Ethnic Voting and Pre-Electoral Violence in Sub-Saharan Africa

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1. Introduction

In theory elections ought to be a peaceful mechanism of leadership selection, which make governments accountable to citizens and thereby discourage corruption and rent seeking. Yet, the introduction of elections in countries where their complementary democratic institutions, such as the rule of law and a free and independent media, remained weak, has left the behavior of competing candidates unconstrained, resulting in contests marred by irregularities, such as vote buying, ballot fraud, and voter intimidation (Collier 2009).

That elections may trigger violence has long caught scholarly attention. Early studies treated electoral violence[1] as a side effect of democratization or just another manifestation of the political instability generally associated with hybrid regimes (e.g., Huntington 1968; Dahl 1971; Huntington 1991). For them, intimidation and violence around elections are the regrettable, yet ultimately unavoidable "birth pangs" associated with political liberalization, which will eventually disappear as countries become fully democratic or slide black into autocracy.

More recent studies, however, suggest that electoral violence is not a by-product of political liberalization, but a strategic tool in the competition for office (e.g., Austin 1995; Laakso 1999; Klopp and Zuern 2007; Laakso 2007; Hickman 2009; Höglund and Piyarathne 2009; Boone 2011; Bekoe 2012a). Based on this insight, a small but sophisticated theoretical literature on violence as an illicit campaign strategy has formed (e.g., Chaturvedi 2005; Robinson and Torvik 2009; Collier and Vicente 2012). These theoretical models suggest that violence can be used to rig elections in countries lacking the institutional capacity to effectively mediate conflict over political power and ensure a level playing field among candidates.

On the causes of electoral violence, a rapidly growing body of quantitative studies has recently emerged. For example, Wilkinson (2004) and Wilkinson and Haid (2009) show that state and local electoral incentives explain a large part of the observed variation in Hindu-Muslim riots between Indian states. Arriola and Johnson (2012) find that clientelistic corruption inhibits pre-electoral violence in competitive electoral autocracies – the set of regimes most susceptible to such violence. Clientelism, as an informal mechanism of political bargaining, provides elites with an alternative for arriving at mutually beneficial outcomes, which lowers the electoral stakes and reduces the candidates' incentives to recourse to violence. Hafner-Burton, Hyde and Jablonski (2013) find that when institutionally unconstrained incumbents have information suggesting that they will lose the election, they become more likely to engage in pre-electoral violence. Finally, Taylor, Pevehouse and Straus (2013) find that most violence takes place before elections and is committed by incumbents seeking re-election in Sub-Saharan Africa. They also demonstrate that pre-existing social conflict and the quality of founding elections shape pre-vote violence, while the stability of democratic institutions and weaker economic growth shape post-vote violence.

While these institutional, economic, and election-specific differences are doubtlessly important, very little attention has been given to the disparities between social contexts in which

these elections take place. This chapter addresses this gap by systematically investigating the relationship between ethnic voting and pre-electoral violence. Drawing on the civil war, ethnic conflict, and electoral violence literatures, I argue that a high level of ethnic voting increases electoral competition and reduces the effectiveness of other campaign instruments, which in turn creates strong incentives for candidates to supress through the use of violence and intimidation in order to increase their electoral chances. Using 54 nationally representative surveys from 19 different countries in Sub-Saharan Africa and four different measures of pre-electoral violence, I show that there is indeed a robust positive association between a country's level of ethnic voting and the use of violence during election campaigns. This result provides an explanation for the persistent cross-national differences in electoral violence across Sub-Saharan Africa.

The remainder of this chapter is organized as follows. The next section reviews the related literature and derives the main prediction. Thereafter, I present the data, measurements, and empirical strategy used to empirically evaluate the relationship between ethnic voting and pre-electoral violence. Section four presents the regression results and assesses their sensitivity and robustness towards alternative explanations. The final section concludes, discusses the results' implications, and suggests avenues for future research.

2. The Relationship Between Ethnic Voting and Pre-Electoral Violence

Much research suggests that democratization may affect the risk of conflict both between (e.g., Mansfield and Snyder 1995; Ward and Gleditsch 1998, Snyder 2000) and within states (e.g., Gleditsch 2002; Mansfield and Snyder 2007; Cederman, Hug and Krebs 2010). The link between democratization and conflict relies on two mechanisms. First, it is argued that ethnic affiliation often dominates other cleavages in post-authoritarian political environments. Especially in institutionally weak states with ethnically heterogeneous societies and where the provision of local public goods and access to state resources are politically contentious issues, ethnicity tends to increase in salience with political competition (e.g., Breton 1964; Mann 2005). The second mechanism focuses on the incentives political competition creates among political elites to strengthen their ethnic clientele by inciting hostility towards other groups. The resulting ethnic outbidding in political mobilization raises tensions and the risk of violence (e.g., Rabushka and Shepsle 1972; Mansfield and Snyder 1995; 2007).

Although democratization is about much more than elections alone, competitive elections play a prominent role in democratic governance and most definitions of democracy (e.g., Schumpeter 1942; Dahl 1989; Alvarez et al. 1996). As Bratton (1998, 52) pointed out: "While you can have elections without democracy, you cannot have democracy without elections." The arguments above are closely linked to the role of elections as the event inciting political competition and thereby exacerbating the risk of conflict. Several empirical studies find evidence that elections increase the risk of conflict, violence, and social unrest. Collier and Rohner (2008). Mansfield and Snyder (2007) and Strand (2005; 2007) all show that elections in incomplete democracies increase the likelihood of conflict breaking out. Looking more precisely at the ordering of elections and distinguishing between different types of conflict, Cederman, Gleditsch and Hug (2013) find that post-electoral violence and ethnic civil wars are particularly likely to erupt after first and second elections following periods of no polling. Focusing on competitive elections in developed countries, Anderson and Mendes (2006) explore the link between electoral losses and protest behavior and find that political minorities in countries with less democratic experience are more prone to resort to violence after elections. Finally, Brancati and Snyder (2011) provide evidence that elections held soon after the end of a conflict, when

political institutions are still weak, increase rather than decrease the likelihood of a return to violence.

But these claims are not uncontroversial. Other scholars have challenged this negative view on empirical grounds. Birnir (2007), for example, argues that democratic elections tend to stabilize ethnic politics. This stabilizing effect may be sustained through inclusive representation of all ethnic groups in the government process. Lindberg (2009) presents a similar argument. Examining all competitive elections in Sub-Saharan Africa, he finds evidence of democratic learning through repeatedly held competitive elections, which thereby contribute to successful transitions. Finally, Cheibub, Hays and Savun (2012) argue that elections may be a response to anticipated conflict and thereby prevent violent conflict in democratizing states. They find that once this potential endogeneity concern is taken into account, the relationship between elections and conflict is in fact negative.

Finally, there is a voluminous literature on constitutional design that has looked at the relationship between elections and violence in ethnically heterogeneous societies. Two schools of thought predominate. The scholarly orthodoxy, most closely associated with Arend Lijphart (1977; 1984; 1999) and the consociational model of democracy, has long argued that some form of proportional representation (PR) is needed in cases of deep-rooted ethnic divisions to prevent violence and civil unrest. Proponents of this view argue that party-list PR is the best choice, as it enables all significant ethnic groups, including minorities, to "define themselves" into ethnically based parties and thereby gain representation in parliament in proportion to their size in society. This allows them to voice their concerns and settle disputes within the political institutions rather than violently outside the political process. In contrast to this orthodoxy, critics, led by Donald Horowitz (1985; 1990), argue that the best way to mitigate destructive patterns of divided societies is to discourage the formation of ethnic parties through the use of electoral systems that encourage cooperation and accommodation among rival groups, and therefore work to reduce the salience of ethnicity, rather than replicating existing ethnic divisions in the legislature. They advocate electoral rules that promote reciprocal vote-pooling, electoral bargaining, and accommodation across group lines.

The empirical evidence tends to support the consociationalist prediction. Cohen (1997), Sisk and Reynolds (1998), Saideman et al. (2002), and Schneider and Wiesehomeier (2008) all find that proportional electoral systems are associated with less violence. Furthermore, Birch (2007) finds that single-member districts are more likely to result in electoral misconduct, which previous studies (e.g., Tucker 2007; Hafner-Burton, Hyde and Jablonski 2013, Borzyskowski 2014) have found to significantly increase the risk of post-electoral protests and violence. But the causal mechanism through which PR reduces violence is unclear. Huber (2012) finds that contrary to the consociationalist claim, PR is associated with less ethnicization of electoral behavior. The main reason seems to be that by allowing relatively easy party formation, PR allows parties to form that appeal on bases other than ethnic identity, with the result being that voters from the same ethnic group often divide their support across a number of parties, often nonethnic ones. Moreover, Norris (2013) shows that there is no monotonic relationship between the type of electoral system and majority-minority differences in political support. In particular, she finds no evidence for the proposition that PR party-list systems are directly associated with higher levels of support for the political system among ethnic minorities.

Overall the existing literature on the relationship between elections and violence is somewhat inconclusive, in part because it looks at different types of violence (e.g., protests,

demonstrations, ethnic conflict, and civil war) and does not directly account for the politicization of ethnicity. This chapter circumvents these issues by focusing on a specific type of violence and looking specifically at the degree to which ethnicity is politicized. First, and unlike most previous research that focuses on different forms of violence in the aftermath of elections, I focus on pre-electoral violence – that is, violence committed during the campaign period in order to suppress turnout of certain groups of voters. Second, rather than relying on some apolitical measure of a country's ethnic diversity, I focus on the degree of ethnic voting, which measures the ethnicization of electoral behavior. Ethnic voting is generally seen as an instrumental action that is part of an ongoing exchange between politicians and voters. Politicians mobilize voters along ethnic lines promising targeted provision of state resources in exchange for votes and voters use ethnicity as cue to gauge the credibility of these promises as well as of past patterns of patronage distribution (e.g., Bates 1983; Chandra 2004; Posner 2005; Ferree 2006). The ethnic voting measure captures the closeness of the relationship between vote choice and ethnic group identity. It measures the role of ethnicity in relation to a political activity and is therefore conceptually distinct from the commonly used measures of ethnic diversity, which are based exclusively on the relative size of the various groups.

How is the degree to which ethnicity determines vote choice associated with pre-electoral violence? I argue that there is a positive relationship between ethnic voting and pre-electoral violence. Two potential mechanisms explain why. First, if group identity determines vote choice perfectly, then elections degenerate into head counts and campaigning becomes highly ineffective (Chandra 2004). Programmatic appeals no longer work in convincing citizens to switch their vote, since they generally concern public policies that cannot be targeted towards a specific group. Even patronage, which can be targeted towards specific groups, is ineffective, as according to the instrumental logic of ethnic voting described above, promises will not be credible if coming from a candidate of a party with a different ethnic support base. Hence, faced with losing the election, candidates have strong incentives to resort to the only instrument left: violence. By sending thugs to suppress turnout of the competitor's supporters through violence and intimidation in competitive districts, candidates are able to increase their vote share and secure electoral victory.

The second mechanism is complementary, but focuses on electoral competition rather than the ineffectiveness of nonviolent campaign strategies. The higher the degree of ethnic voting, the fewer politically unaffiliated voters there are that can be influenced. The fewer undecided voters there are, the greater electoral competition, since the value of each additional vote increases. Rather than engaging in a costly electoral battle over the few unaffiliated voters, candidates may be tempted to deter those voters from casting their ballot and thereby save resources and energy. Thus, as before a higher degree of ethnic voting creates strong incentives for candidates to engage in pre-electoral violence.

3. Research Design

Why Sub-Saharan Africa?

Although the theoretical arguments above are sufficiently general to apply to all competitive elections in developing countries, I limit the empirical evaluation of the connection between ethnic voting and pre-electoral violence to Sub-Saharan Africa for two reasons. First, many Sub-Saharan African counties made the transition towards more competitive electoral regimes in the early 1990s, going through a historically similar transition period (Bratton and Van de Walle

1997; Lindberg 2006). Regular multiparty elections are now held in almost all African countries (with the exception of Eritrea, Somalia, and Swaziland), but the integrity of these contests is often questionable (e.g., Bratton 1998; Basedau, Erdmann and Mehler 2007). Most importantly, these elections vary considerably with regard to pre-electoral violence. Figure 1 shows the percentage of elections with significant campaign violence for three different measures of pre-electoral violence, which are discussed in greater detail below.

[Insert Figure 1 about here]

Overall the maps for the different measures look very similar. While countries such as Benin, Burkina Faso, Botswana, or Mozambique experienced no election campaigns with significant violence, states like the Ivory Coast, Nigeria, Kenya, or Zimbabwe had significant per-electoral violence in more than half of their elections in the first two decades since the end of the Cold War.

Second, Sub-Saharan Africa is currently the only region for which a sufficiently large number of comparable and nationally representative surveys with both sufficiently fine grained information on the respondent's ethnicity and vote intensions exists. This is necessary in order to generate the ethnic voting measure.[2] A substantial literature in African politics shows a broad correspondence between voters' ethnicity and vote choice (e.g., Melson 1971; Horowitz 1985, Posner 2005), but also notes that there is considerable cross-national variation in the degree to which ethnicity determines vote choice (e.g., Norris and Mattes 2003; Dowd and Driessen 2008; Dunning and Harrison 2010). In fact, as illustrated below Sub-Saharan Africa is the ideal testing ground for this proposition, since the cross-national variation in ethnic voting is particularly large.

Data

Pre-electoral violence is measured by four distinct election-specific measurements. The first measure is taken from Lindberg (2009), who offers an ordinal measure of violence during the campaign period and on Election Day for all multiparty elections between 1990 and 2007. He distinguished between peaceful elections, those with isolated incidents, and those with systematic and widespread violence. His classification is based on country-specific academic research, reports from international news agencies, such as the British Broadcasting Company (BBC) or the Agence France-Press (AFP), and local newspapers assessed via AllAfrica.com.[3]

The second measure comes from the African Election Violence Database (AEVD) (Straus and Taylor 2012) and is also an ordinal measure of pre-electoral violence, covering all multiparty elections between 1990 and 2008. It distinguishes between non-violent, violent harassing, violent repressive, and highly violent campaigns. Violent harassment refers to incidents of party supporters brawling in the streets, the police and security forces breaking up rallies, the confiscation of opposition newspapers, and the disqualification of certain opposition candidates. Violent repression refers to incidents of high-level assassinations, long-term high-level arrests of party leaders and the consistent use of violent intimidation and harassment. Finally, an election campaign is considered highly violent, if repeated widespread physical attacks occurred, leading to a substantial number of deaths over time. The coding is based on the U.S. State Department's annual Country Reports on Human Rights Practices, which are written by the U.S embassy

personnel in those countries, Amnesty International's annual Human Rights Watch reports and the journalistic coverage in Africa Report.[4]

The third measure of electoral violence is taken from the National Elections Across Democracy and Autocracy (NELDA) dataset (Hyde and Marinov 2012). The dichotomous variable NELDA 33 indicates whether there was significant violence involving civilian deaths during an election between 1945 and 2010. Similar to the previous two measures, the coding is based on news reports, archives, and country reports from the library of congress and the U.S. State Department. Unlike the previous two measures, which focus explicitly on pre-electoral violence, this measure is not limited to the campaign period. Relying on additional variables from NELDA (i.e., NELDA 29 and NELDA 31) and the case notes in the dataset, I cleaned the measure of pure post-electoral violence cases. According to the codebook, the measure includes no specific threshold of deaths, but violence must be `significant' and at least one civilian must have been killed.

The final measure of pre-electoral violence is derived from the Social Conflict and Africa Database (SCAD) (Hendrix and Salehyan 2013), which codes all forms of social conflict in Africa between 1990 and 2011. Following Daxecker (2013), I count the number of election-related violent events six months prior to Election Day.[5] A higher number of events indicate more pre-electoral violence. The SCAD event coding is based on AFP reports in Lexis Nexis.

The four country-level measures of pre-electoral violence are positively correlated ranging from 0.60 to 0.81, indicating that they capture a similar phenomenon, although they were coded independent of each other by different research teams and rely on different coding schemes and sources. Hence, finding a consistent effect of an independent variable across these different indicators provides robust empirical evidence, as the association cannot easily be dismissed due to coding error or bias of a specific source.

A country's degree of ethnic voting is measured using Huber's (2010) index of ethnic voting (EV). The index captures the extent to which knowledge of a voter's ethnicity allows you to predict his/her vote intent. The EV index is based on Gallagher's (1991) disproportionality index normalized by the number of ethnic groups in a country, so that it ranges from zero to one, where higher values indicate a higher degree of ethnic voting. To better understand what this index measures, consider a country with two ethnic groups A and B and two political parties. If all members of group A vote for one party and all members of group B vote for the other party, then ethnicity is a perfect predictor of individual voting behavior and the EV index will be one. But as more and more up until half of all members of the two ethnic groups switch their alliance from one party to the other, ethnicity becomes an increasingly worse predictor of an individual's vote choice and the value of the EV index drops towards zero.[6]

The construction of the EV index requires a list of relevant ethnic groups and representative surveys with questions on respondents' ethnicity and vote intent. Fortunately, the Afrobarometer surveys (round 3 and later) provide this information[7] for a total of 20 different Sub-Saharan African countries. To identify a country's relevant ethnic groups, I use the group list of the Ethnic Groups in Power dataset 2.0 (EPR-ETH) (Cederman, Wimmer and Min 2010). This list identifies all politically relevant ethnic groups at the national level between 1946 and 2009[8], where ethnicity is broadly defined as any group based on linguistic, religious, racial, and caste identities. A group is considered politically relevant if it is either discriminated against by the state or political elites make ethnic claims on behalf of it. Political relevance and thereby temporal variation are the main two differences between the EPR-ETH and the Fearon (2003)

group list, which Huber (2010) uses. As previous research recommends focusing on politically relevant ethnic groups when studying ethnic politics (e.g., Posner 2004), I opted for the EPR-ETH list.[9] For each country answers to the ethnicity question in the surveys were matched to the EPR-ETH group list. In the vast majority of country-election years (27 out of 43) matching the ethnic groups in the surveys to the groups in the EPR-ETH list was perfect. In the remaining 16 country-election years the largest EPR-ETH group I was unable to match, made up less than 2% of the country's population and the total proportion of unmatchable groups in a country never exceeded 4% of a country's population. Overall, the surveys are pretty representative of the ethnic composition of a country, as the high correlation (r = 0.91) between the ethnic fractionalization scores from the EPR-ETH database and the surveys indicate. These surveys are therefore an appropriate data source to examine ethnic behavior across countries.

Figure 2 presents a scatter plot between ethnic fractionalization and ethnic voting.

[Insert Figure 2 about here]

The scatter plot clearly indicates that the EV index is different from ethnic fractionalization and cannot be explained exclusively by the underlying levels of ethnic diversity. With the exception of Mali (MLI), Tanzania (TZA), and Zimbabwe (ZWE), African countries generally have quite high ethnic fractionalization scores and among highly fractionalized countries there is considerable variation in the degree of ethnic voting. Countries with an ethnic fractionalization index between 0.8 (Benin (BEN)) and 0.9 (Mozambique (MOZ)) have EV scores ranging from 0.024 (Mozambique (MOZ08)) to 0.469 (Kenya (KEN08)). In addition, Sub-Saharan African countries cover a large part of the empirical spectrum of ethnic voting, making them the ideal testing ground to study the impact of ethnic voting on campaign violence. While countries such as Mozambique (MOZ08) (EV = 0.024), Senegal (SEN05) (EV = 0.06), and Botswana (BWA08) (EV = 0.096) exhibit virtually no ethnic voting, others such as Kenya (KEN08) (EV = 0.469), Ethiopia (ETH07) (EV = 0.412), and Nigeria (NGA08) (EV = 0.321).

The main set of control variables include the political regime as measured by the Polity IV index (Marshall, Gurr and Jaggers 2010), the level of economic development (Heston, Summers and Aten 2013), and the degree of ethnic fractionalization (Cederman, Wimmer and Min 2010). Previous studies (e.g., Arriola and Johnson 2012; Hafner-Burton, Hyde and Jablonski 2013) have found that established democracies have less violent elections and it is widely held that the politicization of ethnicity is particularly likely in the early stages of democratic development (e.g., Birnir 2007; Lijphart 2002, 38). Similarly, low levels of economic development are commonly associated with violence and conflict (e.g., Collier and Hoeffler 2004) and could increase the political salience of ethnicity in politics as different ethnic groups struggle for access to state resources. If political and economic development reduces campaign violence, the Polity and GDP per capita variable should have negative coefficients. Finally, since previous research has found that fractionalization of politically relevant groups is positively association with conflict (e.g., Cederman and Girardin 2007) and Figure 2 points towards a positive, but low correlation with the degree of ethnic voting, I also include the ethnic fractionalization index. If more ethnically fractionalized countries are in fact prone to more violence during election campaigns, this coefficient should be positive.

Aside from these main controls, a series of country- and election-specific control variables (e.g., conflict and electoral history of a country, the electoral system, or the degree of geographic

isolation of ethnic groups) are also considered. They are discussed in greater detail during the analysis. Summary statistics for all variables used in the analysis are provided in the appendix.

The necessary individual-level data to construct the EV index restricts the number of Sub—Saharan African countries included in the analysis. In the following analysis I use data on 54 election-years in 19 different countries throughout Sub-Saharan Africa between 2004 and 2011.

Empirical Strategy

The small number of observations also restricts the available statistical techniques to isolate the association between the degree of ethnic voting and pre-electoral violence. I therefore regress the EV index on different measures of campaign violence with a limited set of controls (i.e., Polity, GDP per capita, and ethnic fractionalization) and then stepwise include a series of measures associated with alternative explanations to account for potential selection issues.
Linear probability models are estimated using the Lindberg, AEVD, and NELDA measures of pre-electoral violence[10] and a negative binominal regression is run on the SCAD count data to account for over-dispersion. Because the dataset includes multiple surveys per country and election year, all regressions are weighted by the inverse of the observations frequency and the standard errors are clustered at the country-level.

4. Empirical Analysis

Bivariate Relationships

Figure 3 illustrates the bivariate relationships between ethnic voting and the four measures of pre-electoral violence, after excluding the Zimbabwean elections, which have been identified as outliers.[11] Based on the theoretical discussion above, I expect a positive association between the degree of ethnic voting and pre-electoral violence.

[Insert Figure 3 here]

The upper two plots indicate that there is a discontinuous relationship between ethnic voting and the Lindberg and AEVD measures of pre-electoral violence. The degree of ethnic voting in countries with peaceful elections is not significantly different from countries with low levels of campaign violence, but once ethnic voting passes a certain threshold, a country is significantly more likely to experience high levels of pre-electoral violence. Hence, any positive association between ethnic voting and violence will be driven by the significant difference between the highest and all lower categories, which is why I dichotomized both measures. Doing so makes the two measures identical in my subset of Sub-Saharan African countries, so that they are treated as a single dependent variable in the subsequent analysis.

The plot in the lower left corner presents the relationship between the NELDA measure of electoral violence and ethnic voting. There is a positive relationship, but it is not as strong as in the upper two plots, which may be due to the different violence thresholds. While any violence with civilian deaths is coded as significant in the NELDA dataset, both Lindberg (2009) and the AEVD (Straus and Taylor 2012) are more restrictive, requiring not only deaths, but also the systematic and widespread use of violence during an election campaign. It is therefore not surprising that the election campaigns coded as violent by Lindberg and the AEVD are a subset of those coded as violent by NELDA.

Finally, note the overall positive association between the number of violent events in the six months prior to an election and the level of ethnic voting. The 2005 Tanzanian general elections seem to be a prominent outlier: although Tanzania has a low level of ethnic voting, it had almost as many violent incidents during the campaign period as Kenya in 2002 or Nigeria in 2007. A closer inspection reveals that the vast majority of those events occurred in Zanzibar, two islands (Pemba and Unguja) off the coast of Tanzania, whose small population is more ethnically divided (i.e., mainland Africans versus people of Arab origin),[12] considerably poorer than the mainland Tanzanians (i.e., $220 versus $600 GDP per capita), and whose past multiparty elections in 1995 and 2000 have been marred by accusations of fraud and violence (Laakso 2007, 237-238; Bekoe 2012b, 132). Hence, if we were able to divide Tanzania into Tanganyika (i.e., mainland Tanzania) and Zanzibar, the two cases would nicely fit the overall positive association: Tanganyika would have a very low level of ethnic voting and very few violent events, whereas Zanzibar would have a higher degree of ethnic voting and a high number of violent campaign events.

Regression Analysis

Table 1 presents the regression results for the different measures of electoral violence on ethnic voting.

[Insert Table 1 here]

As indicated by the bivariate correlations in Figure 3, there is a positive association between ethnic voting and electoral violence across all measures of pre-electoral violence. The association remains statistically significant and the coefficient even increases by roughly 50% for the NELDA and SCAD measures after adding the main set of control variables. Moreover, the association between ethnic voting and electoral violence is substantively important: an increase of the ethnic voting index by 0.1 (i.e., slightly less than one standard deviation) increases the probability of significant pre-electoral violence between 18 and 30 percentage points or more than doubles the number of violent incidents during the campaign period. The majority of the estimates for the control variables point in the expected direction: more ethnically fractionalized, less democratic, and less developed countries experience more violence during election campaigns, but most of those coefficients are statistically insignificant. This may be due to the similarity of the countries, especially after controlling for Zimbabwe. Finally, the positive and in most models highly significant coefficient of the Zimbabwe dummy supports the notion that Zimbabwean elections are outliers: they are significantly more violent than the average African election although ethnicity is a very weak predictor of individual vote choice.

Robustness

To assess the robustness of the association between ethnic voting and pre-electoral violence, I stepwise add a series of country- and election-specific variables to the regression models. Table 2 presents the results of the regressions with additional country-specific control variables.

[Insert Table 2 here]

Conflict, especially ethnic conflict, may strengthen ethnic cleavages and thereby contribute to ethnic voting and create a "culture of violence" (Omotola 2010), which makes violence an

excepted way to resolve arguments and social tensions. As a result, the association between ethnic voting and campaign violence may be due to the countries' different conflict histories. To check for this, columns 1-3 in Table 3 include three different conflict related measures: the number of peace years (i.e., years since last conflict), number of past conflicts since independence, and a dummy variable indicating whether a country was involved in a conflict with at least 25 conflict related deaths during the election year. All measures are taken from the UCDP/PRIO Armed Conflict Dataset (Thémner and Wallensteen 2011). The positive association between ethnic voting and pre-electoral violence remains both statistically and substantively significant, independent of the measure of electoral violence and the conflict control. Interestingly, time since last conflict is positively related to pre-electoral violence, suggesting that campaign violence is a distinct phenomenon that does not just occur in and right after conflicts. Conflict history is positively related to pre-electoral violence, supporting the notion that repeated fighting might strengthen ethnic cleavages, but fails to reach conventional levels of statistical significance. Finally, current conflict involvement has a negative coefficient estimate that reaches statistical significance in the negative binomial regression, suggesting that the measures – and especially the SCAD count variable – does in fact capture election-specific violence and not just incidents occurring during an election campaign, but that are unrelated to the electoral process.

Next, I consider the impact of decentralization. Scholars have widely argued that decentralization can politicize ethnic identities, though there is no agreement on how this works (Brancati 2009). Ethnic voting might therefore be more prevalent in decentralized political systems. At the same time, electoral competition in federal states may be more peaceful, as power is divided between the states and the federal government, which reduces the electoral stakes at the national level. To see whether the results regarding ethnic voting are robust when controlling for decentralization, I add a dummy variable indicating whether a country has a federal structure. The variable is taken from Treisman (2002) and supplemented by own research for missing cases.[13] The impact of ethnic voting remains strong and there seems to be no clear relationship between federalism and pre-electoral violence across the three measures.

As a last country-level control, I consider the role of geographic concentration. If individuals from the same ethnic group tend to live in the same region and are therefore exposed predominantly to members of their own group with little exposure to members of other groups, then they might form group-specific viewpoints and interests, and thus vote together with their own ethnic kin. Moreover, if these regions are electorally equally strong and vary in other politically relevant aspects, then elections may have particularly high stakes, creating incentives for electoral violence and other forms of electoral manipulation. To account for this potentially omitted variable, I include a measure of geographic isolation used by scholars studying residential segregation. It captures the extent to which members of an ethnic group are exposed only to one another and can theoretically range from 0 to 1, where 1 indicates perfect isolation (Massey and Denton 1988, 288).[14] To calculate this measure, I use the region variable of the same surveys that were used in the EV calculation. The region variable refers to the highest subnational administrative unit (e.g., the states in federal systems and provinces in centralized systems). The relationship between ethnic voting and pre-electoral violence remains statistically significant in two of the three measures. Only in the count model does the coefficient estimate fail to reach conventional levels of statistical significance. The coefficient of the geographic isolation index is generally positive, suggesting that countries with high ethnic segregation are more likely to experience violent election campaigns.

Next, I consider the robustness of the association with respect to election-specific controls. Table 3 presents those regression results.

[Insert Table 3 here]

Several studies provide evidence that the salience of ethnicity increases around election time, increasing tensions and affecting cross-ethnic interactions (e.g., Eifert, Miguel and Posner 2010; Michelitch 2010). Since the surveys used to calculate the EV index were administered at different points in time during the countries' electoral cycles, the degree to which ethnicity affects an individual's intended vote may vary, introducing bias. To account for this, I include the logged number of days between the administration of the survey and the closest national election. The inclusion of this variable has little impact on the size and statistical significance of the association between ethnic voting and pre-electoral violence.

Huber (2012) shows that, contrary to most scholarly literature, majoritarian and not PR is associated with higher levels of ethnic voting. Moreover, several authors have suggested that single member district electoral systems create higher levels of competition and may therefore be more likely to incite electoral violence (e.g., Bermeo 2003; Laakso 2007; Höglund 2009). To control for this potential omitted variable, I include two different indicators of the legislative electoral system: the logged average district magnitude (ADM) in lower house elections (Table 3, column 2) and a dummy variable indicating whether legislators are elected in single member districts (SMD) (Table 3, column 3). Overall, the positive association between ethnic voting and pre-electoral violence remains, although the size of the coefficient estimates for the AEVD/Lindberg and NELDA measures decrease by about a quarter. There seems to be a consistent association between the legislative electoral system and pre-electoral violence, which is in line with previous empirical research (e.g., Arriola and Johnson 2012).

Lindberg (2006) argues that citizens and leaders in democratizing nations learn what it means to be democratic through repeated multiparty elections. Similarly, Birnir (2007) suggests that repeated multiparty elections reduce ethnic voting. If this is true, than the association between ethnic voting and pre-electoral violence might be driven by the countries' difference in electoral experience. Yet, controlling for the logged number of consecutively held previous multiparty elections does not affect the coefficient of ethnic voting, indicating that the degree of ethnic voting does not decline along with greater competitive electoral experience (Table 3, column 4). The results regarding the impact of the logged number of past elections on electoral violence are mixed. While it seems to reduce the number of pre-electoral social conflict events, it seems to increase the risk of significant pre-electoral violence as measured by NELDA.

Finally, I control for electoral competitiveness. Existing research has shown that supporter mobilization (and consequentially opponent supporter demobilization) becomes more important as electoral competitiveness increases, which provides incentives for candidates to engage in pre-electoral violence and mobilize their co-ethnics (e.g., Mitchell 1995; Chaturvedi 2005; Wilkinson 2004). Due to the lack of alternatives (e.g. reliable pre-campaign election polls), I calculate a proxy of electoral competitiveness using the winner and the runner-up's vote shares in presidential and the winner and the runner-up's seat shares in legislative elections.[15] The vote and seat share data was taken from Lindberg (2009) and Nunley (2013). The coefficient estimates of ethnic voting remain positive and significant for two of the three measures of electoral violence. The impact of electoral competitiveness is mixed: the NELDA regression indicates that

campaign violence increases and the SCAD number regression suggests that electoral competitiveness decreases campaign violence.

Sensitivity Analysis

Table 4 presents the result of a series of sensitivity tests.

[Insert Table 4 here]

Columns 1-3 in Table 4 present the results after dropping all duplicate country-election year observations, keeping the observation closest to the past election. Unsurprisingly, the estimates become noisier after dropping more then 20% of the observations, which reduces the power of the analyses. Nevertheless, all coefficients remain positive and the size of the coefficient for the AVED/Lindberg indicator remains unchanged, while they decrease substantially for the other two measures. Overall, the main regression results survive even after dropping a substantive part of the observations and remain statistically significant. Their substantive effect – although still relative large – is somewhat sensitive to the size and composition of the sample.

Columns 4-6 in Table 4 present the regression results after adding additional controls for those observations that were found to be influential in leverage-versus-squared-residual plots. Controlling for these influential observations has little effect on the association between ethnic voting and pre-electoral violence. The coefficient estimates remain significant and roughly identical in size. Thus, the association between ethnic voting and pre-electoral violence does not seem to be the result of just a few influential observations.

5. Conclusion

This chapter explored the relationship between the degree of ethnic voting and the pre-electoral violence. I have argued that higher levels of ethnic voting should increase the likelihood of violent election campaigns, since it increases electoral competition and renders other campaign tactics, such as programmatic appeals and patronage, ineffective. To evaluate this prediction empirically, I use data on 54 election-years in 19 different countries in Sub-Saharan Africa between 2004 and 2011. Overall, the analysis suggests that there is a robust positive association between ethnic voting and pre-electoral violence. It survived the inclusion of various additional controls that account for alternative explanations and remained statistically and substantively significant even after controlling for influential observations.

The chapter contributes to two related literatures. First, it adds to the broader literature on elections and violence by offering a more nuanced view on the relationship between ethnicity, elections, and violence. In the vast majority of regression models ethnic factionalization had no significant impact of pre-electoral violence, while the ethnic voting index is significantly related to campaign violence. Hence, at least with regard to pre-electoral violence, not ethnic diversity per se, but the politicization of ethnicity for electoral purposes increases the risk of violence. Second, with regard to the more specialized literature on electoral violence, the chapter highlights the importance of the social structure and behavior of the electorate next to the institutional and economic factors emphasized in previous research. Given that the degree of ethnic voting does not change much over time, this chapter points towards an additional explanatory factor for the persistent cross-country differences in electoral violence across Sub-Saharan Africa.

Although the empirical scope of the paper is limited to Sub-Saharan Africa, the theoretical arguments are general and not limited to any specific region. Different degrees of ethnic voting may therefore also explain differences in electoral violence in other parts of the world. Unfortunately, survey data on ethnicity and vote choice is still limited for most other regions, but with the sixth wave of the World Value Survey being released soon, a wider range of comparable and nationally representative surveys will become available, allowing researchers to replicate this study in other parts of the world plagued by electoral violence, such as Southeast Asia and the Caribbean.

Future research should also expand the empirical analysis within Sub-Saharan Africa, which remains in many ways preliminary due to data limitations. With the Afrobarometer Wave 5 being released soon, it will become possible to create a country-election year panel dataset on ethnic voting, allowing us to look more precisely at the causal connection between the degree of ethnic voting and the extent of pre-electoral violence.

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Tables and Figures

FIGURE 1: Percentage of Sub-Saharan African Elections with Significant Pre-Electoral Violence

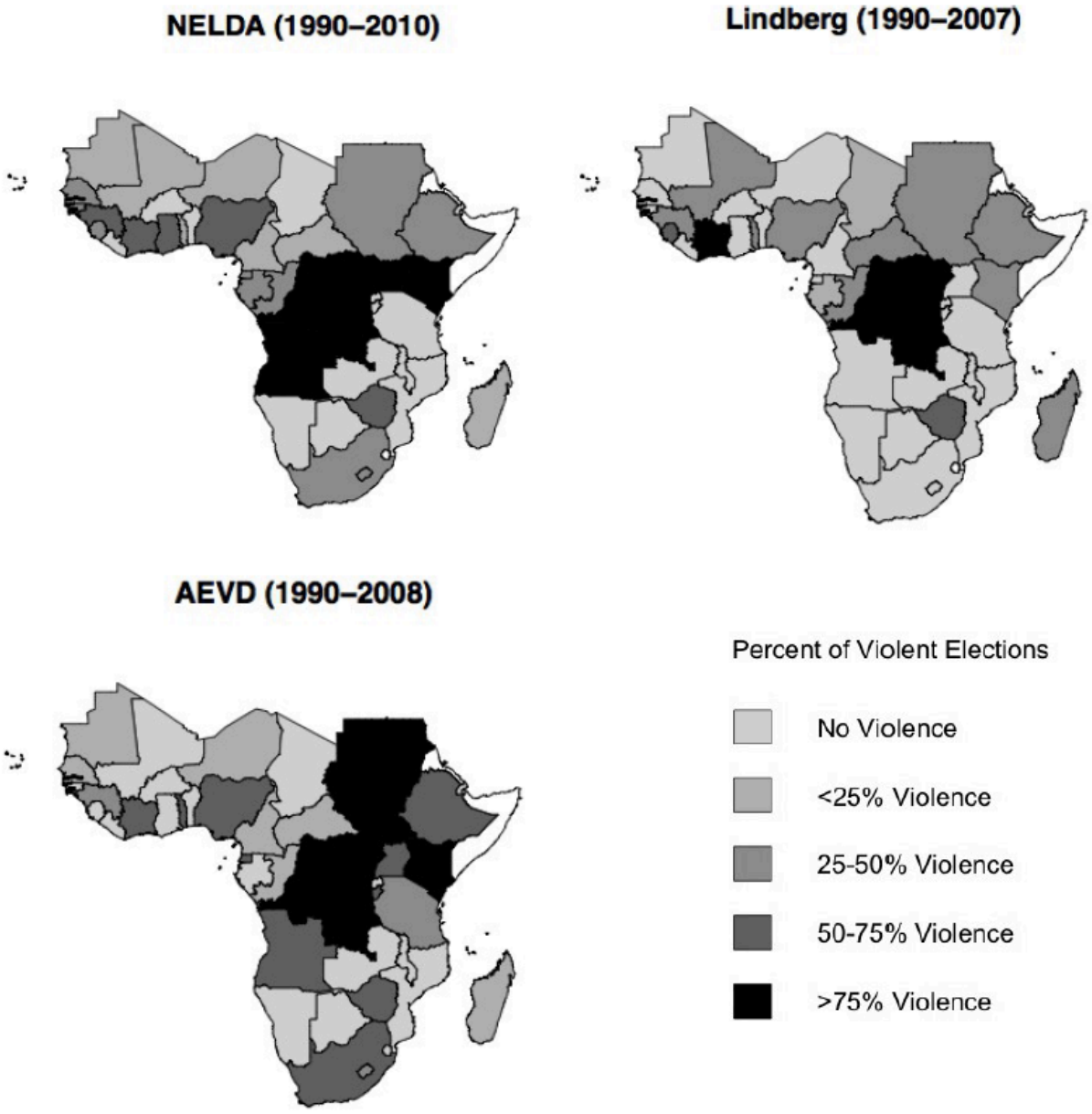

FIGURE 2: Relationship Between Ethnic Fractionalization and Ethnic Voting

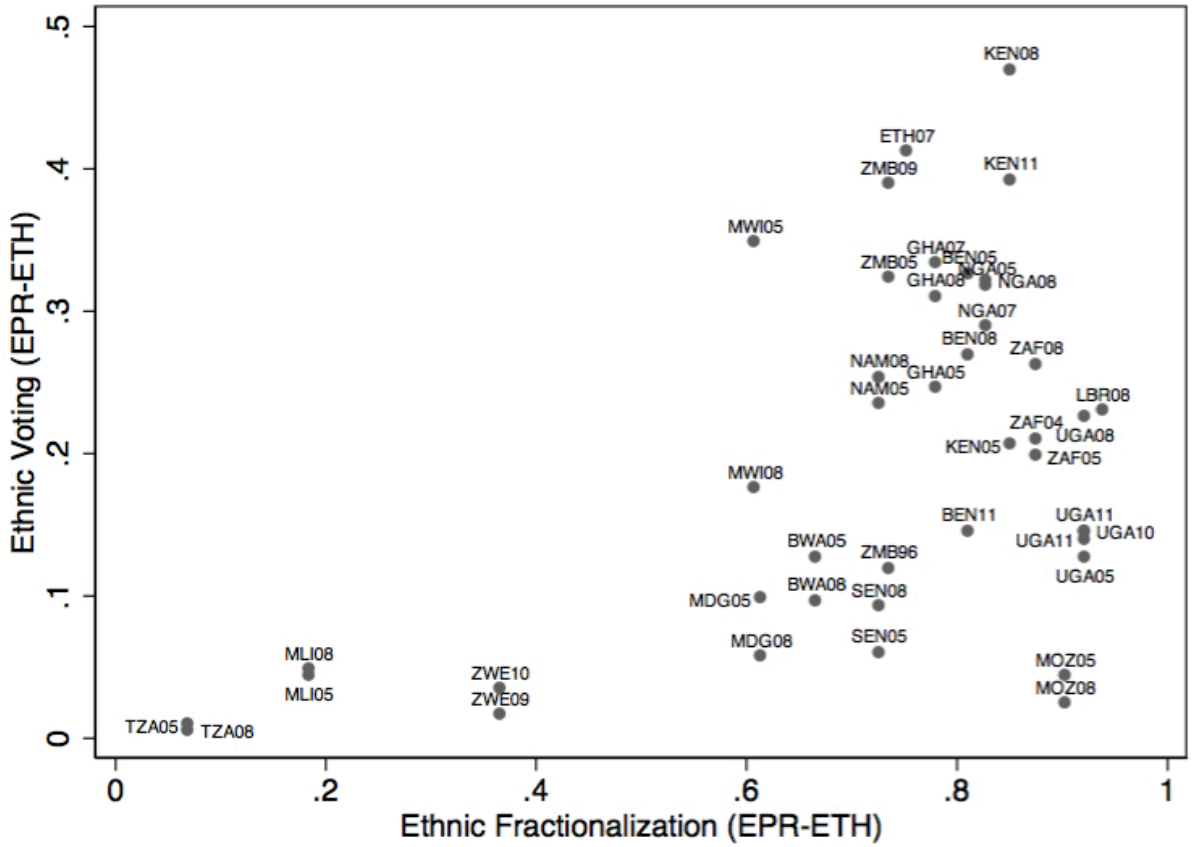

FIGURE 3: Relationship Between Ethnic Voting and Four Measures of Pre-Electoral Violence

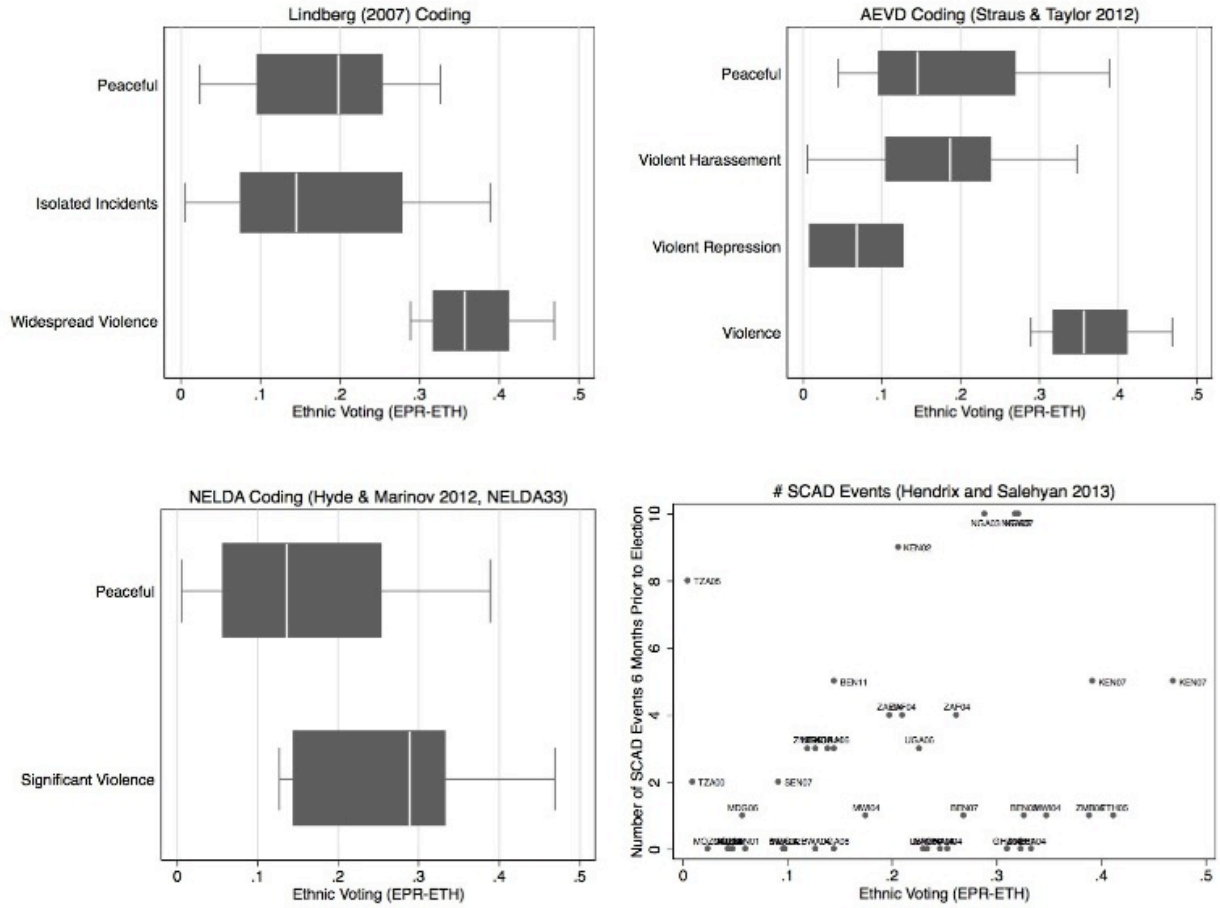

TABLE 1: Main Regression Results of Pre-Electoral Violence on Ethnic Voting

	(1)	(2)	(3)	(4)	(5)	(6)
	AEVD/Lindberg	AEVD/Lindberg	NELDA	NELDA	# SCAD	# SCAD
	Dummy	Dummy	Violence	Violence	Events	Events
Ethnic Voting	1.904*	1.820*	2.053*	3.082***	5.512*	8.268**
	(1.020)	(0.880)	(1.061)	(0.535)	(3.214)	(4.078)
Ethnic Fractionalization		0.858		1.034		9.753
		(0.792)		(1.227)		(6.276)
Polity IV (lagged)		0.021		-0.091***		-0.035
		(0.021)		(0.020)		(0.107)
GDP p.c. (log, lagged)		-0.103		-0.026		0.334
		(0.081)		(0.115)		(0.539)
Zimbabwe	1.258***	1.636***	0.889**	0.690	2.824***	8.441**
	(0.157)	(0.498)	(0.341)	(0.740)	(0.729)	(3.842)
Constant	-.306	-0.324	0.060	-0.360	-0.563	-11.858
	(0.181)	(0.667)	(0.364)	(1.531)	(0.797)	(7.943)
Weighted N	32	32	32	32	32	32
Clusters	10	10	10	10	10	10

NOTES: Estimates in columns 1-4 come from linear probability models, estimates in columns 5 and 6 from negative binomial regressions. All regressions are frequency weighted and standard errors are clustered at the country-level. The standard errors are reported in parentheses and estimates statistically significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***).

TABLE 2: Adding Country-Specific Controls to Main Regression of Pre-Electoral Violence on Ethnic Voting

	(1)	(2)	(3)	(4)	(5)
			Additional Control Variables		
	Peace Years	Conflict History	Current Conflict	Federalism	Geographic Isolation
Panel A: AEVD/Lindberg Dummy					
Ethnic Voting	1.486**	2.284***	1.908*	1.739*	1.913*
	(0.623)	(0.629)	(0.883)	(0.940)	(1.032)
Additional Control	0.037**	-0.184	-0.750	0.227	0.672
	(0.015)	(0.132)	(1.045)	(0.412)	(1.227)
Panel B: NELDA Violence					
Ethnic Voting	2.922***	2.355**	3.145***	3.189***	3.274***
	(0.572)	(0.846)	(0.626)	(0.572)	(0.642)
Additional Control	0.018	0.288	-0.535	-0.301	1.381*
	(0.011)	(0.170)	(0.623)	(0.310)	(0.631)
Panel C: # SCAD Events (6 months)					
Ethnic Voting	4.574*	7.779**	9.358**	7.126***	8.763
	(2.401)	(3.559)	(3.687)	(2.597)	(6.211)
Additional Control	0.134***	0.410	-4.811**	2.167***	4.025
	(0.039)	(0.939)	(2.309)	(0.457)	(17.460)
Weighted N	32	32	32	32	32
Clusters	10	10	10	10	10

NOTES: Estimates in panels A and B come from linear probability models, estimates in panel C from negative binomial regressions. All regressions include the following control variables: ethnic fractionalization from the EPR-ETH dataset, Polity IV (lagged), GDP p.c. (log, lagged) and a dummy for Zimbabwe. All regressions are frequency weighted and standard errors are clustered at the country-level. The standard errors are reported in parentheses and estimates statistically significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***).

TABLE 3: Adding Election-Specific Controls to Main Regression of Pre-Electoral Violence on Ethnic Voting

	(1)	(2)	(3)	(4)	(5)
			Additional Control Variables		
	Time in Election Cycle	Electoral System (log(ADM))	Electoral System (SMD==1)	# Multiparty Elections	Electoral Competition
Panel A: AEVD/Lindberg Dummy					
Ethnic Voting	1.852*	1.405*	1.310	1.777*	1.914
	(0.929)	(0.678)	(0.728)	(0.894)	(1.069)
Additional Control	-0.011	-0.067	0.258	-0.102	-0.115
	(0.038)	(0.055)	(0.235)	(0.539)	(0.631)
Panel B: NELDA Violence					
Ethnic Voting	3.259***	1.967***	1.584**	3.370***	1.682***
	(0.647)	(0.488)	(0.532)	(0.564)	(0.514)
Additional Control	-0.062	-0.180***	-0.758***	0.678*	1.706***
	(0.053)	(0.049)	(0.228)	(0.342)	(0.406)
Panel C: # SCAD Events (6 months)					
Ethnic Voting	9.038*	10.273*	9.200*	7.808***	13.313**
	(4.855)	(5.733)	(5.108)	(2.745)	(5.569)
Additional Control	-0.154	0.224	-0.391	-3.748***	-5.988*
	(0.139)	(0.455)	(1.516)	(0.763)	(3.478)
Weighted N	32	32	32	32	32
Clusters	10	10	10	10	10

NOTES: Estimates in Panel A and B come from linear probability models, estimates in Panel C from negative binomial regressions. All regressions include the following control variables: ethnic fractionalization from the EPR-ETH dataset, Polity IV (lagged), GDP p.c. (log, lagged) and a dummy for Zimbabwe. All regressions are frequency weighted and standard errors are clustered at the country-level. The standard errors are reported in parentheses and estimates statistically significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***).

TABLE 4: Sensitivity of Main Regression Results of Pre-Electoral Violence on Ethnic Voting

	(1)	(2)	(3)	(4)	(5)	(6)
	Dropping Duplicate Observations			Controlling for Influential Observations		
	AEVD/Lindberg Dummy	NELDA Violence	# SCAD Events	AEVD/Lindberg Dummy	NELDA Violence	# SCAD Events
Ethnic Voting	1.848**	1.534*	2.114	2.500*	2.561**	8.268**
	(0.807)	(0.877)	(2.536)	(1.347)	(0.806)	(4.078)
Botswana 2004				0.729**	0.749***	
				(0.316)	(0.212)	
Kenya 2007				0.055		
				(0.489)		
Malawi 2005				-0.373	-0.378	
				(0.373)	(0.326)	
Nigeria						2.061***
						(0.586)
Weighted N	26	26	26	32	32	32
Clusters	18	18	18	10	10	10

NOTES: Estimates in columns 1-2 and 4-5 come from linear probability models, estimates in columns 3 and 6 from negative binomial regressions. All regressions include the following control variables: Ethnic Fractionalization from the EPR-ETH dataset, Polity IV (lagged), GDP p.c. (log, lagged) and a dummy for Zimbabwe. Columns 4-6 are frequency weighted and the standard errors in all regressions are clustered at the country-level. The standard errors are reported in parentheses and estimates statistically significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***).

Appendix Tables

APPENDIX TABLE 1: Summary Statistics

Variable	Type	Median	Mean	Std. Dev.	Min	Max
Lindberg High Violence	Dummy	0	0.182	0.390	0	1
AEVD High Violence	Dummy	0	0.182	0.390	0	1
NELDA Violence	Dummy	0	0.386	0.493	0	1
# SCAD events (6 months)	Count	1	2.773	3.516	0	11
Ethnic Voting (EPR-ETH)	Index	0.198	0.193	0.126	0.005	0.469
ELF (EPR-ETH)	Index	0.780	0.710	0.229	0.070	0.939
Ethnic Voting (Fearon)	Index	0.159	0.189	0.116	0.016	0.464
ELF (Fearon)	Index	0.805	0.770	0.158	0.351	0.953
Polity IV (lagged)	Index	5.5	4.068	3.920	-4	9
GDP p.c. (log, lagged)	Index	6.985	7.080	0.841	5.685	9.112
Peace Years	Years	22	21.773	15.303	0	50
Conflict History	Count	1	1.455	2.040	0	13
Time in Election Cycle (log)	Days	5.966	5.719	1.198	0	7.249
Electoral Competition	Index	0.665	0.603	0.265	0.176	0.982
Avg. District Magnitude (log)	Index	0	0.840	1.525	0	4.711
# Multiparty Elections	Count	1.099	1.239	0.385	0	2.079
Federalism	Dummy	0	0.273	0.451	0	1
Geographic Isolation	Index	0.645	0.690	0.163	0.348	0.983

Endnotes

[1] Electoral violence differs from other forms of political violence in its timing and motivation. For the purpose of this paper, I define electoral violence as any harm or threat of harm against voters during the election process. This is narrower than the IFES (2013) definition of electoral violence, which includes candidates, property, and the electoral process itself as targets. Electoral violence may occur at three distinct periods during the election process: between the beginning of the campaign period and election day, on election day, and between closing of the polls and the inauguration of the newly elected body (Höglund 2009). This paper focuses on pre-electoral violence; that is the election related violence occurring during the campaign period up until election day.

[2] Other cross-national surveys containing the necessary information are the World Value Survey (WVS) and the Comparative Studies of Electoral System Surveys (CSES). But most of the countries included in these surveys are consolidated democracies, which differ in various aspects from developing countries and generally have free, fair and non-violent elections. Moreover, they tend to vary little and have low levels of ethnic voting.

[3] Elections after 2007 were coded by the author following Lindberg's coding rules and using only the sources he listed.

[4] As before, I expand the AEVD coding for elections after 2008, relying only on the sources they listed and following their coding rules.

[5] In order to check the robustness of my findings with regard to the somewhat arbitrarily chosen six-month time period, I have also coded the number of events in the three months period up to election day. The two measures are highly correlated (r = 0.977) and all findings are qualitatively identical, suggesting that the choice of time frame does not matter.

[6] Formally, a country's degree of ethnic voting is equal to

$$EV = \frac{1}{\sqrt{\frac{G-1}{2G}}} \sum_{g=1}^{G} (EV_g * s_g) = \frac{1}{\sqrt{\frac{G-1}{2G}}} \sum_{g=1}^{G} \left(\sqrt{\frac{1}{2} \sum_{p=1}^{P} (V_g^p * V^p)} * s_g \right),$$

where G is the total number of ethnic groups in a country, EV_g is a group g's degree of ethnic voting, which is based on the adapted Gallagher index with V_g^p indicating the proportion of individuals in that group supporting party p and V^p indicating the proportion in society supporting party p, P denotes the number of political parties, and s_g the proportion of group g in the country's population. Birnir (2007) offers an alternative index of ethnic voting based on the volatility of electoral support for political parties, based on the assumption that higher levels of ethnic voting results in less volatility. The problem with her measure is that it does not only capture ethnic voting, as various other factors may also affect electoral volatility. Brancati (2008) offers another alternative, focusing on the vote share of regional parties, which are often ethnic based. While some regional parties are in fact ethnic (e.g., the Basque National party in Spain), other ethnic parties are not regional (e.g., the Bharatiya Janata Party (BJP) in India), rendering this measure problematic. In fact, Huber (2010, 11) shows that it is only weakly correlated with his ethnic voting index.

[7] The ethnicity question is phrased "What is your tribe? You know your ethnic or cultural group?" and the vote intent question captures vote intent and is worded "If a presidential election was held tomorrow, which party's candidate would you vote for?".

[8] For the two elections in 2011 in my dataset, I extend their coding using the same sources and following their coding rules.

[9] Empirically, there is little difference in the EV index between the two group lists. In my dataset the EV values based on the EPR-ETH or Fearon (2003) group list are highly correlated (r = 0.976) and all reported results below are qualitatively similar across the two lists.

[10] Non-linear models, such as ordered and regular logit or probit, are prone to complete separation problems with small samples, severely restricting the number of control variables that can be included. This is why I chose to run linear probability models. The estimates of the linear probability model are generally more conservative regarding statistical significance than their non-linear counterparts due to the linear functional form.

[11] Zimbabwe is the poorest and most autocratic country in the dataset, is ethnically relatively homogenous (i.e., the EPR-ETH ethnic fractionalization index is 0.37), and displays little ethnic voting (i.e., EV = 0.025), but generally has very violent elections (see Figure 1). Country-specific factors, such as Mugabe's highly autocratic and repressive regime, his lack of popularity throughout most of the country, the militarized youth wing of the regime party ZANU-PF, the empty state coffers, and the dismal state of the country's economy account for the high level of campaign violence in the absence of ethnic voting (Meredith 2002; Boone and Kriger 2012).

[12] Unfortunately, the number of respondents in Afrobarometer Surveys from the islands of Zanzibar is too small to calculate a reliable ethnic fractionalization and EV score.

[13] The Sub-Saharan African countries with a federal structure in my dataset are Benin, Ethiopia, Madagascar, Nigeria, and South Africa.

[14] The country-level measure is defined as follows:

$$I = \sum_{g=1}^{G} \left(\sum_{r=1}^{n} \left(\frac{p_g^r}{P_g} \frac{p_g^r}{T_r} \right) \frac{P_g}{T} \right),$$

where r is a region, n is the total number of regions, g is an ethnic group, G is the total number of ethnic groups, $p^r_g$is the population of group g in region r, P_g is the total population of group g in the country, T is the total population of a country, and T_r is the total population in the region r. The greater the index I the more geographically isolated are the ethnic groups in a country.

[15] Electoral competition is calculated using the following formula:

$$\text{Electoral Competition}_{it} = 1 - \frac{W_{it} - S_{it}}{W_{it} + S_{it}},$$

where W stands for the vote/seat share of the winner in country i at election t and S denotes the vote/seat share of the runner-up. The closer the vote/seat share of the winner and the runner-up, the smaller the fraction, and the greater the electoral competitiveness.