Regular Research Article

Estimating the relationship between ethnic inequality, conflict and voter turnout in Africa using geocoded data

Klaus Ackermann a,⁎, Sefa Awaworyi Churchill b, Russell Smyth c

a SoDa Labs and Department of Econometrics and Business Statistics, Monash Business School, Monash University, VIC 3800, Australia
b School of Economics, Finance & Marketing RMIT University, VIC 3000, Australia
c Department of Economics, Monash Business School Monash University, VIC 3800 Australia

ARTICLE INFO

Keywords:
Ethnic inequality
Conflict
Voter turnout
Africa

ABSTRACT

To what extent is voter turnout influenced by ethnic inequality? We combine ethnolinguistic maps on sub-national locations of ethnic groups with night-time light satellite images to construct a dataset of ethnic inequality across sub-national locations in 24 African countries. Using election data from the constituency-level elections archive, we show that ethnic inequality is negatively associated with voter turnout. This relationship holds even after we control for endogeneity and geographic characteristics. We also construct a dataset of election conflict across the sub-national areas. We find that an increase in ethnic inequality is associated with an increase in conflict, which reduces voter turnout.

1. Introduction

Economists and political scientists have long been concerned about the factors that influence voter turnout given its central importance to democracy and role in shaping social and economic outcomes (Alacervich & Zejcirovic, 2020; Blais, 2006; Kasara & Suryanarayan, 2015; Stockemer, 2017). Yet, despite a burgeoning literature on the determinants of voter turnout, many aspects remain unexplored. While prior research demonstrates that race and ethnicity influence political action (see, e.g., Leighley & Nagler, 2013; Leighley & Vedlitz, 1999; Verba et al., 1993) and that ethnic diversity affects voter turnout and the dynamics of electoral politics (see, e.g., Bhatti et al., 2017; Förster, 2018), we know very little about the interplay between ethnic inequality, conflict, and voter turnout. This issue is particularly important in many nascent democracies, in particular in Africa, that have been plagued by ethnic violence and poor economic outcomes (Campbell, 2004). More generally, we also know little about the factors influencing voter turnout in developing countries. We extend the literature by examining the effects of ethnic inequality on voter turnout in Sub-Saharan Africa and how this relationship is mediated by conflict.

Ethnic inequality focuses on the intersection between ethnic diversity and economic cleavages, and reflects the economic differences that exist between ethnic groups in geographic spaces (Alesina et al., 2016; Houle et al., 2019). Many ethnic minorities around the world face deteriorating economic outcomes. This is particularly true in Africa (Campbell, 2004). The importance of better understanding the relationship between ethnic inequality, conflict and voter turnout lies in the fact that voting represents citizens’ preferences (Hajnal & Trounstine, 2005) and underpins the strength of democratic and civil societies (Bhatti et al., 2017). The unequal exercise of democratic citizenship is an important question for the world’s non-consolidated democracies. In particular, in terms of improving the economic lots of ethnic minorities, voter turnout is of interest because of its role in influencing changes in policy that contribute to the rate of economic development and social inclusion (Husted & Kenny, 1997).

To examine the relationship between ethnic inequality and voter turnout, we construct a new dataset of ethnic inequality for 24 African countries covering the period 1991 to 2018. A key innovation of our study is that we employ measures of ethnic inequality at the sub-national, as opposed to the national, level. Specifically, we combine ethnolinguistic maps on sub-national locations of ethnic groups with night-time light satellite images. Using election data from the constituency-level elections archive (CLEA), we show that ethnic inequality is negatively associated with voter turnout. This correlation holds even after we control for endogeneity and geographic characteristics. We also construct a dataset of election conflict across sub-national areas. We discover that the relationship between ethnic inequality and voter turnout channels through conflict. Specifically, we find that higher
levels of ethnic inequality lead to conflict, which considerably weakens political participation.

We contribute to multiple strands of literature. First, our study closely relates to the literature that has examined the impact of ethnic and racial diversity on voter turnout and political participation more generally (see, e.g., Bhatti et al., 2017; Coma & Nai, 2017; Fieldhouse & Cutts, 2008; Forster, 2018; Hill & Leighley, 1999). These studies have mostly focused on developed countries using individual-level data to understand trends in individual, self-reported electoral turnout. We differ from this literature in that we focus on the role of ethnic inequality and conflict in influencing turnout in an important developing region context. Our approach is also innovative in that we leverage sub-national statistics on actual voter turnout, which has the advantage of minimizing self-reporting bias on voter participation.

Second, given our focus on conflict as a mediator, our contribution also relates to studies that examine the relationship between ethnic inequality and conflict (see, e.g., Cederman et al., 2013; Cederman et al., 2011; Guarriso & Rogall, 2017; Gubler & Selway, 2012; Hillesund & Østby, 2022; Østby, 2009), as well as the literature on the relationship between conflict or electoral violence and voter turnout or political participation (see, e.g., Alacevich & Zejcirovic, 2020; Gallego, 2018; Gutiérrez-Romero & LeBas, 2020; Koch & Nicholson, 2016; Rogowski, 2014). This literature demonstrates that conflict and electoral violence leads to a lower propensity to vote and that individuals are more likely to vote in environments that are characterised by lower levels of confrontation and harm (Barber & Imai, 2014). We also connect to the related strand of literature showing that voting rates, and more generally political participation, differs by ethnicity and race. This literature suggests that turnout rates are typically higher for ethnic majority groups compared to minorities (Uhlman & Scola, 2016).

Finally, given that ethnic inequality and income inequality are potentially related in influencing voter turnout, our study is related to the literature that examines the impact of income inequality on voter turnout (Lister, 2007; Polacko, 2020; Schwaner et al., 2020). One of the causes of income inequality is differences in ethnicity (Ajide et al., 2019; Awaworyi Churchill, 2019; Dincer & Hotard, 2011). Borjas (1994) shows that intergenerational differences in earnings between ethnic groups in the United States persist over time, reflecting differences in what he terms ethnic capital, which is a function of ethnic inequality. Similar results have been found for other countries. For example, Nguyen et al. (2020) found that income inequality in Vietnam reflects ethnic inequality with ethnic minorities earning less than the Kinh ethnic majority. One of the reasons for political disaffection among ethnic minorities influencing voter turnout is income disparities along ethnic lines (Alesina et al., 2016). Ethnic inequality is broader than income inequality as a factor influencing voter turnout. Alesina et al. (2016) find that ethnic inequality is weakly correlated with the standard measures of income inequality. Studies that examine the relationship between income inequality and voter turnout suggest that income inequality negatively influences voter turnout among disadvantaged social groups. These studies have mostly focused on the United States, United Kingdom and a few European countries. One exception is Kasara and Suryanarayarn (2015), who examine how income affects inequality in voter turnout in 76 countries from 1996 to 2010. Their sample includes developing and developed countries, although given their global coverage, very few African countries. Thus, in addition to focusing on ethnic inequality rather than income inequality, our study differs from most of these studies given our developing country context.

2. Ethnic Inequality, conflict and voter turnout

Ethnic diversity gives rise to horizontal inequalities (Stewart, 2000). Stewart (2008, p. 3) defines horizontal inequalities as “inequalities in economic, social or political dimensions or cultural status between culturally defined groups”. The link between horizontal inequalities, ethnic groups and violent conflict has centred around the key themes of group identity, grievance and opportunity, and typically involves two steps (Hillesund and Østby, 2022). In the first step, it is argued that when ethnic groups compare their position with other ethnic groups, objective inequality between these groups generate subjectively perceived grievances. Ethnic groups that conclude they are disadvantaged relative to other ethnic groups regard this outcome as unjust and seek to change it (Cederman et al., 2011, 2013). This first stage is often facilitated by ethnic leaders who fuel group members’ sense of relative deprivation by reinforcing feelings of ethnic identity and creating an “us versus them” mentality that undermines trust in outsiders.

In the second stage, subjectively perceived grievances lead to violent mobilisation because they provide the motivation and opportunity to instigate change. One obstacle to bringing about change, even if individual group members feel a sense of injustice, is the need for collective action. Because the grievances are central to individuals’ sense of group identity, they create opportunities for change through triggering a series of group-related mechanisms – group solidarity, peer pressure and activation of social networks. These opportunities overcome collective action problems (Cederman et al., 2013; Hillesund & Østby, 2022; Wood, 2003).

Violent mobilisation can take various forms. One strand of literature has focused on the role of ethnic inequality giving rise to armed rebellion and civil war (Cederman et al., 2011; Gates, 2002; Gubler & Selway, 2012; Østby, 2008; Wood, 2003). Other studies, though, have linked horizontal inequalities to other forms of collective political violence, short of civil war, via the mechanisms described above. Of relevance to what we do, these include electoral violence (Fjelde & Høglund, 2016), broader civil disturbance (Østby, 2016), violent politically motivated protests (Cingranelli et al., 2019) and riots (Bodea et al., 2017).

Interethnic conflict could lead to one of two possible outcomes for voter turnout depending on the context. On the one hand, ethnic divisions can induce strong competition for resources and public goods provision (Alacevich & Zejcirovic, 2020; Alesina et al., 1999). This is true for both groups who have an incumbent advantage but perceive that their advantage is being threatened and those who have a sense of group disadvantage and are seeking to reallocate resources via the acquisition of political power. Competition for resources could lead to the desire for one ethnic group to maximize political power, and, therefore, serves as an incentive to mobilize their own ethnic group to vote, increasing voter turnout (Bhatti et al., 2017).

On the other hand, if the ethnic group with the incumbent advantage feels threatened by the mobilization of the disadvantaged group they may respond through harassment, intimidation or other large-scale acts of aggression in the lead up to the election. Pre-election harassment and intimidation might lower voter turnout because members of the ethnic group to whom the violence is targeted feel unsafe to vote or because the violence causes one or more opposition parties to boycott the election in protest (Bekoe & Burchard, 2017).

More generally, conflict between ethnic groups and social unrest makes neighbourhoods unsafe, which may result in greater reluctance to turn out to vote, especially when ethnic groups are socially segregated (Enos, 2016). In these circumstances, voter turnout may decrease in direct response to individuals withdrawing from situations that involve conflict (Baker & Imai, 2014). Political conflicts are also typically associated with more stringent requirements for voter registration and longer queuing to vote that are likely to mobilize the mass electorate and lower voter turnout (Hill & Leighley, 1999). This suggests that the relationship between ethnic inequality and voter turnout could be mediated by conflict. Additionally, it is likely the direct effects of ethnic inequality on voter turnout may be intensified in areas of conflict, suggesting that conflict may moderate the relationship.

1 For a recent review of much of this literature, see Hillesund and Østby (2022).
3. Why Africa?

Africa provides a particularly relevant setting to examine the relationship between ethnic inequality, conflict and voter turnout for several inter-related reasons. First, ethnic identity is an important point of political division in Africa (Higashijima & Houle, 2018). Ethnicity is generally regarded as the most salient cleavage in Africa (Emizet, 1999; Nnoli, 1998). Importantly, Africa has most of the ethnically diverse countries in the world, with a high concentration of different ethnic groups, suggesting very high levels of ethnic inequality given the relationship between ethnic diversity and ethnic inequality (Alesina et al., 2016; Fearon, 2003).

Second, Africa has witnessed a disproportionate amount of the world’s civil conflict. McGuirk and Burke (2020, p. 3940) note: “In the second half of the twentieth century, 127 civil wars are estimated to have resulted in 16 million deaths, five times more than the death toll from interstate wars. Most of these wars have taken place in Africa, where conflict battles have killed between 750,000 and 1.1 million from 1989 to 2010.”

Coups and other forms of political violence are especially frequent in Africa, relative to other regions in the world (Collier & Hoeffler, 2005). In Sub-Saharan Africa, there was some form of electoral violence in 55 per cent of elections held between 1990 and 2014 (Burchard, 2015a).

Third, much of this conflict in Africa has its origins in ethnic divisions (Collier & Hoeffler, 2002; Etse, 2019; Higashijima & Houle, 2018; Tshitereke, 2003). In Africa, for instance, those plotting coups typically rely on their co-ethnics as a source of support during and after a coup (Houle & Bodea, 2017). Electoral violence tends to spike just before the election (Bekoe & Burchard, 2017), which intimidates rival ethnicities from turning out to vote (Collier & Vicente, 2014).

Finally, voter turnout in African elections is among the lowest in the world (Lynge & Martinez i Coma, 2022; Tambe & Monyake, 2023). Several African countries have been plagued by low voter turnout at recent elections, such as Benin in 2023, Côte d’Ivoire in 2021, Nigeria in 2015, 2019 and 2023, and Zimbabwe in 2022 and this has cast doubt on the legitimacy of the political process. These countries have typically experienced ethnic-related civil conflict and electoral violence in the lead up to their elections (Amata, 2023; Oyoru, 2023; van Baalen, 2023; Yusuf & Saminu, 2024).

4. Data

4.1. Ethnic inequality

We construct a dataset on ethnic inequality from 1992 to 2018 for 24 African countries. Our measure of ethnic inequality is based on the land composition of individual ethnic groups within a country and their corresponding economic output, proxied through night-time light per capita. Alesina et al. (2016) generate similar indicators of ethnic inequality at the country level for a panel of 173 countries. We follow Alesina et al. (2016) in constructing our measures, but with the key difference that we calculate our ethnic inequality indices at the sub-national level (i.e. state or regional level).

Similar to Alesina et al. (2016), we use the geo-referencing of ethnic groups (GREG) dataset (Weidmann et al., 2010), which provides information on the homelands of over 900 ethnic groups around the world. Working with a subset of 24 African countries, we use information on the political boundaries of 135 ethnic groups from GREG. We intersect these boundaries spatially with our adm1 map to create 1,975 ethnic homelands across African countries. Fig. 1 depicts the resulting ethnic boundaries with election data. We have between one and 39 different ethnic groups per region. For each of these sub-divisions, we calculate the total population by year using the Gridded Population of the World...
In addition, we match night-time light data to the sub-divisions following the procedure outlined in Ackermann et al. (2021). Data from 1992 to 2013 are available via the Defense Meteorological Satellite Program (DMSP) weather program on an annual basis. From 2012 onwards, a new satellite generation approach called Visible Infrared Imaging Radiometer Suite (VIIRS) is available, providing monthly data on night-time lights (Elvidge et al., 2017). Both satellites have different raw value scales and time resolutions. As we are interested in within year comparison to establish GINI coefficients on a per capita basis, the different scales and the potential year-to-year changes in satellite instruments do not pose a problem. The index is defined as:

$$G_{s,t} = \frac{\sum_{n=1}^{n} \sum_{i=1}^{n} |y_{t,i} - y_{t,j}|}{2n \sum_{j=1}^{n} y_{t,j}}$$

where, $y_{t,i}$ represent the luminosity per capita in a given year, $t$, for each of our ethnic sub-divisions and $n$ is the number of ethnic sub-divisions within in a sub-national area or region, $s$. This allows us to calculate the GINI coefficients to measure ethnic inequality at the sub-national level where we have variations in ethnic inequality not only by year, but also across sub-national areas or regions within countries. We match each sub-national inequality estimate to the elections in a given country. Fig. 2 provides a visualization of the resulting inequality measures averaged by election and country.

4.2. Voter turnout

To measure voter turnout, we collect data from the constituency-level elections archive (CLEA). It provides election results at the constituency level linked to the sub-national unit in most cases. For Cape Verde, South Africa and Zambia, CLEA also provides shape files that allow us to identify geo-locations of the election results. For the remaining 21 countries, we manually matched the sub-national identifiers to the corresponding region identifiers from GADM, resulting in 275 matched regions. In total, our analysis is based on 47 elections across 24 countries, as shown in Table A1.

4.3. Conflict

We use the social conflict and analysis database (SCAD) to match data on election conflict with our main database at various intervals prior to the election (Salehyan et al., 2012). The database distinguishes between different type of conflict, one of which specifically relates to election conflict. In total we have 560 election-related conflict events, occurring up to six months prior to the election for all our elections listed in Table A1. Fig. 3 overlays the occurrence of election conflict with average ethnic inequality. To measure the effect of election-related conflict, we create an indicator variable that is set equal to 1 if the

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2 The GPWv4 population data is a time-variant population estimate based on census data that is distributed on a global grid-based on satellite data. We aggregate all grid cells by our ethnic intersection maps and interpolate the resulting population data by year (Gallery & Sensing, 2021).

3 Alesina et al. (2016) focused on a world-wide analysis at different level of spatial aggregation from country to administrative boundaries at level 2. In terms of the time dimensions, their focus was on the years 1992, 2000 and 2012.


5 https://gadm.org.
count of election related conflict event\textsuperscript{6} is greater or equal to 1, otherwise.

5. Methodology

To examine the impact of ethnic inequality on voter turnout, we estimate the following model:

\[ Y_{c,s,t} = \beta_0 + \beta_1 G_{s,t-1} + \beta' X'_{s,t-1} + \alpha_t + \epsilon_{c,s,t} \]  

(1)

where, \( Y_{c,s,t} \) represents voter turnout in an election at time, \( t \), at the constituency level, \( c \), located in a sub-national area or region, \( s \). \( G_{s,t-1} \) is the lagged ethnic inequality index, lagged by year to avoid simultaneity bias. \( X'_{s,t-1} \), depending on the specification, is a vector of covariates controlling for time varying population and fixed area size; and \( \alpha_t \) is an election fixed effect.

Election turnout might be affected by myriad factors that are potentially correlated with ethnic inequality. To overcome this endogeneity problem, we construct an instrument for \( G_{s,t-1} \) following the approach in Alesina and Zhuravskaya (2011). Alesina and Zhuravskaya (2011) constructed an instrument for ethnic segregation based on the geographic distance between each ethnic group and the same ethnic group in other countries. The rationale is that if a given ethnic group is geographically close to others from the same group, members might seek to connect; thereby implicitly reinforcing segregation at the source, which could influence ethnic inequality. We apply this idea in generating an instrument at the sub-national level for ethnic inequality. For each sub-regional level, we know the number of different ethnic groups and the geographic proportion of each group. Thus, for each group within a sub-national area, we calculate the distance to the nearest ethnic group outside of the sub-national area in the closest country. We then calculate the average distance by weighting the distance using the proportion of each ethnicity within a sub-national area as a proxy for ethnic inequality.

To highlight the intuition behind our methodological adaptation, consider the example of the Swahili ethnic group present in Kenya and Tanzania. Our analysis acknowledges the nuanced reality that this group inhabits multiple sub-national regions across these countries. Specifically, our instrument measures the geographic distance from sub-national areas within Kenya to the nearest Swahili community in Tanzania. This distinction is crucial because it captures the variable impact of geographic proximity on ethnic interactions and, by extension, on ethnic inequality. For instance, a Swahili community located near the Kenyan-Tanzanian border is likely to have stronger cross-border ethnic ties than a Swahili community situated further inland. This variation in proximity can influence patterns of ethnic segregation and inequality within Kenya in complex ways that traditional, country-level analyses might overlook. By quantifying these distances and considering their effects at the sub-national level, our approach offers a more granular and precise understanding of how geographic proximity across national borders can affect ethnic dynamics within a country, providing nuanced insights into the factors that influence electoral turnout.

6. Results

We begin our analysis with a basic ordinary least squares (OLS) regression that provides benchmark estimates for the relationship between ethnic inequality and voter turnout. The estimates, which are reported in Table 1, indicate that there is a negative relationship between ethnic inequality and voter turnout. Column (1) reports unconditional estimates explaining the relationship between ethnic inequality and turnout, while the results reported in Column (2) are conditioned on the size of the sub-national area and its population. We find that a 1

\textsuperscript{6} The SCAD database codes the type of conflict event. Election-related conflict are those conflicts linked with political events and related to political parties including members and/or officials. Such conflicts can be related to campaigning, political activism and other events that could lead to clashes between political parties and other citizens.
6.1. Mediating and moderating role of conflict

We examine election conflict as a potential channel through which ethnic inequality influences voter turnout. To do this, we focus on election conflict as mediator and moderator in the relationship between ethnic inequality and voter turnout. For conflict to qualify as a mediator, in addition to being correlated with ethnic inequality, it should also be correlated with voter turnout. In a recent survey paper by Huber (2019), various approaches are laid out on how causal mediation analysis can be conducted especially when a valid instrumental variable is available. The single instrument approach in Huber (2019) is the closest framework to our setting. Employing a 2SLS mediation analysis is crucial due to the intricate relationship between ethnic inequality, conflict, and voter turnout. The influence of unobserved factors that could confound the analysis mean that a number of factors might simultaneously affect ethnic inequality, conflict, and voter turnout. Thus, mediation analysis based on standard linear regression models can be susceptible to omitted variable bias. The 2SLS mediation analysis accounts for potential endogeneity. We follow the framework by Dippel et al. (2019) to estimate the mediation effect.

Before reporting the results from Dippel et al. (2019) mediation analysis, we first demonstrate the relationship between ethnic inequality and conflict, which is often the first step in standard mediation analysis (see, e.g., Ackermann et al., 2023; Alesina & Zhuravskaya, 2011; Awaworyi Churchill et al., 2019; Awaworyi Churchill et al., 2022; Prakash et al., 2022).

Columns (1), (2) and (3) in Table 3 report 2SLS results for the effects of ethnic inequality on election conflict occurring less than a month, three months and six months before an election date, respectively. We find that an increase in ethnic inequality is associated with higher conflict and the effect is most pronounced for conflict six months before an election, while the effect size is weakest for conflict within one month of an election date.

In Table 4, we estimate the full system of equations and report the indirect and direct effect of election conflict at different periods of time prior to an election. In terms of magnitude, the indirect effect estimates are substantially higher than the direct effect, explaining up to roughly 88 percent of the total effect. On average, the direct effect are very small with one statistically insignificant result. These results confirm that election conflict is a mechanism through which ethnic inequality transmits to voter turnout.

In Table 5, we examine if election conflict moderates the relationship between ethnic inequality and voter turnout. We find that election conflict does not moderate the relationship. These results suggest that while ethnic inequality induces election conflict and through that reduces voter turnout, the impact of ethnic inequality on voter turnout is not more pronounced in sub-national regions with higher election conflict.

### 6.2. Extensions and sensitivity tests

Inequality has been defined in terms of heterogeneity, segregation and polarization in the literature (Bartle et al., 2017). Specifically, one would expect that when communities are ethnically homogenous, inequalities would be lower. Given that the degree of ethnic diversity...
we adjust voter turnout by the population in the location. The estimates reported in Table A6 show that our results are robust.

While our main estimation strategy controls for a wide range of fixed effects, which should account for cross-country differences in economic performance, in Table A7, we specifically examine the robustness of our results to controlling for GDP per capita. Thus, we re-estimate our model excluding relevant fixed effects that would be perfectly correlated with GDP per capita. We examine the robustness of our results without fixed effects, with country fixed effects, and with both country and year fixed effects. In each case, our results remain robust.

In Table A8, we include a wider range of covariates including infrastructure, urbanization and institution quality. To measure infrastructure, we follow Ackermann et al. (2020) and approximate transport infrastructure using OpenStreetMap to extract total street kilometres within each electoral region. We use urbanization data from the United Nations Population Division and institutional quality data from the World Bank’s Worldwide Governance Indicators database. We find that the negative effect of ethnic inequality on voter turnout is robust across all models regardless of the covariates included.

In a final check, we examine the robustness of results to omitted variable bias using the Oster (2019) bounds analysis. It evaluates the extent of bias due to unobservables and allows for partial identification of the impact of ethnic inequality on voter turnout. We use it as an alternative identification strategy to examine the sensitivity of our results to the inclusion of observed covariates. Appendix Table A9 reports results for the bounds analysis. The Oster (2019) bounding requires information on the relative degree of selection on unobserved and observed variables, referred to as δ. Following Oster (2019), we set δ = 1, which suggests that the selection on observable variables is the same as that on unobservable variables. The analysis also requires the R-squared from the unconditional and conditional regression of voter turnout on ethnic inequality, which we denote as R̃ and R, respectively. Rmax denotes the R-squared from a hypothetical regression of voter turnout on all observable and unobservable covariates, including ethnic inequality, and is calculated as Rmax = min{1, R̃}. Column (1) reports the estimated effect of ethnic inequality on voter turnout for the baseline uncontrolled model using OLS. Column (2) reports the estimated effect of ethnic inequality from the controlled model that includes the full set of observed covariates using OLS. Column (3) shows the identified set for the impact of ethnic inequality on voter turnout, [β̃, β̃], while Column (4) shows whether the identified set excludes zero. We find that the identified set excludes zero, suggesting that the estimates from the controlled regressions are robust to omitted variable bias. In Column (5), we report the value of δ, which is the ratio of the impact of unobserved covariates, relative to observed covariates, that would drive the estimated coefficient of ethnic inequality to zero. The estimated value of δ is

largely determines ethnic inequality, in sensitivity checks we examine the robustness of our results to the traditional indicators of ethnic diversity – fractionalization and polarization – used in the literature. Tables A3 and A4 report results for the effects of ethnic fractionalization and polarization, respectively. We find that in each case, our results are robust to these alternative indicators of ethnic inequality.

In Table A5, we examine if the impact of ethnic inequality on voter turnout is influenced by population size. As we have an instrumental variable setting, we follow the approach by Caner and Hansen (2004) to estimate a potential regime change. We estimate a cut-off value of around 70,000 people. To put this in context, the median population in our electoral districts is 73,000 people. We therefore split the sample by the median for clarity. Thus, using the median population across sub-national areas as the cut-off, we consider areas that have high population as those above the median and low population as those below the median. The results from Table A5 suggest that while the impact of ethnic inequality remains negative for both sub-samples, the effects are only statistically significant in the case of high population areas. This finding suggests that our results are being driven by high population areas.

Our main results focus on the absolute value of voter turnout across each sub-national location that we study. In further sensitivity checks,
3.388, which implies that the effects of the omitted variables have to be more than 3.4 times larger than the effect of the observed explanatory variables, which is unlikely. These results suggest that our results are robust to omitted variable bias.

7. Discussion

Despite its importance to a well-functioning democracy, voter turnout remains low in most African countries and has been declining for decades. Nigeria, Africa’s most populous country, makes for the most striking example, with a voter turnout rate as low as 35% in 2019. Although Nigeria’s population has almost doubled in the past two decades, with about 25 million additional registered voters, the absolute number of voters in 1999 was higher than two decades later in 2019 (OECD, 2019). We address the question of whether ethnic inequality influences voter turnout. Our findings shed light on why voter turnout has been declining. In addition to showing the negative effects of ethnic inequality on voter turnout, we offer empirical evidence on conflict as an important mechanism of influence.

Our results show that by increasing conflict, ethnic inequality tends to reduce voter turnout. In regions marked by high ethnic inequality, the associated tensions and conflict may present as security concerns for the electorate (Bodea et al., 2017; Fjelde & Höglund, 2016). This could lead to heightened feelings of vulnerability and fear of intimidation among minority ethnic groups, and, thus, hinder voter turnout. Further, in areas affected by conflict, electorates tend to face systematic barriers that hinder voter registration and polling station access, which lead to lower turnout rates (Alacevich & Zejcirovic, 2020; Gallego, 2018; van Baalen, 2023).

Conflicts tend to result in population displacements (Adhikari, 2013), which hinder participation in electoral processes due to logistical challenges, lack of access to polling stations and disruption of voter registration efforts (Alacevich & Zejcirovic, 2020; Burchard, 2015b; Tezcur, 2015). Additionally, election conflict tends to undermine trust in political systems, which dampens enthusiasm for civic engagement including voting.

Besides the indirect effects of ethnic inequality on voter turnouts via conflicts, ethnic inequality could have direct effects. Specifically, ethnic inequality could lead to the mobilization of ethnic groups along political lines (Bazzi & Gudgeon, 2021; Helbing et al., 2013). It is not unusual for political parties or interest groups to exploit ethnic grievances with the aim of rallying support and consolidating power. This can result in heightened polarization and significant focus on ethnic identity, which breaks down important social elements, such as social cohesion, that are relevant for civic engagement. Consequently, voter turnout may be affected as individuals align themselves more closely with their ethnic identity, groups emerging from their ethnic groups, and the political agenda held by such groups, rather than participating in the electoral process aimed at promoting broader national or civic interests. Relatively, ethnic inequality and diversity can be linked with various forms of institutionalized discrimination, including voter suppression tactics as well as unequal access to electoral resources, all of which hinder voter turnout.

8. Implications

Our study has several implications for future research and policy. While our focus has been to understand how conflict explains the negative effect of ethnic inequality on voter turnout, it is important to note that various theories point to other potential channels that could be at play. However, we are not able to test these given data constraints. For instance, theories and empirics on the relationship between ethnicities and social capital suggest that neighbourhoods with higher levels of ethnic diversity also have lower levels of trust in people and government institutions, which results in lower participation in political activities (Dincer, 2011; Dinesen & Sønderskov, 2015, 2018). Our findings have implications for ongoing debates on the impact of ethnic diversity, segregation and inequality on social cohesion. However, our focus on sub-national locations as opposed to individual self-reported voter participation implies that we are unable to test for trust as a potential channel. Further studies can build on our findings to focus on individual-level voter participation outcomes, which can shed light on how ethnic inequality influences individual trust and, by extension, voter participation.

The literature on the implications of ethnic division is quite clear in demonstrating that ethnic divisions tend to promote conflict, discriminatory policies and regime illegitimacy, which can hinder political participation (Bleamey & Dimico, 2017; Kanbur et al., 2011; Novta, 2016). However, democracy might further exacerbate these issues by concentrating power among elites who pursue rent-seeking behaviour, which maximizes their own interests and the interests of their own ethnic groups (Goodnow et al., 2014; Wilkinson, 2006). This opens another avenue for future research to examine the moderating role of democracy in the relationship between ethnic inequality and voter turnout.

Our findings have important implications for policy. First, our results have implications for “political equality (which refers) to the extent to which citizens have an equal voice over governmental decisions” (Verba, 2001, p. 1). Political equality depends on not only having the right to vote or participate in collective decision-making, but also the exercising of these rights by voting (Bartle et al., 2017). Hence, political equality depends on the extent to which citizens turn out to vote to exercise their democratic voice. Our findings suggest that ethnic inequality has a significant role to play in shaping political equality in Africa. Specifically, our results imply that active participation, which produces more representative decisions and better government, depends on promoting policies that increase equality among different ethnic groups (Bartels, 2008; Enns & Wlezien, 2011).

Second, related research demonstrates that people with higher incomes are more likely to vote than those with lower incomes (Leighley & Nagler, 2013). By extension, it follows that members of dominant ethnic groups are more likely to vote, reinforcing their privileged position. Our results imply that policies that seek to support disadvantaged ethnic groups are critical to address the issue of power concentration in the hands of dominant ethnic groups (Polacko, 2020).

Our findings also point to the importance of building strong neighbourhoods that minimize ethnic inequality. Although we do not explicitly examine the mediating role of social cohesion in the relationship between ethnic inequality and voter turnout, a well-established literature links ethnic divisions with lowering social capital including cohesion (see, e.g., Awaworyi Churchill, 2017; Awaworyi Churchill & Danquah, 2022; Koomson & Churchill, 2021; Laurence & Bentley, 2016; Meer & Tolzma, 2014). The related literature on the importance of social capital in promoting civic engagement, including political participation, suggests that policies aimed at building strong neighbourhoods and social capital can be effective not only in minimizing ethnic inequality, but also in promoting civic engagement and, thus, voter turnout (Collins et al., 2014; Fahmy, 2006). This could involve the encouragement of migration policies that allow for groups to mix across ethnic lines, and policies that promote quality neighbourhoods.

9. Conclusion

Low voter turnout is a major issue in many developing countries, but we know relatively little about the factors influencing voter turnout in those countries. This study contributed to the literature on the factors influencing voter turnout in Africa by examining the role of ethnic inequality. We also focused on how the relationship between ethnic inequality and voter turnout is mediated and moderated by conflict. To examine this relationship, we constructed a new dataset of ethnic inequality for 24 African countries covering the period 1991 to 2018. In addition to providing new evidence on the factors that influence voter
turnout, we make an important contribution by employing measures of ethnic inequality at the sub-national level. We show that the relationship between ethnic inequality and voter turnout channels through conflict. Specifically, we find that higher levels of ethnic inequality lead to conflict, which reduces voter turnout. We provide relevant discussions on implications for future research and policy.

CRediT authorship contribution statement

Klaus Ackermann: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing. Sefa Awaworyi Churchill: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. Russell Smyth: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Data availability

Data will be made available on request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.worlddev.2024.106644.

References


