Inequality and Armed Conflict: Evidence and Data

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1 Executive Summary

Inequality and conflict are inextricably linked. A considerable amount of research has been done attempting to understand the links between the two. Both vertical (between households or individuals) and horizontal inequality (between groups) as well as perceived inequality have been examined. In this report, we review and synthesize the large literature on inequality and conflict and perform a mapping exercise for data on vertical, horizontal, and perceived inequality. We show that while vertical (economic) inequality is at an all-time high, horizontal inequality has declined steadily throughout the world over the past 25-30 years. Indeed, in sharp contrast to vertical inequality, horizontal inequality is at the lowest levels on record.

Vertical and horizontal inequality, and armed conflict

The conventional wisdom holds that inequality triggers conflict and violence. Initially the literature focused primarily on vertical inequality. However, the inability to explain how and why inequality mobilizes certain groups for violence has plagued the existing literature. Theories of horizontal inequality are better placed to address this question and there is an increasing convergence around the conclusion that horizontal inequality is associated with armed conflict. That said, several gaps are still evident in this literature. First, while the evidence is strong of a positive relationship between horizontal inequality and violent armed conflict, and that political context plays an important role in this relationship, the conditions under which certain group identities become relevant for mobilizing people for violence is still unclear. Second, any interactions between different types of horizontal inequality, as well as interactions between within-group and between-group inequality, are under-studied. Third, studies have found a relationship between horizontal inequality and various forms of political violence, but also non-violence. We currently lack an understanding of the factors that explain why groups choose violent versus non-violent strategies. Finally, we still do not know enough about the differences between distinct types of horizontal inequality – social, political, and economic – or the relative importance of different types of group identities such as ethnicity, religion, age, gender.
Perceived inequalities and conflict

Prominent authors within the horizontal inequality literature (Stewart 2000, 2002 Cederman et al. 2013) have emphasized the central importance of how inequality is experienced, or perceived. This topic remains woefully understudied empirically, although the few studies that exist indicate that perceived inequality and violence are clearly linked. Furthermore, perceived and objectives horizontal inequality do not necessarily overlap. Indeed, we show that the correlation between the two is quite low. The relationship between perceived horizontal inequality and attitudes to violent conflict is thus not an artifact or proxy for the relationship found between objective horizontal inequality and conflict. More and better quality data to measure perceived inequality, as well as a deeper knowledge about how these perceptions are triggered, are crucial for assessing more fully how inequalities affects conflict. Large standardized surveys like AfroBarometer should be supported so they can continue to collect perceptions data, but we also need to invest in new approaches to measure perceptions, such as those developed through the Governance, Peace, and Security modules of the Strategy for the Harmonization of Statistics in Africa (ShaSA) initiative.

How to address inequality

Given that objective and perceived inequality are abound, what can be done to address exclusion and manage conflict? Available evidence suggests that political institutional arrangements, such as territorial decentralization, educational policies, and cultural recognition can help to avert that armed conflicts break out. Moreover, some aspects of political and military power-sharing as well as territorial autonomy seem to reduce the risk that violent conflicts recur. Post-conflict educational provision has been shown to positively impact peace duration, while post-conflict economic policies have a more mixed record. Peace agreements often address grievances believed to be driving violent conflicts. However, few agreements make specific provisions aimed at addressing key economic issues like systematic inequalities in employment and access to land. The evidence base for the effectiveness of policies adopted to address horizontal inequalities on conflict onset and recurrence is very limited, and there is a need for much more rigorous analysis of policy outcomes. Future research needs to pay particular attention to improving our understanding of the sequencing of reforms; to how and why context matters; to interaction and conditional effects; to the ways in which policy or economic reforms can trigger conflict; and to how such reforms may again shape perceptions of inequalities.
Trends in inequality – rising economic and falling horizontal inequality

The answer to the question of whether income inequality in the world has increased or declined depends on how inequality is both operationalized and measured. In this report, we provide an overview of different approaches to measuring both individual and group-based inequality, focusing in particular on how survey data can be used to construct globally comparable measures of horizontal inequality. For global economic vertical inequality, our mapping shows indeed that the world has not seen a level of inequality this high for as long as we have reliable cross-nationally comparable data. This is shown in Figure 1. Global inequality, as measured by the average national Gini coefficient (red line), gradually decreased from 1960 to 1990, then increased back to the 1960 level in the mid-1990s and hovered around or above that level for the next twenty years. The difference between the population-weighted and the unweighted time series indicates that increasing inequality is most pronounced in the largest countries in the world.

We map a range of different measures of horizontal inequality, for various different groups and group comparisons. Figure 2 shows but one example. Here we map horizontal inequality in infant mortality rates, comparing the best and worst performing ethnic group in the country, using individual-level survey data. At the global level, several countries still have significant horizontal inequalities regardless of the type of group identifier that is chosen. For a given country, however, the results depend on how inequality is...
measured or how groups are identified. Nigeria, for example, have the highest levels of horizontal inequality when ethnicity is chosen as the group identifier, but not when religion is used to identify groups.

For horizontal inequality, our main message is one of optimism. Figure 3 compares observed, national levels of infant mortality and horizontal inequality in infant mortality across all the countries for which we have survey data. The picture is striking. Infant mortality has decreased substantially over time, but so has horizontal inequality in infant mortality. The strong negative trend in infant mortality is well-known and thoroughly documented as part of the monitoring of the Millennium Development Goals. This downward trend is shown in the solid blue line in Figure 3. But we also document a similar trend for horizontal inequality (red dotted line). Horizontal inequality in infant mortality increased until around 1985, but since then has declined at the same rate as the overall decline in infant mortality. Both infant mortality and horizontal inequality are presently at all-time lows. The often-heard argument that horizontal inequalities are too sticky to be addressed does not appear to hold. Horizontal inequality can be reduced and given the clear link between horizontal inequality and conflict such improvement should be a core feature of the sustaining peace agenda.

Figure 3: Rates of change in infant mortality and Horizontal Inequality in IMR, by largest vs. second largest, 1970—2015
2 Inequality and conflict: the state of the art

The questions of whether, how, and why inequality influences the outbreak and dynamics of violent conflict has a long intellectual trajectory, starting with the ancient Greeks. A common thread through this large body of literature is the issue of how certain group identities affect this relationship. Most of the inequality-conflict literature has focused almost exclusively on vertical inequality, that is, inequality between individuals and households, with the primary focus on class (income) inequality as a salient group identity (Stewart, Venugopal, and Langer 2016). Global patterns of violent armed conflict in the post-Cold War era, which showed a strong association between poverty and experiencing civil war, reinforced the concern with vertical inequality and conflict. But, as we discuss in the second half of this chapter, questions about the determinants of mobilization for conflict has recently shifted the inequality-conflict literature towards an examination of the role of group-based inequalities in triggering violence.

The aim of this chapter is to trace the evolution of the literature on the relationship between inequality and conflict and to draw conclusions about the state of knowledge of this field. The first part of this review explores the literature that examines how and why inequalities between individuals – known as vertical inequalities – can trigger violent conflict, given that this focus is the origin of this literature and comprises the bulk of it. Despite the great deal of scholarly attention that has been paid to vertical inequalities, there is no conclusive answer as to whether, why, and how this type of inequality impacts conflict. We outline the major reasons for the inconsistent empirical findings, which revolve around methodological and conceptual issues. One of the major criticisms of the vertical inequality-conflict literature has been its inability to answer questions of collective action in explaining mobilization for violence. The second half of this review outlines the major findings of the “horizontal inequality” literature, started by Frances Stewart in the early 2000s, which examines how inequalities based on group identities, such as ethnicity, region, and religion, influence the incidence of conflict. There is a solid amount of support in the literature for the argument that high levels of horizontal economic and political inequalities among the relatively deprived make violent conflict more likely, but only mixed evidence regarding the relatively privileged, and very limited evidence for the influence of social horizontal inequalities. We conclude the chapter with a summary of existing knowledge and a reflection on the key research
gaps in this field: a need for more evidence about which types of group-based identities matter for mobilizing people to engage in conflict, how and why – including more knowledge about the role of perceptions and emotion in making certain identities more salient than others.

Vertical inequality and conflict: Inconsistent empirical findings

In this section, we outline the evolution and major but mixed findings of the literature on the relationship between vertical inequality and conflict. The traditional focus on vertical inequality within the literature on the relationship between inequality and conflict is, perhaps, not surprising, given that “it often appears that the principal political contest and debate in a nation involve a polarization of social groups around distributional issues” (Lichbach 1989). Scholars and theorists have long argued that income inequality is the most obvious factor creating disadvantage through history and is the basis of many of the modern era’s major conflicts (ibid). Conflict often seems to revolve around the economic “have-nots” who wish to change the distributional order, and the economic “haves” who wish to maintain or even expand it in their favor. Both de Tocqueville and Marx argued that inequality between rich and poor has historically been the root cause of revolutions, with Marx going so far as to claim in The Communist Manifesto that “the history of all hitherto existing society is the history of class struggles”. Or in the words of de Tocqueville: “remove the secondary causes that have produced the great convulsions of the world and you will almost always find the principle of inequality at the bottom. Either the poor have attempted to plunder the rich, or the rich to enslave the poor” (Russett 1964).

Although there is a large body of literature examining the relationship between vertical inequality and conflict, the findings of this literature is best summarized as being mixed, with little in the way of a conclusive set of answers on the topic (Cramer 2003, Lichbach 1989, Østby 2013). This is due to a combination of methodological and conceptual reasons that we explain below. But the biggest conceptual and empirical challenge to the vertical inequality literature – and in particular, to studies focused on class-based inequality – has come from the relatively new scholarly focus on horizontal inequalities, a focus that we argue better answers the question of how and why inequality can mobilize individuals to participate in organized, collective, politically-oriented violence.
2.1.1 Early roots of the inequality-conflict debate: Class and regime type

The ancient Greeks viewed wealth inequality as a key source of political upheaval, with Aristotle postulating in *Politics* that the wealthy and the poor alike will fight for a regime more aligned with their preferences and interests, but in the case of the poor, only when they have the material means to do so. Later political theorists agreed on the combustive potential of class inequality, including de Tocqueville, Machiavelli, and perhaps most famously, Marx. Marx, of course, viewed class struggle as the driving force of history, with the economic relations of production determining a given reigning political order. *The Communist Manifesto* portrays class as the most salient, time-invariant group identity, one that naturally gives rise in the Industrial era to increasingly violent and large-scale collective action by the proletariat against the oppressive exploitation of the bourgeoisie, ending in the ultimate redistributive order that prevents the concentration of wealth and thus conflict.

The fear of the poor soaking the rich via violent regime change features heavily in the democratization literatures within economics and political science. Acemoglu and Robinson (2000, 2005) advance one of the more prominent “re distributive” (see Ansell and Samuels 2010) theories of democratization, arguing that economic elites agree to democratize in societies with medium levels of income inequality in order to prevent rebellion by the poor, thus ensuring political stability. Inequality rises in the early phases of industrialization, which leads to the threat of revolution by the poor, who desire redistribution in order to have a greater share of the income in than they would under a dictatorship.¹

2.1.2 Land inequality as a cause of conflict

A literature on inequalities in land distribution as an impetus for political violence through peasant rebellions emerged in the mid-1960s, starting with Russett (1964). Russett (1964)’s findings of a positive association between greater land inequality (measured by land holdings) and political instability are echoed by Midlarsky (1988) and by Eckhardt and Young (1974) (but in the case of the latter, only for the most violent conflicts such as coups and revolutions). More recent work

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¹ See, however, Ansell and Samuels (2010), who question the assumption that the poor are willing and able to organize collective violence against the rich that leads to a change in redistribution.
also provides support for a land inequality-conflict relationship, with Murshed and Gates (2005), Gomes (2015), and Jensen and Sørensen (2012) finding that land inequality explains conflict intensity and onset in the cases of Nepal, India, and several countries in Latin America. But these findings were contested by Nagel (Nagel 1974, Nagel 1976), De Luca and Sekeris (2012), and Thomson (2016), who argue that the land inequality-conflict relationship is instead conditional on inequality levels, with conflict erupting only at intermediate levels of land inequality rather than very high ones. Other scholars, such as Brockett (1992), Muller and Seligson (1987), and Do and Iyer (2010) have also challenged studies that find a positive relationship between land inequality and conflict on the basis of poor data quality and availability, and finding that land inequality either weakly predicts conflict or that it fails to do so at all.

2.1.3 Economic change as a salve or trigger for conflict

Industrialization and other forms of economic change like globalization and economic development processes have been tested as conditioning structural variables to explain political disorder, including violent conflict and regime change. In a variant of the economic interdependence argument, Barbieri and Reuveny (2005) find that countries more open to the forces of economic globalization – as measured by trade flows and foreign direct investment volumes – are less likely to experience civil war. Trade and investment reduce income inequality through technology and skills inflows as well as through enhanced investment in education and other public goods that generate economic growth, making rebellion less attractive. But other scholars, such as modernization scholars like Huntington (1968), argued the opposite, finding that shocks associated with large-scale economic change could result in conflict when the perceptions and expectations of the losers of change are challenged – a point we return to below.

2.1.4 Mixed and inconclusive findings on vertical inequality and conflict

As Muller noted as far back as 1985, the literature on the income-conflict relationship can generally be characterized as being mixed in its findings. Lichbach (1989) noted that relationships of all kinds have been found for the vertical inequality-conflict relationship: inequality may increase conflict, decrease it, have an impact under certain conditions, or have no impact at all.
Scholars who argue for a positive relationship between income inequality and conflict are many and varied. Bartusevicius (2014) finds evidence that income inequality significantly increases the likelihood of popular rebellion, and Justino (2009) finds that the poorer a household is at the start of a conflict, the more likely that household is to support and/or participate in an armed group. Muller and Seligson (1987) argue that income inequality increases the risk of violence, particularly in semi-repressive regimes (a finding echoed in Schock (1996) for worker-based violent challenges to the state), while MacCulloch (2005) finds a positive effect of income inequality on revolutionary preferences only in states with low unemployment benefits.

Other scholars argue that particular forms of economic inequality matter: Deininger (2003) finds that among other things, household asset inequality (which includes agricultural assets, structures, and transport equipment but not household durables or consumer goods) increased the propensity for civil strife in Uganda, while Boix (2008) argues that wealth mobility matters most for instigating conflict.

Some have explored the impact of income inequality on different dependent variables, finding that vertical inequality does not have a homogenous effect on conflict onset across conflict and violence types. For instance, Besançon (2005) finds that economic inequality increases the likelihood of revolutions but decreases the chance of ethnic conflict, while Fox and Hoelscher (2012) find that income inequality increases homicide rates. Houle (2016) finds evidence that economic inequality can predict coups but not civil wars, and Nepal, Bohara, and Gawande (2011) find evidence that villages with greater levels inequality (as measured by the Gini coefficient) saw higher numbers of killings by Maoists during Nepal’s civil war.

Finally, several studies find no support for a relationship between vertical inequality and political violence, including Weede (1981), while Sigelman and Simpson (1977) and Parvin (1973) find only moderate support. This smorgasbord of findings and resulting inconclusivity on the nature of the relationship has four causes. First is the poor data availability for measures of income inequality, both spatially (cross- and sub-nationally) as well as temporally. Second, scholars have adhered to different conceptualizations and operationalizations of vertical inequality, with studies examining income, wealth, asset, and land inequality, as well as poverty (as measured by national economic growth). Third, quantitative studies vary in their research design and in the control and dependent variables included in the statistical models, making it difficult to compare across studies. Fourth, there has been little quantitative testing of the causal mechanisms that have been
put forward in the theoretical and qualitative literature to explain the effects of different types of vertical inequality on violent conflict.

2.1.5 The greed-grievance debate

The findings of two sets of scholars in the early 2000s – Collier and Hoeffler (2004), Collier et al. (2004) and Fearon and Laitin (2003) – started a long debate on whether “greed” (opportunity) or “grievance” (motivation) best explains violent conflict. Collier and Hoeffler employed two proxies for the opportunity foregone by joining a rebellion: per capita income and economic growth (GDP), finding both measures to be significant predictors of civil war onset Collier and Hoeffler (2004) and duration (Collier et al. 2004). Fearon and Laitin (2003) use income inequality (measured by the Gini coefficient) as a proxy for grievance and GDP as a proxy for state strength, also finding that both predict civil war onset. Importantly, both Collier and Hoeffler (2004) and Fearon and Laitin (2003) find no support for ethnic diversity as a significant predictor of conflict onset, a point we return to below. Both sets of scholars interpreted their positive findings regarding income inequality and economic growth as measures of the ability or opportunity to engage in conflict. For Collier and Hoeffler, individuals in poor countries will not pass up profitable opportunities associated with rebellion and will have a low opportunity cost of engaging in conflict, whereas for Fearon and Laitin, poor states are unable to prevent rebellion, leading to a Hobbesian state of nature in which individuals will challenge the sovereign if given the chance. In the words of Collier and Hoeffler, atypical opportunity rather than atypical motivation (grievances) best explains why conflict occurs.

In contrast to this controversial criminological model of conflict, much of the earlier literature had generally framed the relationship between vertical inequality and conflict in as an issue of social justice, with frustration and discontent over poor economic conditions leading people to use violence to change an unfair economic imbalance between rich and poor. Despite Collier, Hoeffler, and Rohner (2009)’s claim of disciplinary bias in this focus on injustice as an explanation for conflict, civil war scholars dived head-on into the greed-grievance debate to

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2 “The majority of the academic work on civil war is conducted by political scientists. This reflects a presumption that it is at root driven by the grievance of political exclusion” (Collier 2009, 11).
examine whether grievance-based explanations truly had no explanatory power, engaging with
two strands of earlier scholarship on relative deprivation and on ethnic and religious polarization
and fractionalization.

At its base, relative deprivation theory is a psychological theory of how individuals’
perceptions and expectations about their material conditions shapes their behavior – in this case,
their propensity to engage in politically-oriented organized violence (cf. Buhaug, Cederman, and
Gleditsch 2014). Marx himself noted the importance of psychology in explaining social tension in
terms how individuals compare themselves to others:

A noticeable increase in wages presupposes a rapid growth of productive capital. The rapid
growth of productive capital brings about an equally rapid growth of wealth, luxury, social
wants, social enjoyments. Thus, although the enjoyments of the workers have risen, the
social satisfaction that they give has fallen in comparison with the increased enjoyments of
the capitalist, which are inaccessible to the worker, in comparison with the state of
development of society in general. Our desires and pleasures spring from society; we
measure them, therefore, by society and not by the objects which serve for their
satisfaction. Because they are of a social nature, they are of a relative nature” (quoted in
Davies 1962, 5).

Ted Gurr elaborated on Marxist arguments that a collective sense of dissatisfaction with the
prevailing distribution of material goods in society, and a perceived mismatch in rising wealth
versus individual living standards, were the root causes of rebellion against the state. Gurr (1970)
further developed the concept of relative (as opposed to absolute) deprivation to explain why
individuals engage in conflict, emphasizing the comparative, relational, subjective dimensions of
the inequality-conflict relationship. His argument was that the greater the discrepancy between
what people believe that they deserve or expect or feel that they are rightfully entitled to on the
one hand, and what they are capable of attaining and maintaining on the other hand, the greater
will be their discontent or frustration. The greater the levels of frustration, and the higher and more
widespread these feelings are, the greater the likelihood for conflict to break out. Gurr (1970)
himself pointed out the subjective nature of this discrepancy between expectations and actual
capabilities: “[t]he emphasis of this hypothesis is on the perception of deprivation; people may be
subjectively deprived with reference to their expectations even though an objective observer might not judge them to be in want” (24), while absolute deprivation may not be considered unjust by those suffering from it. We examine the relationship of perceptions of inequality and violent conflict in a separate chapter of this report.

But what, exactly, is the turning point from dissatisfaction to violence? Gurr’s frustration-anger-aggression theory underspecifies how individuals overcome the collective action problems of organized violence: that is, how groups overcome the free-rider problem and convince people to undertake an action that is risky and costly for the individual but that will benefit the public good. High levels of emotions such as frustration and anger may be a necessary precondition for political violence, but they are not on their own sufficient. Mancur Olson (1965) himself noted the fact that simply having a good cause – economic injustice – is not enough to motivate large-scale group action. We must instead understand how emotion translates – or is translated – into large-scale organized action. In other words, we need to know how and why people agree that organized, violent action to rectify an injustice becomes possible.

Studies on economic change provide an answer to explain timing: that is when economic disparity may become particularly salient across individuals. For instance, Davies (1962) finds that revolutions are most likely to occur when a prolonged period of objective economic and social development is followed by a period of sharp reversal, and that in these periods of sharp reversal, better-off individuals in society will subjectively fear that economic ground gained will be lost and that they will be unable to meet their needs, leading them to overturn the prevailing political order through violence. In simpler terms, the rich fear the poor during times of economic change and use violence to prevent losing their status. Prospect theory may be informative here to understand why the rich would resort to violence; better-off individuals may be more likely to undertake the risky action of using violence to recover their losses than they would to make gains in their status since losses “afflict psychological harm to a greater degree than gains gratify” (Jervis 2004, 165).

In contrast, Huntington (1968) argued that it was not the elites who would resort to violence during times of economic change such as rapid industrialization. Instead, when the social mobilization created by increased wealth does not keep pace with political developments and people are unable to participate in the political system despite having improved incomes, violence will result. As Huntington (1968) observed (and in contrast to economic theories of democratization), “economic development and political stability are two independent goals and
progress toward one has no necessary connection with progress toward the other” (6). Echoing Gurr, violence is likely when “urbanization, increases in literacy, education, and media exposure all give rise to enhanced aspirations and expectations” (Huntington 1968, 47) that are unsatisfied.

2.1.6 From vertical to horizontal inequality

In summary, until the early 2000s, the literature on vertical inequality and violent conflict had reached no conclusion as to the nature of this relationship. And while some of the literature provided (inconclusive) answers as to when inequality could trigger violence, the question of how possible was left unanswered: how rebel groups could overcome collective action problems and convince individuals to undertake risky actions for the collective good. This question coincided with another observation: that much of the conflict occurring in the post-Cold War era was occurring in poorer countries characterized by high levels of ethnic and religious diversity. Scholars turned to social identity theory to explain why group identities in the form of ethnicity, region, and religion could motivate people to engage in politically-oriented organized violence.

Some studies on the relationship between ethnic diversity, divisions, polarization, and fractionalization and the incidence of armed conflict showed evidence of a positive relationship (cf. Horowitz 1985, Kanbur, Rajaram, and Varshney 2011, Reynal-Querol and Montalvo 2005, Sambanis 2001), but only mixed findings for the relationship between religion and conflict (Basedau, Pfeiffer, and Vullers 2016, De Juan et al. 2015, De Soysa and Nordås 2007). But the inability of Collier and Hoeffler (2004) and Fearon and Laitin (2003) to find any support for measures of ethnic or religious diversity and tension in predicting civil war onset threw into doubt much of the work on ethnicity and conflict, reorienting the greed and grievance debate towards economic opportunity explanations for conflict occurrence.

Yet the way in which Collier and Hoeffler as well as Fearon and Laitin had tested for the effect of ethnic and religious diversity in their statistical models suffered from a number of shortcomings. To proxy for cultural tensions, Collier and Hoeffler employ a widely used measure of ethno-linguistic diversity and construct a second measure of fractionalization: the distribution of ethnic groups in a country or “the degree to which a society is split into different ethnic groups” (Esteban and Ray 2008, 166). Fearon and Laitin (2003) use the ethnolinguistic fractionalization (ELF) index and additional data on the share of the population belonging to the largest ethnic group
in a country to measure ethnic dominance or polarization. Esteban and Ray (2011, 2008) argue that polarization is a better indicator to use in predicting conflict since it is the “sum of interpersonal ‘antagonisms’” (Esteban and Ray 2008, 166) or intergroup distance or homogeneity.

These measures of cultural difference as proxies for grievance have several weaknesses. First, they are unable to truly measure the salience of particular group identities in a given context, or how these identities may intersect with material conditions or deprivations. Second, they are also unable to measure levels of inequality among relevant cultural groups. Third, it is not clear how or why ethnic or religious diversity, fractionalization, or polarization might propel people to engage in violence, or why they would engage in politically-oriented violence versus crime (Buhaug, Cederman, and Gleditsch 2014). Fourth, theories of vertical inequality or simple measures of ethnic diversity cannot explain why those who are better off – the relatively advantaged – would engage in conflict (Østby 2013).

In summary, a better theory for organized political violence was required to explain armed conflict, one that could better explain how the intersection between group identity and material inequalities beyond income or wealth could result in violence. Scholars such as Frances Stewart (Stewart 2002b, 2000, Stewart, Venugopal, and Langer 2016, Stewart 2008a) stressed the importance of groups in understanding conflict, showing that inequalities between culturally formed groups (horizontal inequalities) could trigger the outbreak of violence. The group-level emphasis is vital for answering the how possible question of conflict, as Østby (2013) writes: “violent conflict is a group phenomenon, not situations of individuals randomly committing violence against each other. Group identity is critical to recruitment and maintaining allegiance to a military organization” (Østby 2013, 213).

**Horizontal inequalities and conflict**

While the turn in the early 2000s in the civil war literature towards a focus on understanding the group-inequality-conflict relationship through the lens of horizontal inequality was novel in terms of moving beyond the focus on inequality between individuals, the idea that inequalities between groups as an explanation for political violence had been floating around for some time under the guise of several alternative terminologies: ethnic group inequality (Barrows 1976), ranked ethnic groups (Horowitz 1985); relatively deprived groups (Gurr 1993a, Gurr 1993b, 2000); categorical inequalities (Tilly 1998); and cross-cutting cleavages (Gubler and Selway 2012, Selway 2011,
Siroky and Hechter 2016). The non-finding from the large-N literature (Fearon and Laitin 2003, Collier and Hoeffler 2004) had also been challenged in qualitative case studies, most importantly by Frances Stewart (2002a). Building on her conceptual work, the concept of “horizontal inequalities” has become the most prominent in the inequality-conflict literature, and received much more attention.

In reviewing the literature on horizontal inequality, the section proceeds as follows. We first define horizontal inequality and discuss the mechanisms held to underpin its relationship with conflict; before proceeding to an overview of the empirical literature. The discussion of empirical results privileges large-N investigations; and studies that measure actual rather than perceived inequality. The literature that measures perceived inequality is reviewed in Chapter [X]. The discussion is organized around to central dimensions of horizontal inequality: the group identifier (inequality between whom?) and the type of inequality (inequality in what?). We first outline results for inequality between ethnic groups, the group identifier that is most frequently tested in the literature, by type of inequality (economic, social and political). Subsequently, we present the more limited evidence for other group identifiers: migrant status, gender, age and spatial identifiers such as sub-national regions. For an overview of the reviewed studies on horizontal inequality and conflict, see Appendix I.

2.1.7 Definitions and overview of the horizontal inequality argument

Horizontal inequalities are “inequalities in economic, political, or social dimensions or cultural status between culturally defined groups” (Stewart 2008). The basic contours of the horizontal inequality explanation for civil war is as follows. First, there is a positive relationship between horizontal inequality and civil war onset. Second, this relationship is explained by the interaction between group identity and a subjective, joint sense of material inequality that serves as the group’s grievance. Third, three interrelated mechanisms take center stage in explanations of how horizontal inequality translates into conflict: grievance, identity, and opportunity factors (Østby 2013, Gurr 1993b, 2000). The shared understanding (identity) of a group’s collective well-being (grievance) motivates a sufficient number of individuals in the group to participate in organized violence, either to preserve the group’s privilege in the case of the relatively better-off, or as in the case of the relatively deprived, to forcibly endow advantage on the group. Group identity serves as the
glue that ensures group cohesion (opportunity). We examine each of these mechanisms in more detail in turn.

Most contributions to the horizontal inequality literature agree that in order to spur collective action, objective inequality must be translated into an inter-subjectively perceived grievance. In developing this argument, authors commonly refer to relative deprivation theory (Gurr 1970). Horizontal inequality is a special case of relative deprivation in its focus on the group, rather than the individual, as the point of reference for comparisons. Discontent and frustration arises from comparison between the situation of one’s group and that of more privileged groups in society. The greater the discrepancy – whether political, economic or social – the greater the motivation to fight for redistribution. It should be noted, however, that inequality is a symmetrical concept, and relatively privileged groups can be motivated to initiate conflict to preserve their power and access to resources (Stewart 2002). The grievances of the relatively advantaged take the opposite perspective on redistribution, highlighting the injustice involved in arrangements where the wealth their group or region produces, for instance from high-value natural resources like oil or metals and minerals, benefit groups or regions other than their own.

The more sophisticated discussions of grievance as a motivating mechanism for conflict emphasize that the translation of inequality into grievances is far from automatic. The most important precondition in this context is group identification. Group grievances require group members to compare the status of their group to that of others, and such comparison is much more likely when groups are clearly delimited and group members share an identity (Cederman, Gleditsch, and Buhaug 2013, Østby 2013). In a world where most individuals belong to multiple, and often cross-cutting, social groups, this is not a trivial precondition (Stewart 2008b). The most important difference between theories of vertical and horizontal inequalities is precisely this: horizontal inequality theory holds that certain identity markers are more likely than socioeconomic class to create the shared identity needed to formulate actionable grievances that are strong enough to overcome the collective action dilemma. Which identity markers have this potential will differ according to context. Whether the most relevant marker in a geographic area is language, religion,

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3 This is rarely investigated empirically. The recent literature that aims to remedy this gap in the literature will be reviewed in a separate chapter on perceived inequality and conflict.
migrant status, gender or even regional identity is ultimately an empirical question, one that is
easier to resolve in country case studies than in large-N cross-country analyses.

It is important to keep in mind, however, that identities are far from static. Because they
are open for interpretation and re-definition, the effort that group leaders and conflict entrepreneurs
in nascent group-based movements make to interpret and frame reality in a manner that facilitates
mobilization might therefore have an impact on which identity marker individuals come to
emphasize, thus crystallizing identities and increasing group cohesion (cf. Kalyvas 2006). Here,
horizontal theorists draw on a wider social movement literature (cf. Tarrow 2011, Benford and
Snow 2000) to explain how elite entry and collective action framing processes can help grievances
mature, encourage group members to identify with a particular social group, compare its situation
to that of other groups, evaluate the discrepancy as unjust, and assign blame to some external actor
(Cunningham 2013). Cederman, Gleditsch, and Buhaug (2013) also highlight the importance of
emotions, a factor that until recently remained under-theorized in the social movement literature.
Drawing on work by scholars such as Elizabeth Wood (2003), scholars have shown how the
feelings of solidarity, anger and resentment that a strong group grievance can arouse can explain
how the collective action problem is overcome and why mobilization turns violent.

Finally, the most comprehensive accounts of horizontal inequality and conflict take
opportunity factors explicitly into account (Gurr 1993a, Gurr and Moore 1997, Cederman,
Gleditsch, and Buhaug 2013, Cederman, Wimmer, and Min 2010, Cederman, Weidmann, and
Gleditsch 2011, Østby 2013, 2008b). This work contributes to a strand of literature that aims to
transcend the opportunity-grievance debate, and focuses instead on the interplay between the two
(cf. Tarrow 2011). When discussing opportunities, a distinction between internal and external
opportunities is instructive (Gurr 1993b). Internal opportunities are the capacities of a group to
mobilize and include “the salience of group identity, networks among its members and the extent
of common grievances” (Østby 2013, 216). Horizontal inequality should create internal
opportunities because of the strength and collective nature of the grievances and emotions that
shared inequality can spur, and because many identity groups have pre-existing social networks
and resources that nascent movements can tap into to mobilize group members (Cunningham 2013,
Tarrow 2011).

External opportunities include the structural political and economic conditions (or political
opportunity structure) of a given context, the financial and other material resources available
outside the group, and cross-border networks. In terms of financial resources, there is an important difference between relatively deprived and relatively privileged groups. Economically privileged groups per definition have more resources to sustain a rebel movement, while deprived groups have less. The opportunity cost of conflict, however, is per definition lower for deprived groups (Østby 2013). This is the case regardless of whether opportunity costs are conceptualized at the individual or group level, or whether it concerns earnings forgone or political influence foregone by taking up arms.

We address the political structural factors that shape the emergence of rebels in the later section on contextual factors. Most important to note is that many of these external contextual factors are commonly faced by all social movements: the level of state repression (Østby 2013), the response of the state to initial demands (Cederman, Gleditsch, and Buhaug 2013) and the nature of the political coalitions the movement faces (see e.g. Tarrow 2011), whether it can rely on international and transnational support and domestic coalitions. While internal opportunities can be exploited by movement entrepreneurs to overcome the collective action dilemma, the timing and strategic choices the movement makes, i.e. between targeting the government or other ethnic groups, between violence and nonviolence, are likely influenced by external factors (Østby 2013). These strategic choices determine whether a social movement takes the form of civil conflict, communal conflict or nonviolent direct action, but they remain under-theorized in the horizontal inequality literature.

2.1.8 Economic inequality between ethnic groups

The horizontal inequality literature can be roughly divided into categories depending on the answers to two questions: “inequality in what?” and “inequality between whom?”. This section reviews the category that most of the large-N literature on horizontal inequality and conflict falls into: economic inequality between ethnic and religious groups. The following sections look at the evidence on inequality between ethnic groups in the social and political realm, before alternative groups identifiers are explored.

In the horizontal inequality literature, ethnicity is defined broadly to include ethno-religious as well as ethno-linguistic groups. In case studies, the most important ethnicity marker can often be designated fairly easily by those who know the country in question well. In cross-
national studies, however, arriving at comparable categorizations of salient ethnic groups across countries is a nearly impossible exercise, but it has been resolved in two main ways. First, one strand of the horizontal inequality literature adheres to the ethnic groups classification as coded in the Ethnic Political Relations (EPR) dataset (Cederman, Wimmer, and Min 2010). In this literature, only groups that are represented in the national political arena and groups that are overtly discriminated against are included. Second, scholars in the other main strand of the literature give preference to using survey-based indices to define and categorize ethnic groups in a given country (e.g. Østby 2013, 2008b, 2016, Østby, Nordås, and Rød 2009b). In this case, ethnic categories are pre-defined by the teams that develop each survey.

An important, but rarely explicit, distinction in empirical analysis of economic horizontal inequality is the distinction between summary indices of inequality and measures of relative position. The former combine information on both relatively poor and relatively rich groups within a geographic area, usually a country or a region, to provide aggregate measures of the total inequality, i.e. the wealth distribution, in each area. This approach facilitates predictions of how likely conflict is to break out in a particular country or region. The latter approach centers around the relative position an identity group occupies within the wealth distribution in a geographic area instead, in order to predict the likelihood that each group will take part in conflict in that area. An important advantage of the latter is that it facilitates empirical disentanglement of the effects of relative deprivation from those of relative privilege. This is important, given that hypotheses about the two are underpinned by different theoretical mechanisms, as outlined in the previous section.

The limited number of cross-country studies that apply summary indices of economic horizontal inequality all find a positive and generally statistically significant relationship between economic horizontal inequality and civil conflict. These studies use Demographic and Health Survey (DHS) data to construct measures of the difference in asset ownership between the two largest ethnic groups in a range of developing countries (cf. Østby 2008b, a) or to measure the extent of overlap between class and ethnicity in a country (Gubler and Selway 2012, Siroky and Hechter 2016). Single-country quantitative studies exploring variation between sub-national regions in Nepal (Nepal, Bohara, and Gawande 2011) and India (Vadlamannati 2011, Gomes 2015) find similar relationships.

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4 In Østby 2008a the relationship is not statistically significant, probably due to the relatively small sample.
Results from the empirical analyses that distinguish between relative economic disadvantage and relative economic privilege suggest the group inequality-conflict relationship is driven mainly by conflicts involving relatively deprived groups. Early efforts at measuring group deprivation, in the form of the Minorities at Risk (MAR) Dataset’s indices for economic discrimination and differentials between ethnic groups, provided little support for a direct relationship with rebellion (Gurr 1993a), but new and improved data have provided more conclusive results. For measures of relative deprivation, group level studies have found a positive relationship between relative deprivation with civil conflict, with deprivation measured as the relative distance between deprived groups’ estimated GDP per capita and the average national GDP per capita (Cederman, Gleditsch, and Buhaug 2013, Cederman, Weidmann, and Bormann 2015, Cederman, Weidmann, and Gleditsch 2011). A positive relationship has also been found between economic discrimination (using MAR data) and violent separatism among groups demanding self-determination (Cunningham 2013).

When relative group deprivation is aggregated to the country level, using the distance between group and national GDP per capita for the most deprived group in each country, the aggregate measure of relative deprivation is also associated with higher risk of civil conflict (Buhaug, Cederman, and Gleditsch 2014). In contrast, measures of relative privilege, constructed in the same manner as measures for relative deprivation, return less conclusive results. Cederman, Weidmann, and Gleditsch (2011) and Cederman, Weidmann, and Bormann (2015) find statistically significant relationships for certain model specifications, but other studies suggest high levels of uncertainty concerning the existence of an independent relationship (Buhaug, Cederman, and Gleditsch 2014, Cederman, Gleditsch, and Buhaug 2013).

The results from group-level analyses suggest that improving the economic situation of a deprived group relative to other groups should decrease the risk that the group initiates civil conflict. The overall risk of conflict might not decrease, however. Mitra and Ray (2014) develop a theoretical model of economic change and conflict that shows that when group incomes are low, increasing them will lower the risk that violence will be initiated by the group, as expected, but

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5 Gurr and Moore (1997) use a three-stage least squares model and find that economic discrimination helps predict grievances (as expressed by group representatives), grievances help predict mobilization, and mobilization helps predict ethnopoltical rebellion.
raising incomes will also heighten the violence perpetrated against the group because the privileged groups fear that they will lose their advantage. The model is supported in a sub-national empirical analysis of 14 Indian states, with evidence that 1% increase in Hindu incomes decreases casualties from communal riots by 3-7%, whereas a 1% increase in Muslim expenditures increases casualties by 3-5%.

Several qualitative case studies have suggested the relationship between socioeconomic inequality and conflict could be conditional upon political inequality. These studies argue that while economic disadvantages give the masses incentives to revolt (Langer 2008), political exclusion provides the leaders of deprived groups with incentives to change the distributional status quo (Langer 2008), and is easier than economic disadvantages to blame on the central government (Cederman, Gleditsch, and Buhaug 2013). The two quantitative cross-country studies that have investigated this proposition so far find some support for it. On the country level, Østby (2008a) finds the association between asset inequality and civil conflict is stronger for countries with higher levels of political discrimination (see also Østby and Strand 2013). This does not hold for inequality in education. On the group level, Cederman, Weidmann, and Bormann (2015) find that the effect of relative economic deprivation is driven almost exclusively by politically excluded groups. These authors further find that relative privilege is not associated with civil conflict, neither for excluded nor included groups. The latter finding is somewhat counter-intuitive, as one might expect privileged groups whose wealth is being redistributed to other groups, or groups who fear that it will be in the future, would be particularly likely to take to arms if they have no access to the political arena.

Most of the quantitative studies on economic horizontal inequality between ethnic groups have focused on civil conflict outcomes – i.e. the onset or intensity of internal conflicts, in which at least one non-state actor challenges the state. In complimentary analyses, Buhaug, Cederman, and Gleditsch (2014) disaggregate the civil conflict variable further, and find that the effect of the relative deprivation of a given country’s poorest group on civil conflict is driven exclusively by conflicts over territorial claims. The few studies that introduce alternative types of conflict support this and find similar results to those for civil conflict. Fjelde and Ostby (2014) find that horizontal inequality in the form of relative deprivation in assets, but not relative privilege, is positively associated with the risk of communal conflict onset in sub-national regions in 34 Africa countries. Mancini, Stewart, and Brown (2008) finds infant mortality rates are associated with a higher
incidence of communal violence across Indonesian districts. However, Atiku-Abubakar and Shaw-Taylor (2003), find no independent and direct relationship between economic differentials aggregated to the country level and intercommunal conflict.

The two studies that have investigated how inequality impacts nonviolent forms of conflict both find a positive relationship with horizontal inequality; when investigating the relationship between economic discrimination and groups’ choice of nonviolent resistance strategies over conventional politics (Cunningham 2013) and the relationship between relative economic deprivation and individual level participation in demonstrations in Africa (Miodownik and Nir 2016), respectively.

Finally, three studies have investigated attitudinal support for political violence, rendering mixed results. Hillesund (2015) found that relative deprivation in assets among Palestinians in the occupied areas, as compared to Israeli neighbors, increased the risk that individual Palestinians support violent over nonviolent means of resistance. Miodownik and Nir (2016) found no such relationship across the countries surveyed in the second round of the Afro Barometer survey, however. Neither did Rustad (2016), in her survey of four Nigerian states.

2.1.9 Social inequality between ethnic groups

As suggested by the preceding paragraphs, the thrust of the quantitative literature on horizontal inequality has been on the purely economic dimension, measured with estimates of GDP or with survey-based asset indices. The few quantitative studies that investigate what could be termed social horizontal inequality and conflict all use survey or census-based measures of inequality. Social horizontal inequality is different from economic horizontal inequality, in that it entails access to public goods such as education – although such inequality can translate into (and is highly associated with) economic horizontal inequality (Østby 2008b). Results suggest that aggregate inequality in education is related to civil conflict onset in developing countries (Østby 2008b, a); and that localized relative deprivation in education is related to localized communal conflict (Fjelde and Ostby 2014).

Using a more general proxy for levels of social development – infant mortality rates – Mancini, Stewart, and Brown (2008) found that summary indices of horizontal inequality on the district level is associated with a higher incidence of communal conflict in Indonesian districts. He
also included measures of horizontal inequality in education, landlessness and poverty among farmers, labor income, and unemployment among young men. These appeared to be associated with communal conflict when added to the regression model separately, but when they were all included, only inequality in infant mortality remained statistically significant. Finally, Østby et al. (2011) found horizontal inequality in infant mortality rates in Indonesian districts to be related to non-routine violence, but only in areas with high population pressure.

2.1.10 Political inequality between ethnic groups

The general mechanisms held to underpin the relationship between horizontal inequality and conflict – grievance, identity and opportunity – should apply to inequality in the political realm as well. Theories of political horizontal inequality draw on additional literatures, however, related to ethno-nationalism, the principle of self-determination and on how ethnic capture of the state apparatus provide politically excluded groups with incentives to challenge the status quo (Cederman, Wimmer, and Min 2010, Wimmer, Cederman, and Min 2009, Cederman, Gleditsch, and Buhaug 2013).

Early empirical investigations of the relationship between conflict and political inequality among ethnic groups used indices of political discrimination and group differentials from the Minorities at Risk project (MAR). Discrimination was measured on a scale from no discrimination (via historical disadvantage and government neglect) to active discrimination policies. Political differentials measured differences in political status and positions between groups, with negative scores representing relative advantage.

Gurr (1993a) first used these measures in analysis of 227 communal groups throughout the world, and found that rebellion was positively related to political differentials (defined as inequalities that result from intergroup differences in access to scarce resources and positions), but negatively related to political discrimination (defined as patterned social behaviors by other groups that systematically restrict group members’ access to resources, opportunities, rights, and positions). The latter finding was contradicted by later studies. Regan and Norton (2005) aggregated the political discrimination measure to the country level, and found it increased the risk of civil conflict. Vadlamannati (2011) found the same across sub-national regions in India. The relationship appeared not to transfer to other types of conflict, however. Atiku-Abubakar and
Shaw-Taylor (2003) found no relationship with the political differentials index and communal conflict. Regan and Norton (2005) found no relationship between political discrimination and nonviolent protest, and Gurr (1993) himself found no relationship between either political differentials or discrimination and nonviolent protest.

The study of political horizontal inequality has been beset by data and measurement challenges. Ted Gurr’s Minorities at Risk (MAR) Dataset was heavily criticized for the selection bias introduced by including only groups already considered at risk of conflict, and for the amount of coder judgment required to construct many of its indices – criticisms that Gurr (1993b) himself acknowledged. In response to this, the more recent literature on political horizontal inequality and conflict has converged around measures of ethnic groups’ exclusion from executive power as coded by the Ethnic Power Relations (EPR) dataset, a dataset designed to try to reduce the biases in the MAR dataset.

Using EPR data, several studies have found that group level exclusion from the executive, as well as a recent loss of executive power, increases the risk of group participation in civil conflict (Cederman, Gleditsch, and Buhaug 2013, Cederman, Weidmann, and Bormann 2015, Cederman, Wimmer, and Min 2010, Cederman, Weidmann, and Gleditsch 2011). And when the political status variables from EPR are aggregated to the country level, which is usually done by dividing the size of the largest excluded group (Wimmer, Cederman, and Min 2009, Buhaug, Cederman, and Gleditsch 2014, Cederman, Gleditsch, and Buhaug 2013) or the size of the discriminated population (Siroky and Hechter 2016, Cederman, Gleditsch, and Buhaug 2013) by that of the included population, country level political inequality has also been found to increase the risk of civil conflict. In complimentary analyses, Buhaug, Cederman, and Gleditsch (2014) disaggregate the civil conflict variable, and find that the effect of the size of the largest politically excluded group relative to included groups is driven by conflicts over government, whereas the effect of recent loss of power is driven by conflicts over territorial claims.

To our knowledge, only two published articles investigate the relationship between ethnic group exclusion from the executive and types of conflict other than civil conflict. In a cross-country sub-national regions analysis, Fjelde and Ostby (2014) find exclusion to be related to a higher risk of localized communal conflict. Miodownik and Nir (2016) combine group level exclusion measures with individual level conflict data from the Afrobarometer surveys and find a positive
relationship between exclusion and participation in demonstrations among African individuals; but no relationship with attitudinal support for violence.

2.1.11 Other group-identifiers

For inequality between identity groups, i.e. horizontal inequality, to help overcome the collective action dilemma and lead to violent politically-oriented action, group members need to strongly identify with the group in question. The gist of the horizontal inequality argument is precisely this: that vertical inequality often does not translate into conflict because individuals in many parts of the world identify less with their socioeconomic class than with other identity groups that they are part of. In this regard, ethnicity (including religion) provides the most important marker around which societies organize and identities coalesce. Several other markers have been introduced into the horizontal inequality literature, however. As pointed out earlier, which identity markers provide the potential to overcome the collective action dilemma will differ between different contexts, and is ultimately an empirical question. In this section and the next, we review empirical results for the candidates we found large-N empirical studies on other relevant identity categories, including gender, age status (youth), and geographic location.

The quantitative literature on gender inequality and conflict onset is small, but establishes that there are fewer civil conflicts in countries with low levels of gender inequality, measured as female representation in Parliament and years of suffrage. The same is true for countries that do well on social proxies for gender equality, such as secondary and education among women, labor force participation and low fertility rates (Bussmann 2010, Caprioli 2005, Melander 2005). The mechanisms discussed in this body of work range from the essentialist hypothesis that women are simply more war-averse than men (and their inclusion in politics should make countries less war-prone) to constructivist hypotheses that norms of respect will carry over into wider social and political relations in societies that respect and include women (cf. Caprioli 2005).

Age has also been investigated in the civil war literature, for instance in the youth bulge and child soldiering literatures. On the former, Urdal (2006) finds that large youth bulges increase the risk of civil war onset, while a large qualitative literature on youth participation in conflicts in contexts such as West Africa examine how youth exclusion from public goods provision, employment, and politics has motivated young people to take up arms (cf. Peters and Richards
1998, Richards 1996). However, as with the focus on class-based inequality, it is not clear that age is necessarily a relevant enough category given that it is so wide and that the definition of the concept of “youth” fluctuates widely, depending on context.

However, while it is easy to accept that some of the markers discussed can become salient enough to lower the collective action barrier in a given area at a given point in time and in the hands of skilled political entrepreneurs, it is difficult to disentangle the extent to which the conflict potential uncovered in the studies that have a wider graphical and temporal scope is actually due to overlap between the alternative identity markers in question and ethnic categories. This is particularly true for the categories of markers we turn to next: spatial identity markers.

2.1.12 Spatial inequality

Can shared identities defined by geographic markers be strong enough to overcome the collective action dilemma and initiate violent conflict? Anecdotal evidence suggests that shared identities within sub-national regions can indeed fill this function (for instance, in the Biafra state of Nigeria, South Sudan, and Crimea). But does the relationship hold across time and space?

In country level analyses, Lessmann (2015) finds a positive relationship between a summary indicator of inter-regional inequality and civil conflict. Ezcurra and Palacios (2016) find the same for the number of domestic terrorism incidents in a country. Using cross-country analysis of first level administrative regions across 22 African countries, Østby, Nordås, and Rød (2009b) find a curvilinear relationship between regional economic inequality, as measured by comparing asset ownership in each region to that in the rest of country (with negative values denoting relative privilege), and civil conflict – but no relationship between regional inequality in education and civil conflict. And in an analysis of sub-national regions within 22 federal states, Deiwiks, Cederman, and Gleditsch (2012) found that the existence of both relatively deprived and relatively

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6 There is also a literature on spatial inequality that operationalizes relative deprivation as inequality between geographic grid cells, finding either positive (Hegre, Østby, and Raleigh 2009, Raleigh 2014) or non-significant (Buhaug et al. 2011) relationships between relative economic deprivation and civil conflict; and nonsignificant relationships between relative privilege and civil conflict (Buhaug et al. 2011), and between relative deprivation and communal conflict (Raleigh 2014). Since inequality between arbitrarily delimited geographic areas is difficult to conceptualize along identity group lines, we will not discuss this literature in more detail.
privileged regions, measured by comparing regional GDP per capita to the national average, increased the risk of secessionist conflict.

In one of the first quantitative studies using the term horizontal inequality, Murshed and Gates (2005) found that the gap in landlessness and the gap in HDI between sub-national regions in Nepal and the Kathmandu capital area were associated with higher civil conflict intensity. Estimates for inequality in life expectancy, schooling and road density were not significant, however. Deraniyagala (2005) reached the same conclusion, finding that urban-rural inequality led to significant social unrest and eventually armed insurrection in the 1990s in Nepal. Further, in an individual-level analysis covering four Nigerian states, Rustad (2016) found no independent effect of asset inequality between regions on attitudinal support for violence among the surveyed individuals.

As flagged in the previous section, the question of whether the positive results stem from regional identities or whether the measures mainly proxy inequality between ethnic groups remains largely unresolved, however. In Africa, in particular, administrative borders often align closely with ethnic divides, but this not always true across countries in other regions (Østby, Nordás, and Rød 2009b).

**Contextual factors**

The empirical literature on contextual factors that could influence the relative importance of inequalities for conflict dynamics is relatively small. It generally covers three sets of factors likely to influence nascent movements’ external opportunity to mobilize: characteristics of the political system, socioeconomic conditions and natural resource extraction. These factors are best thought of as conditional variables, rather than control variables.

The studies on inequality and the type of political system suggest that regime type matters for the conflict potential associated with inequality, for both vertical income inequality, political horizontal inequality between genders, and for social horizontal inequality between ethnic groups. Muller and Seligson (1987) first discovered that the effect of vertical income inequality on death rates from political violence was stronger in semi-repressive states. They argued that the trade-off between the ability to organize and the likelihood of succeeding with the use of violence favored the use of political violence more in semi-repressive regime than in full democracies or full autocracies.
More recently, Melander (2005) found the conflict-dampening effect of female representation in Parliament to be stronger the more democratic a country is. However, for female representation to reduce the likelihood of conflict, regardless of the causal mechanism at work, Parliament must be able to exert real political influence. Finally, Østby (2008a) found that the effect of inequality in educational attainment between a country’s two largest ethnic groups was stronger in democracies and inclusive electoral systems across a range of developing countries. Democracy enhances the effect of educational inequality because the opportunities to mobilize are greater, and that inclusive electoral systems incentivize parties and leaders to emphasize ethnic divisions in order to gain support from their kinsmen. In contrast, corresponding interaction terms with inequality in asset ownership are not statistically significant in this study.

Schock (1996), too, argues that the effect of grievances should be moderated by political opportunity structures; he finds that the relationship between vertical inequality and the death rate from non-routine political participation events is strongest in countries with weak states, measured as low levels of institutionalization and frequency of military intervention from the outside, but that this relationship is not affected by regime type. The effect of class exploitation, on the other hand, was driven exclusively by semi-repressive regimes.

Governance factors such as power sharing could also condition the relationship between inequality and conflict. In a study of 22 federalist states, Bakke and Wibbels (2006) argue that the degree to which federalism can contribute to peace depends on how federal institutions respond to characteristics of the societies they govern. They find that economic inequality between sub-national regions increases the risk of rebellion and protest primarily in countries where ethnic groups are regionally concentrated, but that fiscal decentralization can reduce the likelihood of conflict when interregional inequality is high. With regards to political inequality, they find that the exclusion of minority regions from political parties increases the risk of conflict primarily in the context of large national parties.

The studies that look at socioeconomic context cover levels of development, social benefits, and demographic stress factors. With regards to level of economic development, Buhaug et al. (2011) found that while the independent effect of relative privilege is often non-significant in large-N studies, relative economic privilege does increase the risk of civil conflict in very poor countries, when measuring privilege by comparing wealth between neighboring geographic grid cells. They suggest that this is because poor states are weak in terms of state capacity and that the
distorting effect of natural resource wealth is particularly large in poor countries. In contrast, in their quantitative case study of Nepal, Nepal, Bohara, and Gawande (2011) find no evidence that poverty or unemployment conditioned the effect of income inequality or ethnic polarization on conflict intensity. The effect was found to be stronger in villages with lower levels of education, however, and villages with many farmers. The authors suggest that this indicates that farmers are stuck in a mobility trap, but that education could help resolve it. With regards to the contextual effect of social benefits, MacCulloch (2005) finds that vertical income inequality matters for revolutionary preferences in countries where unemployment benefits are kept low, suggesting that inequality tends not to cause support for violence on its own, but that frustration with the lack of response to it by the government could help trigger revolution.

Two studies suggest that the salience of inequality-related grievances is enhanced the context of demographic stress. Investigating the case of Indonesia, Østby et al. (2011) found a differential effect of inequality on infant mortality rates between religious groups on non-routine violence only in regions with high population pressure. Contrary to this, Urdal (2008) found no evidence that rural population density has acted as a trigger of political violence in Indian states. The combination of youth bulges and vertical income inequality, however, appears to have triggered a conflict potential that neither of the individual variables exhibited in isolation.

Finally, the studies that investigate the contextual effects of natural resource wealth and extraction generally suggest that natural resources exacerbate the effect of inequality on conflict. Asal et al. (2016) found the effect of political exclusion on civil conflict to be stronger for groups whose settlement area include oil deposits. This was corroborated for economic inequality in a sub-national regional analysis of inequality in assets between regions, using a combined measure of diamond and oil deposits (Østby, Nordås, and Rød 2009b). The conditional effect also holds for the relationship between inequality in assets between ethnic groups in the Nigerian Delta area and attitudinal support for violence (Rustad 2016). In the most recent addition to this literature, Hunziker and Cederman (forthcoming) instrument for oil production with geological determinants of hydorcarbon reserves and find an interaction between the effect of oil production and that of political exclusion from the executive on secessionist conflict.
**Within-group inequality**

At the intersection between the concepts of vertical and horizontal inequality lies a concept that has received little empirical attention in the conflict literature: within-group inequality. By way of theory, Esteban and Ray (2008, 2011) have argued that ethnic alliances have a mobilization advantage over class alliances because ethnic groups, unlike classes, can exhibit within-group economic inequality. In the context of such inequality, the relatively rich can supply conflict capital, while the poor, motivated by grievance and low opportunity costs, supply conflict labor. The opposite argument can also be made: that low levels of within-group inequality should make between-group inequality more easy for group members to perceive, and thus be motivated by. In a similar vein, Siroky and Hechter (2016) argue that when groups subject to horizontal inequality face high within-group inequality, cross-cutting class ties are introduced than should make ethnic conflict less likely and class conflict more likely.

Kuhn and Weidmann (2015) empirically address the interaction between horizontal and within-group inequality, and provide initial support for the Esteban and Ray (2011) argument. Measuring within-group inequality with a Gini coefficient calculated from night light emissions within group settlement areas, they find it increases the risk of civil conflict. The effect is particularly strong for groups that also suffer from political exclusion or economic horizontal inequality, i.e. have a motive to rebel, and holds up to an instrument variable approach. In support of the opposite argument, however, the country level analysis of Siroky and Hechter (2016) suggests that the relationship between economic/political horizontal inequality and ethnic conflict is weaker in countries with high levels of within-group inequality, and the relationship with class conflict stronger.

Other studies have investigated the independent effect of within-group inequality on conflict. In their study of 22 Sub-Saharan African countries, Østby, Nordås, and Rød (2009a) found that within-region inequality, measured with Gini coefficients for asset ownership and education, increased the risk of conflict. Mitra and Ray (2014), on the other hand, found no significant effect of within-group inequality in expenditures on Hindu-Muslim riots in India.

In sum, evidence on the effect of within-group inequality and its interaction with horizontal inequality is scarce and decidedly mixed. More studies are needed to resolve the question.
The challenge of causality

In this review, we have focused on studies that examine the relationship between inequality and conflict, with the causal arrow going from inequality to violence. A growing number of studies have examined the reverse relationship: how conflict creates inequalities, such as in the health and education sectors. This section does not aim to cover the literature on the reverse conflict-inequality relationship. Instead, it provides an overview of the approaches that have been adopted to assuage concerns that endogeneity and selection bias influence the empirical results for the inequality-conflict relationship discussed above; and calls for studies investigating the functional form of the inequality-conflict relationship.

A number of studies of the inequality-conflict relationship have raised the issue of endogeneity in the inequality-conflict relationship. That is, while higher inequality may make the onset of conflict more likely, conflict itself can make inequality worse. This is the conflict trap: the fact that conflict is “development in reverse” (Collier et al 2003) and can aggravate deprivation and associated grievances that mobilize people to take up arms. Furthermore, policy makers who suspect a particular group or population segment is likely to revolt may preemptively enact policies that alter levels inequality. Such policies could bias our “naïve” estimates of the inequality-conflict relationship either upwards or downwards. Wucherpfennig, Hunziker, and Cederman (2016) show why this is the case in the political realm: If governments strategically exclude conflict-prone ethnic groups or regions, then regression analysis that does not account for endogeneity will overestimate the relationship between political exclusion and civil conflict. If, on the other hand, governments preemptively include conflict-prone groups in government, regression estimates will be artificially low.

In the inequality-conflict literature, the most commonly applied technique to address endogeneity concerns is to lag the inequality variables. This section focuses on the contributions that apply more comprehensive techniques. The few studies that apply such techniques, generally indicate that the inequality-conflict relationship holds up to fixed effects and instrumental variable analysis. The studies are summarized in Table 1.

Instrumenting for vertical inequality in height with both the ratio of soil and climatic suitability for sugar cane relative to wheat and low population density in 1500, Baten and Mumme (2013) found the relationship between inequality and civil conflict held up to scrutiny. Similarly,
MacCulloch (2005) found the relationship between income inequality (Gini) and revolutionary preferences in situations of low social spending was robust to an instrumental variables approach based on levels and changes in foreign demand and oil import prices, as well as country and year fixed effects. Nepal, Bohara, and Gawande (2011) also found robust positive relationships between vertical inequality and conflict, and polarization and conflict, in a study of Nepal. In addition to sub-national regions fixed effects, they ran instrumental variable analysis with variables denoting the percent of households operating agricultural land, the percent of households in which women owned land and the average number of big head livestock owned by women.
<table>
<thead>
<tr>
<th>Article</th>
<th>Measures of inequality &amp; conflict</th>
<th>Techniques used to probe for causality</th>
<th>Relevant findings</th>
</tr>
</thead>
</table>
| MacCulloch (2005)              | VI: Income (Gini) C: Revolutionary preferences | **Instruments**: Levels and changes of Foreign Demand and Oil Import Price  
**Fixed effects**: Country, year | Robust positive relationship  
(conditioned by social spending) |
| Baten & Mumme (2013)           | VI: Height C: Civil war            | **Instruments**: Ratio of soil and climatic suitability for sugar cane relative to wheat; Low population density in 1500 interacted with southern location | Robust positive relationship                                                   |
| Nepal et al. (2011)            | VI: Wealth index (Gini)  
HI: Polarization of wealth  
C: No. deaths by Maoists | **Instruments**: % of households operating agricultural land; % of households in which women own land; average number of big head livestock owned by women  
**Fixed effects**: Sub-nat. region (distr.) | Robust positive relationship                                                   |
| Mitra & Ray (2014)             | HI: Expenditure C: Hindu-Muslim riots | **Instrument**: Expenditures by occupation as proxy of weighted average of returns for Hindus and Muslims in each occupational class  
**Fixed effects**: Sub-nat. region, time  
**Other**: GMM with lagged income and conflict measures | Robust positive relationship: Stronger in 2LS than OLS |
| Vadlamanati (2011)             | HI: Economic and political discrim.  
C: Civil conflict | **Instruments**: More than 80 instruments, but details are unclear  
**Other**: Dynamic panel GMM | Robust positive effect of econ. discrim.; pol. discrim. non-sign. in GMM analysis |
| Wucherpfennig et al (2015)     | HI: Political exclusion of ethnic group | **Instrument**: Interaction between previous colonial power (France vs. Britain) and peripheralness (distance to colonial center) | Robust positive relationship: Stronger in IV models than naïve analysis          |
Turning to studies of horizontal inequality, Wucherpfennig, Hunziker, and Cederman (2016) instrument for political exclusion in a range of post-colonial states by interacting a variable denoting ethnic groups’ peripherality (distance to the former colonial center) and their former colonial master (France vs. Britain), thus exploiting the fact that empires applied different strategies of colonial rule. Results indicate that the effect of political exclusion on civil conflict
have been underestimated. It seems, then, that it is more common for governments to preemptively include rather than preemptively exclude conflict-prone ethnic groups.

The two studies that instrument for economic horizontal inequality are both studies of India. Mitra and Ray (2014) use a weighted average of expenditures by occupation as a proxy of average returns for Hindus and Muslims in Indian districts, to exploit the fact that ‘Muslims and Hindus are concentrated differently over occupational classes’ (Mitra and Ray 2014, 750). Their finding that increasing group incomes for a relatively deprived groups lowers violence perpetrated by the group but increases violence against it from richer groups holds up to this approach, as well as to sub-national regions and time fixed effects and GMM analysis with lagged income and conflict measures. Vadlamannati (2011) uses more than 80 instruments, and finds that the positive effect of economic discrimination on civil conflict holds up, but that the effect of political discrimination loosens statistical significance. Other examples of attempts to probe for causality in the study of horizontal inequality and conflict include the fixed effects approaches of Lessmann (2015) and Hillesund (2015) and the application of random effects by Melander (2005) to the study of gender inequality.

While the studies discussed in this section suggest endogeneity could be less of a problem than initially suspected, there is a need for more studies on this, in order to cover all forms of inequality and conflict, and all parts of the world.

A final point regarding causality concerns the dearth of articles that report testing the functional form of the horizontal inequality-conflict relationship. One reason to expect an inversely U-shaped relationship between inequality and conflict, for example, where the effect is highest at intermediary levels, could be that the groups and individuals that are most severely deprived simply lack the resources to organize a revolt.

In the early literature on vertical inequality, Davis (1948) argued that the relationship between inequality and conflict should be U-shaped, because a narrow concentration of income creates mass dissatisfaction whereas a wide dispersion leads to elite dissatisfaction. Nagel (1974), on the other hand, argued it should be inversely U-shaped, because potential grievances increase with inequality whereas the tendency to compare wealth decreases. Parvin (1973) argued that for each income level, there is an optimum level of income inequality, beyond which further egalitarian measures are likely to increase rather than decrease violence, as a privileged class resists erosion of their privileges (Parvin 1973, 291). Early empirical studies, like Sigelman and
Simpson (1977), found no support for a U-shaped or inversely U-shaped relationship between vertical income inequality and political violence. More recently, however, Thomson (2016) found that the relationship between the Gini for concentration of landownership and civil war has an inverted U-shape. He argues this is because very high levels of concentration allow for the formation of a cohesive and repressive rural elite to deter and repress rebellion.

In the horizontal inequality literature, Østby, Nordås, and Rød (2009b) find that the relationship between inter-regional inequality and civil conflict in Sub-Saharan Africa is curvilinear, with a significant and positive effect for the most deprived only. The robustness tests reported in Rustad (2016) suggest a possible curvilinear relationship between district level asset ownership, as compared to the richest district in the state, and individual level support for violence in the Niger Delta. In general, though, while the horizontal inequality literature tends to allow for the possibility that both relative deprivation and relative privilege could increase the risk of conflict, usually by constructing separate variables for the two, few published articles test for the possibility that the effect of relative deprivation subsides at the highest levels of deprivation, for example due to a lack of resources.

**Conclusion**

The literature on the relationship between vertical inequality and conflict is inconclusive as to whether this type of inequality influences the outbreak of violent armed conflict. While the conventional wisdom is that inequality should trigger conflict, methodological and conceptual problems plague the study of vertical inequality and conflict. But more problematic is the fact that this literature struggles to answer the question of how and why inequality mobilizes certain groups for violence. Theories of horizontal inequality are better placed to address this question, but several gaps are evident in this literature that should be addressed in future research on the topic. First, the evidence is fairly strong of a positive relationship between horizontal economic inequalities for the disadvantaged and violent armed conflict, and that political context plays a strong role in this relationship. But the conditions under which certain group identities become relevant for mobilizing people for violence is less clear. Second, more research is needed on potential interactions between different types of horizontal inequality, as well as interactions between within-group and between-group inequality. Third, more studies that aim to control for endogeneity and test the functional form of the inequality-conflict relationship are needed. Fourth,
studies have found a relationship between horizontal inequalities and various forms of political violence but also non-violence, and understanding the opportunity factors that explain why groups choose violent versus non-violent strategies, and why they choose particular violent strategies, requires more illumination. Finally, more research is needed to flesh out the differences between different types of horizontal inequality (social, political, and economic), and to beef up the evidence base regarding the effects of social horizontal inequality as well as the salience of different types of group identities such as region, gender, and age.
3 From objective to perceived horizontal inequalities: what do we know?

Introduction

The main body of literature on horizontal inequality focuses on objective inequalities between groups such as education, infant mortality and wealth (see Chapter 1 and 5). Nonetheless, there is a small but growing literature arguing that it is not the objective inequalities that trigger conflicts but the perceptions of such. Hence, what matters is how people perceive their groups situation compared to other groups. However, due to very few data sources this is difficult to test, but, the few studies that have tested perceived horizontal inequalities find support for this hypothesis. In this Chapter we will discuss the literature that has emerged on this topic, the theoretical background and how they measure and test perceived horizontal inequalities. In the last section of the Chapter we use Afro-barometer data to map and in particular compare objective and perceived measures of horizontal inequality.

Literature review

Why and how do perceptions mediate the inequality-conflict relationship? Relative deprivation theorists have always been explicit about the fact that people’s perception of relative deprivation should matter more than the actual scale and scope of deprivation itself for their willingness to resort to violence and aggression. Relative deprivation theory is often the starting point for thinking about how grievances can trigger violent behavior, and its use in explaining the onset of politically-oriented, collective violence (conflict onset) was perhaps most famously popularized by Ted Gurr (1970). Gurr argues that when there are very high levels of perceived discrepancy between what a group of people (not just a few individuals) believe that they are rightfully entitled to either maintain or attain in the future and what they are actually capable of attaining or maintaining, this discrepancy is likely to generate a group-level emotional response in the form of frustration, anger, and discontent. In other words, the perception of group-level deprivation creates a shared, high level of discontent (“very intense deprivation”) over an “intolerable gap between normative expectations and actual achievements created by cumulated experiences of hardship in a collectivity” (Korpi 1974, 1569). This discontent generates an individual emotional response (frustration) about the discrepancy which in turn heightens aggression among individuals, resulting in violent political conflict when the source of the frustration is identified as the political system.
The greater the scope (number of people who feel the discrepancy) and the intensity (sharpness of the discontent) of the collective frustration, the more likely is violence to break out.

As Gurr (1970) points out, perceptions and beliefs are key causal mechanisms in the link between collective well-being and violence. It is not absolute deprivation that matters for generating conflict, but how people believe that their group is faring in society – their perceptions. That is, conflict is a function of what people believe that they should have and their understanding of what source is responsible for the fact that they do not have what they believe they are entitled to. Perceptions are generated through memories of past conditions, exposure to new ways of life or new ideologies, and through information about the achievements of other relevant, comparable social groups (“reference groups”). In addition to the degree to which grievances are high and widely shared, violence is also a function of two additional factors: 1) the biological response of aggression, defined as “the normative and utilitarian justifiability of violent action directed at the agents responsible for it” (Gurr 1970, 13), and 2) existing social structural conditions, such as levels of repression and organizational capacities that facilitate mass mobilization.

Cederman, Gleditsch, and Buhaug (2013) further elaborate on the causal chain between grievances and conflict. For horizontal inequalities to become a motivating device (a grievance), three conditions must be satisfied. One, there must be a set of well-defined and identifiably separate groups in society (constituting an identification problem). Two, these groups must be able to compare themselves to other groups in society (constituting an information problem). And three, these groups must be able to take the information about inter-group inequality and evaluate or frame it as unfair and then assign blame, politicizing the inequality (constituting normative and framing problems). Finally, collective action must be organized to carry out violence, which largely depends on emotions and the existing political opportunity structure.

Inter-subjectively perceived grievances are notoriously hard to measure (Cederman, Weidmann, and Gleditsch 2011), however. Thus, while most studies that find a relationship between objective levels of material inequality and conflict (Østby 2008, Cederman et al., 2013; Cederman, Weidmann, & Gleditsch, 2011; Cederman, Wimmer, & Min, 2010) assume that the relationship is mediated through perceptions of inequality and grievance – in other words, objective inequality leads to perceived deprivation, which again increases the willingness to take part in conflict – very few studies test the perception and willingness mechanisms directly. Thus, the next sections review the few studies that measure perceptions. These studies contribute to our
understanding of the mechanisms linking inequality to conflict in two main ways. First, in support of the proposed mechanisms, most studies indicate that perceived inequality influences attitudes and behavior about, and in, conflict. Second, the literature questions and nuances the assumed link between objective inequality and deprivation. The link between conflict and people’s perceptions of their own position in the economic or political distribution is far from automatic and is, in fact, open to manipulation. This has important implications for preventing conflict and sustaining peace. Table 2 in the Appendix summarizes the main findings in the studies reviewed.

3.1.1 Do perceived inequalities increase the risk of conflict? Measurement and findings

Most studies that explicitly test the link between perceived inequality or deprivation and behavior and attitudes regarding conflict confirm the theoretical expectations and find that grievances increase conflict behavior and attitudes. In early empirical work, Gurr (1993a) and Gurr and Moore (1997), found that economic and political group grievances, as articulated by group representatives, increased the risk of group rebellion and nonviolent protest in global coverage studies of minority groups.

More recently, scholars have moved from measuring group grievances expressed by leaders to measuring the perceptions of individual group members. This is because objective inequality only translates into conflict if a sufficient number of individual group members come to view the situation of their group as unjust (Cederman, Gleditsch, and Buhaug 2013). The measures used to capture group grievance through the perceptions of individual group members fall into three main categories. First, survey questions about individual (or household) living conditions have been aggregated into group or region level measures and compared to other groups, regions or a national average (Must 2016, Rustad 2016). This approach has been criticized, because there could be differences in how people view their own living conditions versus those of the rest of their group. Privileged individuals may recognize that while they are well off, the rest of their group might not be. Furthermore, the measure does not account for group identification. In order for an individual to feel aggrieved because of the inequality between her or his own group and another group, the individual must identify with this group. Third, it is not obvious which reference group aggregates of group perceptions should be compared to – i.e. whether group
members are most likely to compare their situation to a national average, or to the situation of
largest group in the country, or instead to the largest group in the region. Rustad (2016) argues in
favor of the latter spatial reference, claiming that it is most likely that people compare themselves
to who are closest geographically to themselves rather than to the largest group in society. She
then translates this in her study of perceived HIs in the Niger Delta with a survey question that
asks respondents to compares their group average to the largest group in the state in which the
respondent was living. This meant that respondents from the same groups would be compared to
different groups depending on where they lived.

Second, some studies aim to resolve some of these referencing issues by asking about
perceived horizontal inequality more directly, using survey questions like the following from the
Afro Barometer: “Think about the condition of [respondent’s ethnic group]. Are their economic
conditions worse, the same as, or better than other groups in this country?” (Must 2016,
Miodownik and Nir 2016). Similar questions exist for group-level relative political influence\(^7\).
These questions specifically refer to the ethnic group that the respondent belongs to, and that they
themselves identify with. We can therefore more safely assume that they identify with that specific
group. Furthermore, it is not necessary to aggregate the answers to a group average as the question
itself includes this assumption.

Third, some studies employ survey questions that focus on how often individual group
members feel their group is treated unfairly by the government (Kirwin and Cho 2009, Miodownik
and Nir 2016). This measure is both more comprehensive and more restrictive than those in the
second category. It is more comprehensive in the sense that it covers all kinds of injustices –
economic, political, social, and cultural. But it is also more restrictive in that it requires the
respondent to explicitly evaluate the situation as unfair, and to actively acknowledge that the
government has an active role in creating the injustice in question. Both the evaluation of injustice
and assignment of blame are conditions held by Cederman, Gleditsch, and Buhaug (2013) and the
wider social movement literature (see e.g. Tarrow 2011) to be necessary ingredients in the
translation of inequality into a grievance. In this sense, the second category of measures capture

\(^7\) Think about the condition of ____________ [R’s Ethnic Group]. Do they have less, the same, or more influence in
politics than other groups in this country?
the perception of inequality, whereas the latter measure captures a more general feeling of group grievance.

Most of the studies using these various types of perception measures find a positive relationship with conflict-related behavior and attitudes. The two studies with the most extensive geographical coverage, Kirwin and Cho (2009) and Miodownik and Nir (2016), rely on a question about whether the respondent felt that their ethnic group was treated unfairly by the government\(^8\), and find that this is associated with both increased rates of participation in demonstrations and higher levels of support for political violence. Both sets of scholars used data from the Afro Barometer (AB) survey (Round 3), collected in 2005-2006.\(^9\) In a study of attitudes among Palestinians in the West Bank and Gaza, Hillesund (2015) found that Palestinians were more likely to support violent over nonviolent resistance when they evaluated the political and human rights situation in the area as poor. The evaluation of the rights situation, without a specified reference group, is an unconventional measure for perceived political horizontal inequality. Hillesund (2015) argues, however, that the question acts as a proxy for perceived political inequality between Palestinians and Israelis, given that most Palestinians can be expected to implicitly compare themselves to Israelis when evaluating their own political rights situation.

Further evidence that perceptions of political exclusion are important motivators for mobilizing people for conflict are found in Must (2016). She provides cross-national support for the idea that perceptions shape peoples’ willingness to engage in conflict. Using data from Afro Barometer and the World Values Survey as well as from a survey conducted in Tanzania, and encompassing measures from all the categories outlined above, she shows that perceptions of political inequality as well as of unfair treatment by government can and do motivate violence across time and space.

Qualitative comparisons indicate further support for the perceptions-conflict hypothesis. Langer and Ukiwo (2008) suggest that the fact that a larger share of surveyed Nigerians than Ghanians report that their country experiences ethnic favoritism or discrimination and group differences in access to public goods could help explain why Nigeria has experienced so much more inter-ethnic violence than Ghana. Looking at the Middle East and North Africa region, ________________

\(^8\) How often are _________s [R’s Ethnic Group] treated unfairly by the government?

Devarajan and Ianchovichina (forthcoming) argued that the Arab Uprisings can be explained in part by drops in subjective feelings of life satisfaction, driven by perceived declining living standards related to a shortage of formal sector jobs, dissatisfaction with quality of public services, and corruption.

Not all empirical results point in the same direction, however. The most direct measure of perceived group position in the economic and political distribution to date, the second category of measures outlined above (direct measures of HIs), were included in Round 3 (2004-2005) and Round 4 (2008-2009) of the Afro Barometer survey, but not continued in Rounds 5 and 6. Respondents were asked whether they considered their ethnic groups’ economic and political conditions, respectively, to be worse, the same as, or better than that of other groups in their country. Using these measures, Miodownik and Nir (2016) found, somewhat surprisingly, that perceptions of political group deprivation were associated with a lower risk of participation in demonstrations and with marginally lower support for violence, and that perceptions of economic group deprivation had no discernable effect on either outcome.

In a study utilizing survey data from four Nigerian states, Rustad (2016) employed a question about how respondents rate their living conditions compared to other Nigerians. In support of hypotheses about the effect of perceived vertical inequality, she found that individuals who rated their conditions as poor were more likely to express attitudinal support for violence. When aggregating the answers to the group level, however, to measure horizontal inequality, she found that belonging to a district or ethnic group in which the average score on this variable was much lower than the score in the richest district or largest group in the states, respectively, corresponded to lower support of violence. She argued this suggests that members of relatively privileged rather than deprived groups were more likely to rebel.

In sum, there is more evidence of a relationship between perceptions and conflict when perceptions are measured as unfair government treatment than for direct or aggregate measures of perceived material inequality. This is in line with the Cederman, Gleditsch, and Buhaug (2013)’s argument that for inequality to be translated into political violence, it is not enough that the situation is perceived as unequal. To trigger political violence, the inequality must also be evaluated as unjust, and blame must be assigned to the government.

The variation in results between the different measures of perceived HI could also stem from methodological issues related to the construction of the first and second category of
inequality measures. These measures tend to encompass both relative privilege (at the one end of the spectrum) and relative deprivation (on the other end). When the effect of such variables is modeled linearly in empirical analysis, the analysis will not be able to accurately capture a situation where both relatively privileged and relatively deprived groups are more likely to revolt, a situation often hypothesized to be the case in horizontal inequality theory (see Chapter 1). In any empirical analysis of objective horizontal inequality (see e.g. Cederman, Gleditsch, and Buhaug 2013), this problem is typically solved by making separate measures of relative privilege and relative deprivation in order to investigate their effect separately.10 A similar solution should be possible when analyzing perceptions. Separate measures for perceived relative privilege and perceived relative deprivation would enable scholars to investigate their effects separately.

3.1.2 Do objective and perceived inequalities overlap? Misperceptions and manipulation

Several scholars have argued that perceptions are crucial in mediating the effect of inequality on conflict. But, lacking data on perceived inequalities, they have often argued that perceptions are likely to correspond to objective realities to such an extent as to be sufficient to justify using objective measures of inequality in empirical analysis (Stewart 2002a, 12-13, Cederman, Gleditsch, and Buhaug 2013). Early empirical work by Gurr (1993a) supports this line of argument. He finds in analyzing 227 communal groups from the Minorities at Risk (MAR) dataset, that economic grievances result from objective inter-group economic inequalities, while political grievances stem from a combination of political and economic inequalities. Holmquist (2012) also argues in favor of the idea that objective and perceived inequalities overlap, finding significant correlations between objective and perceived inequality in Round 4 of the Afro Barometer survey. To measure objective inequality, he uses a lived poverty index that captures people’s access to a variety basic commodities and public goods such as food, clean water, and health services, and calculates this as the group mean on the poverty index divided by the national average. This is supplemented with measures based on asset ownership. His perceived HI measures were based on

10 Holmquist (2012) creates this kind of measure for perceived relative deprivation, but he does not investigate its relationship with conflict.
the Afro Barometer questions discussed above, but recoded so they captured the extent of relative deprivation only: the share of respondents in each ethnic group that considered their group worse or much worse off than other groups in the country (with separate variables for political and economic conditions), as well as the share that found their group was often or always treated unfairly by the government.

Several additional studies challenge the notion of an overlap between objective and perceived inequalities – in other words, that perceptions are grounded in reality. In a survey of certain areas in Nigeria and Ghana designed to cover a variety of ethnicities and regions, Langer and Ukiwo (2008) find that objective conditions and group members’ perception of them often did not correspond in the realms of political power access and education. In particular, members of politically included groups rarely considered their group politically dominant. Politically excluded groups were more concerned with the impact of ethnicity in the public spheres than others.

In a similar vein, Langer and Smedts (2013) analyze Afro Barometer data to examine the relationship between individual perceptions of inequality between ethnic groups and objective inequality levels. The authors do not directly test how perceptions influence the likelihood of conflict, but they do provide further evidence that objective inequalities do not always coincide with people’s understanding or perception of them. Individuals who perceived themselves and their ethnic groups to be politically excluded were more likely to perceive their groups as being relatively economically disadvantaged compared to other groups in society. However, and very counter-intuitively, individuals who were objectively better-off socio-economically were more likely to perceive their ethnic group as being economically disadvantaged compared to other groups.

Finally, Rustad (2016) finds that in the Niger Delta there is very little overlap between which ethnic groups perceive themselves as rich and those who actually are rich (shown in Figure 4). The Igbo ethnic group, for instance, perceive themselves as among the three worst-off ethnic groups in Nigeria in spite of the fact that they have the highest economic levels of all of the groups in the country. On the other hand, Urhobos perceive themselves as being fairly well off, when in fact they are the worst-off group in the sample. In Rustad’s study, objective HI is measured as a
wealth index of items that the respondent owns\(^1\), and levels of perceived HI is based on a question on the respondents perception of their own living conditions compared to other Nigerians.

**Figure 4: Perceived and actual HI measures for ethnic groups in Nigeria**

![Figure 4: Perceived and actual HI measures for ethnic groups in Nigeria](image)

*Source: Rustad (2016)*

The question of when and why individual perceptions might be differently influenced by objective political versus economic inequalities is one that should be taken up in future research. There are two possible explanations for the absence of an overlap between objective and perceived inequalities. First, political horizontal inequalities may be more visible than other types of inequality. Second, political power – in particular, control over the state – represents a high-stake, high-value endeavor in many poor countries, which heightens the salience of political versus economic exclusion. The importance of political exclusion is emphasized in Bara (2014), who finds that nation-level group political exclusion is a key predictor of ethnic conflict. Political exclusion is likely to be even more explosive when a group has been suddenly ousted from a

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\(^1\) The wealth index is based on whether the respondents owned the following items: a book, a radio, a TV, a bicycle, a motorcycle, a car, or land property.
position of power; this is a different type of sharp or sudden negative social change that can heighten wide-spread discontent.

Two lessons in particular emerge from Langer and Smedts (2013). First, we cannot assume that there is a linear relationship between objective inequalities and subjective perceptions of them, and consequently we cannot assume that measures of objective inequality will necessarily predict the onset of violent conflict. Indeed, Devarajan and Ianchovichina (forthcoming) argue that subjective levels of dissatisfaction among the middle class – in particular related to the lack of formal sector jobs and low quality public services – and a perception of falling living standards and rising corruption triggered popular anger and led to mass anti-government mobilization during the Arab Spring – not objective levels of economic inequality.

Second, elites matter in shaping perceptions: when individuals cannot access objective information about inequality levels, the risk increases that “people’s perceptions may instead be based on personal experiences, opinions and stories of friends, family, and people in positions of power” (Langer and Smedts 2013, 8-9). In other words, perceptions are very much subject to elite manipulation (see also Brown and Langer 2010, 30). Ukiwo (2008) shows that something similar occurred in southern Nigeria, where local elite discourses of indigeneity and belonging resulted in the exclusion of non-indigenous ethnic groups and ultimately in mobilization by the excluded for communal conflict.

Aspinall (2007) stresses the importance of elites as ethnic political entrepreneurs in politicizing inequalities and legitimating the use of violence to rectify inequalities via identity-based collective action frames. Aspinall compares three resource-rich provinces in Indonesia and finds that conflict erupted only in the province where elites engaged in “hard ideological work… to transform unfocused resentments about natural resources into grievances that would mandate violence” (Aspinall 2007, 968). In a similar vein, Brown and Langer (2010, 31) suggest that ethnic entrepreneurs may seize on perceptions, or, importantly, misperceptions about inequality for their own political benefit. Furthermore, new elites can emerge to challenge established figures that do not confront perceived inequalities adequately. This can set off the process of “ethnic outbidding,” whereby the original leader retaliates against challenges to their leadership with an even more extreme proposal in order to sway support back, ultimately resulting in increasingly extreme promises and proposals to resolve grievances.
These findings suggest that in order to understand the link between inequality and conflict, and to develop effective policies to prevent conflict and sustain peace, we need to collect data on perceived as well as objective inequalities. We can not simply assume that objective measures are good proxies for how people perceive their situation. If leaders use the differences between groups to pit groups against the state or other groups, then the perceptions that these leaders create are much more relevant for explaining conflict than the objective or actual situation for group members. Furthermore, perceived inequities could be quite “sticky”, and the feeling of being underprivileged might remain even if the group’s income is increasing.

3.1.3 Do perceptions mediate the inequality-conflict relationship? Summary and caveats

So what do we know about whether, how, and when perceptions mediate the inequality-conflict relationship? As outlined in previous sections, existing studies suggest that perceived inequality often increases the risk of conflict, but that the link between objective and perceived inequality is more complex than previously assumed.

As a supplement to the reviewed analyses of each separate link in the proposed inequality-grievance-conflict chain of mechanisms, Miodownik and Nir (2016) investigated whether the effects of objective and perceived inequality on conflict attitudes and behavior interact. They use Afro Barometer data to probe the causes of individual support for violence in ethnically divided societies. Some of their results support the classical theoretical accounts, such as the finding that subjective perceptions of inequality amplify the effect of objective exclusion on acceptance of violence and alter the willingness of groups to dissent. Both objective horizontal inequality measures and subjective judgments motivate unrest in the form of protests, but it is perceived grievances about inequalities that determine whether objective horizontal inequalities are likely to lead to violence or not.

As suggested by the research reviewed in previous sections, however, the relationship is not equally straightforward for all types and measures of inequality, perceptions and conflict. For example, Miodownik and Nir (2016) find that politically included groups are as likely to engage in violence as the excluded, which underlines the important role of misperceptions in shaping peoples’ willingness to resort to violence. Moreover, economic disadvantage coupled with
perceptions of government unfairness increase the likelihood of unrest, whereas objective economic disadvantage coupled with correct perceptions of economic disadvantage decrease the likelihood of unrest. And while the interaction analysis of Miodownik and Nir (2016) contributes to our understanding of the mechanisms linking objective and perceived inequality to conflict, the relationship proposed in the literature is one of mediation, rather than interaction. An important contribution to the field could therefore be made by introducing more formalized techniques for mediation analysis, which allow for investigation of how much of the empirically established effect of horizontal inequality on conflict runs through perceptions of inequality and grievances (see for example Imai et al. 2011).

Another important development in the literature is the recent focus on trigger events. Stewart (2000, 252) argued early on that objective inequality would not always lead to conflict, because it would not always be perceived as an inequality, due to, for example, repression or ideology. In these cases, particular trigger events could lead to eruption or escalation of conflict. More recently, Must and Rustad (2017) have argued that that in southern states of Tanzania, Mtwara and Lindi, the discovery of natural gas was such a trigger. The region had been marginalized for years, when gas was discovered raising expectations for development in the region. However, these expectations were not met and the gas is likely to be exported to Dar es Salaam. In the spring of 2012 and 2013, violent protests broke out in the region as a direct result of this (see case study of Tanzania Chapter 5).

While most studies have tested whether high levels of perceived inequality lead to conflict, very few have tested the trigger mechanisms. One reason is that such investigations ideally require data on perceptions both before and after a trigger event. Must and Rustad (2017) attempt to test the effect of the discovery of natural gas on people’s frustration, and whether increased frustrations lead to and increase in support for the use of violence, but they did not have the opportunity to conduct both a before and after survey. They thus asked a retrospective question after the survey enumerator had discussed the natural gas discoveries: How satisfied are you with the development in the living conditions for the people in your region – compared to what you expected? Using this question, they find that that those who are increasingly frustrated are more likely to support protests. The study indicates that there still is a gap in the literature on triggers.

A final call for future research concerns the need for more direct measures on participation in political violence. While attitudinal support for violence likely increases the risk of participating
in violence, the relationship is likely far from direct, since economic and political opportunities and constraints come into play in the crucial leap from support to action. To fully investigate the proposed chain of mechanisms from inequality to conflict, measures of actual participation in violence or protests are therefore needed. While some have argued measures of participation in demonstrations proxy participation in violence, a complete account of the mechanisms need to distinguish between violent and nonviolent forms of collective action.

*Country level mapping of perceived economic inequality*

In this chapter, we map and compare perceived and objective horizontal inequalities in Africa, based on the Afro Barometer survey, Round 4, conducted in 2008 and 2009. Round 4 of the Afro Barometer Survey covered more than 27,000 respondents in 20 different countries. Unlike other large surveys, like the DHS surveys, it included questions that can be used to measure perceptions of inequalities, in addition to the actual situation of the respondent. Unfortunately, more recent rounds of the Afro Barometer survey have omitted these questions. In this mapping, we look at both ethnic and geographic group inequalities. In this section, we focus mainly on economic HI, but also include some visualization for political HI.

### 3.1.4 Ethnic horizontal inequality

To measure ethnic horizontal inequalities, we use a question in which the respondents themselves are asked to identify their ethnic group belonging. The ethnic groups are specific to the respondent’s country, so if two respondents identify with the same ethnic group, but are located within different countries, they are coded as belonging to different groups.

To measure objective inequality, we first calculate the mean response in each ethnic group, for a question measuring poverty: ‘Over the past year, how often, if ever, have you or anyone in

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13 Respondents were also given the opportunity to respond that they do not consider themselves as belonging in one specific ethnic group, or that they identified with the national identity (for example Nigerian or Ghana). These individuals are not included in our mapping.
your family gone without: A cash income? Never =1, Just once or twice =2, Several times=3, Many times=4, Always=5’. To avoid having a few respondents influence the mapping disproportionately, we only include groups with 20 or more respondents. Second, we use the group mean to calculate two objective HI-measures: One comparing each of the ethnic groups with the best ethnic group in the country, this is an asymmetric measure, meaning it only captures deprivation. The second objective HI measure compares each group with largest ethnic group (i.e. the ethnic group in each country that has the highest number of respondents). This comparison is symmetric and captures both those that are relatively deprived and those relatively privileged compared to the biggest ethnic group in the country. More specifically, we use the following formula:

\[ HI = 1 - \frac{\text{ethnic group average}}{\text{richest or largest ethnic group average}} \]

The objective HI-variable comparing all groups with the best group varies between 0 and -1. 0 indicates that there is no difference between the best group and the group that it is compared with. The higher negative value the worse off the group is compared to the best group. The HI-variable comparing all the groups with the largest group varies between -1 and 1, where 0 indicates that the groups is equal to the largest group, a negative number indicates that it is off worse (relatively deprived), and a positive value indicates that the group is better off (relatively privileged). For a more detailed description of the calculations of HI measures, see the measurement chapter on general HI in report (Chapter 5).

To measure perceived HI, we use the question ‘Think about the condition of __________ [R’s Ethnic Group]. Are their economic conditions worse, the same as, or better than other groups in this country? 5=Much better, 4=Better, 3=Same, 2=Worse, 1=Much worse.’ This question includes an explicit comparison with other ethnic groups. The only calculation needed to make it a group level measure of perceived HI is to identify the group averages. The higher the value on this variable, the better group members perceived their groups’ situation as compared to other ethnic groups. The perceived HI measure is inherently symmetric, as the respondent is asked to rate themselves as better, worse or same as other groups.

In Figures 2 and 3 we do a comparison between objective and perceived ethnic HIs. This gives us the opportunity to assess how correlated objective and perceived HI are, and whether it is
possible to use objective HI as a proxy for perceived HI. In the Figures below, we sort the data based on the objective HI measures. The relatively best off ethnic groups (0) are on the right side of the graphs and the worse off on the left side. We see that the trend line for perceived HI is upward-sloping, indicating that members of groups that are relatively poorer than other groups in the country also perceive themselves as relatively worse off, on average.

The correlation between perceived and objective HI variables in Figure 5 is 0.26. This gives some support for the finding from the literature review that objective and perceived inequalities are related, but do not always overlap. Examples of cases with poor overlap include the ethnic group Tonga in Malawi. They are among the best-off groups in their country according to the objective HI measure, but based on the perceived measure, the average is 2.1 – meaning they consider themselves worse off than other groups. At the other end of the spectrum we find the Wambo ethnic group in Namibia. This group is among the relatively poorest groups in Namibia based on the actual HI measure, but the mean group response for the perceived HI is 3.4 – meaning they consider themselves about as well off as other groups in the country.

Figure 5: Perceived HI vs actual HI comparing to best ethnic group in the country
In the maps in Figure 6, we compare the best off with the worst off group in each country to indicate which countries have particularly high levels of ethnic HI.\textsuperscript{14} To the left, we map the objective HI (gone without income), and on the right, the perceived HI (economic situation compared to other ethnic groups). There is no clear overlap between objective and perceived HI. Nigeria has high levels of objective HI, while it seems that the perceptions do not reflect this. In Malawi perceptions of inequality are higher than the actual inequality.

\textbf{Figure 6: Levels of objective and perceived HI at country level, comparing best and worst group in the country.}

In Figure 7 we compare perceived HI with objective HI where we are comparing each ethnic group in a country with the largest ethnic group in the country. In the graph we sorted by the objective HI variable. Objective HI varies between -1 and 1, where 0 indicates that that the mean response of the ethnic group is the same as the biggest group in the country, negative numbers indicate that the group is worse off than the biggest group and positive number that the group is better off than the biggest group. We see that the objective HI curve has an S-form, indicating that there are ethnic groups that are both better and worse off than the biggest group in the country. The correlation between the perceived and objective HI measures in Figure 4 is 0.30.

\textsuperscript{14} Note that the levels do not reflect over-all poverty level in the country.
In sum, while objective and perceived inequalities are correlated, the relationship between them is not as strongly as previously assumed. Thus, in order to properly understand the link between inequality and conflict it is necessary to have data on perceptions of inequalities.

3.1.5 Perceived political ethnic HI

It has been argued that inequality within the political realm could potentially also create grievances between groups (see Cederman et al., 2013; Cederman et al., 2010; Wimmer, Cederman, & Min, 2009 and also the chapter on HI literature review). Thus, how people perceive how their group is treated politically is also an interesting measure to look at (see Must 2016). Afrobarometer includes a question about how the respondent perceive the political conditions for their ethnic group: *Think about the condition of [R’s Ethnic Group]. Do they have less, the same, or more influence in politics than other groups in this country? 5=Much better, 4=Better, 3=Same, 2=Worse, 1=Much worse.* In Figure 8 we compare the mean ethnic group response for this question with the mean ethnic group response on the question of perceived economic HI. The two measures are quite similar, and have a correlation of 0.65. The countries where we see a slight deviation is in Liberia and Malawi. In Liberia, the Mandingo group, which is a small Muslim
minority, seem to consider themselves economically similar to other groups, with a mean of 3.1, while for the political inequality the mean score is 2.1, which indicates they view themselves as worse-off than others. In Malawi, the Tonga ethnic group seem to consider themselves treated politically similar to other groups, with a mean score of 2.9, while they economically consider themselves worse off than others, with a mean score is 2.1. However, it is worth noting that neither the Mandingo nor the Tonga have many respondents in this data.

**Figure 8: Comparing perceived political and economic ethnical HI**

![Graph comparing perceived political and economic HI](image)

**3.1.6 Spatial inequality**

Horizontal inequality is based on group identity. Stewart (2000) points to two types of groups related to HI: spatially different and culturally defined. Spatially different groups are typically defined by politically units, such as federal states or lower governmental tiers. Culturally defined groups are identified by characteristics such as ethnicity or tribe, as we have described in the previous section. In this section, we use regions as the basis for the calculation of the HI variables. We use the regions defined in the Afro Barometer Survey, which mainly, but not always, correspond with the first administrative level in each country.
To measure spatial objective HI, we use the same question as in the ethnic HI mapping, capturing how often the respondent has gone without income\textsuperscript{15}. When aggregating, however, we use the regional mean instead of the ethnic group mean, and compare each region to the best-off region in their country.

For perceived spatial HI we cannot use the same question as in the previous section as this asks specifically about ethnic groups. Instead we use the question: ‘In general, how do you rate your living conditions compared to those of other Ghanaians/Kenyans/etc.? 1=Much worse, 2=Worse, 3=Same, 4=Better, 5=Much better’. Since this question does not include explicit comparison with other groups, but measures the respondent’s personal view on his or her situation compared with others living in the same country, we calculate perceived HI by comparing the mean response for all the individuals living in the same region to the best region in the country.

In Figure 9 we see that the sorted objective HI variable and the trend line for the perceived HI is quite similar, and the correlation between these two variables is 0.43. Nonetheless, there are some obvious examples of regions where the two variables diverge. For example, Adamawa in Nigeria is the best-off region in Nigeria in terms of objective HI. However, the respondents in the region perceive themselves to be worse off than others. At the other end of the scale we find Timbuktu in Mali, which scores poorly on the objective HI scale – yet people in this region still feel that they have about the same living conditions as others.

\textsuperscript{15} However, in this analysis we have recoded the variable to match the perceived inequality (living conditions). Thus high numbers indicate high levels of HI for both variables.
Figure 9: Perceived HI vs actual HI comparing to best region in the country

In Figure 10 we compare which countries have the highest levels of spatial objective and perceived HI by mapping the comparison between the best off and worst off region in each country. Darker colors indicate higher levels of inequality. We see that there is some overlap, but it is not perfect.

Figure 10: Comparing objective and perceived spatial HI

To further explore this, we look at Mali (highlighted in the map in Figure 10). Figure 10 shows that at a country level Mali has very high objective HI, but scores lower on perceived HI. In Figure
we map these inequalities on a sub-national level to investigate the sub-national variation on the same variables within Mali. We see that the region Kidal in the northeastern Mali is best both in terms of objective and perceived HI. This might seem curious, as northern Mali is commonly regarded as the most underdeveloped and conflict ridden area. However, this region is fairly isolated from the other regions, which might explain the high levels of perceived HI – people in Kidal might simply not have enough knowledge to evaluate the relative situation.

Further, we see that the differences between Kidal and the rest of the country is much greater when it comes to objective HI, compared to perceived HI. But we also see that while the level of deprivation is higher for objective it is the same regions that are deprived both for the objective and perceived measure.

Figure 11: Comparing objective and perceived spatial HI in Mali

3.1.7 Conclusion

Several prominent authors within the horizontal inequality literature (Gurr 1970, Stewart 2000, 2002 Cederman et al 2013) have pointed out the importance of perceptions of inequalities. Nonetheless, while the literature on horizontal inequalities and conflict has grown (see Chapter 1), the literature on perceived horizontal inequalities remains small. The literature review revealed that the few studies that exist find a relationship between perceived inequalities and attitudes towards violence. Furthermore, many of the studies also show that the correlation between perceived and objective HI is not as high as expected, which is confirmed in the mapping section of this chapter. Thus, the relationship between perceived HI and conflict attitudes is not an artifact
or proxy for the relationship found between objective HI and conflict. This is supported in our mapping exercise, which relies on the only existing cross-national data source that can be used to measure perceived HI (Afro Barometer surveys: while objective and perceived inequalities are positively correlated, there are many instances where they do not overlap.

The correspondence between the objective and subjective inequalities is somewhat higher when regions, rather than ethnic groups, are used as the basis for comparison. There are at least two plausible explanations for this. First, regions might not be the best group identifier to use for the basis of calculating HI, because for most people the spatial or regional identity is not that relevant compared to ethnic groups (see discussion in Chapter 5). Second, the question used to calculate perceived ethnic HI was specifically used to ask how the respondents ethnic group compared to other ethnic groups. That is, the respondent was specifically asked to compare their ethnic group with other ethnic groups. The question used for spatially perceived HI is based on a question of how each respondent felt that their own situation compared to others, and not how the living conditions for people in their region compared to other regions.

More and better quality data to measure perceived inequalities, as well as data on how these perceptions are triggered, is crucial for fully assessing how inequalities affects conflict. Thus, it is essential that large survey undertakings such as the Afro Barometer continues to collect data also on perceptions, which they failed to do in Round 5 and 6. The ShaSA surveys, which covers 10 African countries, also include questions of political perceptions, however they are not probed specifically for identity groups, and are thus less suitable for testing perceived horizontal inequalities.
## Appendix

Table 2: Summary of central articles that measure perceptions

<table>
<thead>
<tr>
<th>Article</th>
<th>Objective inequality</th>
<th>Perceived inequality</th>
<th>Conflict</th>
<th>Relevant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midowonik &amp; Nir (2015)</td>
<td>HI: Political exclusion from executive (EPR); Groups’ asset ownership divided by country average (AB)</td>
<td>Perception of the political and economic status of group relative to other groups (AB); How often group is treated unfairly by government (AB)</td>
<td>Self-reported participation in demonstrations last year (AB); Acceptance of political violence (under certain conditions) (AB)</td>
<td>Independent effects: Perceived unfair treatment increased the risk of both demonstrations and support for violence. But perceived political HI decreased the risk of either, and perceived economic HI had no effect. Interactions: Perceptions of unfair treatment amplified the effect of economic HI on protest (but not support for violence); and perceived political HI amplified the effect of political exclusion on support for violence (but not demonstrations). More surprisingly, perceived economic HI made the effect of economic HI on demonstrations is weaker, and its effect on support of violence negative. Perceptions of unfair treatment did the same to the effect of political exclusion.</td>
</tr>
<tr>
<td>Article 2:</td>
<td>HI: Political exclusion from executive (EPR); Economic inequality is based on self-reporting access to food/clean water/fuel/medicine/income (AB)</td>
<td>Article 3: See Must and Rustad (2017)</td>
<td></td>
<td></td>
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<td>-----------</td>
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<tr>
<td></td>
<td><strong>Article 2:</strong> Perception of the political and economic status of group relative to other groups (AB);</td>
<td><strong>Article 2:</strong> Communal conflict outbreak (UCDP GED)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Article 2:</strong> Both objective and perceived political exclusion is a driver for communal conflict</td>
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</tr>
<tr>
<td>Kirwin &amp; Cho (2009)</td>
<td><strong>Not measured</strong></td>
<td>How often group is treated unfairly by government (AB)</td>
<td>Self-reported participation in demonstrations last year (AB); Acceptance of political violence (under certain conditions) (AB)</td>
<td>Group grievance (perceived unfair treatment) increases participation in demonstrations and acceptance of political violence; perceived personal economy has no significant effect [Logit, FEs]</td>
</tr>
<tr>
<td>Gurr (1993)</td>
<td>HI: Economic differentials index; Economic discrimination index; Political differentials index; Political discrimination index (MAR)</td>
<td>Economic and political grievances, as expressed by group leaders (MAR)</td>
<td>Group rebellion (MAR); Nonviolent group protest (MAR)</td>
<td>Levels of rebellion and nonviolent protest are both predicted by grievances (as expressed by group leaders, political grievances in particular); and grievances are predicted by objective disadvantages (economic discrimination in particular)</td>
</tr>
<tr>
<td>Gurr &amp; Moore (1997)</td>
<td>HI: Economic discrimination index (MAR); Political discrimination index (MAR)</td>
<td>Economic and political grievances, as expressed by group leaders (MAR)</td>
<td>Group rebellion (MAR); Nonviolent group protest (MAR)</td>
<td>Economic, but not political, discrimination helps predict grievances; grievances help predict mobilization and mobilization helps</td>
</tr>
</tbody>
</table>
| Rustad (2016) | HI: Mean asset ownership in group/region divided by largest group/richest district in the state  
VI: Individuals’ asset index score divided by 10\textsuperscript{th} percentile in their district  
(Original survey data) | HI: Mean self-assessment in group/regions of living conditions ‘compared to other Nigerians’ divided by mean for largest group/richest district in the state  
VI: Self-assessment divided by highest score  
(Original survey data) | Attitudinal support for violence  
(Original survey data) | Perceived VI increases the risk of supporting violence; whereas perceived HI actually decreases it, suggesting ‘only members of relatively privileged groups are more likely to support violence’ |
| Hillesund (2015) | HI: District average for asset ownership and education (Fafo survey data) divided by average of closest Israeli district (Israeli Bureau of Statistics) | Self-evaluated status of political rights and freedoms in the Occupied Palestinian Territories (Fafo survey data) | Attitudinal support for violent over nonviolent resistance  
(Fafo survey data) | Palestinians evaluating the rights situation as poor are more likely to support violent over nonviolent resistance  
[Multilevel multinomial logit] |
| Devarajan & Ianchovichina (2016) | VI: Gini in expenditure and wealth; Wealth concentrated in hands of billionaires | Life satisfaction | [\textit{Not measured}] | Objective inequality cannot explain the Arab Spring because it declined in the MENA region prior to 2010. Rather, subjective feelings of well-being mattered: life satisfaction scores declined prior to 2010, reflecting perceived falling standards or living related to shortage of formal sector |
| Langer & Ukiwo (2008) | Various socioeconomic indicators; composition of governments | Survey questions about: Ethnic dominance in state institutions; Government discrimination/ favoritism; whether ethnicity/ religion affects access to public opportunities and services | [Not measured, but compares Nigeria, with its history of interethnic violence, to relatively peaceful Ghana] | A larger share of surveyed Nigerians than Ghanians report ethnic favoritism/discrimination or difference in access to public goods, which could help explain differences in conflict history. Objective and perceived inequality did not always correspond, particularly when it comes to political power access and education. Also, the politically excluded were more concerned with the impact of ethnicity in the public sphere than others. |
| Langer & Smedts (2013) | Ethnic groups socioeconomic situation and fulfillment of basic needs (AB) | Perception of the economic status of group relative to other groups (AB); | | Find that that perceived and objective economic ethnic inequalities are not highly correlated as previously assumed. |
| Must & Rustad (2016) | [Not measured] | Perception of the economic status of group relative to other regions; perception of region treated unfairly by government (original survey) | Self-reporting support and participation in protest and violence (original survey) | Feelings of unfair treatment of government seems to increase the support for protest and violence. Also perceived economic regional HI has a positive effect on support for protests and violence, but the effect is not so strong. |
4 Mapping inequalities: available data and global, national, and sub-national trends

Introduction

How is inequality operationalized and measured? This question has been answered in two ways in the academic and scholarly literature.\(^\text{16}\) First, inequality has been operationalized as wealth inequality between individuals (labeled vertical or inter-individual inequality), and measured as the distance in wealth, income, and/or land holdings between individual persons. Second, inequality has been operationalized as differences in access to economic, social, and political assets and power between socially relevant identity groups in society, such as ethnic, religious, or regional groups (labeled horizontal inequality), and measured as such. As discussed earlier in this report, the scholarly focus on inequality has traditionally been on inequality among individuals and between countries. Recent developments in the literature examining the relationship between inequality and armed conflict have challenged the relevance of the first focus and privileged the second, based on the insight that human inequality is much more than income inequality. Rather, inequality is holistic, in that it consists of wider societal disparities in the distribution of goods, privileges and opportunities between socially relevant groups. This insight is key for understanding how individuals overcome collective action problems to participate in organized violence with political aims.

This chapter provides an overview of the approaches to measuring both individual and group-based inequality. We discuss the concepts of vertical and horizontal inequality, and how these two forms of inequality relate to each other, review previous efforts to measure vertical and horizontal inequality, and provide an overview of the relevant data sources. Here we discuss in turn national-level, subnational, and survey data sources. We further, analyse the different approaches to measuring inequality, discuss trade-offs between data quality and geographical coverage, and maps various forms of inequalities worldwide, using selected and updated data.

\(^{16}\) Sections 1-4 in this chapter draws significantly on previous work by Østby and various co-authors (Østby 2013, 2016, Østby et al. 2011)
Defining inequality

Questions about inequality in the world – types, patterns, trends, causes, and consequences – have a long academic pedigree, and have recently become prominent again with the work of Thomas Piketty (2013). Much of the academic and popular work on inequality has been focused on economic inequality between individuals, and the academic literature employs a plethora of inequality measures that are concerned with the characteristics of the entire income distribution in a society. Ultimately, the answer to the question of whether income inequality in the world has increased depends on how inequality is both operationalized and measured. We discuss various ways of doing this below, but we find that regardless of whether you weigh by population or not, since the 1960s the world has never had as high rates of income inequality as today (see Figure 20).

Three key features of the national income distribution are central to policy debates—the mean (or average) of the distribution, the spread of the distribution, and the lower tail of the distribution. The rate of change of the first is simply the rate of growth; the second is captured by various measures of inequality (such as e.g. the Gini coefficient); and the third tries to delineate poverty. To measure the latter, we need to specify the poverty line, or a cutoff, which defines the poor (Kanbur 2007, 1). In theory, inequality can both rise and fall when average growth is rising and poverty is falling.

Although the discussion of whether worldwide inequality has risen or not is interesting in its own right – particularly in relation to globalization processes – most would agree that looking at global levels is not useful when explaining national-level phenomena such as national development, regime type, or internal conflict because global levels are too highly aggregated. To better understand the dynamics of inequality within a country, we need to move to the national level, or ideally to lower, sub-national levels of aggregation.

An important question to ask is ‘inequality between whom?’ While much of the literature on the relationship between inequality and armed conflict has focused on economic

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17 The most common measure is the Gini coefficient, which we will describe below.

18 The mechanics of growth, inequality, and poverty as defined above are quite straightforward. Holding inequality constant, when growth happens, poverty falls. Holding the mean of the distribution constant, when inequality increases, poverty increases. In this sense, hence, growth is good for poverty reduction and increasing inequality is bad for poverty reduction. If one could achieve growth without the inequality increase, or inequality reduction without a reduction in growth, or both a growth increase and inequality reduction simultaneously, then poverty would go down (Kanbur, 2007: 2)
inequality between individuals (vertical inequality), many studies find that this type of inequality is unrelated to civil conflict. More recent work shows that what seems to better predict and explain armed conflict in particular is systematic inequalities between groups with a shared identity, such as ethnicity, religion or geographical affiliation. This is because groups must overcome collective action dilemmas to successfully engage in violent group action, which a sense of shared identity can help to facilitate.

Frances Stewart and her collaborators first developed by the concept of ‘horizontal inequalities’ and its theorized relationship with conflict (Stewart 2000). Stewart (2008b, 3) defines HIs as ‘inequalities in economic, social or political dimensions or cultural status between culturally defined groups’. In other words, HIs are present, for example, when ethnic or religious cleavages coincide with systematic socioeconomic divisions in society. This leads us to two particularly important aspects pertaining to the concept of HIs. Stewart (2002a, 2) argues that the focus on inter-individual or vertical inequality neglects a vital dimension of human well-being and of social stability, namely the group dimension. Likewise, Sen (1992, 117) agrees that general analyses of inequality must, in many cases, proceed in terms of groups rather than specific individuals, and that one should focus on inter-group variations. Possible salient group-identifiers include ethnicity, religion, regions, gender, age cohorts, and migrant status. The relevant group definition will depend on context, and thus will vary across different social contexts.

Although there is often a correlation between vertical inequality (VI) and horizontal inequality (HI), they need not be related to each other. In practice, a country can have large income inequalities between groups, despite the fact that the overall (vertical) income inequality is rather low (e.g. Rwanda), and vice versa: a country can have a high vertical income inequality score, even though the structural differences between groups might be low (e.g. Brazil). Furthermore, a country can have both strong vertical and horizontal inequalities at the same time (e.g. South Africa), or it can score low on both (e.g. Switzerland). Figure 1 illustrates these four possible scenarios (combinations of VI and HI) in a society consisting of two equally sized groups: people from the South (dark grey) and people from the North (light grey).
Figure 12: Four stylized combinations of horizontal and vertical inequalities

The graphs in scenarios A–D are stacked, so that the uppermost line indicates the overall income distribution. Source: Østby (2011: 10).

The second essential thing to note about HIs is that they are multidimensional, characterized by political, economic and social elements (as indeed are VIs, but they are rarely measured in
a multidimensional way). Despite that fact that VIs are usually measured only in terms of income or land distribution, the esteem, or relative standing compared to other groups, of a group, which impacts on individual well-being, arises from the relative position of the group in a large number of areas and not just in terms of income. Stewart (2008b, 13) categorizes HIs into four areas: political participation, economic aspects, social aspects, and cultural status. HIs in political participation can occur at the level of the cabinet, the parliament, the bureaucracy, or the army. Economic HIs entail access to ownership of assets (e.g. financial, land, livestock), employment, and income. Social HIs involve unequal access to public goods and services such as health care and education. Finally, HIs in cultural status pertain to the extent to which a society recognizes a distinct group’s cultural practices in matters such as language, dress, and holidays.

HIs often occur along ethnic lines, in that specific ethnic groups are prevented by the state from accessing and attaining political power, public goods and services, and/or cultural recognition. However, while important, ethnicity is not the only relevant group distinction regarding horizontal inequalities and conflict (see Stewart, 2008). Rather, ethnicity often overlaps with other fundamental factors like language, religion, and territorial affiliation, which can make it challenging to fully determine exactly which cleavage is at the root of group-based inequalities. Furthermore, ethnic cleavages in developing countries are often ambiguous, and whether perceived distinctions become considered as ‘ethnic’ may in part depend on past conflict and lack of integration (Barth 1969, Tronvoll 2009). Finally, ethnicity is a slippery concept and can be difficult to define in certain contexts. This is not the case with administrative boundaries, which are usually (but not always) unambiguously defined.

In this chapter, we explore data on VI, and on HIs as they occur along various group indicators, including ethnicity, religion, geographical affiliation (subnational region), and rural/urban divides. As for the types of inequality, we address both political and socio-economic aspects of inequality.

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19 For an exception to this rule, see Hicks (1997).
How to measure inequality

4.1.1 Vertical inequality

The most common measure of income inequality is the Gini coefficient. The Gini coefficient is a summary statistic of the Lorenz curve, which is a graphical representation of the proportionality of the distribution of income (the cumulative percentage of the values) (Lorenz 1905). As shown in Figure 2, the Gini coefficient is defined graphically as the area of concentration between the Lorenz curve and the line of perfect equality. From unordered size data the Gini coefficient is most easily calculated as the ‘relative mean difference,’ i.e., the mean of the difference between every possible pair of individuals, divided by the mean size $\mu$ (Dixon et al. 1987):

$$G = \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} |x_i - x_j|}{2 n^2 \mu}$$

The Gini coefficient ranges between 0 and 1 (or 0 and 100) where 0 implies an egalitarian distribution (perfect equality) and 1 (or 100) indicates total concentration of wealth (perfect inequality). In a perfectly equal society where everyone has the same income the Lorenz curve would coincide with straight 45% line.

Figure 13: The Lorenz Curve and Gini Coefficient
In other words, 20% of the population has 20% of the total income, and so on. For complete inequality, in which only one person has any income (if that were possible), the Lorenz curve would coincide with the straight lines at the lower and right boundaries of the curve. In reality, most societies lie on a spectrum somewhere in-between these end points. Every point in the Lorenz curve represents a statement, such as ‘the bottom 20% of all households have 10% of the total income’. See Sen (1997) for an overview of other measures of vertical inequality.

4.1.2 Horizontal inequality

Recent advances in the research on armed conflict and inequality has moved towards a focus on horizontal inequalities. As stated before, horizontal inequalities are political, economic, and/or social inequalities between socially relevant groups. Despite this definition and the existence of adequate group-level data for various dimensions of socioeconomic well-being and cultural identity markers, it remains challenging to measure HIs. As explained by Mancini, Stewart, and Brown (2008), there are many ways to operationalize horizontal inequalities, most of which apply to entire countries. Below we outline how HIs can be measured – both at the country level, and at the level of the group.

4.1.2.1 Aggregate (national-level) HI measures

To compare HIs across different countries, a standardized measure is needed. Most empirical work on group differences use simple measures of differences in outcomes (that is, access to political power, economic resources, and social recognition) between the major groups in society, aggregating these for cross-country comparisons. The advantage of this approach is that such a measure is very simple and makes sense intuitively. For a comparison of two groups, the simplest measure conceivable would be the following:

\[ HI = 1 - \frac{\text{worst}}{\text{best}} \]

where \( \text{worst} \) refers to the average share of some asset owned by members of the poorer group and \( \text{best} \) refers to the average share of the asset owned by members of the richer group. The measure ranges from 0 (perfect equality) to 1 (horizontal inequality with the richer group owning all the assets). However, relative wealth does not necessarily follow from group size,
Østby (2008b) proposes the following application of the formula in order to calculate horizontal inequalities of household assets between the two largest groups in a country:

\[ HI = 1 - \exp \left( -\ln \left( \frac{1}{M} \sum_{i=1}^{M} \frac{A_{i1}}{A_{i2}} \right) \right) \]

where \( M \) is the number of household assets and \( A_{i1} \) refers to the share of group 1 (the largest ethnic group in the country) that owns asset \( i \) and \( A_{i2} \) is the corresponding share of group 2 (the second largest ethnic group in the country).

For the inequality mapping presented later in this chapter, we use this formula to measure national-level HI in three ways: HI between the two largest groups, HI between the best performing group versus the rest of the country population, and HIs between the best performing and the worst performing group in a country.

These two formulas measure inequalities between groups in society, rather than within groups. Although Stewart (2009, 41) points to the problem of how to deal with intra-group inequalities, Mancini, Stewart & Brown (2008, 90) argue in favor of separating their measure of HIs ‘from what is happening within the group’. Additionally, in an earlier paper, Stewart (2002a, 12) also stresses that ‘we need to measure intra-group as well as inter-groups differentials in order to explore how intra-group differentials affect the consequences of HIs.’ To the best of our knowledge, there is no ideal HI measure that fully combines information on both inter- and intra-group inequalities as well as relative group sizes (see Østby, 2008 for a discussion of various measures).

Stewart and colleagues focus mostly on aggregate situations, taking an overall (as opposed to a group-specific) perspective on measuring HIs. Along similar lines, Murshed & Tadjoeddin (2009), insist that inequality has to be measured within the level of the nation state. However, as pointed out in Østby, Nordás & Rød (2009b) and Hegre, Raleigh & Østby (2009), any country-level measure of HI risks failing to capture the relevant groups in society. In fact, the horizontal inequality argument only requires one under-privileged group to predict conflict. If the rest of the population in the country is homogenous or have small income differences, a

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20 There is, however, a literature that looks at disaggregating inequality, for example in order to analyze the contribution of within-region inequalities as well as between-region inequalities to the overall regional income. A measure of vertical inequality that allows for such decomposition is the Theil index. For an application to China and Indonesia, see Takahiro (2003).
country-level measure would be attenuated and unable to capture this. This problem is present in any country-level study of HIs and conflict.

4.1.2.2 Group-level HI measures

As argued above, there may be good reasons to measure HIs at the group-level. In a study of inter-regional inequalities and conflict in sub-Saharan Africa, Østby, Nordås & Rød (2009b) measure ‘regional relative deprivation’ as the relative performance of each region compared to the overall performance of the country using the following formula:

\[
RRD = -1 \left( \ln \left( \frac{1}{M} \sum_{i=1}^{M} \frac{A_{i1}}{A_{i2}} \right) \right)
\]

where \(M\) is the maximum number of household assets, \(A_{i1}\) refers to mean asset score of a given region, and \(A_{i2}\) is the corresponding mean score of the country as a whole. This generates a continuous variable. A region that has only half as much wealth as the country average scores 0.69 on the scale, whereas a region that is twice as well off as the country average scores –0.69. A score of 1.0 implies that a region has roughly one third of the national average. A score of –1.0 implies that a region is about three, or exactly \(e = 2.72\), times as wealthy as the national average.

Along similar lines, in a global study of HIs and ethno-nationalist civil war, Cederman, Weidmann & Gleditsch (2011) propose two group-level measures of HI, which are slightly more intuitive and easier to interpret: a symmetric logged form and a non-symmetric, non-logged form. The former indicator defines inequality as the square of the logarithmized ratio between \(g\), income per capita of the ethnic group, and \(G\), the average income per capita of all groups in the country:

\[
lineq2 = \left[ \log (g/G) \right]^2.
\]

This operationalization of HI captures deviations from the country average symmetrically and is zero for groups at the country average. As an alternative to this symmetric indicator, they also propose an asymmetrical measure of HI with two variables that correspond to groups that are poorer and wealthier than the country average, respectively:

\[
low ratio = G/g \text{ if } g < G,
\]

\[
high ratio = g/G \text{ if } g > G.
\]
\[ high \text{ ratio} = \frac{g}{G} \text{ if } g > G, \]
\[ 0 \text{ otherwise.} \]

This operationalization entails that deviations from the country mean are always positive numbers greater than one. For example, a group that is twice as wealthy as the country average scores 0 on the low ratio and 2 on the high ratio, and a group that is three times poorer than the country average scores 3 on the low ratio and 0 on the high ratio.\(^{21}\) For the group-level mapping of HI in this chapter we rely on Cederman et al.’s (2011) assymetrical measure of HI.

### 4.1.3 Sources for data on inequality

In order to measure vertical inequality (VI), we need individual-level data on income or some other asset, whereas in order to measure horizontal inequalities (HIs) we need subnational level data on variables like economic performance or political inclusion and some kind of cultural affiliation, or, even better, individual-level data on both. In this section, we will first review some early efforts at measuring horizontal inequalities. Then we will discuss the main existing data sources on VIs and HIs as well as sources that can be used to measure HIs across several countries.

**Early efforts at measuring HIs**

Although Frances Stewart (2000) was the first scholar to explicitly use the term ‘horizontal inequalities’, a handful of scholars have attempted to study structural differences between ethnic groups on a cross-national (or cross-group) basis. In a pioneering test, Barrows (1976) analyzed the determinants of political instability in 32 sub-Saharan African states during the 1960s. In a multiple correlation analysis, he found that inequality was a consistent predictor of political instability when inequality is measured along a scale of ‘ethnic group inequality’. This measure is calculated as ‘the size of ethnic groups and their share of political power and/or other values [wealth, education and the like]’ (Barrows 1976, 154-155). Barrow’s study is

\(^{21}\) Both Østby et al. (2009) and Cederman et al. (2011) can be criticized for comparing a region or group to the entire country. This could undermine the level of HIs for groups that comprise a large share of a country’s population, such as the Black population in South Africa.
particularly noteworthy since it appears to be the first attempt to measure horizontal inequalities quantitatively. A major problem with his index, however, is that personal judgment was the only source for determining the group inequality scores for each country. Another early strand of research on HIs and violence is Blau and Blau (1982) and others’ work on black/white relationships in US cities, which explores whether riot incidence is related to economic and social characteristics of the cities, including horizontal inequalities.

Prior to Stewart’s work, there were relatively few efforts to study the conflict potential of horizontal inequalities systematically and quantitatively. Until recently, most researchers exploring the consequences of intergroup inequalities relied on Ted Gurr’s Minorities at Risk (MAR) dataset (1993b, 2000) (see www.cidcm.umd.edu/mar), the first worldwide dataset providing group-level inequality data. Despite its wide use, however, MAR has been criticized for selecting on the dependent variable, that is, focusing exclusively on groups that are at risk of engaging in conflict and hence excluding apparently ‘non-relevant’ ethnic groups. Furthermore, the various indicators of relative group grievances provided by MAR are quite crude and are largely based on statements and actions by group leaders and members (Minorities at Risk, 2009: 12), which produces rather subjective evaluations of group deprivation. A recent update of the MAR dataset, AMAR, corrects for this selection issue and now includes all groups of social relevance (Birmir et al. 2015).

Østby’s (2008b, a) cross-national analyses represent the first attempts to measure objective socioeconomic HIs among ethnic groups in developing countries using household survey data from a number of national Demographic and Health Surveys (DHS).22 Cederman, Weidmann, and Gleditsch (2011) take an alternative approach, combining their own data on ethnic groups’ settlement areas (Wimmer, Cederman, and Min 2009) with Nordhaus et al.’s (2006) G-Econ dataset (Geographically-based Economic data) on local economic activity. In order to proxy HIs, they use these data sources to calculate wealth estimates per ethnic settlement group, and compare this to the average wealth of all groups in a country. More recently, Cederman, Weidmann and Bormann (2014) introduced a new composite indicator that explores and combines the strengths of three different sources of data on local wealth: the G-Econ data, survey data on household durables, and night lights emissions data from satellites combined with geographical data on the settlement of ethnic groups. The pros and cons with the

22 These surveys are available from www.measure.dhs.com.
approaches to measuring inequality described above will be discussed more in depth below, when we present the various types of data sources in turn.

4.1.4 National-level data sources on vertical and horizontal inequality

Computing a single number that can represent the totality of inequality in a country involves making several hard choices that raise a number of validity issues.

The status of the median individual is an intuitive and tempting indicator, at least if the underlying dimension is measured as a continuous variable, such as income. The Gini coefficient is a summary of the distribution of income, where several possible scenarios may yield the same number. Hence, a medium Gini coefficient can say something about the presence of inequality, but not what kind of inequality this is. Political inequality does not reflect a similar continuum. The core concept of political inequality is exclusion from political power (including participation in a political process), which, at least, is binary in nature. Political inequality exists to the extent that some individuals have more power than others. Age is a commonly accepted basis for political exclusion, but gender generally is not. Exclusions might occur over a large range of dimensions. Some of these dimensions, such as skin color or gender, are highly fixed and non-negotiable, whereas others, such as income, may be more fluid. Political inequality exists to the extent that some individuals have more power than others. Our focus is on the extent to which political institutions create barriers to meaningful participation.

In almost all societies, political inequality is intertwined with economic inequality (Cederman, Gleditsch, and Buhaug 2013). To date, the leading national-level data sources on vertical economic inequality and political inclusion and exclusion, respectively, are the World Income Inequality Database and the Ethnic Power Relations dataset, presented in brief below.

4.1.4.1 World Income Inequality Database (WIID)

The World Income Inequality Database (WIID) from the United Nations University World Institute for Development Economics Research (UNU-WIDER) collects and maintains information on income inequality for developed, developing, and transition countries. WIID provides the most comprehensive set of income inequality statistics available. The WIID3.4, released in January 2017, contains information on 182 countries, with the earliest observations. For the purpose of measuring economic vertical inequality, the most commonly used variable is the Gini coefficient. The data can be downloaded here:
4.1.4.2 Ethnic Power Relations (EPR)

The Ethnic Power Relations dataset (EPR) (Wimmer, Cederman, and Min 2009) identifies all politically relevant ethnic groups and their access to state power in every country of the world from 1946 to 2013. Version 3.0 (EPR3) includes annual data for 157 countries and 758 groups and codes the degree to which their representatives held executive-level state power, from total control of the government to overt political discrimination. The data also contains information on the type of ethnic marker distinguishing group members (religion, language, race, etc.). The data can be downloaded here: http://www.epr.ucla.edu/.

4.1.5 Geographical (disaggregated) data

It can be a formidable challenge to get at objective and comparable data on horizontal inequalities. Horizontal inequalities (and vertical ones alike) can be politically sensitive, and national and subnational governments are likely to report biased data if any. However, there is a wealth of geographically disaggregated socioeconomic and political data that could be used – in combination with geographical data on ethnic, religious, regional and/or rural-urban boundaries – to measure horizontal inequalities. How to structure such data is, however, far from trivial. One recent effort is the PRIO-GRID (Tollefsen, Strand, and Buhaug 2012) project. PRIO-GRID is a unified grid structure with 0.5 x 0.5 decimal degree spatial resolution and annual observations (1946–2015), in which conflict data, as well as other relevant georeferenced and location-specific data are stored (e.g., demographic, climatological, and political data). The subnational data sources described below are all integrated into PRIO-GRID.

4.1.5.1 Nightlight data (DMSP)

The DMSP Nighttime Lights Time Series\(^\text{23}\) provide satellite images of yearly nightlight emissions, i.e. it measures how much light escapes from an area when other light sources such as sunlight and moonlight has been removed. Further, observations with clouds have been excluded to be able to base the composite measure calculations on the highest quality data. The data is based on satellite images from the National Centers for Environmental Information (NOAA). The smoothed yearly composite measures are available online as large georeferenced image files, for the period 1992–2013. The benefit of these data is that they are highly

\(^{23}\)See https://www.ngdc.noaa.gov/eog/dmsp/downloadV4composites.html
disaggregated and can easily be adjusted to various sub-national areas such as different administrative levels or ethnic group areas. In this mapping we use the average levels of nightlight within each specific region.

Although several studies have found inverse correlations between nightlights and poverty, it is clear that nightlights data are not a perfect predictor of development. In developed nations official data sources are considered much more accurate – to the extent that nightlights can be even be misleading (Mellander et al. 2015). And while nightlights might be a good prediction of poverty in developing countries, more recent work has found that applying machine learning to day-time satellite imagery can produce much better predictions of poverty than nightlights data alone (Jean et al. 2016). These efforts are still in their early stages and has only been applied to a handful of case study countries so far. We were not able to draw on such data for this mapping.

4.1.5.2 Geographically based Economic data (G-Econ)

The Geographically based Economic data (G-Econ) project provides a geo-physically based data set on local economic activity within countries for the entire world. The data are constructed from a variety of sources, including regional gross product data for the lowest available political subdivision, estimates of regional income by industry, and estimates of rural population and agricultural income. The specific methodologies differ by countries and data availability (see Nordhaus et al., 2006 for a detailed discussion). The current data set (G Econ 4.0) covers ‘gross cell product’ (GCP) for all regions for 1990, 1995, 2000, and 2005 and includes 27,500 terrestrial observations. The basic metric is the regional equivalent of gross domestic product, measured in 2005 USD at market exchange rates as well as at purchasing power parity exchange rates to allow for meaningful cross-country comparisons. Gross cell product (GCP) is measured at a 1-degree longitude by 1-degree latitude resolution at a global scale. The data can be downloaded here: http://gecon.yale.edu/data-and-documentation-g-econ-project.

4.1.5.3 Global Subnational Infant Mortality Rates

The Global Subnational Infant Mortality Rates, v1 (2000) from the Center for International Earth Science Information Network (CIESIN), Columbia University, consists of estimates of infant mortality rates for the year 2000. The infant mortality rate (IMR) for a region or country is defined as the number of children who die before their first birthday for every 1,000 live births. The data products include a shapefile (vector data) of rates, grids (raster data) of rates
(per 10,000 live births in order to preserve precision in integer format), births (the rate denominator) and deaths (the rate numerator), and a tabular data set of the same and associated data.

4.1.5.4 Geo-referencing Ethnic Power Relations (GeoEPR)
The latest version of the GeoEPR dataset (Wucherpfennig et al. 2011) geo-codes all politically relevant ethnic groups from the EPR-Core 2014 dataset. GeoEPR assigns every politically relevant group one of six settlement patterns and, if possible, provides polygons describing their location on a digital map.

4.1.6 Household survey data
An alternative approach to measuring HIs through geographically matching subnational economic data with data on geographical boundaries of administrative regions or ethnic settlements is to take national household surveys, which include information on both socioeconomic wellbeing and ethnic/religious/regional group affiliations, as a starting point. Biased information is very unlikely when data are generated from national surveys like the DHS, as the original intention behind these was far from assessing socio-economic inequalities between ethnic groups. As with combining the settlement of identity groups with subnational disaggregated economic data, the aggregation of survey data ensures descriptive rather than evaluative data. That is, researchers do not need to rely on their personal judgment as the sole source for determining group inequality scores.

4.1.6.1 Demographic and Health Surveys (DHS)
Since 1984, the MEASURE DHS project, funded by USAID and implemented by ICF Marco, has administered more than 300 surveys in 90 countries, collecting accurate, nationally representative data on fertility, family planning, maternal and child health, gender, HIV/AIDS, malaria, and nutrition. Figure 14 shows the geographical coverage of the Standard DHS surveys available to the public, with green colors indicating more recent surveys.
The DHS surveys were conducted primarily to provide researchers and policy-makers with comprehensive and comparable data on fertility and child health and their determinants, and the DHS project has become the gold standard of survey data in the population and health sector in developing countries. However, the content of the surveys has changed over the years to adapt to changing circumstances and priorities. Apart from health and nutrition indicators, most of the surveys also include a host of questions relating to socioeconomic background factors such as the possession of various household assets (such as electricity, a radio, and a refrigerator) and education levels. Furthermore, the surveys include information about the region of residence of the respondents, and sometimes, but not always, information of ethnic and religious affiliation.

In a typical DHS survey, a sample of households is selected throughout the entire country and then interviewed using a household questionnaire to collect housing characteristics. Women between the ages 15 and 49 are interviewed using a women’s questionnaire to collect information mainly on background characteristics, children and women’s health and other issues, such as education level. Samples vary considerably in size, ranging from less than 5,000 women (e.g. Ghana DHS 1998) to more than 120,000 (e.g. India DHS 2005–06).24 A large share of the surveys also include detailed information about the geographical location of each

24 See Demographic and Health Surveys (1996) for details on the sampling methodology.
enumeration area (EA). Together, these surveys provide a very rich dataset, from which one can construct reliable and valid group inequality indicators. 25

The DHS surveys can be used to generate HI measures based on different group indicators: ethnicity, religion, region or locality of residence, as well as migrant status, and probably age-cohorts. As regards dimensions of inequalities DHS contain information on household assets, educational levels, and infant mortality rates. For the purpose of this mapping we have chosen to focus primarily on the two latter, education levels and IMR. These are variables with very good coverage in the DHS as well as a universal interpretation, which eases inter-country comparison. However, we also show some inequality maps based on other socioeconomic dimensions, such as household wealth, access to piped water, and electricity.

4.1.6.2 Multiple Indicator Cluster Surveys (MISC)

Since 1995, close to 300 Multiple Indicator Cluster Surveys (MICS) have been carried out in 107 countries, generating data on key indicators on the wellbeing of children and women, with the objective of contributing to shaping policies for the improvement of their lives.

With a somewhat broader geographical scope than the DHS, MICS has become the largest source of statistically sound and internationally comparable data on women and children. MICS was among the major data sources of the Millennium Development Goals (MDG) indicators and continues to be a major data source during the 2030 Sustainable Development Agenda to measure Sustainable Development Goals (SDGs) indicators.

25 See Chapter 2 for more details regarding the reliability and validity of the DHS data.
Figure 15: Countries covered by the MICS project as of 2017.

Figure 15 shows the geographical coverage of the MICS surveys, with green colors indicating more recent surveys. A drawback of the MICS data is that it the dataset is not as rigorously standardized as DHS. Using MICS data for mapping or statistical analyses requires considerably more ‘cleaning’ in order to compare different surveys. Moreover, the full birth histories required to calculate infant mortality rates are only provided in some of the surveys, though methodologies have been developed to get around this limitation via indirect estimation methods that use more basic information available in all MICS surveys. MICS clearly is, however, a good supplement to the DHS project. It is worth noting that together the two survey projects have an adequate coverage of developing countries. Although there is a substantial overlap, there are also a number of countries which have hosted DHS surveys but not MICS and vice versa – that have had MICS but no DHS survey. Figure 16 shows their combined coverage and which countries are unique to each survey (yellow for DHS, red for MICS).
4.1.6.3 Other household surveys

In addition to the DHS and MICS surveys there are other household surveys that could be used to generate measures of horizontal (and vertical) inequalities. Some survey programs are similar to the DHS and MICS programs in that the main focus is on the health and livelihoods of the respondents, and typically have sample sizes numbering in the thousands and tens of thousands. These include survey programs such as the Living Standards Measurement Study (LSMS)\textsuperscript{26}, and the WHO World Health Survey\textsuperscript{27} (although these are only a one-time snapshot around the year 2003). Specialized survey modules prepared in conjunction with the Strategy for the Harmonization of Statistics in Africa (ShaSA) process should also be mentioned. For many countries, these include large (sub-nationally) representative surveys with a range of information. Countries including for instance, Uganda, Benin, Madagascar, and Mali have also implemented the Governance, Peace, and Security module. This module collects information that could be used to measure political horizontal inequality. Some of these surveys are also representative at the sub-national / province level, this is in contrast to for instance Afrobarometer. Unfortunately, we have not been able to get access to them for this mapping.

\textsuperscript{26} http://econ.worldbank.org/WEBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTLSMS/0,,contentMDK:21610833~pagePK:64168427~piPK:64168435~theSitePK:3358997,00.html

\textsuperscript{27} http://www.who.int/healthinfo/survey/en/
Other survey programs are perhaps better described as opinion surveys. The main focus of these survey programs tends to be too study attitudes and opinions on various topics, including on topics relevant to inequality and exclusion such as perceptions of ethnic or gender discrimination. They are easy to work with and are highly standardized. On the other hand, this type of opinion survey generally sample a far smaller pool of respondents, and contain little or no information about health, livelihood, and things like infant mortality rates. Example programs include the World Values Surveys (WVS); and the PEW Global Attitudes program.

Another source for survey data are the barometer-type programs which are similar to the global opinion surveys except they have a more concentrated regional focus. They tend to have somewhat larger sample sizes than international opinion-surveys, and ask questions on a somewhat wider range of issues including issues like political participation, support for democracy or government, perceptions of political and economic conditions in the country. This type of program includes the Afro-, Latino-, Euro-, Asian-, and Arab-Barometers.

Table 3: Comparison of topics covered by different types of survey programs.

<table>
<thead>
<tr>
<th>Category</th>
<th>Concept</th>
<th>Health Surveys</th>
<th>Opinion Surveys</th>
<th>Barometers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
<td>Geographical region</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Ethnic group</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Religious group</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Urban/rural group</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Living standards</td>
<td>Income level</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Sufficient income</td>
<td>-</td>
<td>* (some)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Perceived income</td>
<td>-</td>
<td>* (some)</td>
<td>* (some)</td>
</tr>
<tr>
<td></td>
<td>(scale)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assets</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td>X</td>
<td>* (some)</td>
<td>* (some)</td>
</tr>
<tr>
<td>Health</td>
<td>Improved drinking water</td>
<td>X</td>
<td>-</td>
<td>* (some)</td>
</tr>
<tr>
<td></td>
<td>Improved sanitation</td>
<td>X</td>
<td>-</td>
<td>* (some)</td>
</tr>
<tr>
<td></td>
<td>Infant mortality rate</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Education</td>
<td>Years in education</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Highest school level</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Table 3 summarizes the topical strengths and weaknesses in terms of types of inequality-related information can be found in the various survey programs. Several online search portals are available to help find and navigate the various surveys available, including the many one-time country-surveys that are not necessarily linked to any of the survey programs mentioned above. These include sites such as the World Bank Central Microdata Catalogue\textsuperscript{28}, and the Global Health Data Exchange.\textsuperscript{29}

### 4.1.7 Summary of data sources

The table below provides an overview of data sources at different levels ranging from data that only exist at the national level to data at the level of the individual, and with regard to different types of information (socio-economic, political variables). All the mentioned data sources are used for the inequality mapping in this chapter.

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>Sub-national</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Socio-ec</td>
<td>Political</td>
<td>Socio-ec</td>
</tr>
<tr>
<td>WIID (Gini, income)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPR (Political inclusion)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DMSP (Nightlight)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>G-Econ (Gross cell product)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>GeoEPR (Political inclusion)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>CIESIN (IMR)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHS (IMR, education)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICS (IMR, education)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.1.8 Geographical scope vs. data quality

In specific cases, it is often necessary to balance data coverage against the quality of the data. Indeed, in measuring inequality generally, both between individuals and between groups, there

\begin{itemize}
  \item \textsuperscript{28} http://microdata.worldbank.org/index.php/catalog/central
  \item \textsuperscript{29} http://ghdx.healthdata.org/
\end{itemize}
is constantly a tradeoff between the geographical and temporal coverage of the data on the one hand, and the quality of the data on the other hand. Moreover, there are various pros and cons associated with relying on different datasets and sources. Below, we discuss some strengths and weaknesses of the survey-based approach to measuring HIs compared to that to the approach taken by Cederman, Weidmann, and Gleditsch (2011).

Cederman, Gleditsch & Weidmann (2011) combine data on ethnic groups’ settlement areas (Wimmer, Cederman, and Min 2009) with Nordhaus et al.’s (2006) G-Econ dataset on local economic activity to measure global economic HIs between ethnic groups. Cederman, Gleditsch & Weidmann (hereafter CGW) (2011, p. 483) admit that the DHS ‘offer a relatively direct measure of well-being’, but point to a number of limitations afflicted with the use of DHS to create HI measures. Most importantly, they point to the restricted geographical coverage and the focus on developing countries. They also mention potential problems associated with representativeness at the subnational level and potential response biases, such as the possibility that poorer individuals might overstate (or understate) their assets.

CGW are of course right that the DHS cannot be used to evaluate the role of HIs on a global basis. However, the Nordhaus-based HIs data are not necessarily superior to the DHS-based HI data for the countries that are included in both databases. First, the Nordhaus data cannot account for the informal economy, which very often benefits groups engaged in agriculture. This is particularly relevant for African and Asian countries where large segments of the population still depend on agricultural livelihoods. Any measure of economic productivity is a ‘flow measure’, and hence an imperfect proxy for the actual level of income or wealth.

Second, and far more serious, a closer inspection of the documentation of the Nordhaus data reveals that the overall data quality is indeed very poor for large parts of the developing world (where most conflicts occur) – exactly where the DHS surveys are conducted. Figure 6, which depicts the quality of the G-Econ data, with the darkest shade of red indicating top quality data, speaks for itself. With the exception of South Africa, the entire continent of Africa has ‘low quality or some regional data’ (our emphasis). Also parts of Asia, such as Indonesia, have equally poor data. According to Cederman, Gleditsch & Weidmann (2011, p. 14) ‘on some countries the official data may be of so poor quality that the variable is suppressed and accuracies over survey reports may be questionable’. This is at best an understatement.

30 See updated data from G-Econ 2.11 at http://gecon.yale.edu/data-and-documentation-g-econ-project.
4.1.9 Combining sources

A recent study by Cederman, Weidmann and Bormann (2014) introduces a new composite indicator that explores and combines the strengths of three different sources of data on local wealth: the G-Econ data, survey data on household durables, and nightlights emissions data from satellites combined with geographical data on the settlement of ethnic groups. They weigh economic data more heavily in countries where official statistics is more trustworthy, and weight nightlight data more heavily where government statistics are poor or lacking. Since ethnic groups often overlap, however, it becomes difficult to ascertain which of the overlapping groups are benefiting from the levels of nightlights or economic productivity. They therefore developed a third step where income information from survey data was linked to each ethnic group and weighed more heavily in those areas where groups overlap. (Their combined index

Source: Map generated by author on the basis of Nordhaus et al.’s (2006) G-Econ data and PRIO-GRID. Quality designation: -999= some defect not yet determined; -99= very small or zero area, to be set at zero area (non-existent); 1= lowest quality (disputed, essentially non-existent data); 2= low quality and some regional data; 3= small islands; 4= medium quality, developing country; 5= high quality but not complete or poor resolution regional data; 6= highest quality data and regional resolution. Source of map: Østby (2011: 47). We have attempted to re-generate this map using the more recent Nordhaus data but that has not been possible.
confirms the previous findings that horizontal inequalities do spur conflict in the case of groups that are poorer than the country average.

Cederman, Weidmann and Bormann’s (2014) only utilize survey data for those areas where ethnic groups overlap. At option, would have been to include survey data for all areas where it is available and experiment with different types of weighing and indexes. Jean et al. (2016), moreover, use georeferenced survey data to train a machine learning algorithm to combine nightlights and daytime satellite imagery data to produce more accurate predictors for observed poverty.

4.1.10 Mapping inequalities around the world

What countries have the highest and lowest levels of inequalities between individuals and groups? How have inequalities evolved over time? Is the world becoming more equal? Can we trust the existing data on inequality? What are the most pronounced cultural cleavages when it comes to systematic inequalities between identity groups (horizontal inequalities)? Are horizontal inequalities really so “sticky”, or static, as they are often described to be? These are among the various questions that we empirically address in the following mapping exercise. We address both vertical and horizontal inequalities and include both political and socioeconomic dimensions of inequality, as well as various group identifiers (ethnic, religious, regional, urban/rural).

The remainder of this section is organized as follows: First we give an overview of the present and historical situation in terms of vertical economic inequality around the world, including a discussion of data quality. Next, we provide a much more thorough mapping of horizontal inequalities around the world, starting with the political dimension and then proceeding with the socioeconomic dimension. Our primary focus is mapping horizontal economic inequality. Through several maps, we display the heterogeneity of horizontal inequality as such. That is, the picture of horizontal inequalities within countries varies quite a lot depending on a set of parameters. To illustrate this, we discuss at some length the implications of selecting various group identifiers, deciding what groups to compare, and selecting various indicators of socioeconomic wellbeing. Furthermore, we add to the overall picture by adding some maps and discussion of group-level horizontal inequalities, moving from aggregate measures of national level HI to the relative performance of e.g. subnational regions compared to the rest of the country. We end the section by discussing how horizontal inequality has evolved over time. As a supplement to the maps shown in this chapter we refer
to the appendix, which contains a much larger number of maps, covering all our data sources, group definitions, measures, and dimensions of inequality.

4.1.11 Vertical economic inequality

The best empirical database on income inequality data is the Wider Income Inequality Database, which is based on a wide variety of national surveys. These surveys differ in their reliability, coverage and definition of income. Our strategy is to sort all surveys according to these criteria and then use the best surveys for each country-year observation.

Table 5: Distribution of Quality in WIDER surveys used in this analysis

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Coverage</th>
<th>Income definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality</td>
<td>1,603</td>
<td>All</td>
</tr>
<tr>
<td>Average Quality</td>
<td>916</td>
<td>Rural/Urban</td>
</tr>
<tr>
<td>Low Quality</td>
<td>667</td>
<td>Other</td>
</tr>
<tr>
<td>Not Known</td>
<td>28</td>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
<td>3,214</td>
<td>3,214</td>
</tr>
</tbody>
</table>

In the final dataset, preference was given according to rank in the table, in accordance with the WIDER user manual. Rather than combining information of various qualities, the best available information was always preferred. Ties were solved by the arithmetic average. In the end, this resulted in 3,164 observations in the time period 1946—2015, or about 27% of the total number of country years present in that period.

To extend the data further, we interpolated the data (adding 3307 observations) and used the first observation back in time (adding 4687 observations) and the final observation forward in time (adding 742 observations). All of these operations are questionable, but among them, interpolation and forwarding seems to be the lesser evil.

Figure 18: Vertical Economic inequality in the World, average for period 2005--2015

Figure 18 describes the average Gini coefficient for most countries in the world for the period 2005—2015. The green color indicates lower Gini and the red color indicates higher Gini. As can be immediately observed from the map, Southern Africa and South America are both very unequal. European countries fare much better. Also, interestingly, Africa seems to be the region with the largest variation across countries in terms of vertical income inequality. It should also be noted in this regard that quite a number of African countries lack information on Gini scores altogether.\textsuperscript{32}

4.1.1.1 What about data quality?

Another question is the distribution of the quality of the existing numbers. Figure 19 shows the average quality numbers for the same period. The lower the number (green color), the higher the data quality. Not surprisingly, the best data are found in open, rich economies, whereas Africa and Asia do quite a lot worse. This seemingly is a combination of poor and authoritarian

\textsuperscript{32} Trying to locate income inequality for countries with missing information on the Gini coefficient, Strand & Gates (2002) put a request to the Scientific Study of International Processes (SSIP) listserv for information, and got the following answer from Phil Schrodt (quoted in Strand and Gates (2002)): “Missing data is usually missing for a reason and this is a splendid example. Seems to me almost all of these cases fall into one of three cases:

1. None of your business, infidel;
2. None of your business, capitalist running dog CIA lackey;
3. We’d be delighted to give you the information, but we haven’t had a decent meal in thirty years;
4. All of the above (Somalia).”
countries. There are clear patterns of positive covariance in that the best WIDER data and the best G-Econ data are found in the same areas, but the correlation in medium and low quality areas is much less obvious. The WIDER user manual issues a strong warning against using data of different quality, coverage, and definition in the same time series analyses. Visual inspection of specific countries shows why this is highly problematic. For example, changing the definition of income from gross to disposable income changes the Gini coefficient for the United States by as much as 10 unit points. To examine this further, we regressed the Gini coefficient on dummy variables for the different levels of data-quality found in the WIDER dataset. The regression results in Table 6 illustrate that there are large differences in average between the different quality-categories. Countries with higher levels of inequality tend to have lower quality data on inequality. A creative mind might think that Table 6 could form the basis for a conversion table, but it is important to underscore that the differences between countries are significant. Hence, correcting for the 10-point gap in the USA could make matters very much worse in another country.

Figure 19: WIDER Quality assessment, average for period 2005--2015
Table 6: Regression results for Gini vs. levels of Quality, Coverage and Definition

<table>
<thead>
<tr>
<th>Variable</th>
<th>coef</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality (ref.)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Average Quality</td>
<td>-4.785***</td>
<td>(-9.49)</td>
</tr>
<tr>
<td>Low Quality</td>
<td>1.637**</td>
<td>(3.10)</td>
</tr>
<tr>
<td>Not Known</td>
<td>0.187</td>
<td>(0.09)</td>
</tr>
<tr>
<td>Consumption (ref.)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Income, gross</td>
<td>-1.220*</td>
<td>(-2.38)</td>
</tr>
<tr>
<td>Income, disposable</td>
<td>-3.032***</td>
<td>(-5.25)</td>
</tr>
<tr>
<td>Other</td>
<td>3.546***</td>
<td>(4.30)</td>
</tr>
<tr>
<td>All (ref.)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Rural/Urban</td>
<td>2.468**</td>
<td>(2.97)</td>
</tr>
<tr>
<td>Other</td>
<td>-5.419*</td>
<td>(-2.39)</td>
</tr>
<tr>
<td>Constant</td>
<td>41.05***</td>
<td>(77.21)</td>
</tr>
</tbody>
</table>

p<0.05, ** p<0.01, *** p<0.001; N=3,164

4.1.11.2 Has the world become more unequal (across individuals)?

Figure 20 shows how the global average Gini coefficient has changed over time, depending on whether we compare countries or individuals. The dotted black line, surrounded by the red area, represents the annual average of national Gini estimates, as reported by the WIDER Income Inequality Database.
Figure 20: Global (vertica) inequality over time

What we see is a trend where the global inequality drops from 1960 to 1990, then increases back to the level from the 1960 and hovers around in this territory for the next twenty years. The 1990s was a period of many new countries, a large-scale shift towards marked-oriented policies and a period of strong economic growth. Which of these, if any of them, are most strongly associated with the change in global inequality is not deducible from this figure.

We have iteratively removed each country from the calculation of the annual average, and the red area represents the maximum variation that resulted from this. What the very narrow red area shows is that no single country has a very strong influence on the unweighted average.

The solid, black line represents an average weighted by population size. The solid line is well below the dashed line up until year 2000, when they swap rank. The solid line is also a lot more ragged than the smooth dashed line. These two factors are intertwined. The weighted inequality measure points to a substantial increase in vertical inequality from the 1990s, after which the level stabilized well above the figures from 1960. If we look at this figure, the world has never been more unequal than it is today. The discrepancy between the weighted and unweighted time series indicates that the trend is most pronounced in the largest countries on the planet. The blue area represents the maximum and minimum values from the sequential removal of every country from the estimation. The lower bound is what the weighted average would look like if the United States was removed from the sample. The U.S. is large and above
average on inequality, but it is mainly the population size that has a huge influence on this graph. On the upper band of the graph is global inequality when China is removed. China is the largest country in the world and below average in inequality.

**Figure 21: Data points for China, by Quality**

Figure 21 illustrates that very few of the data points from China are of high quality, and the few that are place income inequality in China well above the global average. The massive variation in the Chinese data points underscores that these data are noisy, but it is also worth noting that data quality becomes gradually better after the end of the cold war. The blue area in Figure 20 becomes narrower as we move forward in time, and the time series becomes less rugged as well.

### 4.1.12 Horizontal economic inequality

As was seen in the previous section, mapping vertical inequality is not necessarily so straightforward, and the result depends on both the quality of data as well as operational issues, such as weighing by population size. That said, mapping horizontal inequalities around the world is far more complex and depends on a number of significant coding decisions. Below we address these in turn, and present numerous maps of alternative country-level HI figures. Through several maps and figures, we display national-level aggregate horizontal inequalities focusing on different types of identity groups (ethnic, religious, regional, rural/urban), varying the way we compare the groups (i.e. the two largest groups, the best versus the worst performing and
the best versus the rest of the country’s population); and for various dimensions of inequality (IMR, education, electricity etc.). We highlight throughout how sensitive measures and rankings of horizontal inequality is to issues of what groups we focus on, and how these groups are compared. This has important policy implications.

**Figure 22: Coverage of survey data used for the mapping**

Most of the maps in this section are generated based on source data from the DHS and MICS surveys. As can be seen from Figure 22, the combined coverage of surveys from DHS (marked in yellow) and MICS (marked in red) is quite good. As a rule, each country in our mapping exercise is based on the most recent survey available, whether that be DHS or MICS.

Another aspect worth mentioning is that for some of the countries the most recent survey was conducted relatively long ago. This is most important for the countries marked as red and orange in Figure 23 below -- all subsequent maps of inequality for those countries, and this includes important large countries such as Brazil and South Africa, represent the situation on the ground in the 1990s.
Let us start with one example of how different countries score in terms of horizontal inequality. Remember that the inequality measure ranges potentially from 0 to 1, where 1 is max inequality. Any score above 0.5 means that one group is twice as privileged as the other. Figure 24 shows horizontal inequalities in terms of average completed years of education for girls comparing the two largest ethnic groups in a country. The countries are listed in descending order starting with the most unequal countries according to this operationalization of HIs. The color codes refer to world regions. Three main messages stand out from this figure. First, many countries have very sharp HIs between ethnic groups with regard to female education. Second, there is considerable variation between countries as regards the level of HIs. Chad is the most unequal country, with a HI score of close to 0.8, whereas Kazakhstan is at the bottom with insignificant HIs between ethnic groups regarding girls’ education. Third, three African countries top the list. This is perhaps not so surprising given that the other continents are steadily reaching or have already reached universal secondary female education.
Figure 24: HI in terms of education between ethnic groups, largest vs. second largest

Note: World regions marked by colors (Africa=blue; Americas=red; Asia=orange; Europe=green).
Figure excludes surveys conducted before year 2000.
4.1.12.1 Inequality between different types of groups

As discussed above, the definition of what constitutes a group is central to the measurement of horizontal inequality. Our overarching goal is to maximize comparability, and we have chosen as the basis of group definitions the following four group classifiers:

1. **Ethnicity** is perhaps the most common classifier of identity groups. Ethnic identity is based on fundamental factors like language and race, and is a group identifier that is often assumed to influence behavior and well-being in a significant way, and hence form the basis of identity conflicts.

2. **Religion** is another important source of identity, that often closely corresponds to ethnicity. It differs from ethnicity in that it is often possible to change religion.

3. **Region**: Identity information such as ethnicity and religion, is often missing from surveys. However, regional affiliation is usually available and can be used to maximize the available information. Regional affiliation is admittedly not an ideal proxy of identity. However, regions frequently correspond to ethnic group demarcations, with each region being dominated by a particular ethnic group (Stewart 2002). Furthermore, regional affiliations may be enforced by regional institutions and parties, and regional boundaries often structure the distribution of state patronage, welfare, and political influence.

4. **Urban vs. rural** populations is a fourth group identifier and a distinction that is often associated with significant inter-group inequalities.

The next four maps (Figure 25 to Figure 28) show country-level aggregate horizontal inequalities in terms of infant mortality rates (IMR) between the best and the worst ethnic, religious, and regional groups, as well as across the rural and urban population in each country. All the maps use the same color classification based on the same set of standardized inequality measures, meaning we can directly compare the intensity and distribution of inequality across maps.

There are several differences worth mentioning between these maps. The most striking is the number of countries included. 50 countries have information on ethnicity and 62 have information on religion. When region or urban/rural is used to define groups, we gain a much larger number of countries, 98 and 99, respectively. Second, at the global level, several countries have significant horizontal inequalities regardless of the type of group identifier that is chosen, although the level of HIs seem lower for IMR overall than for education. Comparing the countries that are present in all, or several, maps, we see some differences across group-
identifiers. Nigeria, for example, have the strongest HI when ethnicity is chosen as the group identifier, but not when religion is used to compare groups.

**Figure 25: HI of IMR by ethnic group (best vs. worst performing group)**

![Map showing IMR by ethnicity](image)

**Figure 26: HI of IMR by religious group (best vs. worst performing group)**

![Map showing IMR by religion](image)

Source: DHS and MICS surveys, various years
Figure 27: HI of IMR by region (best vs. worst performing group)

Source: DHS and MICS surveys, various years

Figure 28: HI of IMR between urban and rural groups (best vs. worst performing group)

Source: DHS and MICS surveys, various years
Figure 29 focuses more specifically on the variation in HIs across various group-identifiers. For this figure, we only look on educational inequality, but vary the group identifier. The figure shows that the level of education inequality seems to vary significantly across group-identifiers within countries. The green color shows HIs between rural and urban groups, the red color denotes religion and the blue denotes ethnicity. We see that the highest inequality score is the educational differences between the rural and urban population in Niger, closely followed by Burkina Faso. The rest of the countries are listed in descending order due to their score on rural-urban inequalities in terms of education. The figure also shows that educational HI between rural-urban groups in a country does not necessarily coincide with the degree of HIs between religious or ethnic groups. For example, Cambodia appears to have a mid-level of rural-urban educational inequality, but here the degree of ethnically based educational inequality is much stronger, as indicated by the red bar. Due to the high number of countries Figure 33 is a bit hard to read. An alternative representation of the variation across group-identifiers when it comes to educational HIs can be found in Table 7 at the end of the chapter, where each country is ranked according to the level of educational HI across various group identifiers. Again, Chad tops the list both in terms of ethnicity and religion, but Nigeria comes out even worse if we also consider regional inequalities.
Figure 29: HI in terms of education between various types of groups (two largest ethnic, religious, rural-urban)
Figure excludes surveys conducted before year 2000.

4.1.12.2 Different types of group comparison

Horizontal inequality is about comparing groups, but which groups should be compared? Depending on how to define groups, the number of groups can become quite large. For instance, the number of ethnic groups in a society is often larger than the number of religious groups, whereas an urban-rural divide creates just two groups. When the object of the study is the onset of armed conflict or any other form of rare event, we are not in search of average conditions. Rather, we look for the extreme circumstances, or at least the most relevant circumstances. An armed conflict is usually the product of several extreme conditions, but it is not obvious which groups that are the most relevant. We outline three different options:

1. **Best vs. worst**: We identify the groups that are best and worst off compared to some dimension of inequality (e.g. IMR or education), and compare those. When surveys are used, it is important to ensure that the numbers in the sample are somewhat representative. A cut-off must be defined, excluding all groups that fail to reach this threshold. This threshold is arbitrary, and represents as such a threat to the validity of the operationalization.

2. **Best vs. rest**: Inequality can be conceptualized as a privileged group raised above everyone else, kind to apartheid South Africa or colonial India. The threshold issues regarding the definition of the Best group still applies and the Rest group will quite possibly be inconsistent across countries and identity definitions.

3. **Largest vs. second largest**: When we conceptualize societal conflict as primarily a conflict between dominant actors, it makes sense to focus on the largest groups in a society. Theories of identity polarizations will point towards this operationalization, and this is also our preferred option.

Figure 30 to Figure 32 describe horizontal inequalities in terms of IMR between ethnic groups according to the three types of comparison, best vs. worst, best vs. rest and largest vs. second largest. Naturally, the level of HIs appear much more severe when we compare the best vs. the worst performing groups (Figure 30) than when we look at the best group vs. the rest of the country (Figure 31), or the two largest ethnic groups (Figure 32). We find only non-substantial difference between measuring inequality as the best group vs. the rest of the country (Figure 31), or the two largest groups (Figure 32), except the former seems to have slightly higher HIs.
Figure 30: HI of IMR between ethnic groups, best vs. worst

Source: DHS and MICS surveys, various years

Figure 31. HI of IMR between ethnic groups, best. vs. rest

Source: DHS and MICS surveys, various years
The variation is further explored in Figure 33. Here, all the bars refer to HIs between ethnic groups, but the three colors represent different types of comparisons. Red shows HI between the best versus the worst group, and hence depicts the maximum level of HI for each country. The green color denotes best-rest, and the blue color denotes HI between the two largest ethnic groups. It is striking how the measure is sensitive to the kind of comparison of groups. In some countries, this is much more so than in others. In Nigeria, the level of HI in terms of education between ethnic groups is high regardless of the type of comparison. In contrast, in the Congo, the HI score between the best and worst ethnic groups is as high as 0.8, whereas it is very low if we focus on HIs between the best performing ethnic group vs. the rest of the country or the two largest ethnic groups. In sum, how HIs are operationalized can, in specific contexts, produce widely different results. A country such as the Congo can, depending on how you measure it, be seen as having substantial HIs or little or no inequality at all. In developing policies to prevent conflict this must be considered. It should be noted that these large differences in HI across measures also provide opportunities for people that want to mobilize for armed conflict to essentially ‘cherry-pick’ and focus on the comparison that is perceived as most egregious.
Figure 33: HI in terms of education between ethnic groups, various comparisons

Note: Figure excludes surveys conducted before year 2000.
4.1.12.3 Inequality along various dimensions

Objective horizontal inequalities must materialize themselves in some form of observable difference. However, depending on the measure used, countries can vary quite a lot in their apparent inequality. Consider access to electricity in Western Europe in 1880 and 1980. In 1880 no one had it, and in 1980 almost everyone had it. Figure 34 to Figure 38 below illustrate this phenomenon, and highlights the importance of differentiating between the general level of development and inequality. Below we show maps of HIs between the two largest ethnic groups per country along five dimensions: infant mortality rates (Figure 34), average completed education years (for women) (Figure 35); household access to piped water (Figure 36); electricity (Figure 37); as well as HI in terms of a broader defined index of access to relevant groups, a wealth index (Figure 39). Consider Peru. Access to improved drinking water is prevalent in Peru, and there are no large inequalities on this dimension. Education and IMR differ a bit more, whereas access to electricity produces very large horizontal inequality (Peru does not have data on the DHS wealth index).

**Figure 34: HI in terms of infant mortality, largest vs. second largest ethnic group**

Source: DHS and MICS surveys, various years
Figure 35: HI in terms of education between ethnic groups, largest vs. second largest ethnic group

Source: DHS and MICS surveys, various years

Figure 36: HI in terms of access to improved drinking water between ethnic groups, largest vs. second largest ethnic group

Source: DHS and MICS surveys, various years
Figure 37: HI in terms of electricity between ethnic groups, largest vs. second largest ethnic group

Source: DHS and MICS surveys, various years

Figure 38: HI in terms of wealth index between ethnic groups, largest vs. second largest ethnic group

Source: DHS and MICS surveys, various years

In Figure 39 below we show how HIs differ across three dimensions of inequality (education, IMR and household wealth) even though we keep constant both the group identifier (ethnic) and the type of comparison (largest vs. second largest).
Figure 39: HI along various dimensions, between ethnic groups, largest vs. second largest

[Graph showing various countries with bars indicating HI along various dimensions (between largest vs. second largest ethnic group)]
The dimension that yields the largest HI scores is education (blue bars). Then follows household wealth (red bars) and IMR (green bars). Education is the dimension of inequality between ethnic groups that yields the highest HI score, with Chad topping the list. The countries are listed in descending order in terms of their score on educational HI. There is considerable evidence here that ‘all good things do not go together’. Countries such as Mozambique can have very low levels of Horizontal Inequality in terms infant mortality rates. This could be because an overall focus on infant mortality has benefited all groups, but could also be a result a concerted effort to reduce inequalities. At the same time, however, we see that Mozambique has high levels of HIs in education and wealth. For development actors it is thus important to realize that success in one area does not automatically translate to other areas.

4.1.13 Political inequality

Having examined economic inequality, we now shift gears and look at political inequality. Figure 40 presents the status of national political exclusions in 2013.

*Figure 40. Share of excluded population in 2013, based on EPR*

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33 This could be a fruitful avenue for future research. Hegre and Nygård (2015), examining different dimensions of governance, find that improvement in one dimension tends to lead to improved governance in other dimensions. There is little evidence here of that happening for HIs. Analyzing when and under what circumstances improvement in one type of HI affects the larger HI context could produce important policy recommendations.
The map is largely green, indicating that most countries have a largely inclusive political system, meaning few systematically exclude ethnic groups from political power, in 2013. This is in line with the general move towards more democratic countries in the world. Reading this map, it is important to keep in mind that these colors represent the political system as such and is not spatially representative below the national level. Excluded ethnic groups often live in distinct geographical areas, and the GeoEPR dataset can be used to map these areas. In 2013, about 7% of the total world population was regarded as politically excluded. This estimate is lower than previous estimates, as shown in Figure 41. From 1960 till the early 1990s, the level of political exclusion remained stable between 11 and 12%, followed by a steady drop over the next 20 years. The reduction in political exclusion happened at the same time as the world saw an unprecedented number of active conflicts (ref. (Gleditsch et al. 2002). Ethnic political exclusion is a very relevant mechanism behind armed conflict onset, and in several countries the level of political exclusion was reduced as part of a peace process between armed representatives of different ethnic groups.
It is important to keep in mind that this graph shows the excluded population relative to the total global population. Ethnically homogenous dictatorships, where almost everyone are excluded, will not show up in this graph. While ethnically fragmented societies are important regarding armed conflict, we should not neglect the rest of the world. Figure 42 shows the development of the Civil Liberties index from the V-Dem project over time. The period up to 1973 shows a slight decline, which is the ebbing of the second democratic counterwave (Huntington 1993). In 1973, the Portuguese Carnation Revolution became the first in a series of democratic transitions that transformed first Southern Europe, then Latin America, East Europe, Asia and Africa. Only the Middle East has proven resilient towards this process. The peak of the graph occurs in the wake of the Arab Spring. However, the trend towards less democratic governance has been growing for some time, and the civil liberties curve ends with a significant drop. This drop represents larger and more common violations of individual rights in a growing number of countries until recently considered liberal democracies. These

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transgressions are to some extent masked as part of the post-2001 war against terror. If these measures are allowed to grow even more indiscriminate, we might see an increase in the ethnically excluded population.

Figure 42: Global average of the V-DEM Civil Liberties Index, 1960—2015.

4.1.14 Changes in horizontal inequality over time

Unlike for political inequality, all of the figures presented so far on HIs have been based on the latest available estimate. Thus, the maps might often present data that are collected over a relatively long time-period. This represents a challenge that so far has not been properly addressed in the literature. In an effort to overcome this issue, we focus on a feature of the infant mortality data. The DHS surveys contain information about the birth history of up to 20 children per respondent. The birth year of these children are coded, and, if applicable, their age when they died. Using this information, we have estimated infant mortality rates for 79 countries, for the time period 1970—2015, based on a grand total of 8.7 million children. Moreover, the same data also allows us to calculate the IMR ratio for the largest versus second largest group, where applicable. In other word, we have constructed a time-varying measure of horizontal inequality for IMR for the period 1970 to 2015 for this set of 79 countries. As far as we know this has not
been done before. These two time series, one showing infant mortality rates and the other HIs in IMR across the largest versus second largest group, have been standardized relative to their value in year 2000 to facilitate a comparison.

Figure 43: Rates of change in infant mortality and Horizontal Inequality in IMR , by groups, 1970—2015

To add some detail, while a survey is collected in a given year, we can use the birth history contained in the surveys to estimate the infant mortality rates of years in the past based on the birth year of the children. In many countries, there are more than one DHS survey, which means that children born in 1990, for example, might be reported both in the 1993 survey and the 2001 survey. We combine information from different surveys to obtain the best possible estimates for individual years. To construct an HI measure, an IMR ratio is defined between the largest and the second largest group, with a minimum group size of 50 children and where at least one child has died before its first birthday. We chose the largest versus second largest because of consistency over time. Any definition of ‘best’, ‘worst’ and ‘rest’ would be likely to change from year to year, leading to random fluctuations and the sample uncertainty in small groups could lead to very inflated HI estimates. Groups are defined based on either region, religion or ethnicity. We do not know which group definition that is the most relevant in individual
countries. Therefore, we select the maximum HI estimate from these three possible sources as representative for this country.

In this, we find, not surprisingly, that IMR has decreased, but also document that HIs in IMR have followed pace. The strong negative trend in infant mortality rates is well-known and thoroughly documented as part of the Millennium Development Goals. This downward trend is shown in the solid blue line in Figure 43. In addition, however, Figure 43 also shows a similar trend for the horizontal inequality time series (red dotted line). We find that HI in IMR increased until around 1985, but since then has declined at the same rate as the overall decline in infant mortality. In other words, both infant mortality and horizontal inequality of the same are presently at an all-time low.

Figure 44 shows the same comparison for regions instead of groups. The Figure reveals several interesting patterns. First, while it is well documented that infant mortality rates have gone down over the last 50 years, we have never had reliable estimates of how IMR rates have changed. The graph is normalized to year 2000, and the HI measure is par with the year 2000 level at the onset in 1975. Initially, we see an increase up to about 1980, and a fairly persistent level for the next 15 years. We then see two periods of declining horizontal inequalities: 1995—2000 and 2005—2011. The trend for the two graphs are quite overlapping from about 1990 and onwards, except that the IMR curve is smoother then the IMR ratio curve. The final data point seemingly represents a breaking point for both curves, but this data point suffers from low data availability and should probably be disregarded in wake of better data.

The Figure does in fact correspond quite well with the pattern of armed conflicts in the world. The period 1985—1995 was a period where many new conflicts erupted, whereas the period 1995—2012 saw a remarkable decline in the number of conflicts. This correlation should be the subject of future research.
If we look at the three group definitions independently, we find a non-overlapping picture. Figure 44 is based on difference between regions, arguably the least valid group definition, but one which is almost always present in surveys. Figure 45, focusing on religion, looks very much like Figure 44, but the variation is smaller. This probably reflects the validity issue. Regional differences are likely to reflect identity-based differences but inaccurate measurement adds noise and biases the estimates towards 0. Based on religious divisions alone, we find the two curves corresponding much better. The IMR ratio in 1970 is 50% above the level in 2000, and while there is an increase for the first ten years, it is not as pronounced as in Figure 45.
Figure 45: Rates of change in infant mortality and Horizontal Inequality (by religion), 1970—2015

Figure 46 is based entirely on HI as defined by comparing ethnic groups. There is a common pattern in all these graphs: There is some form of increase in HI followed by a decline. For religiously defined groups, the peak is in 1979, while the peak in Figure 43 is in 1990. The first ten years of the ethnicity graph is quite uncertain, as the figure here relies on fewer observations from fewer countries compared to Figure 45. Nevertheless, the decrease in HI from 1990 and onwards is remarkable, and clearly speaks against the common notion that horizontal inequalities are “sticky” and hardly subject to change over time. While the final data point should be interpreted with care, we do show a 75% reduction above the year 2000 level to a new level well below this index year. These figures are based on summaries of individual surveys. Future research should critically assess the quality of these surveys to increase the validity and, crucially, construct confidence intervals or other measures of uncertainty around the estimates.
4.1.15 Subnational mapping of horizontal inequalities

The previous sections have all mapped inequalities at the national (aggregate level). However, with geo-referenced subnational data we can also map group-level HIs, or HIs at the subnational level. Below, we show some examples of subnational regional inequalities. Maps with global coverage are not particularly well suited to visualize subnational patterns in terms of inequality. Hence, we will rather focus on zooming in on some particular countries of interest when we present our case studies below. We do, however, show some maps indicating how the regions (administrative level 1) deviate from the national average in the positive or negative direction. Figure 47 shows admin 1 units overlaid with satellite images of nightlight emission data, where the nightlight is measured as the mean for the regional unit.  

We have used the formulas for high and low ratios proposed by Cederman et al. (2011) and combine these in one map. The darker red, the less privileged the region compared to the country average. Conversely, the

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35 The nightlight emission data are extremely asymmetrical, thus the lower values have been capped at 100, to be able to show the variation in the data.
darker the blue the more privileged the region compared to the country mean. We see that the privileged areas seem to be more prominent that the deprived areas. Thus, we can also notice that many of the blue areas correspond with areas of petroleum production, like in Texas in the USA, Alberta in Canada, Siberia in Russian and the Lula oil field in Brazil. However, most of the regions do not seem to differ too much from the country mean (i.e yellow color).

**Figure 47**: Regional relative deprivation/privilege in terms of nightlight emissions (DMSP)

Figure 48 shows a map of subnational administrative units level 1 (regions) that is overlaid with geo-referenced economic data from the G-Econ dataset. What is perhaps most striking, especially compared to Figure 47, is the small number of relatively privileged regions and the high number of relatively deprived regions. Further, compared to Figure 47 we see that the colors for both the privileged and deprived areas are darker, thus suggesting that G-Econ indicates stronger inequalities compared to nightlight emissions. When we switch to inequalities in terms of IMR (from the CIESIN database) across subnational regions (Figure 49), the picture changes somewhat, with the yellow color (indicating very low regional deviations) dominate the picture. This could also be a result of low data quality at the subnational level.
Figure 48: Regional relative deprivation/privilege in terms of economic welfare (G-Econ)

Figure 49: Regional relative deprivation/privilege in terms of IMR (CIESIN)

Figure 50 indicates the number of excluded groups within each region based on the GeoEPR dataset. The number of groups is based on the situation in 2013. This is not measuring horizontal inequality as such, but it gives an indication of which areas where groups are politically excluded. The greener the area the fewer politically excluded groups, red areas indicate higher numbers of excluded groups. The most striking on the map is the red belt
stretching across Russia, further we see that there are red areas in South-east Asia as well in Central Africa.

**Figure 50:** Number of excluded groups in each region (GeoEPR)

Lastly, we can also look at sub-national variation based on the DHS and MICS survey data used above. Figure 51 shows average years of education at the province level calculated from these
surveys, and Figure 52 shows infant mortality rates for the same provinces. We have standardized all estimates within countries so that provinces should be compared in-country and not between countries. For both education and IMR we find substantial sub-national variation. The variations, and thus the inequality, appears most pronounced, however, in terms of IMR. The inner-Amazon areas of Brazil, for instance, appear to have education levels on par with most of the rest of the country. In terms of IMR, in contrast, this region sees much higher rates of infant mortality. This could reflect the fact that the infrastructure needed to provide schooling is easier to provide than what is needed to bring down infant mortality rates.

**Figure 52: Average infant mortality rate by province, various surveys, standardized for cross-national comparison**
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5 Patterns of inequality and conflict: brief case studies of Nigeria, Uganda, Tanzania, Yemen, and the Philippines.

In this section, we will look more closely at five selected case studies. This allows us to set the horizontal inequality into both a historical background and conflict context. We have chosen 5 cases, which all highlight different perspectives of horizontal inequality and geographical diversity. The five selected countries are Nigeria, Uganda, Tanzania, Yemen, and the Philippines.

Nigeria

5.1.1 Background

Nigeria was a former British colony, gaining independence in 1960. In the immediate post-independence period the country enjoyed civil rule. However, in 1966 it suffered from a coup by the ethnic group, the Igbo, followed by a counter coup led by the Hausa-Fulani ethnic group. This was the start of the Biafra War (1967-1979), where the Igbo ethnic group declared independence (Figure 51), killing more than one million people. In the period after the Biafra War there were several attempts to establish civil rule and democracy in Nigeria (1979-1983, Aug-Nov 1993), but these were defeated by military coups and democracy was not established until 1999.

Nigeria is a highly ethnically, religiously, and geographically diverse country, and understanding the diversity in socio-economic trends within Nigeria is important for also understanding conflict patterns (see Figure 50). Map 1 indicates the three main conflict regions in the country, the Niger Delta, the Middle Belt and the northeast (involving Boko Haram). For further reference, when we refer to the north, this is the region above the Middle Belt, and when we talk about the southwest, this is the region around Lagos between the Niger Delta and Middle Belt. In addition, Map 1 includes the major cities and the location of the Sambisa forest (the Boko Haram stronghold), the extended Niger Delta region, and the area that was proclaimed as the Biafra state in 1966.
5.1.2 Trends in Conflict

In Figure 52, we see an overview of battle related deaths since 1965, in which the major peak is the Biafra War. After that we see a steep increase in the 2000s – particularly after 2010, which corresponds with the period when Boko Haram has been active.

Further, in addition to the temporal conflict trend, the UCDP GED data allow us to investigate the spatial development of conflict. The time trend maps in Figure 53 show a clear movement...
of conflict events over the past 25 years. Larger circles indicate that there are several events recorded in the same place.

Right after the return to civil rule in 1999 there was an increase of events in the Niger Delta (comparing Maps 1 and 4), while from 2010 to 2014 we see less conflict in the Niger Delta region, but an increasing amount in the northeast (Maps 4 and 5). We also see that there is an increasing number of conflict events in the region as well – the eastern Middle Belt with experienced a peak between in the early 2000s (Map 2) and again in 2013-2014 (Map 5). We can identify three geographically distinct conflicts in Nigeria:

**Figure 55: Time trend maps of conflict events from 1989-2014 (GED)**

**Niger Delta** – The conflict in the Niger Delta is related to the struggle connected to oil exploitation in the region – in particular the sharing of oil revenues and environmental degradation. The conflict has mainly been concentrated in the three states: Delta, Rivers, and Bayelsa (see Figure 55). It has involved in particular the ethnic groups Ijaws and Ogoni. The conflict escalated further towards the end of the 2000s. During this period the most prominent group was the Movement for Emancipation of the Niger Delta (MEND), mainly consisting of members of the Ijaw ethnic group. The conflict related to the oil resources in the Niger Delta
calmed down after the amnesty in 2009. However, lately, the conflict seems to have heated up, with increasing violence and attacks on oil installations leading to a decrease in oil production.

**Boko Haram** – Boko Haram, which roughly translates to ‘Western education is sinful’, was established in 2001 and has since 2009 promoted their agenda through violent actions. Among the major goals of the group is to have a Muslim president and to implement Sharia law in all of Nigeria. The extreme violence has taken various forms, such as suicide attacks and bombs particularly aimed at schools and churches, inflicting large numbers of casualties and killing many children. The conflict has had a high level of violence, most notably in January 2015. The conflict has escalated significantly in the period from 2013 through to early 2015, including the abduction of 276 girls from Chibok. Since the presidential election in 2015, Nigerian and neighboring forces have cracked down on the movement, which pledged allegiance to the Islamic State in 2015. However, conflict activity was still high in 2016.

**Eastern Middle Belt** – The Middle Belt is mainly affected by non-state communal conflicts, often related to conflict between herders and nomads. There was an increase in this type of conflict in the early 2000s and again between 2010 and 2015. These conflicts intensify in years with substantial drought during the growing season.

### 5.1.3 Trends in Inequality

Several scholars have pointed at Nigeria as a country in which lager horizontal inequalities have affected conflict, and where ethnic, religious, and geographical differences make a difference (Stewart 2008).

Figure 54 indicates among which identity groups we find the highest inequalities. Both comparing the best groups with the worst and the largest with the second largest we see that there are high inequalities within all types groups, and that they follow the same trends. This is not surprising as the religious, ethnic and geographical groups are quite overlapping in Nigeria. Thus, we will look at inequalities across all of these groups.

**Figure 56: Inequality in years of education across provinces, ethnic groups, religions, and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), (DHS)**

36 The dip in provinces in the graph indicating largest vs second largest is due to a change in which province was the largest and second largest.
5.1.3.1 Religious inequalities

The religious cleavage in Nigeria is quite striking, and it has been argued to be an artifact of the British favoriting the Christian south during the colonial period. In Figure 55 we compare cohort specific levels of education between Muslim and Christian women, with both graphs showing a large discrepancy. Further, it is striking that the gap increased rather than decreased after independence in 1960. This is particularly evident for secondary education, where approximately 50% of Christian women have completed secondary education for women born in the 1980s, while only about 20% of Muslim women born in the same period have done the same.

Figure 57: Cohort specific education comparing Christian and Muslim women. To the left, share of women with completed primary education and to the right, share of women who has completed secondary education (DHS).

To further investigate the inequality gap between Muslim and Christian women, we split the categories into whether the women are part of the minority or majority religion in their area. In Figure 56, we see that for Christian women it does not matter whether they are living in a
Christian or Muslim dominant area – their level of education is approximately the same and has experienced the same development over the past 50 years. However, for Muslim women it seems that it is much better to live in Christian dominant areas compared to Muslim areas. While Muslim women living in Christian area are still lagging somewhat behind Christian women, the gap is smaller and the time trend seems similar. However, Muslim women living in Muslim dominant areas have seen a very slight positive development over the past 50 years, and the gap between them and the three other categories is increasing.

Figure 58: Cohort specific education comparing minority and majority Christian and Muslim

5.1.3.2 Regional inequalities

The finding in Figure 56 indicates that the inequality of education is not only related to religion but also living area. Figure 57 shows the share of women that has completed primary education within each federal state. The map to the left displays the responses from the DHS survey conducted in 1990, and the map on the right shows the responses from the DHS survey conducted in 2013. First of all, we clearly see that there is a north/south divide, which is equivalent to the Christian and Muslim cleavages. We also see that there has been a positive development in the country from 1990 to 2013, but that the Northern areas are still lagging and some of the regions have not seem much development in 23 years, between the surveys.

The north/south divide is further restated when we look at other development factors such as wealth and access to electricity (Figure 58). Here it is clear that the North Eastern and
Middle Belt areas are particularly marginalized, and from the conflict map (Figure 53) we see that these are areas that have experienced much conflict.

Figure 59: Region specific education attainment. To the left, share of women with completed primary education DHS survey 1990 and to the right, share of women who has completed primary education DHS survey 2013

Figure 60: Region specific development. To the left, average wealth, and to the right, share of households with access to electricity

5.1.3.3 Ethnic Inequality

Nigeria is known to be a country with many and large ethnic inequalities and conflicts. The cleavages between the largest ethnic groups correspond to the Muslim/north and
Christian/south divide, where Hausa/Fulani is the major ethnic group in the North, Yourba in the southwest and Igbo in the Southeast. Figure 59 clearly shows that the Hausa/Fulani group is lagging behind the other groups, particularly in terms of education, but also when it comes to IMR. It is also interesting that the two other large ethnic groups are considerably better off than the Hausa/Fulani and also compared to the other category, which includes all other ethnic groups than those in this graph.

**Figure 61:** Cohort specific for ethnic groups. To the left, share of women with completed primary education and to the right, infant mortality rate (DHS)

![Graphs showing cohort specific for ethnic groups.](image)

However, in Nigeria the ethnic cleavage is not only between the major ethnic groups, but also between smaller groups, particularly in the Niger Delta. In Figure 60 we see that Ijaws, the fourth biggest ethnic group in Nigeria, but the biggest in the Niger Delta, are doing much better than the other categories. In Figure 60 we compare Ijaws with the other major ethnic groups in the Niger Delta. The graph shows clearly that the Niger Delta is a region with a high level of education. For women born in 1995 the share that has completed primary education is between 90% and 95% for the major ethnic groups in the Niger Delta. From Figure 59 we see that the other category is about 75%. While the Ijaw are the worst-off group among these ethnic groups in the Niger Delta, the difference is so small that it is not likely to be significant.
5.1.4 Conclusion

In Nigeria, we see that there are clear and large horizontal inequalities between religious, regional and ethnic groups. Originally these inequalities were linked to the British, who favored and developed the Christian south. Nonetheless, it is clear that these differences are increasing, thus there must be more than just the colonial legacy driving these differences. Further, while much of the horizontal inequality literature focuses on the Niger Delta (Rustad 2016), it does not seem that the large inequalities are found there, rather these groups are doing comparatively better than the rest of the country.
Uganda

5.1.5 Background

Uganda gained independence from Britain in 1962. During the colonial period the Buganda Kingdom, also known as the Central region, became the center for the Uganda Protectorate and many Buganda got the status as colonial administrators. This created a deep cleavage between the north and south, which became even more evident in the post-colonial period. In addition, Uganda is a very ethically divided country, and cleavages with are important for understanding both conflict and inequality. Figure 63 indicates the where the major ethnic groups in Uganda are situated.

Figure 63: Ethnic groups in Uganda

Between 1962 and 1971, Milton Obote ruled Uganda. He came from the northern ethnic group of Langi, thus during his nine years in power the national armed forces were dominated by soldiers from his ethnic group and the Acholi. During this period the Buganda kingdom was also abolished, creating resentment in the south towards the north. In 1971 Obote was ousted by a coup led by the chief of the armed forces, Idi Amin. Amin was a fellow northerner but came from the West Nile region. To consolidate his power, he changed the ethnic balance within
the armed forces by recruiting from his own ethnic group the Kakwa and Nubians. As a result, many Langi and Acholi soldiers as well as many within the civilian population were massacred.

Idi Amin was overthrown in a coup in 1979, and Obote was again elected president – an election that was rejected by many from the south, among others current president Museveni, who then engaged in guerrilla warfare. During Obote’s second term, the ethnic balance again shifted and the northern areas experienced revenge killings, particularly in Idi Amin’s home region.

In 1986 Museveni and the National Resistance Movement (NRM) power, and in 2016 Museveni started his fifth term as president. During his presidency, Museveni has been able to reverse negative economic growth, creating more stability and restored peace in several areas. Nonetheless, he and the NRM are seen as representatives from the south and many of the northern regions and ethnic groups feel marginalized. On the other hand, many in the south see the northerners as trouble- and conflict-makers. Thus, the cleavage between the north and the south has sustained since the independence.

5.1.6 Trends in Conflict

Uganda has been a particularly conflict ridden country and has experienced both internal conflicts and interstate conflicts. As can be seen from the conflict maps in Figure 64 and 63, showing the development of battle related deaths over time, the main conflict period was in the 1980s to the mid-2000s.
Particularly since the fall of Idi Amin, there has been continuous warfare, with different rebel groups fighting the sitting government. These conflicts were most of the time related to the north/south divide, but also within ethnic groups in the northern region. The most severe period in terms of fatalities was during the second presidency of Obote (Figure 63). The National Resistance Army (NRM), which was the army wing of the NRM, fought the government in the so-called “Bush War” between 1981 and 1986 when the NRA seized Kampala. During this period, the country experienced a large displacement of people and human rights abuses, particularly related to the refugee camps.

Thus, the power shift from north to south stirred up much ethnic tension in the northern areas, and several new rebel groups emerged. This is clear in the conflict maps, where the majority of the conflict events are concentrated in the north. The most severe and long lasting of these groups is the Lords Resistance Army (LRA), led by Joseph Kony and based within the Acholi ethnic group. The stated motivation for the LRA is to fight the Museveni government due to violations against Acholi people, the lack of northerners in the government, and marginalization of the north. Another motivation was also the purification of the Acholi people,
and violence was particularly directed towards those who supported the government. The extreme use of violence by the LRA resulted in difficulties in recruitments, and in the 1990s the group resorted to kidnapping to be able to fill up their ranks, LRA is well-known for their use of child soldiers. In addition to internal conflict, Uganda has been involved in an interstate war with Tanzania in 1978. In addition, the LRA has been involved in the conflicts in both Sudan and the DRC.

Figure 65: Fatalities in Uganda between 1946-2015

As the conflict map indicates, it currently seems that the conflict in the northern areas has cooled down; however there are still ethnic tensions in the country. For example, in 2016 there were clashed in the Western region related to feelings of marginalization and lack of recognition by smaller ethnic groups, accusing the Museveni government for having a divide-and-rule plan.

5.1.7 Trends in Inequality

As the two previous sections have shown, during the post-independence history there are several different groups that have been excluded, victimized and marginalized, depending on the group in power. Since 1986, when Museveni came to power, the southern part of Uganda, and in particular the central region has been favored. While Uganda in general has had
economic growth in the past 25 years, the northern region has had a noticeably lower growth than the other regions, and benefitted much less from various economic policies and reforms that have been implemented.

Figure 64 indicates the biggest inequalities between groups occur when it comes to years of education among women. We can see the biggest differences are clearly between ethnic groups and regions, and less so when it comes to religious groups. We also see that there seems to be large inequalities between urban and rural areas. When comparing other measures for development such as access to water, IMR, and electricity, we find the same. Thus, for Uganda we will focus on ethnic and regional differences.

**Figure 66: Inequality in years of education across provinces, ethnic groups, religions, and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), Uganda, 1990—2010 (DHS)**

5.1.7.1 *Ethnic inequalities*

In Figure 65 we show the development for some of the major ethnic groups of years of education for women born in the same year to the left, and level of infant mortality rate to the right. Both graphs indicate a positive development: increasing years of education and lower levels of IMR. However, particularly for education there is a big difference between the northern ethnic groups (Acholi and Langi) and the southern groups (Buganda, Banyankole and Basonga), the southern groups are performing substantially better than the northern, in particularly the Buganda groups, which were also favored by the British during colonization. Further, it seems that the gap between the Buganda and the other southern groups is decreasing over time, while for the
northern groups it seems to be stable over time. The downward trend after 1990 is due to lack of data, but we see that the differences between the groups are approximately the same. For IMR, we see that the level among the Acholi was particularly high during the 80s and 90s, which corresponds with the most conflictual period in the northern region.

**Figure 67:** Cohort specific educational attainment across ethnic groups (left), and cohort specific infant mortality across ethnic groups (to the right, (DHS)

![Graph showing educational attainment](image)

In Figure 66, we compare level of education for women who are part of the ethnic majority where they live with those who are part of the ethnic minority in their area. We see that for both completed primary education (to the left) and complete secondary education (to the right) ethnic minorities have a lower level of education.

**Figure 68:** Cohort specific educational attainment for ethnic minority and majority women, completed primary education to the (to the left), and secondary education (to the right) (DHS)

![Graph showing educational attainment](image)
5.1.7.2 Regional inequality

In Uganda, the regional differences are just as important as ethnic. In Figure 67 we first look at the differences between urban and rural areas. In the graph to the left, we see that women living in rural areas have on average almost half the number of years of education compared to women living in rural areas. Further, this gap does not seem to decrease over time. On the other hand, in the graph to the right we see that the share of children that has been vaccinated was little a bit higher in the urban areas in the 1990s, but this gap seems to have disappeared.

Figure 69: Cohort specific for women living in urban and rural area., years of education (to the left) and share of children under 5 that has been vaccinated (DHS)

In Figure 68 we look at the geographical distribution of wealth and attainment of secondary education. We clearly see that the northern region, and in particular the northeast and the West Nile, is marginalized compared to the rest of the country.
In Uganda, there seems to be large horizontal inequalities particularly between the north and the south. While this is partly due to violent situation in the North, it is also possible to argue that the conflicts in the North are partly due to exclusion and marginalization, thus the causes of the conflict are reinforced. Further, there are also clear inequalities between the largest ethnic group, Buganda, and the other ethnic groups. This is partly due to the position that the Buganda had during the colonial area, but also because of the current administration’s (Museveni government) positive relationship to the Buganda kingdom.
Tanzania

5.1.9 Background

Tanzania consists of two main parts, the mainland Tanganyika and the island of Zanzibar. In 1964 both regions had gained independence and were merged to become what we today know as the United Republic of Tanzania. Julius Nyerere became Tanzania’s first president and was a strong support for self-reliance and socialism, thus once in power he established a one-party system with Chama Cha Mapinduzi (Party of the Revolution) (CCM) as the only party, in which there would be internal elections for leaders and would ensure one national wide ideology referred to as African socialism. The policies for the new ideology would promote national self-sufficiency, low dependence, equality between individuals and groups and a village based economy. These new policies led to huge parts of the rural population, particularly in the south, to be relocated in government-constructed villages. Further, the main focus was on local development, hence less attention to creating infrastructure, which would in particular connect the south to the rest of the country. However, as a result of pressure from both international national groups, Tanzania established a multi-party system in 1995. Nevertheless, Tanzania has not yet experienced a change of party. While Nyerere’s African socialism had positive implications such as low economic inequality compared to other Sub-Saharan countries, provision of public goods and social politics, the country experienced a general economic decline and the regime was not sustainable. Thus, in the mid-1980s Tanzania moved towards a market economy and there was a great increase of foreign investments and aid. 37

5.1.10 Trends in Conflict

Tanzania is often referred to as the “dog that doesn’t bark”. Despite, economic decline, poverty and neighboring countries engaging in violent conflict, has Tanzania stayed surprisingly peaceful since independence. The exceptions are a six-month border war between Tanzania and Uganda and a recent civil conflict.

In 2012 and 2013, violent protests broke out in the southern regions of Tanzania, Lindi and Mtwara. These southern regions have been isolated and marginalized and also suffered under the Mozambique civil war in the 60s and 70s taking place just across the border. According to World Bank data the average population living under the poverty line in Tanzania

37 This text is based on a background study by Idunn Kristiansen
in 1991 was 38.6%, decreasing to 35.3% in 2000. The same statistics for the South were 43.9 and 43.2, hence substantively larger and with very little decrease. Also, it was not until 2015 that the road to Dar es Salaam was finished. Nonetheless, despite this apparent marginalization of the region there has not been any uprising, which would have resonated well with horizontal inequality theory. It was not until the discovery of huge natural gas offshore discoveries in the region in 2010 that we saw violence increase in the region. Must (2016) and Must and Rustad (2017) argue that the increased expectations of development in the region due to discoveries where dashed by the decision to build a pipeline to transport the liquefied gas to Dar es Salaam instead of taking it onshore in Mtibara. This created frustrations and perceptions of being unfairly treated (See Chapter 2 on perceptions).

The northern regions of Tanzania have not experienced conflict and uprising; nonetheless, these areas are also marginalized compared to the bigger cities Dar es Salaam and Arusha.

5.1.11 Trends in Inequality

In Tanzania, there are a few minorities, and these are very small. The biggest differences are between religious affiliation: Christianity is the largest religion, making up approximately 60% of the population, with the Muslim population totaling about 30%. One of the main traits of African socialism in Tanzania was the focus on equality – both between individuals and groups. Thus, Tanzania has not developed the same polarization of either ethnic or religious groups. However, it seems that these policies possibly increased regional horizontal inequality.

Figure 69 indicates the types of identity groups where we can find the highest levels of inequality. When we compare the best groups with the worst, we see that there is a large difference between religious groups; however, when we look at the largest and second largest religious groups the difference is relatively small. When we compare regions, it seems that the inequality between the best and the worst region is fairly stable throughout the 2000s, while for the largest vs second largest it seems to drop since 2005. This could be because there has been development in the most populated areas but the less populated and marginalized areas, like Lindi and Mtibara, are still marginalized. Thus, for Tanzania we will mainly focus on regional differences and also partly look into religious differences.
5.1.11.1 Regional inequalities

The map to the left in Figure 70 indicates that in all regions at least 60% of the women have completed primary education. In the map to the right we see that in both the southern and northeastern regions, where only between 0-20% of all women had completed secondary education.

Figure 71: Inequality in years of education across provinces, religions, and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), Tanzania, 1990—2015 (DHS)

Figure 72: Educational attainment as share of women who had completed primary education (to the left) and women who had completed secondary education (to the right) in 2015 (DHS)
Figure 71 indicates the level and development of wealth between 2010 and 2015. In general, we see that all regions are doing well and that there is a positive trend from 2010 to 2015. But again, we see that the southern regions and the northeastern are slightly less privileged than the others.

5.1.11.2 Religious inequalities

Figure 72 indicates the cohort specifically education attainment (years of education) comparing Muslim and Christian women (to the left) and development of IMR for both religious groups (to the right). The graphs show that the mean for the Christian women are slightly higher than for the Muslim women, but this difference is miniscule.
Figure 74: Cohort specific development religious groups. To the left: mean average year of education for religious groups for women born the same year, and to the right: infant mortality rates (DHS)

5.1.12 Conclusion

Tanzania has a surprisingly peaceful country considering their level of poverty and the conflict history of their neighbors. On the other hand, Tanzania does not have the deep ethnic, religious, and geographical cleavages as we see for example in Nigeria and Uganda. This could partly be due to the fact that ethnicity was never a big factor during colonial times, but also due to Julius Nyerere’s African socialism where instead of using differences between groups as a means to create support, he worked towards creating national unity and being Tanzanian as the most important identity.
**Yemen**

Former Yemen President Ali Abdullah Saleh, who ruled the country from the re-unification of north and south Yemen in 1990 to his overthrow in 2012, is quoted as saying that ruling Yemen was like “dancing on the heads of snakes” (Clark 2010). President Saleh was referring to his efforts over the last three decades to keep peace and stability in Yemen through a combination of brutal repression and negotiating. Yemen under Saleh became a typical neo-patrimonial state where different groups in society sought to maximize the rent they could extract from the state (Salmoni, Loidolt, and Wells 2010). As a result, Yemen never developed a state with control over its territory. Instead, the various regional rivalries, between Aden in the South and Sanaa, the capital of unified Yemen, in the center, and between Sanaa and northern Saada, created continuous tensions and sporadic bursts of violence. This is in spite the fact that Yemen, in contrast to many other developing countries, is not lacking in any unified overarching sense of ‘nation’ – Yemenites have considered themselves a distinct nation since at least the seventh century.

Yemen is today rapidly becoming ‘the’ trouble spot in the world. As the world’s attention has been focused on Syria, the conflict in Yemen, with the most recent one starting in 2010, has largely been left to its own devices. This is highly unfortunate. The conflict in Yemen is becoming a humanitarian catastrophe on a similar scale of the Syrian conflict. In contrast to the Syrian conflict, which shows signs of winding down, the conflict in Yemen is still escalating. This case study of Yemen will briefly discuss the country’s conflict history and then feature a longer discussion about patterns of inequality and exclusion in the country. Lastly, we attempt to trace inter-linkages between inequality and armed conflict, focusing on the role of political exclusion.

### 5.1.13 Trends in conflict

Figure 75 shows the number of battle related deaths in Yemen from 1945 to 2015. As we discuss in more detail below, Yemen has seen several bouts of armed conflict since World War II. These conflicts have varied in intensity from low level simmering conflicts, to high-intensity full scale war as the conflict that rages in Yemen today.

#### 5.1.13.1 Pre 1990 unification.

Since re-unification, Yemen has seen internal armed conflict, both regular internal but in recent years increasingly internationalized, as well as non-state and one-sided conflict. We will
consider these trends in armed conflict in more detail below, but it should be noted that this is part of a larger pattern of armed conflict that stretches back to before the Second World War. The first record of an armed conflict involving Yemen in systematic databases is the Saudi Arabia – (North) Yemen interstate conflict of 1934 (Sarkees and Wayman 2010). The conflict was fought over the control of the area south of Hijaz along the Red Sea. Saudi Arabia captured the regions of Asir, Najran, and Jizan from Yemen, and in 1934, Yemen and Saudi Arabia signed a peace treaty (Treaty of Taif) that granted these areas to Saudi Arabia. Saudi Arabia did attempt to capture the capital of Sanaa during this conflict, but they quickly learned how substantial of an obstacle to conventional use of force Yemen’s mountainous terrain is – a lesson future and current counter-insurgency efforts are also learning (Salmoni, Loidolt, and Wells 2010). Between 1934 and unification, the two Yemens have been engaged in both internal and interstate conflict. Internal armed conflict followed the transfer of power in North Yemen in 1948 after the death of Imam Yahya and again in 1962 after the deaths of Yahya’a successor Imam Ahmed. The 1962 conflict, ostensibly between republicans supported by Egypt and royalists supported by Saudi Arabia, lasted until 1970 and resulted in a significant number of battle deaths. The UCDP/PRIO Armed Conflict Database (ACD) (Gleditsch et al. 2002, Melander, Pettersson, and Themnér 2016) considers the current ongoing conflict in Yemen to reflect the same underlying incompatibility and thus codes it as continuation of the same conflict. North and South also fought a low-level interstate conflict, essentially border clashes, in 1972 and 1979.

5.1.13.2 Post unification

Unified Yemen experienced its first bout of internal conflict in 1994. In 1993, Vice-President Ali Salim al-baid sets up a provision government in the southern port of Aden and alleges that the North is systematically marginalizing southerners. Soon after, President Saleh declared a state of emergency, and between May and July 1994 a brief civil war was fought essentially between fractions of the old northern and southern army that had not yet been properly

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38 At this point North Yemen was an independent state as it had been since the dissolution of the Ottoman Empire in 1918. The country that was to be called South Yemen was under British control. South Yemen became an independent state the formation of the People’s Republic of Yemen in 1967.

39 The mountainous terrain characterizing northern Yemen is many ways perfectly exemplifies the way in which such geographical features enables insurgency (Fearon and Laitin 2003).

40 A conservative low estimate from Lacina and Gleditsch (2005) put the figure as just below 5000 battle deaths.
integrated. From this example, the relationship between the conflict in Yemen and the lack of adequate security sector reform seems clear. Yemen had never really attempted to build a coherent and unified security sector that was truly under civilian control and responsive to society. Such reform efforts will inevitably have to be a critical ingredient in any efforts at building and sustaining peace in Yemen. The northern army quickly and efficiently overran southern forces and captured Aden. The brief conflict is estimated to have left between 1,500 and 7,000 direct battle deaths. Note that the current armed conflict is fought between northern insurgents and the central government. The continuing conflict therefore does not reflect the north-south tension, but rather the center-north tension that also sparked the armed conflict in the 1960s. The most prominent of these northern insurgents are Al-Qaeda in the Arabian Peninsula (AQAP) and the Houthi militia.

Figure 75: Battle related deaths, Yemen, 1945--2015

5.1.13.3 Current
The current internal armed conflict in Yemen, classified in the ACD as an internationalized civil conflict, can roughly be divided into two phases. The first phase started in 2009 with the formation of the AQAP and the groups subsequent attacks on a number of government and military facilities in southern Yemen. President Saleh launched a counter-insurgency campaign
against AQAP heavily supported by the US. This phase of the conflict reached a peak in terms of battle deaths in 2012. Subsequently, AQAP lost territory and towns it had conquered and the conflict deescalated somewhat. At the same time, Yemen saw the mobilization of a non-violent social movement that pushed for the ouster of President Saleh. The social movement that managed to stay active and non-violent in the midst of an active armed conflict, succeeded in its demands and in 2012 Saleh stepped down and handed over power to his Vice-President. It is worth noting that at the time this was seen one of few success stories from the ‘Arab Spring’. Unfortunately, it was not to last.

Following the relative demise of AQAP, the so-called Houthi militia became increasingly assertive. The Houthi militia represents groups centered on the Houthi family and the Zaydi Shia branch of Islam located in northern Yemen. The group has a long history of self-reliance. During Saleh’s reign, they became increasingly concerned about the influence of Saudi Arabian Wahabism in Yemen, and in 2014 they called on the government to step down. This

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41 Yemen had been strong ally of the US since the launch of the so-called ‘Global War on Terror’ (Salmoni, Loidolt, and Wells 2010).
led to rapidly escalating conflict that is still unfolding. Later the same year the Houthi militia entered the capital, and in 2015 they took complete control of the city and ousted the sitting president. Consequently, the Houthi militia is today the de facto government of Yemen. The main axis of the current conflict is between the Houthi militia and the forces of Hadi, named after the ousted president. The conflict is rapidly escalating in lethality. In 2015, non-state conflict also broke out between AQAP and the Forces of Hadi.

The last three decades of conflict in Yemen have affected most of the (inhabited) parts of Yemen. Figure 76 shows the location of conflict events, using the UCDP GED dataset, in the country across four periods. Below we discuss in more detail patterns of inequality in Yemen and then look at the (geographic) relationship between inequality and conflict.

5.1.14 Trends in inequality

**Figure 77:** Inequality in educational attainment across provinces and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), Yemen 1990--2007

![Graph showing trends in inequality](image)

Figure 77 shows trends in inequality Yemen in terms of years of education. The figure looks at inequality in terms of differences between provinces and urban vs. rural areas. As for previous country features, the left and right hand panels operationalize inequality across these groupings based on whether we compare the best performing vs. the worst performing group (left), or the largest vs. the smallest group (right).
Figure 78: Inequality in infant mortality rates across provinces and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), Yemen, 1990–2012

Figure 78 shows the same for infant mortality. There is evidence of substantial amounts of inequality in both education and infant mortality across provinces and urban vs. rural areas. In Yemen, these two categorizations will largely overlap, with more developed provinces in the south also having more urban areas. Both when we compare the best and worst performing regions/area or the largest vs. second largest group, we find substantial differences in education attainment and infant mortality. There is, however, evidence that this inequality has been decreasing – entailing that we are currently seeing a convergence between the northern and southern areas. The exception is infant mortality, if we compare the largest and the second largest groups. Here inequality was decreasing, but there have been some moderate increases in inequality in the last few years. As noted above, exclusion has been a powerful force for mobilization for northern rebel groups. These patterns of inequality show the presence of objective inequalities that these rebel leaders might have been able to use, or at least point to, in their mobilization and recruitment efforts.
An issue of particular concern in Yemen is access to potable or improved drinking water. Figure 79 shows inequality in access to water for provinces and urban vs. rural for the same comparisons as above. The pattern is very interesting. Since the mid-2000s, inequality in access to water has increased dramatically in Yemen. This holds regardless of whether we focus on provinces or urban vs. rural areas, or if we compare the best and the worst performing group or the largest and second largest group. If anything, inequality in access to water appears to still be on the rise. This has potential important implications for peacebuilding in Yemen. Even if peace could be achieved in the short-run in Yemen, a prospect that at the moment does not look very likely, this aspect of inequality is very likely to be detrimental to any post-conflict stability if not adequately addressed.
Philippines

After de-escalation and a lull in fighting since 2010, the armed conflict in the Philippines has seen a marked increase in intensity over the last two years. As we detail below, the Philippines experienced continuous conflict since its independence in 1946. There have been several attempts to reach negotiated settlements to the various conflicts, but so far all such efforts have failed or quickly unraveled. The Philippines is an archipelago consisting of nearly 7,000 islands, of which about 1,000 are inhabited. The country is ethnically and religiously quite homogenous – mostly Roman-Catholic, but with a significant Muslim minority group located primarily in the southern region of Mindanao. Since independence there has been substantial regional variation in socio-economic development in the country. This case study of the Philippines will briefly discuss the country’s conflict history and then feature a longer discussion about patterns of inequality and exclusion in the country. Lastly, we attempt to trace inter-linkages between inequality and armed conflict, focusing on regional inequalities.

5.1.15 Trends in conflict

Figure 78 shows the number battle related deaths in the Philippines from 1946 to 2015, the last year for which we have updated numbers. As is clear from the figure, the Philippines have had active armed conflict since independence. This conflict history can be succinctly summarized in two conflict processes involving two sets of actors. The first process has roots back to Philippine resistance to the Japanese occupation during World War II. Communist groups were
an important part of this resistance, and after independence these groups reacted to the central government’s attempts at instating market oriented and capitalist reforms. A rebellion, named the Huk rebellion after the name of the communist’s military branch Hukbong Bayan Laban sa Hapon (Peoples Army Against Japan), lasted from independence to the mid 1950, but mostly resulted in only low-intensity fighting.

As seen in Figure 78, the conflict escalated dramatically in the 1970s. This was a result of a major expansion of the Maoist Communist Party of the Philippines (CPP) and an effort by the Marcos regime at suppressing the state of rebellion – the Marcos regime instituted Martial law to allow them considerable latitude in combatting the rebellion. The 1970s and 80s saw continuous high intensity fighting between the CPP and government forces – fighting that affected most of the Philippine territory. In the early 1990s, however, the conflict de-escalated. This was a result of not only fatigue on both sides, but also because the military was becoming increasingly concerned with internal struggles, brought on by a series of failed coup attempts. The 1990s and 2000s have seen a string of failed attempts at a final resolution to the process. That last attempt failed in 2013. The conflict involving the CPP, as well as other related groups, remains active but is currently simmering at very low levels.

The second conflict process in the Philippines is centered on the Muslim minority group in Mindanao. The conflict can be traced back to the 1968 Jebidah massacre, where Christian military officers killed dozens of Muslim recruits. This led to the formation of an independence movement in Mindanao (whereas the first conflict process is over government this second is thus over territory) and a rapid escalation in fighting that led to a high-intensity armed conflict. As with the CPP centered conflict, in the 1990s the conflict de-escalated and several attempts at negotiated settlements were reached. Negotiations broke down in 2000, and since then the conflict has seen several waves of fighting. Currently, this conflict is experiencing a period of escalation and presently attempts at reaching a settlement do not appear to be making much headway.

The series of maps in Figure 79 shows conflict events in the Philippines in four periods. In the 1989-99 as well as the 2000-09 periods, when both the CPP and the conflict in Mindanao were active, armed conflict affected essentially every corner of the country. Indeed, Rustad et al. (2011) find when they attempt to predict sub-national risk of conflict in the Philippines that all regions of the country are at risk of conflict. In the two last periods since 2010 the CPP conflict dyad has mostly been inactive or only operating at a very low level of intensity. Consequently, armed conflict is today mostly clustered and confined to the southern Mindanao region.
5.1.16 Trends in inequality

Figure 82 shows trends in inequality in the Philippines in terms of years of education. The Figure shows four different ways of looking at inequality – in terms of differences between provinces, religious groups, ethnic groups, or urban vs. rural areas. Moreover, the left and right hand panels of the figure operationalize inequality across these groupings based on whether we compare the best performing vs. the worst performing group (left), or the largest vs. the smallest group (right). For instance, the red line in the left panel shows the mean difference in years of education across the best performing and worst performing religious group, while the red line
in the right panel compares the largest vs. second largest religious group. For the Philippines, this is in both instances comparing Christians and Muslims. Figure 83 shows the same breakdown of inequality, but instead focusing on infant mortality rates. There are few or no signs of any substantial inequalities in educations or infant mortality when we compare urban vs. rural areas. This holds regardless of whether we focus on the best vs. the worst groups, of the largest vs. the second largest. Inequality has stayed at low levels throughout the period, and in recent years there is some evidence of a slight decline.

Figure 82: Inequality in years of education across provinces, ethnic groups, religions, and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), the Philippines, 1990--2010

The Philippines has many ethnic groups. This makes it hard to get reliable estimates of inequality, since we only have a few respondents in each group. Ethnic groups are not a very salient aspect of Philippine politics, however, so we disregard ethnicity here. There is evidence of a substantial amount of inequality between provinces, especially when we compare the best vs. the worst performing areas. The worst performing areas are situated in the south. This is consistent, then, with the patterns of conflict discussed above, and with the regional differences in development we discuss below. Rebel group leaders have used these perceived, and actual, inequalities between especially the Mindanao region and the northern more developed areas to mobilize for armed conflict. Nonetheless, for both education and infant mortality, we see a trend of decreasing inequality for the more recent years for which we have conflict. This is of course a very encouraging development.
Figure 83: Inequality in infant mortality rates across provinces, ethnic groups, religions, and urban vs rural areas, best vs worst group (left) and largest vs second-largest group (right), the Philippines, 1990--2010

![Graph showing infant mortality rates across provinces, ethnic groups, religions, and urban vs rural areas.](image)

The figures above both focus on differences across groups over time. Figures 84 and 85 (left panels) instead focuses on the mean years of schooling (Figure 84) and average infant mortality (Figure 85) for birth-cohorts over time. The graphs end in 1990 since this is last cohort we have information for. For both figures, the left panel shows this cohort-specific information; the right panel compares majority and minority religious groups living in majority areas. The right panel thus shows means years of education for Christians (green line) and Muslims (orange line) living in Christian areas.

**Figure 84: Cohort specific educational attainment across religious groups (left), and educational attainment for minority groups living in majority areas, the Philippines, 1950--1990**

![Graph showing mean years of education for Christians and Muslims.](image)

Figure 84 show a consistent difference in mean years of education for Christians and Muslims. Across all the cohort for which we have data, we find that Muslims have 3 and 4 years less, on average, of education compared to Christians. There is also some evidence of a difference in infant mortality, Figure 85, with Muslim cohorts systematically having somewhat higher infant mortality rates. The differences here are, however, much smaller. By and large, these differences appear to be driven by regional differences. The two right-hand panels show little or no difference in average years of schooling or
infant mortality if we compare Muslim cohorts in Christian (majority) areas. For this measure, we also find a closing of the already small gap that existed between older cohorts. For the most recent cohort, there is virtually no difference between Christians and Muslims living in Christian majority areas for either years of education or infant mortality. Again, this is evidence of trend of decreasing inequality in the Philippines.

Figure 85: Cohort specific infant mortality across religious groups (left), and educational attainment for minority groups living in majority areas, the Philippines, 1950--1990
5.1.17 Regional inequality

There are substantial regional variations in socio-economic development, wealth and health within the Philippines. These inter-regional patterns of inequality coincide, to a large extent, with patterns of conflict.

Figure 86: Percent households with electricity (left), and average wealth index (right), the Philippines, 2008

Figure 86 shows socio-economic development measured in terms of the percent of households with electricity (left) and the wealth index (right) that we discussed in more detail above. Not surprisingly, the overlap between the two measures is substantial.
Wealthy regions predominantly have households with electricity. Level of socio-economic development differ substantially between the north and the south. On average, regions in the south, and especially the Mindanao island, are poorer and have more households without access to electricity. Figure 87 shows by region the percent of women with completed secondary education (left) and infant mortality (right). Essentially, the same picture as before emerges. There is a large north-south split within the country. In the south, fewer women have completed secondary education, and infant mortality rates are generally somewhat higher.

These consistent and wide-ranging patterns of intra-regional inequalities in development have been an important source for grievances in the country. The rebel groups, especially in Mindanao, have actively exploited these inequalities to mobilize recruits. In many ways, they are a prime driver of this particular conflict. These patterns of inequality, however, appear to have much less bearing on the conflict between the government and the CPP. Comparing Figure 81 and Figure 87, there is also some circumstantial evidence that the southern regions bear more of the consequences of the conflict. The south has seen substantially more conflict events, especially in the last 10 years and this conflict has conceivably also
contributed to the lagging development. It is beyond the scope of this feature to investigate the extent to which there is a causal link here, but the literature on the conflict trap would very much suggest it is (Collier et al. 2003, Hegre, Nygård, and Ræder 2017).
6 Policies for social and political inclusion

Introduction

What types of policy measures can reduce horizontal inequalities as well as mitigate the risk of armed conflict occurrence and/or recurrence? In this chapter, we examine the existing evidence regarding the relative effectiveness of policies adopted to address different types of horizontal inequalities – political, economic, social, and cultural – on preventing conflicts from breaking out at all, and from recurring in places that have been affected by conflict. The first section outlines the typology advanced by Langer, Stewart, and Venugopal (2012) regarding possible policy reforms that can address various types of horizontal inequalities and contribute to preventing conflict onset and/or recurrence. We then review the existing evidence regarding the impact of inequality-reducing policies on preventing conflict onset, and in the third section examine the impact of post-conflict policies on conflict recurrence. In the fourth section, we analyze the types of issues have been included in peace agreements and the impact that inclusion can have on agreement success in permanently ending a conflict. We conclude with reflections for future research and policy work on this topic.

Our main findings are as follows. First, there is sufficient evidence to suggest that political institutional measures, territorial decentralization, educational policies, and cultural recognition can help to avert the onset of conflict. Second, some aspects of political and military power-sharing as well as territorial autonomy policies seem to reduce the risk of conflict recurrence; but this is not the case for wealth sharing policies. Post-conflict educational provision has a positive impact on peace duration, but post-conflict economic policies have a very mixed record regarding their impact on peace duration. Third, in addition to including power-, military-, and wealth-sharing provisions, peace agreements have also paid attention to education, civil society, and gender – all of which make it more likely that a peace agreement will address the popular grievances driving a conflict. However, few agreements make specific provisions for important economic issues like systematic inequalities in employment and land reform, even though these issues are also often key motivating grievances for rebellion. Finally, we note that the evidence base regarding the effectiveness of policies adopted to address horizontal inequalities on conflict onset and recurrence is very limited, and there is a need for much more rigorous analysis of policy outcomes. We outline a number of knowledge gaps regarding policy effectiveness that should be taken up in further research and policy work in...
this area, including improving understanding of sequencing of reforms, how and why context matters, interaction and conditional effects, the ways in which policy reforms themselves can trigger conflict, and how policy reforms may shape perceptions of inequalities.

**A typology of policy measures**

Langer, Stewart, and Venugopal (2012) provide an overview of the types of policies that have been adopted – or that could be adopted – across countries to address horizontal inequalities and prevent conflict onset or recurrence (see Table 1 below). These policies either directly or indirectly address inequalities across the four types of inequalities. “Direct approaches involve targeting groups directly, positively (for the deprived) and negatively (for the privileged). Indirect approaches aim to achieve the same HI-reducing impact indirectly, via general policies affecting everyone in society” (Langer, Stewart, and Venugopal 2012, 22). Ethnic quotas are an example of a direct policy, while decentralization is an example of an indirect policy. Langer, Stewart, and Venugopal (2012) also consider a third category of policy measures, which are integrationist: those that reduce the salience of group boundaries, such as non-identity-based political parties.

In addition to the disaggregating policies across types of inequality, we can also distinguish policies based on whether they are specifically designed to prevent conflict from occurring at all through inequality reduction (*pre-conflict prevention policies*), or to prevent conflict from recurring (*post-conflict prevention policies*). Some policies impact both of these outcomes: they may work to both prevent conflict occurrence and recurrence, and their design may or may not be obviously tailored to pre- or post-conflict prevention (that is, pre- and post-conflict prevention policies may look similar). Peace agreements, however, are specific post-conflict arrangements that seek to resolve a conflict and prevent it from resuming again in the future, and some of the provisions found in peace agreements will be specifically designed to achieve those aims.
Table 8. “Examples of approaches to reducing HIs” (Langer, Stewart, and Venugopal 2012, 23)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Poltical</th>
<th>Indirect HI-reducing</th>
<th>Integrationist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct HI-reducing</td>
<td>Indirect HI-reducing</td>
<td>Integrationist</td>
</tr>
<tr>
<td></td>
<td>Group quotas; seat reservations;</td>
<td>Design of voting system to require power-sharing across groups (for example,</td>
<td>Geographical voting spread requirements; ban on ethnic / religious political</td>
</tr>
<tr>
<td></td>
<td>consociational constitution; list</td>
<td>two-thirds voting requirements in assembly); design of boundaries and seat numbers</td>
<td>parties (national party stipulations)</td>
</tr>
<tr>
<td></td>
<td>proportional representation</td>
<td>to ensure adequate representation of all groups; human rights legislation and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>enforcement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic</td>
<td>Anti-discrimination legislation; progressive taxation; regional development</td>
<td>Incentives for cross-group economic activities</td>
</tr>
<tr>
<td></td>
<td>quotas for employment; special</td>
<td>programmes; sectoral support programmes (for example, Stabex)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>investment or credit programmes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for particular groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social</td>
<td>Comprehensive access to services; regional programmes of support for social</td>
<td>Requirement that schools are multicultural; promotion of multicultural civic</td>
</tr>
<tr>
<td></td>
<td>Quotas for access to public</td>
<td>infrastructure and services</td>
<td>institutions</td>
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<tr>
<td></td>
<td>education; for scholarships;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>subsidies for school meals for</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>particular groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural Status</td>
<td>Minority language recognition and education; symbolic recognition (for example,</td>
<td>Civic citizenship education; promotion of an overarching national identity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>public holidays, attendance at state functions)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freedom of religious observance; no state religion</td>
<td></td>
</tr>
</tbody>
</table>

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Pre-conflict prevention policies

What types of policies are effective in preventing conflict from occurring at all? What might explain the absence of conflict in places where we see horizontal inequalities? The existing literature provides evidence about the effectiveness of just a handful of policies in mitigating inequalities and thus preventing conflict onset: the design and quality of political institutions, territorial autonomy in the form of federalism and decentralization, education policies, and cultural recognition. In terms of politics, high quality, democratic institutions, and low levels of government repression appear to reduce the likelihood of conflict breaking out. Decentralization’s effects on averting conflict are contextually conditional, depending on the characteristics of identity-based groups, the economic status of regions, and the design features of a decentralized political system. The pacifying effects of proportional representation and political inclusion are not clear-cut. Their effectiveness depends on context and the manner in which they were implemented. Finally, there is limited evidence to support the argument that ensuring access to social services like education and recognizing the cultural practices and norms of ethnic groups can actively prevent conflict from breaking out.

6.1.1 Political policy measures

6.1.1.1 Political institutions

Several studies point to the importance of the nature, design, and quality of formal governance institutions in both reducing inequalities and preventing conflict from breaking out. Regime type appears to be important; famously, democratic peace theory states that democracies will not fight each other and that strong democracies are also less likely to experience civil war (Hegre 2001, Maoz and Russett 1993, Hegre et al. 2001). Democracies also tend to redistribute more (Boix 2003). And democracy tends to reduce income inequality levels (Reuveny and Li 2003). Nevertheless, recent literature suggests that democracy alone does not reduce the risk of conflict onset, especially once income is taken into account. Hybrid regimes, semi-democracies and poor democracies have a very high risk of conflict onset, while middle-income democratic countries are more likely to be at peace (Hegre 2001, Hegre and Nygård 2015, Fox and Hoelscher 2012, Hegre et al. 2001). Hegre and Nygård (2015) find that informal institutions of governance (such as levels of corruption, political exclusion and repression, and bureaucratic quality) as opposed to the formal institutions of democratic governance (such as those that ensure the executive is elected by the population and constrained by the legislature) are more
likely to reduce the risk of conflict onset. In particular, political (ethnic) inclusion and low levels of repression decrease the risk of conflict onset.

Democratic rule may be important for an additional reason: reducing ethnic favoritism and by extension the group inequalities that can generate grievances. In a study of road building in post-independence Kenya (1963 to 2011), Burgess et al. (2015) find that in periods of non-democratic rule, districts that shared the ethnicity of the president received twice as much expenditure on roads and had five times the length of paved roads built. This favoritism disappeared during periods of democratic rule. Yet why did Kenya remain relatively peaceful during periods of non-democratic rule, despite the government’s clear ethnic favoritism? Stewart (2010) argues that this is because relatively deprived groups were included in government, overcoming grievances about relative economic deprivation. When the elections of 2007 threatened to exclude formerly politically included groups, the perceived injustice of inter-group inequality in public goods provision motivated individuals to engage in violence.

Collier et al. (2003) argue that political reform is required to reduce the risk of conflict onset. This entails institutionalizing democratic governance systems where: power is widely distributed, no actor is permanently excluded, checks and balances between branches of government are functional and robust, and there is real multiparty electoral competition in which the population can freely participate.

6.1.1.2 Territorial autonomy: Federalism and decentralization

Although not mentioned by Langer, Stewart, and Venugopal (2012) as a possible political inequality-reducing policy measure, federalism (or decentralization) is an additional political solutions that can protect the rights and interests of minority groups, manage regional horizontal inequalities, ensure a balance of power among groups, and thereby reduce the risk of conflict onset. Federalism or decentralization entails regional political autonomy from the capital; it is a combination of self-rule and shared rule that can preserve peace by “retain[ing] the territorial integrity of the state while providing some form of self-governance for disaffected groups” (Bakke and Wibbels 2006, 2). The available evidence, however, provides a mixed picture as to the conflict-prevention potential of territorially-based autonomous political authority, and the success of decentralized political systems in maintaining peace seems to depend on other social, political, and economic factors. We further discuss territorial autonomy in the fourth section of this chapter on post-conflict prevention policies, as power-sharing arrangements sometimes include territorial division between warring groups.
Bakke and Wibbels (2006) examine conflict onset in 22 federal states between 1978 and 2000, and find that federalism’s ability to contribute to peace is conditional on several factors: how federal institutions (fiscal decentralization, intergovernmental transfers, and political co-partisanship) respond to characteristics of the societies that they govern, most notably society’s level of wealth (inequality) and ethnic composition. Put more succinctly, federalism can help to politicize grievances created by inequalities and can mobilize people along ethnic lines. Fiscal decentralization decreases the likelihood of ethnic rebellion and protest where there is high interregional (economic) inequality, while large national governing parties increase the likelihood of conflict when minority regions are excluded from parties. Interregional inequality increases the likelihood of conflict onset when ethnic groups are regionally concentrated, while increased fiscal transfers by central to decentralized governments reduce the likelihood of ethnic protest when ethnic groups are regionally concentrated.

Erk and Anderson (2009) point out that there is a fundamental paradox at the heart of federalism. While it can accommodate differences between identity-based groups and prevent conflict in the short-run, in the long run it can also strengthen those differences in ways that lead to a push for secession, and can also create conflict between the center and regions that might otherwise not have existed. These authors argue that federalism can influence the outbreak of secessionist conflicts under three conditions: 1) when groups have the will and capacity to secede; 2) due to the workings of certain institutional design features (such as the number of sub-national units and rules of the electoral system); and 3) when certain economic and social factors are sufficiently salient for violent mobilization (including the structure of social cleavages and the degree of economic inequality between regions).

Diprose (2009)’s analysis of decentralization in Indonesia highlights the point that Bakke and Wibbels (2006) as well as Erk and Anderson (2009) make about the sometimes contradictory or paradoxical effects of decentralization on conflict onset. Decentralization has relieved center-periphery tensions around long-standing grievances towards nationalist agendas in Indonesia. To some extent, it has also addressed long-standing inter-group tensions and horizontal inequalities at the local level, particularly where geographically concentrated ethno-religious groups have previously been marginalized from government. Finally, it has reduced grievances by increasing local autonomy and participation in decision-making through direct elections of district heads. However, decentralization has also led to new tensions through demographic change, which has resulted in heightened ethno-religious segregation and power struggles via the splitting of subnational administrative units into increasing numbers of units.
Deiwiks, Cederman, and Gleditsch (2012) also find a conditional effect for federalism on conflict onset. In their study of conflict risk in 31 federal states between 1970 and 1992, they find an increased risk of secessionist conflict under conditions of economic inequality and political exclusion. In highly unequal federal states, both relatively developed and underdeveloped regions are more likely to be involved in secessionist conflict than are regions close to the national income average. Exclusion from central state power and ethnic groups’ access to regional institutions are both also associated with an increased risk for secessionist conflict.

An additional element of the political system in decentralized states may also influence the risk of conflict onset: political parties in decentralized regions. Brancati (2006)’s study of democratic states between 1985 and 2000 provides evidence that political parties influence the peace-preserving effect of political decentralization. While in general decentralized government systems are less likely to experience conflict than centralized ones, the risk of conflict onset in a decentralized system sharply increases with the presence of regional political parties. Such parties are likely to emphasize identification with the region rather than the state and potentially even undermining state legitimacy (Elkins and Sides 2007, Kaplan 2009).

Finally, Tranchant (2008) finds that the impact of fiscal decentralization in particular on conflict onset depends on state capacity and institutional strength. Fiscal decentralization reduces the risk of conflict onset only in rich countries when proxying state capacity with a measure of income (GDP per capita), but raises the risk when proxying state capacity with bureaucratic quality measures. Likewise, Selway and Templeman (2012)’s analysis also produces mixed findings regarding the effect of federalism on conflict: their analysis of 106 country-regimes between 1972 and 2003 results in inconclusive results for federalism’s pacifying effects, and they conclude that federalism alone does not impact political violence.

### 6.1.2 Social policy measures

Very little robust evidence exists regarding the pacifying effects of pre-conflict policy measures designed to reduce social horizontal inequalities, defined as access to social services and public goods like education and health. A number of studies have shown that access to education seems to reduce the risk of conflict onset for several possible reasons: equitable access can reduce grievances and send a signal that government is trying to improve people’s lives; access also conceivably raises the opportunity cost of engaging in conflict (although this may be offset by poor educational quality and lack of post-schooling employment opportunities); and curricular
content can provide people with the tools to resolve conflicts peacefully, can positively shape inter-group relations, and can also shape views about the social acceptability of using violence (Collier and Hoeffler 2004, Thyne 2006, Dupuy 2008a).

Taydas and Peksen (2012) find that a state’s ability to provide social welfare services such as education and health reduce the probability of civil conflict onset, while Østby and Urdal (2010) review several additional studies that demonstrate that greater government expenditure on education as well as availability of secondary education particularly for young men are linked to peace (cf. Thyne 2006). However, these studies do not examine whether this pacifying effect is the result of how schooling opportunities are distributed across distinct social groups, or how identity groups are treated in the curriculum and in schools. A few studies have attempted to determine the relationship between group educational inequalities and education, including Østby (2008b), who proxies horizontal social inequalities with a measure of group educational attainment (total years of schooling), and finds that higher levels of such inequality predict conflict onset. Likewise, Murshed and Gates (2005) also find that years of education attained in an administrative district are negatively associated with numbers of conflict-related casualties in that area. But Østby, Nordås, and Rød (2009b) fail to find a significant effect of regional relative deprivation in educational achievement on conflict onset.

Ukiwo (2007) provides a nuanced examination of how variation in access to higher education has influenced conflict onset versus prevention in Nigeria. Access to higher education has been politicized over the years, resulting in political and socio-economic inequalities between identity groups. Yet over the years, the state has also expanded access to educational opportunities and thus enhanced the ability of different ethnic groups to occupy public service positions, deflating past conflicts over differential access and employment. However, educational inequality still mobilizes people in the North for violence, and has contributed (negatively) to the flourishing of ethnic identities.

6.1.3 Cultural status measures
A few of scholars have written about policies designed to mitigate cultural horizontal inequalities, defined as imbalances in the treatment and recognition of different identity-based groups’ language, customs, and practices (Langer, Stewart, and Venugopal 2012). Langer (2009) and Langer, Mustapha, and Stewart (2007) compares how and why states in West Africa have managed horizontal inequalities in ways that either prevented or resulted in armed conflict. Langer highlights the case of Ghana, which has never experienced armed conflict, unlike its
neighbors, Côte d’Ivoire and Nigeria. Perhaps the single strongest reason for Ghana’s peacefulness lies in the symbolic impact of how state leaders, starting immediately after independence under President Kwame Nkrumah, promoted a strong national identity, actively supported teaching all the country’s languages, and emphasized the state as a culturally inclusive and neutral by stressing the value of each ethnic group. Political institutional measures were important in preventing the formation of strong horizontal inequalities: the country’s legal framework requires political parties to have a national character, and parties have formally agreed to refrain from using ethnicity in electoral campaigning. Moreover, the state has worked to ensure balanced regional representation in the executive (striving to include the economically disadvantaged northern region in particular), and has tried to overcome regional development gaps through redistribution. It is, however, hard to know whether or to what extent the Ghanaian case can be generalized. Langer recognizes the fact that identity has not, in fact, been a strong mobilizing factor in Ghana: the most excluded region of Ghana (the North) has a relatively few number of small ethnic groups, while Islam is not widespread in the country. Thus, whether the symbolic measures taken by Ghanaian politicians would have the same effect in other contexts with much stronger identity markers and systematic inequalities is not clear.

How the state treats different identity-based groups is likely important for social cohesion and levels of popular support for the state. van Staveren and Pervaiz (2017) emphasize the importance of positive inter-group relations for explaining social outcomes such as economic development. These authors provide evidence that the degree to which identity groups feel socially included determines social cohesion levels in a given context. Social inclusion entails group perceptions of discrimination, levels of inter-group trust and tension, and disparities in education and employment. Higher levels of social cohesion can mitigate the negative effects of ethnic diversity, including presumably the risk of conflict onset, since social networks and trust levels are likely to be higher. Easterly (2001) finds that high quality institutions that constrain the amount of damage one ethnic group can do to another (including those that provide legal protection to minorities, respect property rights, ensure contract enforcement, and facilitate cooperation for public services) reduce the negative effect of ethnic fractionalization on the probability of both conflict and genocide onset.
**Post-conflict prevention policies**

Much more evidence has been generated regarding the effects of post-conflict policies on the probability of conflict resumption. This is likely because it is difficult to know whether a policy has averted conflict from breaking out all together in the absence of an actual conflict occurring. It is also likely the consequence of the greater degree of scholarly attention that has been paid to trying to explain the causes of armed conflict rather than of peace (Hauge 2010). In this section, we review the evidence base for policies that have been adopted after a conflict has ended and that are intended to address inequalities between groups and also to prevent the re-eruption of violence. We examine power-, military-, and wealth-sharing arrangements that are often featured in peace agreements, as well as the territorial autonomy provisions that sometimes accompany power- and wealth-sharing provisions. We further analyze post-conflict social service provision and economic policies.

Our findings are as follows. Power-sharing as a post-conflict institutional measure has received the most scholarly attention; nevertheless, there is no general consensus that power sharing increases the chances of durable post-conflict peace. While wealth sharing policies that decentralize decision-making, and revenues from, high-value natural resources are relatively popular in conflict settlements, there is no evidence to suggest that they have any impact on preventing violence from re-erupting. In contrast to the mixed pre-conflict prevention potential of territorial autonomy policies in the form of federalism and decentralization that we discussed in the previous section of this chapter, territorial autonomy does seem to prevent the resumption of conflict.

Military power sharing, too, seems to increase the chances of a durable peace, though the existing evidence to support this is thin. Finally, evidence exists to support the argument that post-conflict educational provision has a positive impact on peace duration, but knowledge is lacking about the pacifying potential of other types of public goods and social service provision, such as infrastructure and health care. Finally, post-conflict economic policies have a very mixed record regarding their impact on peace duration, with the bulk of the evidence suggesting that more has failed in this area than has succeeded.

### 6.1.4 Political power sharing

Power sharing (or “consociational democracy”) entails the institutionalized division of political power among the “competing social groups in the transitional institutions of government” in a post-conflict period (Hartzell and Hoddie 2003, 318). In such an arrangement, all significant
groups participate in political decision-making, are constrained in the use of their power, and are granted the ability to govern themselves (Strøm et al. 2017). Arend Lijphart (1977, 1968), one of the first scholars to study power sharing, outlined its four defining features: a broadly inclusive, “grand” coalition executive authority; the existence of a mutual veto, wherein minority groups retain the right to block decisions in order to ensure their protection; proportional rules for selection into political office; and segmented or territorial autonomy as a mechanism for group self-rule (Binningsbø 2013, Schneckener 2002) (Strøm et al. 2017). The underlying idea of power sharing is that political inclusion, constraint, and partition provide warring groups with superior incentives and rewards for non-violent contestation than for violent combat (Gates et al. 2016). Warring groups can thus credibly commit to a power-sharing bargain, which reduces the chance that “spoilers” will defect from a conflict settlement.

Research on power sharing has not reached a consensus. Critics of power sharing doubt its pacifying effects and potential, pointing out that: power sharing arrangements do not ensure the rule of law and enforcement of human rights; they postpone rather than resolve conflict; they can harden group identities; they are difficult to implement due to a trust deficit between warring parties; and they may require both international security, political, and economic support as well as a pre-existing high degree of willingness among elites to cooperate (Vandeginste 2009, Sriram and Zahar 2009, Spears 2002, Schneckener 2002, Milligan 2013, Cheeseman and Tendi 2010). Moreover, post-conflict power sharing deals directly challenge democratic rule by granting power based on the use of violence rather than selection by a democratic electorate, and thus power sharing can incentivize actors to return to violence to increase their winnings in future negotiations (Binningsbø and Dupuy 2009, Tull and Mehler 2005). Power sharing can be a mechanism for ensuring the political inclusion of marginalized groups in society, but in the context of a conflict it does not necessarily entail that all, or even the most important, marginalized groups are included – but rather those groups that are the greatest threat to peace. Thus, power sharing arrangements do not always address inequality-related grievances.

Mukherjee (2006) finds that the security problem is a deal-breaker for post-conflict power sharing arrangements. In post-conflict peace agreements signed between 1944 and 1999, political power sharing agreements reduced the likelihood of conflict recurrence only when the previous conflict spell ended in military victory (for either government or rebels). When past conflicts ended in stalemate, power-sharing arrangements increased the likelihood of conflict resumption, perhaps because of commitment problems. This is probably because when power
sharing agreements are put in place after stalemates, governments are more likely to use the opportunity to rebuild their security capabilities to try to defeat the insurgency rather than uphold their commitment to joint, peaceful governance.

Jarstad and Nilsson (2008) also stress the importance of credible commitments in their analysis of peace agreements signed between 1989 and 2004. These authors find that when the parties to an agreement decide to make costly concessions by implementing military and territorial power sharing provisions, peace is more likely to prevail. Nonetheless, warring parties can easily renege on political power sharing agreements, and thus these authors fail to find a positive effect of political power sharing on peace. Ottmann and Vüllers (2015) examine agreements signed during a similar time period to Jarstad and Nilsson (2008) and reach the same conclusions: the promise of political power sharing increases the risk of conflict, while military, economic, and territorial power sharing promises decrease the risk. In contrast, Mattes and Savun (2009) find the opposite in their analysis of agreements signed between 1945 and 2005: that only political power sharing as a fear-reducing provision decreases the risk of civil war recurrence, but military, territorial, and economic power sharing have no impact. They further find that third party guarantees to political power sharing arrangements and cost-increasing provisions have significant effects.

Scholars have found a range of effects of for different characteristics of political power sharing arrangements. Cammett and Malesky (2012) find that closed-list proportional representation electoral systems are most likely to lead to durable peace (as opposed to a grand executive coalition, minority veto, and other provisions). Bogaards (2013) also finds support for a positive effect of proportional representation in securing peace. Martin (2013) finds evidence that executive power-sharing is particularly unstable, but that mechanisms that separate warring parties such as territorial power-sharing and proportionality in the military forces, as well as legislative power sharing, are likely to prevent conflict recurrence. Finally Strøm et al. (2017) and Gates et al. (2016) disaggregate power-sharing institutions into inclusive, dispersive, and constraining institutions, and find a positive effect on peace only for constraining power-sharing arrangements, while inclusive power sharing institutions actually increase the risk of conflict. Constraining institutions limit the power of the dominant party or social group and thus protect ordinary citizens and vulnerable groups against encroachment and abuse. Most existing definitions of power sharing omit these institutions. Gates et al (2016) show how constraining institutions alleviate commitment problems, thus reducing actors’
abilities to renege on bargains, repress their opponents, and foment conflict. In so doing, they provide a much-needed link between the literatures on repression and powersharing.

6.1.4.1 Informal institutions
In addition to political power sharing, other political issues seem to have a positive effect on preventing conflict recurrence. Hegre and Nygård (2015) find that informal political institutions (including rule of law, bureaucratic quality, corruption levels, economic policies, and political repression levels) make the risk of conflict recurrence decrease more rapidly than in other countries, while formal institutions don't reduce the risk of conflict until decades after the last conflict. Countries with nondemocratic institutions but excellent informal governance have lower immediate risk of recurrence than states with democratic institutions but poor informal governance. Thus, getting the informal institutions of governance “right” in the aftermath of conflict is just as important, or perhaps even more important, than the formal institutions, though they may be harder to influence. Other forms of informal social and political institutions may also prevent the recurrence of conflict, in particular those that manage identity. Simonsen (2005)’s examination of post-war politics in Iraq, Bosnia, Afghanistan, and Kosovo shows a need for the de-ethnicization of politics after conflict, which can be achieved by increasing contact across ethnic groups, promoting cross-group interests to make people aware of what they have in common, building inter-group trust, and emphasizing multiculturalism. Some of this also can be achieved through formal political institutions, such as the design of constitutions and electoral systems.

6.1.5 Territorial autonomy
Territorial autonomy in the form of federalism or decentralization is considered by some scholars as one of the core dimensions of power sharing arrangements. The general scholarly consensus is that territorial autonomy is good for post-conflict peace. Collier, Hoeffler, and Söderbom (2008) find a negative but non-significant effect of regional autonomy on conflict resumption, and Cederman et al. (2015) find a generally positive effect of autonomy on peace, particularly in countries with no prior history of conflict. Among other things, when autonomy is combined with central political power sharing arrangements, it can improve the quality of governance, make government more responsive to minorities and disgruntled groups, and guarantee minority groups’ physical security and identity survival. Martin (2013) also finds evidence of a positive effect for territorial power sharing in the form of self-governance.
arrangements on the chances a peace agreement will succeed, since territorial division both separates belligerents and preserves their group independence.

6.1.6 Military power sharing and integration, and security sector reform

Under the umbrella of the power sharing literature, very few scholars have examined the effect of military power sharing and integration on peace, defined as “the distribution of the state’s coercive power among the warring parties” (Hartzell and Hoddie 2003, 320). Jarstad and Nilsson (2008) further specify a military pact to mean “the integration of the military forces” (Jarstad and Nilsson 2008, 207). This can entail proportionality in military forces as well as the integration of rebel forces into the military (Binningsbø 2013). Martin (2013) and Jarstad and Nilsson (2008) both find a positive effect for military power sharing on post-conflict peace, while Hoddie and Hartzell (2003) argue that military power sharing agreements send credible signals of conciliatory intent to fully commit to peace among former enemies, but they find that only the complete implementation of military power sharing provisions significantly improves the prospects for maintaining peace.

Security sector reform (SSR) in post-conflict contexts can entail the integration of marginalized identity groups such as ethnic or religious groups into the military and police forces as a way to address horizontal inequalities and to defuse the influence of ethnicization on conflict recurrence (Brzoska 2006). In terms of the effects of ethnic integration into military forces, Simonsen (2007)’s review of ethnic integration into military forces in conflict-affected contexts shows that such integration can encourage a common sense of commonality across ethnic boundaries, reducing the likelihood of turning back to violence. Samii (2013) finds positive evidence for Allport’s contact theory via integrated security institutions, showing that quota-based ethnic group integration into the Burundian military resulted in a reduction of prejudicial behavior and attitudes by those who benefitted from the quotas (see also Gaub (2010) for additional discussion and evidence). Heinemann-Grüder and Grebenschikov (Heinemann-Grüder and Grebenschikov 2006) argue that multi-ethnic policing in Kosovo has been a critical factor in successful community-level policing in post-conflict Kosovo, and the police is far more ethnically integrated than other segments of society. However, this integration did not prevent some police officers from participating in the March 2004 protests against the arrest of former rebel leaders on war crime charges, with some of the more violent activities during these protests being ethnically motivated attacks. Finally, the case of Afghanistan shows how difficult it can be to depoliticize security factions; Sedra (2006) found that after the 2005
peace agreement, Afghanistan’s armed forces, police, and intelligence organizations remained highly politicized, to the point where one ethnic group dominated in these sectors. Faction and ethnic allegiances continue to be more important than loyalty to the state. A similar situation has occurred in rebel-military integration the eastern Democratic Republic of Congo, where the failure to create ethnically balanced military units in 2009 was capitalized on by local ethnic entrepreneurs to fuel violent inter- and intra-community tensions (Baaz and Verweijen 2013).

6.1.7 Wealth sharing

In addition to dividing political and military power, dividing control over natural resources is another power-sharing policy measure that has been adopted in a number of conflict-affected contexts, particularly in contexts where the management of high-value resources is perceived to be a root cause of a conflict (Binningsbø and Rustad 2012). Dividing control over resources can entail ceding decision-making powers over how resources are used to the geographic areas where these resources originate, and/or equitably distributing resource revenues. This can address grievances over resource mismanagement that may have motivated people to take up arms, and reduce poverty levels in resource-rich areas that can foment grievances. However, the existing evidence suggests that post-conflict wealth-sharing policies are unlikely to prevent the resumption of conflict.

Ross, Lujala, and Rustad (2012) argue that high-value natural resources are often unequally distributed within countries, and when distributional patterns align with identity cleavages, horizontal inequalities can result, leading to grievances either amongst the relatively deprived or the relatively advantaged. Those who feel that they do not benefit enough (the relatively deprived) from the resources extracted from their lands may wish to secede from the state or to gain greater control over their resource wealth, while those who do benefit (the relatively advantaged) may want to secede to ensure that they continue to benefit (cf. Asal et al. 2016, Collier et al. 2003). Resource revenue-sharing policies have had a positive impact on peace in some cases, such as in Aceh, Indonesia.

Despite the fact that wealth-sharing provisions that decentralize authority over, and revenues from, resources like oil, gas, mining, and forests have been included in a number of peace agreements and several states have adopted these types of policies in the post-conflict period, the evidence supporting their effectiveness in deterring a return to violence is mixed. In their examination of resource conflict termination measures between 1989 and 2006, Le Billon and Nicholls (2007) find that resource revenue sharing measures have a positive effect on
preventing conflict resumption. However, their research design allows them to draw only correlational conclusions, rather than causal ones. In contrast, Binningsbø and Rustad (2012) examine all laws and peace agreements adopted between 1946 and 2006 that call for resource revenue distribution, resource power allocation, and land reform in post-conflict contexts. They find no effect of such policies on the duration of post-conflict peace. This non-finding may be explained by the fact that other grievances than those addressed by wealth sharing policies were not resolved, and/or by the poor design and implementation of wealth sharing policies.

6.1.8 Public services provision

Given that inequitable social services provision often underlies both group grievances as well as opportunities for conflict, does evidence exist to suggest that improving services in the aftermath of a conflict can prevent the resumption of armed conflict? The few studies on this question suggest that the answer is yes, but the limited existing knowledge base means it is difficult to draw robust conclusions about this relationship.

Haigh et al. (2016)’s examination of four housing reconstruction projects in post-conflict, post-tsunami Sri Lanka showed that these projects increased, rather than reduced, ethnic tensions and discrimination. Reconstruction created new forms of conflicts and tensions for the individuals who came to live in the newly constructed houses, which was exacerbated by the fact that war-affected areas did not receive preference in aid allocation. Housing reconstruction projects were not planned in a way to reduce ethnic tensions, and did not improve contact between groups. The authors conclude that a key element missing from these projects was a robust grievance mechanism.

Ishiyama and Breuning (2012) examine the impact of increased access to education after conflict between 1989 and 2008 on conflict resumption, and find that increased enrollments in higher education in particular in the first five years after a conflict has ended significantly decreases the likelihood of a conflict will start anew. However, the authors do not analyze how post-conflict educational access reforms intersect with horizontal inequalities. The finding regarding the pacifying effect of higher education in particular is an interesting contrast to Thyne (2006)’s finding that university enrollments do not predict civil war onset. Conflict-affected states implement many types of reforms beyond merely expanding educational access, and Nicolai (2009) outlines examples of the various types education reforms implemented during and after conflict with the aim of contributing to conflict resolution. Reforms undertaken in various contexts and at different levels of the education system include
improved access to education, reintegration of conflict-affected individuals such as youth combatants and refugees into the education system, revised teacher training and curricular content (including the addition of peace education courses), and reformed school management practices. Some of these policies are designed to address the ways in which education systems can contribute to the creation and maintenance of group inequalities over time, such as through expanded access to the education system and reform of inappropriate curricular content. While many of these reforms may work to reduce group educational inequalities, they can also have negative consequences. For instance, expanded primary school access in Burundi in 2005 led to a decline in educational quality due to a lack of resources, and ultimately there was no change in regional education disparities (Nkrunziza 2012). Decentralization and expansion of education into disadvantaged communities in Guatemala, in addition to improved cultural recognition in the curriculum (including allowing bilingual teaching), has also resulted in quality differentials (Caumartin and Sànchez-Ancochea 2012).

Yet despite the prevalence of post-conflict education reforms and the frequency with which education is mentioned in peace agreements (see section 5 of this chapter), to date, no systematic study has been carried out to examine the effects of the various types of post-conflict education reforms on post-conflict peace duration. It is further unknown whether or how these different types of policies impact existing levels of group educational inequalities, and the length of time required for education policies to rectify educational inequalities.

### 6.1.9 Economic policies

Poverty is a strong predictor of conflict onset, and conflict often worsens poverty (Collier et al. 2003). Presumably, then, in order to prevent the resumption of conflict, economic policies and reforms in the form of employment and broad-based development programs are required. Yet the evidence regarding the ability of economic policy reforms to mitigate horizontal inequalities in the post-conflict period and also prevent the recurrence of conflict is limited and mixed.

Stewart (2012)’s assessment of post-conflict employment policies shows that in many cases, these policies are often too focused on supply-side policies such as training programs (which are unlikely to generate much employment), rather than demand-side policies such as public employment schemes, and that horizontal inequalities in employment have generally been ignored in post-conflict periods. For example, a vocational training program for ex-combatants in Sierra Leone resulted in a glut of young persons trained in specific skills for a very existing few jobs, a situation made worse by a lack of funding for entrepreneurial activities.
Post-conflict job training, employment creation, and income generation programs in Nepal fared somewhat better, but in some cases did not extend to the most disadvantaged groups and regions due to lack of funding. In a handful of post-conflict countries, affirmative action employment programs have been put in place to help to overcome economic horizontal inequalities. For example, Northern Ireland’s public sector employment quota has successfully reduced employment inequalities between Catholic’s and Protestants and has, but there has been no rigorous evaluation of its impact on peace duration in the country (Stewart 2006, Stewart et al. 2006).

Post-conflict economic reforms that focus on implementing neoliberal reforms such as liberalization of regulations and the privatization of state functions are designed to build and strengthen market economies and thus generate economic growth through employment and investment. Yet there is a risk that market-based development models either maintain or worsen group inequalities, for instance because these models heighten formal sector unemployment, lead to uneven wealth accumulation by some groups in society (including those in urban areas), and result in a loss of access to core social services like health, education, and water resources for marginalized groups (David 2002, Venugopal 2012). For instance, Uganda’s privatization of parastatal enterprises in the mid-1990s generally benefitted richer groups and those close to government (Langer and Stewart 2012). Neoliberal policies pursued by Rwanda’s post-genocide government had clear urban and pro-rich biases (Leander 2012). Privatization can simply serve as an alternative means for entrenched patronage networks and corrupt elites to snap up and control new sources of revenue and enhance their political power at the expense of other groups, increasing corruption at the expense of the disadvantaged (Venugopal 2012, Le Billon 2008). And while economic inequalities generated through market reforms can spur innovation, a capitalist economy can also foster socially unhealthy competition between identity groups that leads to heightened inter-group tensions (Richmond 2014).

**Peace agreements**

The end of an armed conflict is an important moment to not only entice armed groups to lay down their weapons for good, but also to lay the foundation for the types of social, political, and economic changes that can address the root causes as well as the consequences of conflict. In particular, these changes have the potential to reduce levels of horizontal inequalities that may have motivated groups to engage in armed conflict. This section reviews the types of policy
measures have been included in peace agreements and that either directly or indirectly aim to mitigate horizontal inequalities. We also briefly examine the types of issues that are more versus less likely to be included in a peace agreement and the rationale for this. We find that in addition to political and economic issues such as power- and wealth-sharing provisions (discussed in the previous sections of this chapter), peace agreements have additionally included attention to education, civil society, and gender. We review each of the last three issue areas in turn, and discuss their importance in alleviating inequalities and in turn preventing conflict recurrence. We also find that few agreements make specific provisions for important economic issues like employment, land reform, and control over natural resources. While not all peace agreements are implemented, this neglect is highly problematic, given that economic inequalities often provide motive and opportunity for people to take up arms.

Conflict-inducing grievances over a lack of access to education and/or inappropriate curricular content has motivated individuals to join rebel groups. Examples include Sierra Leone, where young people specifically named exclusion from the education system as a reason for taking up arms (see Peters and Richards 1998), and Rwanda, where teaching during Belgian colonial rule consisted of actively emphasizing differences between the country’s ethnic groups, laying the foundation for the country’s violent, inter-group hatreds and conflicts (Bush and Saltarelli 2000). Peacemakers have been actively addressing education’s role in fuelling armed conflict in negotiated agreements, as Dupuy (2008b) finds in her study of peace agreements signed between 1989 and 2005. In fact, well over 50% of all agreements (full and partial) signed during that time period mention education in some form. Agreements require four types of activity in the education sector: implementing the right to education, resuming education services in the post-conflict period, responding to conflict-created issues within the education sector, and actively reforming the education system as a way to address the issues at the heart of the incompatibility between the warring parties. Dupuy (2008b) does not investigate the implementation of these provisions, but as Nicolai (2009) shows, a number of post-conflict countries have successfully implemented post-conflict education reforms in the form of improved access and curricular changes, with some of these reforms called for in peace agreements.

Existing evidence also suggests that in addition to including social provisions like education in a peace agreement, incorporating civil society into the negotiation, contents, and implementation of an agreement is critical for agreement success. This is because negotiated settlements are more likely to “stick” when non-elite groups such as civil society organizations,
are included in peace processes (Dupuy, Gates, and Nygård 2016). “Civil society” is a broad concept that includes not only formal organizations, but also grassroots community groups, trade unions, and religious groups (Nilsson 2012). Agreements that are crafted and signed solely by warring elites are unlikely to fully address the grievances that result from horizontal inequalities and lead to violence, and they are also unlikely to reduce those inequalities. In fact, agreement success seems to depend on civil society involvement in particular, as Nilsson (2012) shows in her analysis of all peace agreements signed in the post-Cold War period. While only around one-third of agreements signed during this time period included at least one civil society actor, Nilsson’s results show that peace durability significantly increases when civil society organizations are involved in peace accords, with the risk of agreement failure reduced by as much as 64% (Nilsson 2012). Peace agreements outline different types of roles for civil society actors, including in the delivery of humanitarian relief and addressing needs of the displaced; monitoring peace agreements, especially in terms of fulfilling core human rights commitments; legitimating peace agreements and resulting administrations, including spreading awareness of it and consulting the public on its contents; and in playing a role in transitional governance (Bell and O'Rourke 2007).

Including women in agreements is also important for ensuring that larger societal grievances are addressed in the post-conflict period, that agreements endure, and that women’s concerns in particular are addressed. United Nations Security Council Resolution 1325 calls for women’s full participation in peace processes in order to maintain and promote peace and security. Such inclusion can, of course, help women to achieve social, political, and economic gains, but can also be the catalyst for addressing other types of horizontal inequalities that have may fueled conflict. Bell and O'Rourke (2007) find that while a low proportion of agreements actually make mention of women (just 16%), there is evidence of an increase in women being mentioned in peace agreements after the adoption of the Resolution 1325. Agreements where the United Nations serves as a third party are particularly likely to mention women. Provisions are made in peace agreements for women in a number of ways: as part of power-sharing provisions (see Bell 2015); through guaranteed inclusion in political institutions more broadly, such as through quotas in legislative bodies; through protection for indigenous women; through general references to political and legal gender equality or non-discrimination and through broad commitments to uphold women’s human rights; and through calls to address women and girls’ needs in post-conflict reconstruction processes, including addressing the effects of sexual violence.
Despite the promise that including women holds for peace durability, it should be noted that gendered provisions in conflict settlements are not always implemented, and that social reforms in the direction of greater gender equality appear to depend on three factors: international support for gender mainstreaming in peacebuilding, the larger structural base of power relations in society, and the institutional framework for post-conflict governance in a given context (Nakaya 2003). As Nakaya (2003) argues, women can actually fare worse after an agreement: for instance, after peace agreements were signed in Somalia and Guatemala, women’s political power actually declined, while the post-conflict privatization of public services – prescribed by international donors in the spirit of pro-market post-conflict reforms (see Richmond 2014) – disadvantaged women in particular. More worryingly, perhaps, is the fact that pre-existing gender and power norms are largely responsible for whether women can successfully influence peacemaking. Gizelis (2011, 2009) shows United Nations-led post-conflict peacekeeping operations are more successful in societies with higher levels of female empowerment. In such contexts, women are able to express their views in peacemaking processes and to participate in peacekeeping operations, providing these operations with a larger amount of social capital on which to draw. Thus, the question is how to improve gender equality levels such that peacekeeping and peacebuilding operations will succeed and conflict will be permanently terminated.

Finally, while peace agreements have included provisions for education, civil society, and women, there are many issues that are not included and that are unlikely to receive attention in agreements. Political and security provisions tend to dominate the contents of peace agreements, and transitional justice provisions have also become more prevalent over time (Westendorf 2015). But other issues – particularly economic ones like employment, improved access to land through land reform, and the equitable distribution of revenues from natural resources – are less frequently mentioned, even though these types of issues often create the types of inequalities that are the basis for grievances that drive people to join rebel groups (Westendorf 2015, Binningsbø and Rustad 2012). Post-conflict governments may, of course, adopt policies outside of peace agreements that give attention to these issues, but face difficulties in doing so, given the sensitivity of issues like land reform and the fact that generating jobs and ensuring equal access to them in a war-destroyed economy is an enormous hurdle.
Conclusion

Table 2 below summarizes the findings of this chapter. There is some evidence of a positive effect of political institutions on pre- and post-conflict prevention, mixed evidence regarding social and cultural policy measures, and almost no conclusive evidence for economic policy measures. This state of the knowledge base may reflect scholars’ greater level of attention to political as opposed to other issues in explaining conflict occurrence and resumption, and thus we should not necessarily assume that economic, social, and cultural policies can or do not work to prevent conflict. The lack of robust evidence about policy effects is a significant research gap that should be taken up in future work, as much policy advice about how to address the relationship between inequalities and conflict is currently based on theory, not empirics (McCoy 2008). The quality of the existing evidence base regarding policy impacts is also challenged by the inability to draw strong conclusions due to methodological considerations. Additionally, the different measurements scholars have used for policies and inequalities also create problems in comparing effects across studies.


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<th>Dimension</th>
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<td><strong>Pre-conflict prevention</strong></td>
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<tr>
<td>Political</td>
<td>Formal institutions (democracy) (+); informal institutions (+); proportional representation (x)</td>
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<td>Peace agreement inclusion</td>
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<td>Political power sharing (x), military power sharing, territorial autonomy</td>
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<tr>
<td>Economic</td>
<td>Wealth sharing (-), employment programs (x), development aid (x)</td>
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<tr>
<td>Social</td>
<td>Education access (+), curricular content (x)</td>
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<td>Cultural</td>
<td>Symbolic recognition (x)</td>
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Note: (+) = positive impact; (-) = negative impact; (x) = impact uncertain
A number of additional knowledge gaps emerged from this chapter. In addition to the lack of evidence about the effects of certain types of policies on mitigating different types of inequalities, there is also the difficulty of attributing outcomes to particular policies for two reasons. First, without a rigorous research design, it is not always possible to establish that a given policy has alone prevented conflict, and we cannot always know why “dogs don’t bark”: that is, what prevents a country from experiencing conflict at all. Second is the question of whether countries that adopt certain policy measures in the aftermath of conflict have explicitly done so to try to prevent a conflict or because of international pressures that they might have conceded to anyways – and how this difference may impact policy design and implementation.

For example, do conflict-affected states that implement education reforms in the aftermath of war do so because they view education as a pacifying mechanism, or because of significant international pressure to achieve development and human rights goals?

Other research gaps include: the need to better understand when policy reforms designed to try to mitigate inequalities and prevent conflict can actually have the opposite effect, as when affirmative action reforms trigger a backlash; whether policy measures can, in fact, actually address the root causes of conflict, given that conflict also shapes inequalities and causes new ones to emerge; what types of interaction or conditional effects that policy reforms might have, including how combinations and degrees of inequalities determine policy impacts; the contextually dependent nature of reforms and inequalities, including a better understanding of why the same policy reform may have certain effects on one place but not in another; the long-versus short-term impacts of policy reform on conflict and peace; the sequencing and prioritization of reforms; and whether and how policy measures impact and shape perceptions of inequality.
7 Conclusion: preventing conflict and sustaining peace

What is the relationship between inequality and armed conflict, what are trends in inequality, and how can patterns of inclusion and exclusion be addressed? Getting the answer to these questions ‘right’ is crucial for developing successful policies for preventing conflict and sustaining peace. We have outlined the available scientific evidence on these questions. Inequality has been a central concern for a large scholarly body of work, but despite the substantial attention that has been paid to understanding vertical inequalities and conflict, there is no conclusive answer as to whether, why, and how this type of inequality impacts conflict. While the conventional wisdom is that inequality should trigger conflict, methodological and conceptual problems plague the study of vertical inequality and conflict. More problematic is the fact that this literature struggles to answer the question of how and why inequality mobilizes certain groups for violence.

Partially in response to this, scholars have shifted focus to examining horizontal inequalities. The horizontal inequality literature examines how inequalities based on group identities, such as ethnicity, region, and religion, influence the incidence of conflict. There is a solid amount of support in the literature for the argument that high levels of horizontal economic and political inequalities among the relatively deprived make violent conflict more likely, but only mixed evidence regarding the relatively privileged, and very limited evidence for the influence of social horizontal inequalities. We still need more research and evidence about which types of group-based identities matter for mobilizing people to engage in conflict, and how and why they do. This includes a need for more knowledge about the role of perceptions and emotion in making certain identities more salient than others.

Several prominent authors within the horizontal inequality literature (Gurr 1970, Stewart 2000, 2002, Cederman et al 2013) have pointed out the importance of perceptions of inequalities. The literature on perceived horizontal inequalities remains small, but the few studies that exist do find a relationship between perceived inequalities and attitudes towards violence. Importantly, these studies show that objective and perceived horizontal inequalities do not necessarily overlap. On the contrary, the correlation between the two is not as high as expected, a pattern we confirm and further document using fine-grained survey data. This is important, since it means that the relationship between perceived HI and conflict attitudes is not a proxy for the relationship found between objective HI and conflict. The pattern of overlap between objective and subjective inequalities also varies. It tends to be higher for (perceived) inequality between regions, but lower for inequality between ethnic groups. There are at least
two plausible explanations for this. First, regions might simply not be the best group identifier to use as the basis of calculating HI – for most people the spatial or regional identity is not that relevant or salient compared to ethnic groups. Second, the survey question used to calculate perceived ethnic HI was specifically used to ask how the respondents’ ethnic group compared to other ethnic groups. That is, the respondent was asked to compare their ethnic group with other ethnic groups.

This highlights the need for more and better quality data to measure perceived inequalities, as well as data on how these perceptions are triggered. Without such data, we can not fully assess how inequalities affects conflict. It is essential that large survey undertakings, such as the AfroBarometer, continue to collect data on perceptions, which they failed to do in Round 5 and 6. The ShaSA surveys, which cover 10 African countries, also include questions of political perceptions, but they do not probe specifically for identity groups and are therefore less suitable for testing perceived horizontal inequalities. This, however, could easily be changed by adding a few more focused questions to the standard questionnaire.

The evidence base for the relationship between inequality and armed conflict relies on high-quality, fine-grained data on inequalities. We document and map available sources that can be used to measure and track both vertical and horizontal (objective and perceived) inequalities. Inequality is a complex phenomenon. In a given country (or region) or a given time, to a large extent the level of inequality depends on how it is operationalized and measured. Vertical (economic) inequality is most commonly measured using the Gini coefficient. The best empirical database on income inequality data is the Wider Income Inequality Database, which is based on a wide variety of national surveys. These surveys differ in their reliability, coverage and definition of income. To construct a reliable measure of vertical inequality we sort all surveys according to their reliability, coverage and definition of income, and then use the best surveys for each country-year observation. It should be noted that this, not surprisingly, reveals that the best, most reliable data on income inequality are found in open, rich economies, whereas data on Africa and Asia is much less reliable. Perhaps more problematically, we find that countries with higher levels of inequality tend to systematically have lower quality data on such inequality. Nonetheless, using this data we find that the world currently has the highest levels if income inequality on record: globally, inequality decreased from 1960 to 1990, but then the trend reversed and inequality climbed back to 1960s levels. It has since stayed around or above these levels.
For horizontal inequality, the picture is somewhat different. To construct measures of horizontal inequality, we rely on a large amount of household surveys, mostly from the DHS and MICS surveys. Using these surveys, we are able to cover a large part of the world including (and this is of course especially important given an interest in conflict) most of Africa, Latin America, and South East Asia. We focus on inequalities between ethnic, religious, and spatial groups, comparing such groups using different metrics, and in terms of, especially, education and infant mortality. For instance, we find that many countries have high levels of HI between ethnic groups regarding female education, but there is considerable variation between countries as regards the level of HIs. Chad is the most unequal country overall, with a HI score of close to 0.8, whereas Kazakhstan is at the bottom with insignificant HIs between ethnic groups for girls’ education. For education as well as for the other measures of inequality we consider, African countries tend to top the list of the most unequal countries. This is perhaps not so surprising given that the other continents are steadily reaching or have already reached development goals, such as universal secondary female education. Moreover, questions vary internally according to what type of inequality we focus on. Nigeria, for example, has the highest levels of HI when ethnicity is chosen as the group identifier, but not when religion is used to compare groups. Similarly, consider a country such as the D. R. Congo. Depending on how you measure it, Congo can be seen as having substantial HIs or little or no inequality at all. In developing policies to prevent conflict, policymakers must consider these discrepancies.

It should be noted that these large differences in HI across measures also provide opportunities for people that want to mobilize for armed conflict to essentially ‘cherry-pick’ and focus on the comparison that is perceived as most egregious. In general, we find that rates of horizontal inequality in education tends to be higher than rates of inequality in wealth or in infant mortality. That is, there is considerable evidence that ‘all good things do not go together’. Countries such as Mozambique can have very low levels of horizontal inequality in terms infant mortality rates. This could be because an overall focus on infant mortality has benefitted all groups, but could also be a result of a concerted effort to reduce inequalities. At the same time, however, we see that Mozambique has high levels of HIs in education and wealth. For development actors, it is thus important to realize that success in one area does not automatically translate to other areas.

In contrast to the trend in vertical inequality, however, the picture that emerges for horizontal inequality is not entirely bleak. Indeed, our main message in mapping horizontal inequality in infant mortality is one of optimism. For this particular type of inequality we can,
using information on respondents’ birth histories contained in the surveys, examine the trend over time. This allows us to compare the trend in overall infant mortality with the trend in horizontal inequality in infant mortality. We show, not surprisingly, that infant mortality has decreased sharply. This strong negative trend in infant mortality rates is well-known and thoroughly documented as part of the Millennium Development Goals. Likewise, we also document a similar trend for horizontal inequality in infant mortality. HI in infant mortality increased until around 1985, but since then has declined at the same rate as the overall decline in infant mortality. In other words, both infant mortality and horizontal inequality of the same are presently at an all-time low.

This is certainly good news, but is also at odds with the prevailing view that horizontal inequalities are, essentially, too “sticky” for development actors to be able to address them (see for instance: Tilly 1998). Uvin (2009, 86) argues that: ‘horizontal inequality is sticky – it does not change easily. When the political system changes the persistence of horizontal inequality creates a more mixed system, with a likely stabilizing impact’. The quite remarkable decrease we document in horizontal inequality in infant mortality directly contradicts such arguments. Indeed, it appears that horizontal inequality in infant mortality is just as amendable to improvement as infant mortality itself. Consequently, there is no reason to believe that policies to address HIs in infant mortality should, a priori, be less effective than policies to address infant mortality. We caution, however, that presently we only have time varying data that allows us to say something about infant mortality HIs; we can not similarly analyze the trend in, for instance, horizontal inequality in education or wealth.

This points to some of the core recommendation from our mapping exercise. We simply need more and better data. This includes both collecting data for countries for which we have little or no information, but also collecting more and more recent data for most countries. More fine-grained data would potentially allow us to construct time-varying measures of other types of horizontal inequality than for infant mortality. This would be immensely useful – not only for improving our understanding of inequality and conflict, but also for designing policies to address horizontal inequality. At present, we simply lack adequate data to really say much specifically about what policies work in addressing horizontal inequality. As always, new data also needs more nuances and to be systematically geo-referenced. Such issues should ideally be taken on by the UN Statistical Commission and the UN Economic and Social Commission in their planning for the Sustainable Development Goals.
That said, we can say something more specifically about the effectiveness of policies aimed at addressing exclusion. In the scholarly literature overall, there is some evidence of a positive effect of political institutions on pre- and post-conflict prevention, mixed evidence regarding social and cultural policy measures, but almost no conclusive evidence for economic policy measures. This state of the knowledge base may reflect scholars’ greater level of attention to political as opposed to other issues in explaining conflict occurrence and resumption, and thus we should not necessarily assume that economic, social, and cultural policies do or do not work to prevent conflict. It is indeed troubling, as highlighted by McCoy (2008), that policy advice about how to address the relationship between inequalities and conflict is currently based on theory and not rigorous empirics. The quality of the existing evidence-base regarding policy impacts is also challenged by the inability to draw strong conclusions due to methodological considerations.

Still, there is sufficient evidence to suggest that political institutional measures, territorial decentralization, educational policies, and cultural recognition can help to avert the onset of conflict. Some aspects of political and military power-sharing as well as territorial autonomy policies also seem to reduce the risk of conflict recurrence; but this is not the case for wealth sharing policies. Post-conflict educational provision has a positive impact on peace duration, but post-conflict economic policies have a very mixed record regarding their impact on peace duration. In addition to including power-, military-, and wealth-sharing provisions, peace agreements have also paid attention to education, civil society, and gender – all of which make it more likely that a peace agreement will address the popular grievances driving a conflict. However, few agreements make specific provisions for important economic issues like systematic inequalities in employment and land reform, even though these issues are also often key motivating grievances for rebellion. We also note that the evidence base regarding the effectiveness of policies adopted to address horizontal inequalities on conflict onset and recurrence is very limited, and there is a need for much more rigorous analysis of policy outcomes.

More generally, much research is still needed on these issues. Research gaps include the need to better understand when policy reforms designed to try to mitigate inequalities and prevent conflict can have the opposite effect, as when affirmative action reforms trigger a backlash. We have yet to determine whether policy measures can, in fact, address the root causes of conflict, given that conflict also shapes inequalities and causes new ones to emerge or what types of interaction or conditional effects that policy reforms might have, including
how combinations and degrees of inequalities determine policy impacts. Finally, the contextually dependent nature of reforms and inequalities, including a better understanding of why the same policy reform may have certain effects on one place but not in another along with the long- versus short-term impacts of policy reform on conflict and peace all need to be explored, along with the sequencing and prioritization of reforms. Lastly, more research is needed into whether and how policy measures impact and shape perceptions of inequality.
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