Ghana, Tunisia, Mauritania, Nigeria, Madagascar, Niger, Kenya, Benin, Swaziland and Cameroon
9	Significant worsening	10-14.9 points lost	6 out of 7 countries	The Gambia, Mozambique, Guinea Bissau, Central African Republic, South Africa and Eritrea
10	Critical worsening	≥16 points lost	3 out of 5 countries	Senegal, Mali and Libya

**Source:** Authors' calculation from The Fund for Peace (2016).

**TABLE 10.2** Correlation between inequality measures and conflict indicators

	Fragility index	Refugees and IDPs	Group grievance	Factionalized elites
Gini coefficient	-0.40183	-0.37008	-0.33352	-0.40043
Inequality intensity (share of lowest 10% in highest 10%)	0.303191	0.292414	0.315016	0.293458
Multidimensional Poverty Index (MPI)	0.398041	0.345477	0.068876	0.145394
Population in multidimensional poverty (headcounts)	0.403488	0.388481	0.062905	0.119291
Intensity of MPI deprivation	0.352495	0.229196	0.034838	0.168651
Population near multidimensional poverty	0.012857	0.111446	-0.05879	-0.00923
Population in severe multidimensional deprivation	0.368804	0.286465	0.048415	0.153138

**Source:** Authors' computation.

**Note:** IDP = Internally displaced persons.

**FIGURE 10.5.** Correlation between fragility and extreme poverty in Africa

The scatter plot displays the relationship between the poverty headcount ratio (x-axis) and the fragility index (y-axis) for various African countries. The x-axis ranges from 0 to 100, and the y-axis ranges from 55 to 115. A positive linear regression line is fitted to the data, with the equation  $y = 0.2268x^2 + 77.171$  and  $R^2 = 0.16528$ . The data points are labeled with country names, and a vertical red line is drawn at x = 50.

Country	Poverty headcount ratio (\$1.25)	Fragility index (average 2005-14)
Seychelles	2	65
Gabon	5	74
Cabo Verde	10	78
South Africa	15	65
Sudan	20	110
Côte d'Ivoire	25	100
Mauritania	28	88
Togo	30	85
Ethiopia	32	95
Ghana	35	65
Swaziland	38	82
Uganda	40	92
Guinea	45	100
Kenya	48	95
Niger	50	92
Guinea-Bissau	55	95
Sierra Leone	58	92
Chad	62	108
Central African Republic	65	102
Nigeria	68	98
Malawi	70	92
Comoros	72	82
Zambia	75	85
Tanzania	78	82
Madagascar	82	82
Benin	48	78
Lesotho	52	82
Mali	55	82
Mozambique	60	82
Rwanda	65	88
Democratic Rep.	88	110
Burundi	85	98
Liberia	82	92

The correlation analysis provided above does not provide reliable parameters for causal relationships among the variables of interest, including inequality, poverty and conflicts. It therefore calls for a more systematic approach and a wider perspective that examines both economic and non-economic dimensions that drive conflicts in Africa.

### 10.3 Theoretical linkages and a literature review

### 10.3.1 Theoretical linkages

Disentangling the inequality–conflict nexus calls for analytical approaches that would help organize the thought process and that are consistent with economic theory; here the neoclassical economic theories of violent conflict are used. There are several theories of violent conflicts, but this chapter focuses on three strands: inherency/contingency, relative deprivation, and rational action theories.<sup>10</sup>

The contingency and inherency theoretical perspectives of conflicts, as espoused by Eckstein (1980), emphasise the importance of contingency or an aberrant (an uncommon combination of factors) in unleashing collective violence, as opposed to an inherent propensity (an ever-present option of social life) to violence, i.e., rational actions. Under the contingency theory, inequality is an important source of perceived 'relative deprivation', but requires a delicate combination of other factors to lead to violence. However, under the inherency theory, violence does not especially require structural inequality, but some forms of collective inequality might be relevant as sources of coordinated interests leading to violence (Cramer, 2005). These theoretical perspectives have some appeal in the African

<sup>10</sup>Cramer (2005) provides a detailed analysis of the various theoretical dimensions of the inequality-conflict debate.

context. The youth bulge could be an aberrant for the contingency theory, while the periphery-centre development continuum (spatial development argument) offers the trigger for the inherency theory. Ethnicity and religion could also combine with poverty and income inequality to trigger this form of violence.

Another perspective is the relative deprivation theory, which focuses on the gap between people's views of their value expectations and their value capabilities (Gurr, 1993).<sup>11</sup> In line with Kuznets theory, relative deprivation is assumed to increase during the early stages of development, producing distrust and frustration, and a socially unusual inclination to aggression that could lead to collective violence. In this context, violence is a function of deprivation relative to others (e.g. inequality), providing justification that their grievances and frustration are generated by discrepancies in conditions, expectation shortfalls and their ability to use coercive and institution resources.

The rational action theory is not formed in relative to others but, rather, is based on opportunities, costs and benefits. Increasing inequality may lead to rising absolute deprivation, which may lead to rebellion if collective action constraints are overcome. High inequality produces some ambiguous effects. As Cramer (2005) argued, high inequality will not lead to rebellion because of insufficient 'opportunity'. However, from the costs side, especially when people become desperate, the assumption is that this could trigger violent actions, especially when the state alienates significant groups of people by its failure to meet obligations. Although resources of the state or of the bourgeoisie could overpower collective actions, if the power of government is not strong enough to effectively block the potential for extreme action, then a situation of multiple sovereignty arises. These mutually exclusive claims generate violence as was or still is the case in Somalia, Central African Republic, Mali, South Sudan and the north-eastern part of Nigeria (during the Boko Haram saga).

The neoclassical economic theory, based on methodological individualism and rational choice, unlike the relative deprivation approach, is built on maximizing specific utilitarian goals. Under this theory, inequality produces market and policy distortions that produce investment disincentive signals (e.g. violence) to private investors. Collier (2000) posits that violence is a constant possibility, an option available to choice-making individuals, using the neoclassical economic construct. The recent analytical distinction between greed and grievance (Collier and Hoeffler, 2004) has also provided alternative sources of conflicts where grievance reverberates contingency theory (frustration-aggression nexus) and greed resonates inherency theory (rationality-oriented violence). The greed and **grievance** distinction has brought inequality into the neoclassical perspective because inequality is a good proxy for relative deprivation within societies.<sup>12</sup>

One major challenge in the literature is using the most appropriate inequality indicator for relative deprivation. Nafziger and Auvinen (2002) suggest the use of vertical (class) or horizontal (regional or communal) inequality, Stewart (2000) argues for horizontal inequality (i.e., unequal distribution along regional, religious or ethnic lines), and Midgley (1984) advocates for market inequality. This paper uses a combination of vertical and horizontal inequalities to capture relative deprivations.

---

<sup>11</sup> People's value expectations relate to the goods and conditions of life to which they believe they are justifiably entitled, while their value capabilities relate to the amounts of those goods and conditions that they think they are able to obtain and maintain (see Gurr, 1993 and Cramer, 2005).

<sup>12</sup> See Nafziger and Auvinen (2002), Collier and Hoeffler (2004) and Cramer (2005) on how inequality is being integrated into the neoclassical framework as an important indicator of relative deprivation.

### 10.3.2 The literature review

Although the debate about the relationship between inequality and conflict is one of the oldest in literature, it remains unsettled. It is almost a universal assumption that an inequitable distribution of resources and wealth will provoke resentment and violent rebellion. This often holds when people feel inequality is being legitimised and/or accompanied with a degree of power and repression that prevent collective action.

Economic, social and political inequalities can harm economic growth if they result in accumulation of discontent among some population groups to a sufficiently high level as to break social cohesion. Although not all social and political conflicts are driven by the existence and/or persistence of inequalities, several studies have suggested that inequality and persistent poverty among certain population groups are important causes of riots, insurrections and other forms of civil upheaval (e.g. Gupta, 1990; Stewart, 2002; Elbadawi and Sambanis, 2000; Dollar, Easterly and Gatti, 2000).

In addition to impeding growth and poverty reduction, high economic inequalities increase the risk of violent conflict. They are often the rallying point for conflict among aggrieved groups within society (Lichbach, 1989; Cramer, 2003; Stewart, 2008). However, inequality should not be seen in a monolithic sense; otherwise, the relationship becomes elusive. It should be seen in the broader sense of economic, social and political inequalities because the links are not as direct as often expected. As argued by Cramer (2003), economic inequality is pivotal in explaining civil conflict only if the economic factor is considered inseparable from social, political, cultural and historical factors. Therefore, focusing exclusively on vertical inequality, often measured by the Gini coefficient, may not produce the expected results. This calls for the need to examine the way inequality is managed in society and the significance of different forms of inequality.

Horizontal rather than vertical inequalities cause conflict in cases where economic inequalities coincide with social, political and cultural inequalities between groups (e.g. Stewart, 2008 and 2010).<sup>13</sup> Conflict arises when there is a combination of economic, social (including race or ethnic issues), political or cultural inequality that could be used as a common factor or 'a coordinated interest' to mobilise followers by aggrieved groups of people.<sup>14</sup> It has been argued that ordinary inequality between the rich and the poor may not be strong enough to cause violent conflict. But an explosive conflict could erupt when power and resources are unequally distributed between groups that are also differentiated in other ways, for instance, by race, religion or language (Annan, 1999, quoted in Østby, 2008b). This clearly suggests that horizontal inequality is more explosive than vertical inequality.

For example, Esteban and Ray (2011), using a behavioural model of conflict, establish a monotonic relationship between index of fractionalisation or a measure of polarisation and Gini coefficient. Their theoretical proposition shows that there is no clear expectation that within-group inequality could be linked with conflict initiation, but it could be associated with the ability of the group to fuel the violence. The ability to sustain conflicts depends on a group's access to labour and capital.

---

<sup>13</sup>Economic inequalities include: inequalities in income; employment opportunities; financial, human and natural resources; and social assets. Social inequalities include unequal access to social services such as education, health care and housing. Political inequalities refer to unequal distribution of political opportunities, while cultural inequalities refer to disparities in recognition of language, religion, customs, norms and practices of different groups.

<sup>14</sup>Clear examples of this are the economic and political inequalities between Hutu and Tutsi groups, which resulted in civil war, and the violence in Kenya after the 2007 elections, which was fuelled by inequalities between regions and ethnic groups. Another example is that Boko Haram used references to high poverty, inequality and lack of jobs to mobilise followers.

Several studies have produced convincing evidence on this. Barrows (1976) establishes a positive correlation between horizontal inequality and political instability in 32 SSA countries in the 1960s.<sup>15</sup> Gurr (1993), using a global perspective on ethno-political conflicts, also shows a positive relationship between minority insurgencies and relative deprivation.<sup>16</sup> Østby (2008a) argues that the probability of conflict increases threefold when average values of the various inequality indicators are used compared to when the extent of horizontal inequality of assets among ethnic groups is at the 95th percentile; it is 2.5-fold for horizontal interregional inequalities, i.e., when indicators vary from the mean value to the 95th percentile. Huber and Mayoral (2014) also find a strong positive association between the level of inequality within a group and the group's propensity to engage in civil conflict, but this could not be established for inequality across ethnic groups.

Similarly, Wimmer, Cederman and Min (2009), from their cross-national analysis, find that ethnic politics is as powerful and robust in predicting civil wars as is a country's level of economic development. Their regression findings show that rebellion, infighting and secession result from high degrees of exclusion, segmentation and lack of cohesion. Conversely, more diverse states are not more likely to suffer from violent conflict.

Prevalence of high inequalities between groups, measured by per capita income, average household assets and average years of schooling, has been found to increase the risk of conflict. For instance, some studies<sup>17</sup> have found that the impact of social inequalities between different groups was stronger than income inequalities between groups in causing conflict. Daouda (2011) establishes that conflicts in northern Niger are linked to deprivation, measured by access to basic social services. As argued by Cramer (2003), economic inequality plays an important role in explaining the historically violent conflict in Angola only if seen from a political economy sense, where the economic factor is internally related to the social and political forces in the country.

However, others, such as the Institute for Economics and Peace (IEP, 2011) and Collier and Hoeffler (2004), found that income inequality and land ownership disparities are not correlated with conflict. Furthermore, evidence from the World Bank (2015) did not show income inequality as a strong factor in explaining political conflict. That is, conflict is not strongly pronounced in countries with vertical inequality. In some countries, such as the Central African Republic, high income inequality is associated with political conflict. However, in Southern Africa, especially in South Africa, income inequality is highest, but there is no conflict except for frequent riots and protests, which seems to imply a weak correlation.

Poverty, on the other hand, seems to be correlated with conflict in Africa. This is evident in Elbadawi and Sambanis (2000), Collier and Hoeffler (2002) and Fearon and Laitin (2003). Evidence from the World Bank (2015) tends to support this assertion. For instance, conflicts in the Central African Republic, Democratic Republic of the Congo, Madagascar and Nigeria are caused by rising levels of poverty (ACLED, 2015). Thus, poverty and spatial, gender and income inequalities all coalesce to deny people their basic socioeconomic rights and a stake in the system, which fuels political conflict. Deprivation is also one of the main factors mentioned by the Boko Haram insurgents. Poverty and lack of job opportunities created favourable circumstances for recruiting young people to join terrorist groups. With good education and decent jobs available, Boko Haram might have been denied the

<sup>15</sup> The measure of horizontal inequality is share of political power and socioeconomic variables.

<sup>16</sup> Gurr defines relative deprivation in economic, social and political terms, not just an economic dimension.

<sup>17</sup> See Østby (2008b); Cederman, Weidmann and Gledditsch (2010); and Cederman, Wimmer and Min (2010).

young foot soldiers that it deploys in its heinous crimes. In the Central African Republic, Christians and Muslims have lived together for generations in relative harmony, but scarcity, deprivation and inequality have erupted into political conflict. In fact, evidence from the World Bank (2015) shows that both income inequality and poverty play an important role in driving political conflict in Central African Republic, but not quite as strong a role in many other countries.

There is a school of thought that says that even though inequality and violence are a constant in human society, organised violent political conflict only takes place from time to time and is interspersed with periods of peace (Cramer, 2005). Cramer proposes three reasons for inconclusive findings on the inequality-conflict debate:

- a) Inequality might not be a cause of conflict, or it is perhaps neither necessary nor sufficient for violent conflict.
- b) As opposed to using average levels of inequality, particular characteristics of inequality might be more relevant.
- c) Intensity of inequality, measured in various ways, may be relevant to the outbreak of violent conflict (ibid.).

This is further confirmed by Huber and Mayoral (2014), who maintain that most inequality within countries occurs between ethnic groups, whereas inequality within groups account for a small proportion of national inequality. And the fact that variations in the Gini coefficient of a country are typically correlated with inequality between groups but are much smaller within groups explains the reason for which overall inequality might not correlate with conflicts. This explains why many studies do not find any strong correlation between the two variables.

Stewart (2010) concludes that violent conflict is most likely to occur in places where economic, social, political and cultural inequalities occur simultaneously and that some groups of people are deprived across every dimension, thus providing additional illumination.

Conversely, Bircan, Brück and Vothknecht (2010) examine how conflict drives inequality. They argue that income inequality tends to rise during difficult periods of conflict. They analysed the distributive impacts of violent conflicts, in contrast to previous literature that has focused on inequality driving conflict, and used cross-country panel data for the period 1960–2005 to estimate war-related changes in income inequality. The results indicate rising levels of inequality during war, especially in the early period of post-war reconstruction. For instance, income inequality (Gini) rose by 1.6 points during war and by 2.1 points during post-war recovery. The impact becomes stronger in protracted wars. However, this rise in income inequality is not permanent. While inequality peaks around five years after the end of a conflict, it declines again to pre-war levels by the end of the first post-war period. Lagged effects of conflict and only subsequent adjustments of redistributive policies in the post-war reconstruction period seem to be valid explanations for these patterns of inequality.

There is convincing evidence that the relationship between inequality and conflict is not monolithic. Economic, social, political and cultural inequalities are not mutually exclusive; rather, they are mutually reinforcing in explaining conflicts. As Swearingen (2010) and Stewart (2010) argue, political inequalities between groups are most likely to motivate leaders, while socioeconomic inequalities motivate followers. This calls for a multi-dimensional measure of inequalities for the direct and indirect impact of inequality on conflicts to be fully manifest.



## 10.4 Model specifications and empirical results

### 10.4.1 Model specifications

As stated in the previous section, the role of inequality in explaining conflict is incontrovertible. It is clear from the literature that a holistic view of inequality produces better results than a monolithic approach. For instance, while income inequality may be a natural driver, it alone cannot explain the full ramifications of conflict. Economic inequalities are important. However, non-economic factors such as ethnicity or religion could be key factors in social conflict, while political inequalities could drive conflicts if existing mechanisms are perceived to be discriminatory against certain population groups. In capturing these aspects, a behavioural model of the form is used:

$$C_{it} = \alpha + \beta i + \delta I_{it} + \gamma P_{it} + \sigma \Theta_{it} + \varepsilon_{it} \quad (1)$$

where  $C_{it}$  is conflict,  $I_{it}$  is a measure of inequality,  $P_{it}$  is ethnic or religious polarisation and  $\Theta_{it}$  is a measure of political stability in country  $i$  at time  $t$ , respectively.  $\alpha$  is a constant;  $\beta i$  is a time-invariant country fixed effect; and  $\delta$ ,  $\gamma$  and  $\sigma$  are parameters to be estimated.  $\varepsilon_{it}$  is a random error term. Following Esteban and Ray (2011), Montalvo and Reynal-Querol (2005) and Reynal-Querol (2002),  $P_{it}$  is defined as:

$$P_{it} = \sum_{j=1}^n \pi_j^2 (1 - \pi_j) \quad (2)$$

where  $\pi_j$  is the proportion of people who belong to the ethnic (religious) group  $j$  and  $n$  is the number of groups.

### 10.4.2 Data and empirical strategy

The authors constructed a panel dataset for the period 1970–2013 for 33 African countries. Conflict-related data is from the Uppsala Conflict Data Program (UCDP)/PRIO Armed Conflict Dataset. Two proxy variables were used for the dependent variable, conflict: a measure of intensity of armed conflicts and conflict-related deaths per capita.

Two aspects of inequality were considered here as a proxy for social inequality: income inequality and inequality in education. For income inequality, the authors used the Gini coefficient using the Standardized World Income Inequality Database (SWIID v4). Inequality in education is measured by an Education Inequality Index, defined as the ratio between the deviations from the mean of educational achievements by the richest and poorest quintiles. This Index reflects the severity of inequality in education. The data are from the World Inequality Database on Education.

Ethnic and religious polarisation is computed as per equation (2) using data from the Composition of Religion and Ethnic Group (CREG) project by the University of Illinois (USA). Political stability measures are also used from the Worldwide Atrocities Dataset compiled by the Political Instability Task Force (PITF) as explanatory variables in the analysis. This is expected to capture the level of authority of the political regime.

The empirical strategy is motivated by equations (1) and (2). Following the model, the main interest here is to examine the relationship between inequality and conflict. The main assumption is that inequality leads to conflict. While the authors have attempted to capture inequality in different forms (including in income, education, ethnic and religious polarisation and political systems), conflicts could still be driven by many other factors, including external forces. As such, omitted-variable bias

could be a challenge. Efforts were made to resolve this issue by presenting specifications that include additional controls and time-invariant fixed effects. Granger causality tests were also used to exclude multi-collinearity issues.

The model uses unbalanced panel data. Given data limitations, the authors confined the analysis to 33 African countries. While the model is primarily estimated using OLS regression, the authors also estimated the model using Logit and Generalised Method of Moment (GMM), both as a robustness check and as an approach to address possible endogeneity. The results of the latter have to be interpreted cautiously due to data limitations and the GMM estimator is asymptotically biased and inconsistent with limited data.

### 10.4.3 Empirical results

Table 10.3 presents the summary of statistics. The sample countries experienced varying degrees of conflict. As reflected by conflict intensity and cumulative conflict intensity, the majority of intense conflicts tended to be short term. The sample countries had a death rate of nine per 100,000 population (or 215,000) over the period under review. While a low democracy score (DEMOC) implies that the level of democracy is low, a high negative score on polity2 indicates that the sample countries are, on average, highly autocratic. Twenty-nine per cent of the population is excluded, while 10 per cent is subject to discrimination. Income inequality as measured by Gini (net) is high, at 42 per cent, while it varies from a low of 23.6 per cent to a high of 69.3 per cent. There is also sizeable inequality in education as reflected by the education inequality index. Ethnic and religious polarisation is visible in most countries in the sample.

Pairwise Granger causality tests were conducted for all variables to determine the extent of endogeneity. The results indicate the possible presence of endogeneity and multicollinearity.

**TABLE 10.3** Variables and summary statistics

Variable	Variable symbol	Mean	Median	Standard deviation	Number of observations
Cumulative conflict intensity	CONF_CUM	0.751	1.000	0.433	453
Conflict intensity	CONF_INT	1.351	1.000	0.478	453
Death per capita (*1,000)	DEATH_CAP	0.009	0.000	0.084	1 448
Democracy based on polity2	DEMOC	0.088	0.000	0.284	1 315
Share of discriminated population (%)	DISCPOP	9.9	0.000	0.225	1 299
Education Inequality Index	EIINDEX	1.320	1.182	0.632	113
Ethnic Polarisation Index	ETHPOLINDEX	0.133	0.154	0.066	1 518
Share of excluded population (%)	EXCLPOP	29.0	0.170	0.306	1 299
Log of GDP per capita (lagged)	GDPCAPL	1.357	0.972	1.240	1 312
Gini (net) (%)	GINI_NET	42.41	40.44	8.060	608
Oil production per capita (lagged)	OILPCL	0.312	0.000	0.842	1 312
Combined democracy/ autocracy score of polity2	POLITY2	-3.225	-6.000	5.104	1 315
Share of powerless population (%)	PWRLPOP	18.3	0.005	0.271	1 299
Religious Polarisation Index	REPOLINDEX	0.150	0.190	0.081	1 518



Consequently, the authors used both period fixed effects and time-invariant country fixed effects. The authors also computed the variance inflation factor (VIF) for all OLS estimations, which indicated that multicollinearity is not a serious problem in our model.

Table 10.4 presents the results for the first measure of conflict, the dependent variable, which is cumulative conflict intensity. Contrary to the assumptions made earlier and also to the literature, these results indicate that income inequality or vertical inequality, as measured by Gini does not seem to drive conflicts in Africa; rather, income inequalities (both level and lagged Gini) tend to have a slightly negative effect on conflicts in the sample countries. These results are, however, consistent with the findings of the Institute of Economics and Peace (2011), Collier and Hoeffler (2004), ACLED (2015), Smidt et al. (2016) and World Bank (2015).

Should this be a surprise? No, as pointed out by Odusola (2015), all countries whose lowest quintile's share of their national incomes during the 1980s–2000s is less than 4.00 per cent are from the Southern Africa countries of Botswana, South Africa, Lesotho, Namibia, Seychelles and Zambia. Even the two countries with the highest income inequality severity<sup>18</sup> in Africa (Botswana and South Africa) are in the same region. Incidentally, these are non-conflict-prone countries.

By contrast, the rational action theory, which is based on opportunities, costs and benefits, tends to show that resources of the state and those of the bourgeoisie, who have a great deal at stake in any violent conflict, overpower collective actions of aggrieved groups. The theoretical proposition of Esteban and Ray (2011) has shown that for violent conflicts to succeed, labour and capital are needed. Resources from the state and rich people in society may overpower those of the aggrieved group's labour and capital.

Data limitations make it impossible to establish any meaningful relationship between inequality in education and conflict. To this end, education inequality has been dropped from most of our estimates.

Ethnic and religious polarisation plays a key role driving conflict in Africa. The former seems to have a larger effect on cumulative conflict intensity. Exclusion of minority groups from participation in government could also influence conflict, although not as strongly as polarisation. GDP per capita also has a positive and significant effect. The results do not indicate active, intentional and targeted discrimination or powerlessness of certain minority groups to have a significant effect on conflict. Similarly, oil production also does not indicate any effect on conflicts. The latter result might have been influenced by a large number of non-oil producing countries experiencing conflicts. Polity2 has a significant negative effect on conflicts, indicating the influence of more democratic government in ensuring peaceful societies. Period- and time-invariant country dummies are all positive and significant.

Table 10.5 shows the results for the alternative measure of conflict – conflict intensity – as the dependent variable. Gini does not have a significant effect on conflict intensity, although the effect remains negative. This tends to suggest that vertical inequality does not have much impact in driving conflicts. Religious polarisation and the share of excluded groups in the total population have significant positive effects on conflict, as shown in table 10.5, when conflict is measured by cumulative conflict intensity. Powerless population and oil production are insignificant. The effect of the former

---

<sup>18</sup> This represents the share of national income of the lowest quintile relative to the highest quintile.

**TABLE 10.4** OLS-dependent variable: Cumulative conflict intensity

Variable	1	2	3	4	5	6
GINI_NET	-0.026*** (0.006)	-0.028*** (0.006)	-0.028*** (0.006)	0.006 (0.017)	0.006 (0.017)	-0.023*** (0.006)
GINI_NET(-2)				-0.039** (0.016)	-0.041*** (0.016)	
REPOLINDEX	1.189** (0.558)	1.765*** (0.616)	1.161** (0.560)	1.422* (0.737)	2.525*** (0.808)	
ETHPOLINDEX		1.907** (0.914)			3.429*** (1.186)	1.301 (0.863)
POLITY2	-0.021** (0.008)	-0.027*** (0.009)	-0.018* (0.009)	-0.001 (0.012)	-0.016 (0.013)	-0.028*** (0.010)
EXCLPOP	0.313** (0.144)	0.207 (0.151)	0.328** (0.146)	0.363** (0.174)	0.209 (0.177)	0.850 (0.683)
GDPCAPL	0.045* (0.026)	0.061** (0.027)	0.032 (0.032)	0.053 (0.045)	0.102** (0.047)	-0.001 (0.029)
PWRLPOP						-0.708 (0.671)
DISCPOP						-0.193 (0.715)
OILPCL			0.039 (0.053)	0.046 (0.064)	0.005 (0.063)	0.026 (0.053)
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time-invariant country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.409	0.427	0.411	0.390	0.435	0.434
S.E.	0.404	0.399	0.405	0.411	0.398	0.400
VIF	1.691	1.746	1.698	1.639	1.768	1.765

**Note:** For all estimates, robust standard errors are in parentheses.

\*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1

See table 10.3 for variable list.

remain negative as before. Polity2 has the expected sign but is insignificant. The effect of ethnic polarisation is negative but insignificant.

Results for conflict-related deaths as a proxy for conflict is shown in table 10.6. In the first three columns, results are provided with the log of deaths as the dependent variable. Columns 4–6 indicate results with deaths per capita as the dependent variable. The idea behind considering both is to eliminate any biases against smaller countries. Gini has a significant but negative effect on conflict as measured by death per capita but is insignificant for log of deaths. Religious polarisation leads to conflict-related deaths and is significant, but the sign becomes negative when deaths per capita is used as the dependent variable, a phenomenon that shows the importance of population size. Exclusion has a significant and strong effect on conflict under both scenarios. Moreover, ethnic polarisation is insignificant. Polity2 also has a significant negative effect on conflict-related deaths as

**TABLE 10.5** OLS-dependent variable: Conflict intensity

Variable	1	2	3	4	5
GINI_NET (0.0051)	-0.0016 (0.0056)	-0.0046 (0.0056)	-0.0063 (0.0056)	-0.0046 (0.0055)	-0.0059
REPOLINDEX			1.2477** (0.6166)		1.1092** (0.5498)
ETHPOLINDEX	-0.3818 (0.8246)	-0.4963 (0.8328)	0.4586 (0.9147)	-0.1274 (0.8582)	
POLITY2	-0.0026 (0.0087)	0.0018 (0.0096)	-0.0068 (0.0089)	-0.0034 (0.0100)	-0.0053 (0.0084)
EXCLPOP	0.2162 (0.1376)	0.2384* (0.1394)	0.0835 (0.1508)	0.3811** (0.1641)	0.1089 (0.1417)
GDPICAPL		-0.0087 (0.0284)	0.0435 (0.0272)	-0.0114 (0.0283)	0.0397 (0.0261)
PWRLPOP				-0.2890 (0.1776)	
OILPCL		0.0622 (0.0528)		0.0540 (0.0527)	
Period fixed effects	Yes	Yes	Yes	Yes	Yes
Time-invariant country fixed effects	Yes	Yes	Yes	Yes	Yes
R-squared	0.3442	0.3522	0.3649	0.3649	0.3637
S.E.	0.4030	0.4035	0.3996	0.4011	0.3985
VIF	1.5240	1.5430	1.5740	1.5740	1.5710

before. Democracy also indicates a significant negative effect on conflict. GDP per capita now has a significant but negative effect on conflict when deaths per capita is used as the dependent variable but not when deaths is used. Powerless groups, share of discriminated population and oil production remain non-responsive as in previous estimations.

The authors also used alternative estimation techniques – generalised method of moment (GMM) and Logit – as robustness tests to estimate the model using cumulative conflict intensity as the dependent variable, which indicated more significant responses to model specifications than conflict intensity and deaths/deaths per capita. The authors carried out GMM and Logit estimations. They were restricted to using panel GMM, but not dynamic panel estimation due to data limitations. This also restricted them to using the Arellano-Bond two-step estimator to investigate any existence of endogeneity. Given data limitations, the authors were restricted to using period fixed effects and time-invariant country fixed effects to deal with this issue.

The results from the panel GMM estimation (unreported) are very similar to OLS estimations, both in sign and significance levels in all variables; results from Logit estimates are reported in table 10.7. Despite the limitations, the results are very similar to earlier outcomes. Gini has significant but negative effect on conflict. The inverse relationship between income inequality and conflicts tends to confirm the assertion of British political scientist, Harold Laski: “A State divided into a small number of rich and a large number of poor will always develop a government manipulated by the rich to protect the amenities represented by their property.”

**TABLE 10.6** OLS-dependent variable: Conflict-related deaths

Dependent Variable	Deaths (log)			Deaths per capita		
Variable	1	2	3	4	5	6
GINI_NET	-0.011 (0.023)			-0.001** (0.000)	-0.001** (0.000)	0.0004** (0.0002)
GINI_NET(-2)		-0.029 (0.024)	-0.037 (0.031)			
REPOLINDEX	4.539* (2.333)	1.978 (2.350)	6.794** (3.422)	-0.072*** (0.026)		-0.072*** (0.026)
ETHPOLINDEX					-0.011 (0.027)	
EIINDEX				-0.009*** (0.002)	-0.006** (0.002)	-0.008*** (0.002)
POLITY2	-0.068** (0.032)	0.065 (0.048)		0.0000 (0.0003)	0.000 (0.000)	0.0003 (0.0003)
LPOPL		0.111 (0.151)	0.088 (0.199)			
GDPCAPL	0.032 (0.094)	0.038 (0.114)	0.226 (0.153)	-0.008*** (0.003)	-0.005** (0.002)	-0.010*** (0.003)
EXCLPOP		2.094*** (0.618)	1.520** (0.743)	0.013* (0.007)	-0.023 (0.045)	
PWRLPOP					0.039 (0.043)	
DEMOC		-1.009** (0.500)				
DISCPOP					0.028 (0.045)	
OILPCL		0.160 (0.206)	0.119 (0.267)	0.003 (0.003)	0.000 (0.004)	0.004 (0.004)
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time-invariant country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.194	0.257	0.300	0.404	0.340	0.365
S.E.	1.655	1.597	1.608	0.010	0.011	0.010
VIF	1.240	1.345	1.427	1.676	1.515	1.573

**Note:** See table 10.3 for variable list.

As expected, both polarisation and excluded populations have significant positive effects on conflicts. The results also confirm a strong inverse relationship between democracy and conflict. While these results are significant, the authors recognize the limitations of the study, especially the limited data available on income and education inequality, which could have affected the results.

**TABLE 10.7** Logit-dependent variable: cumulative conflict intensity

Variable	1	2	3	4	5	6
GINI_NET	-0.108*** (0.028)	-0.109*** (0.027)	-0.109*** (0.027)	-0.135*** (0.034)	-0.085*** (0.026)	0.104 (0.092)
GINI_NET(-2)						-0.176** (0.089)
ETHPOLINDEX	6.103 (4.609)	5.990 (4.573)	5.961 (4.556)	9.627** (4.705)	2.927 (4.265)	9.031 (5.981)
POLITY2	-0.100** (0.046)	-0.097** (0.044)	-0.096** (0.044)	-0.158** (0.051)	-0.079** (0.042)	-0.104* (0.061)
GDPCAPL	0.027 (0.131)	0.014 (0.117)		-0.161 (0.153)	-0.056 (0.119)	0.160 (0.154)
EXCLPOP	2.418*** (0.838)	2.434*** (0.832)	2.465*** (0.793)	6.109 (5.184)	2.453*** (0.861)	1.728* (1.043)
OILPCL	-0.056 (0.234)			0.035 (0.253)		-0.551** (0.254)
DISCPOP				-1.014 (5.482)		
PWRLPOP				-5.369 (5.213)		
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time-invariant country fixed effects	Yes	Yes	Yes	Yes	No	No
R-squared	0.144	0.144	0.144	0.206	0.108	0.139
S.E.	0.425	0.424	0.423	0.413	0.429	0.416
<b>Goodness of fit test</b>						
Andrew's Stat	21.4	18.2	16.2	25.8	30.5	25.7
Prob. Chi sq	0.017	0.050	0.093	0.003	0.007	0.004

**Note:** See table 10.3 for variable list.

## 10.5 Policy implications and conclusions

This chapter offers some relevant policy implications on violent conflict and multidimensional inequalities in Africa. Violent conflicts are driven by multidimensional inequalities in Africa. Focusing on income inequality alone may not produce fuller results on drivers of conflicts in Africa. Even within an aggrieved group, no one single factor drives conflict. While group leaders are interested in political inequalities between groups, their followers are motivated by socioeconomic inequalities.

This chapter shows a combination of factors driving conflicts in Africa. First, conflict is driven mainly by non-economic inequality than by income inequality. Second, ethnic and religious polarisation seem to have a greater effect than any other factor in the incidence of conflict. Third, exclusion also has a significant positive effect on conflict. Fourth, more democratic systems that move away from autocracy have a significant negative effect on conflict.

These findings offer some policy considerations. The fact that income inequality (vertical) has some dampening effects on conflicts does not imply that economic inequality is immaterial. It tends to

suggest additional work in digging deeper into within-group income inequality and other conflict triggers.

The overwhelming role of ethnic and religious polarisation calls for immediate policy actions. The rising wave of violent extremism and fundamentalism (e.g. Boko Haram in the Chad Basin region and Al-Shabaab in Somalia and Kenya), post-election result ethnic induced riots in Kenya and the protracted conflict in Côte d'Ivoire call for inclusive systems that accommodate all religions and ethnic nationalities. Strategic and concrete actions to address polarisation should be collectively developed and faithfully implemented to forestall recurrence of violent conflicts that emerge as a result of religious and ethnic polarisation. Adoption of multiculturalism in government institutions without compromising meritocracy is pivotal to preventing ethnic violence.

The excluded population plays a significant role in explaining conflict. Efforts geared toward strengthening their sense of identity will help avoid conflict. An important strategy that could produce long-term effects would be removing all discriminatory policies and legislation against the excluded population. Another approach, which may be short term, is using affirmative action and quotas to address the imbalances. The informal power-sharing formula in Ghana and Nigeria, where the president and the vice president are shared between the north and south, is a good example.

The prevalence of autocracy breeds violence, whereas participatory democracy dampens it. Promoting representation of disadvantaged areas and groups tends to reduce group grievances and organised violence. The adoption of proportional representation in politics as opposed to the 'winner take all' approach should be embraced but without compromising the role of an opposition in promoting good governance. Decentralised governance also tends to promote inclusiveness and bring the government closer to people in some situations.

Although this chapter does not address within-group inequality, the literature is unequivocal on how within-group inequality could be associated with the ability of groups to fuel violence through access to labour and capital. Promoting socioeconomic opportunities, including job opportunities, access to finance and access to health and education services, to mention just a few, is important to prevent group grievances and violent conflicts. Complementary development strategies that are pro-growth, pro-jobs and pro-poor remain vital to sustaining shared prosperity, peace and stability. This is vital because it reduces the supply of labour to prosecuting violent conflicts.

---

## REFERENCES

- ACLED (Armed Conflict Location and Event Data) Project.** 2015. *Conflict Trend (No. 41): Real-Time Analysis of African Political Violence, September 2015*. [www.crisis.acledata.com/the-effect-of-inequality-on-conflict-in-africa/](http://www.crisis.acledata.com/the-effect-of-inequality-on-conflict-in-africa/)
- Barrows, W.L.** 1976. Ethnic Diversity and Political Instability in Black Africa. *Comparative Political Studies* 9(2), 139-170.
- Beegle, K., L. Christiansen, A. Dabalen and I. Gaddis.** 2016. *Poverty in a Rising Africa: An Overview*. Washington, DC., World Bank.
- Bhorat, H., K. Naidoo and K. Pillay.** 2016. Growth, poverty and inequality interactions in Africa: an overview of key issues. *UNDP Working Paper Series*, UNDP-RBA WPS No. 1, June 2016.
- Bircan, C., T. Brück and M. Vothknecht.** 2010. Violent Conflict and Inequality. *DIW Berlin Discussion Paper* No. 1013. Berlin.
- Cederman, L. Weidmann, N. and K.S. Gleditsch.** 2010. Horizontal Inequalities and Ethno-Nationalist Civil War: A Global Comparison. Paper prepared for presentation at Yale University, April 2010. [www.iq.harvard.edu/calendar](http://www.iq.harvard.edu/calendar)
- Cederman, L., A. Wimmer and B. Min.** 2010. Why do ethnic groups rebel: new data and analysis. *World Politics* 62(1), 87-119.
- Collier, P. and A. Hoeffler.** 2000. On the Incidence of Civil War in Africa. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.201.1596&rep=rep1&type=pdf>

- \_\_\_\_\_. 2004. Greed and grievance in civil war. *Oxford Economic Papers*, 56(4), 563-95.
- Collier, P., A. Hoeffler, and D. Rohner.** 2008. *Beyond Greed and Grievance: Feasibility of Civil War*. Department of Economics, University of Oxford.
- Cornia, G.A. and B. Martorano.** 2016. Building the Integrated Database and the Seven Sins of Inequality Measurement in sub-Saharan Africa. *UNDP Working Paper Series*, UNDP-RBA WPS No. 2, June 2016.
- Cramer, C.** 2003. Does inequality cause conflict? *Journal of International Development*, 15, 397-412.
- \_\_\_\_\_. 2005. Inequality and Conflict: A Review of an Age-Old Concern. *United Nations Research Institute for Social Development (UNRISD) Identities, Conflict and Cohesion Programme Paper 11*. Geneva, UNRISD.
- Dollar, D., W. Easterly and R. Gatti.** 2000. *What Causes Political Violence? A Research Outline*. World Bank Development Research Group, Washington, D.C.
- Douda, Y.H.** 2011. Conflits armés, inégalités et pauvreté : quelles interactions dans la région nord du Niger. Université de Tahoua, Niger, LAREfi, Groupe d'Economie du Développement Université Montesquieu-Bordeaux IV.
- Elbadawi, E. and N. Sambanis.** 2000. Why are there so many conflicts in Africa? Understanding and preventing violent conflict. *Journal of African Economies*, 9(3), 244-69.
- Esteban J. and D. Ray.** 2011. Linking Conflict to Inequality and Polarisation. *American Economic Review* 101, 1345-1374.
- Fearon, J. and D.D. Laitan.** 2003. Ethnicity, insurgency and civil war. *American Political Science Review*, 97(1), 75-90.
- Gupta, K.D.** 1990. *The Economics of Political Violence: The Effect of Political Instability on Economic Growth*. Praeger, New York.
- Gurr, T.R.** 1993. *Minority at Risk: A Global View of Ethnopolitical Conflicts*. Washington D.C., United State Institute of Peace Press.
- Holmqvist, G.** 2012. Inequality and Identity: Causes of War? *Discussion Paper 72*. Nordiska Afrikainstitutet, Uppsala. p. 11.
- Huber, J.D. and L. Mayoral.** 2014. Inequality, Ethnicity and Civil Conflict. 7 July 2014. [polisci.columbia.edu/files/polisci/u86/huber%20mayoral\\_0.pdf](http://polisci.columbia.edu/files/polisci/u86/huber%20mayoral_0.pdf)
- Humphreys, M.** 2002. *Economics and violent conflict*. Harvard CPI Portal on Economics and Conflict, Framework Paper, p. 2.
- Institute for Economics and Peace (IEP).** 2011. *Structures of Peace: Identifying What Leads to Peaceful Societies*. <http://economicsandpeace.org/wp-content/uploads/2011/09/Structures-of-Peace.pdf>
- IMF (International Monetary Fund).** 2015. *Regional Economic Outlook: Sub-Saharan Africa, Dealing with Gathering Clouds*. [www.imf.org/external/pubs/ft/reo/2015/afr/eng/sreo1015.htm](http://www.imf.org/external/pubs/ft/reo/2015/afr/eng/sreo1015.htm)
- Lichbach, M.V.** 1989. An evaluation of does economic inequality breed conflict studies. *World Politics* 41(4), 431-70.
- Midgley, J.** 1984. *Social Security, Inequality, and the Third World*. Chichester, John Wiley and Sons.
- Montalvo, J.G. and M. Reynal-Querol.** 2005. Ethnic polarisation, potential conflict and civil wars, *American Economic Review* 95(3), 796-816.
- Muller, E.N.** 1997. Economic determinants of democracy. In M.I. Midlarsky (ed.), *Inequality, Democracy and Economic Development*. Cambridge University Press, Cambridge.
- Nafziger, E.W., and J. Auvinen.** 2002. Economic development, inequality, war, and state violence. *World Development* 30(2), 153-163.
- Nagel, J.** 1974. Inequality and discontent: A non-linear hypothesis. *World Politics* 26, 453-472.
- Odusola, A.F.** 2015. Fiscal Space, poverty and inequality in Africa. Paper presented at the 2015 African Economic Conference, November 2015, Kinshasa, DRC.
- Østby, G.** 2008a. Inequalities, the Political Environment and Civil Conflict: Evidence from 55 Developing Countries. In F. Stewart (ed.), *Horizontal Inequalities and Conflict: Understanding Group Violence in Multi-ethnic Societies*. Basingstoke, Palgrave Macmillan. pp.136-59.
- \_\_\_\_\_. 2008b. Polarisation, Horizontal Inequalities and Violent Conflict. *Journal of Peace Research*, 45(2), 143-162.
- Reynal-Querol, M.** 2002. Ethnicity, political systems and civil wars, *Journal of Conflict Resolution*, 46(1), 29-54.
- Sambanis, N.** 2004. Poverty and the Organisation of Political Violence. In: *Globalisation, Poverty, and Inequality*. Brookings Trade Forum. Washington D.C.: Brookings Institution Press, pp. 165-211.
- Smidt M., L. Vernaccini, P. Hachemer and T.D. Groeve.** 2016. JRC Technical Reports: The Global Conflict Risk Index (GCRI) – Manual for Data Management and Product Output. European Union, Italy.
- Solt, F.** 2014. The Standardized World Income Inequality Database. Working paper. SWIID Version 4.0, Sept. 2013.
- Stewart, F.** 2008. *Horizontal Inequalities and Conflict: Understanding Group Violence in Multi-ethnic Societies*. Basingstoke, Palgrave Macmillan.
- \_\_\_\_\_. 2010. Horizontal Inequalities as a Cause of Conflict: A Review of CRISE Findings. *World Development Report 2011 Background Paper*. [www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2011/06/01/000386194\\_20110601051301/Rendered/PDF/620380WP0HORIZ0BOX0361475B00PUBLIC0.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2011/06/01/000386194_20110601051301/Rendered/PDF/620380WP0HORIZ0BOX0361475B00PUBLIC0.pdf)

- Swearingen, M.** 2010. *Group Inequality and Conflict: Some Insights for Peacebuilding*. Washington, D.C., United States Institute of Peace.
- The Fund for Peace.** 2016. *Fragile States Index 2016*. Washington, D.C.
- UNDP (United Nations Development Programme) Regional Bureau for Africa.** 2015. *Preventing and Responding to Violent Extremism in Africa*. December 2015.
- Willems, R.** 2012. When do inequalities cause conflict? Focus on citizenship and property rights. December 2012. [www.thebrokeronline.eu/Articles/When-do-inequalities-cause-conflict](http://www.thebrokeronline.eu/Articles/When-do-inequalities-cause-conflict).
- Wimmer, A., L.E. Cederman and B. Min.** 2009. Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Dataset. *American Sociological Review* 74, 316-337.
- World Bank.** 2015. Gini index (World Bank estimate). <http://data.worldbank.org/indicator/SI.POV.GINI>
- \_\_\_\_\_. 2016. PovcalNet <http://data.worldbank.org/indicator/SI.POV.DDAY> (Accessed July 2016).