

Electoral Preferences among Multi-ethnic Voters in Africa*

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Abstract

Inter-marriage is transforming Africa's ethnic landscape. In several countries on the continent more than a fifth of all marriages now cut across ethnic lines. As a result, there is a growing population of multi-ethnic citizens who descend from diverse family lineages. The growth of Africa's mixed population has the potential to affect politics in a variety of potentially far-reaching ways. In this paper we focus on one possible implication by examining the electoral preferences of multi-ethnic voters in contexts where ethnic bloc voting is commonplace. Drawing on survey data from Malawi and Kenya, we find that mixed individuals are less likely to support the party associated with their stated ethnic group, relative to mono-ethnics. We outline several possible explanations related to identity measurement, the link between identities and preferences, and social networks.

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Introduction

Ethnic inter-marriage is rapidly changing the social landscape in Africa’s diverse societies. However, standard measures used in the ethnic politics literature continue to treat individuals as descendants of singular ethnic lineages. This is true both of macro-level indicators, such as ethnic and linguistic fractionalization indices (Fearon, 2003; Alesina et al., 2003; Posner, 2004), and individual-level identity measures used in surveys conducted in Africa, including the Afrobarometer. Scholars in recent years have highlighted the importance of the multi-dimensionality of ethnicity both for how ethnic identities are conceptualized and measured (Chandra, 2004; Posner, 2004, 2005; Wimmer et al., 2009). Yet, despite some excellent work on bi-racial individuals in the U.S. and South Africa (Davenport, 2018; Harris, 2019) and studies of the political effects of inter-marriage among politicians in Africa (Adida, 2015; Adida et al., 2016), scholars of ethnic politics have yet to come to terms with the implications of inter-marriage and the concomitant growth of multi-ethnic voters for theories of ethnic politics and measurement strategies.¹ Questions about ethnic inter-mixing are particularly important for Africa, the world’s most diverse region, where a substantial share of marriages now cut across ethnic lines and a growing population of multi-ethnic individuals can no longer be coded according to a single ethnic lineage.

Whether scholars need to account for ethnic inter-mixing remains an open question. While there is good reason to think that mixed voters may differ in how they conceptualize their identities, the strength of identity attachments, and the links between identities and political behaviors, it is equally plausible that mixed individuals may think and act in ways that mirror mono-ethnics. In this paper we explore whether multi-ethnics are distinct along one particular dimension: electoral preferences in contexts where ethnic bloc voting is common. Consistent with standard practice in survey research, we ask respondents in two countries – Malawi and Kenya – to report their ethnic identities using a question format that does not encourage mixed respondents to offer multiple affiliations. Then, to identify multi-ethnics, we ask for the ethnic identities of respondents’ parents. The analysis explores whether multi-ethnics who self-identify as members of a particular group are less likely than

¹We use “multi-ethnic” and “mixed-ethnic” interchangeably in this paper.

mono-ethnics from the same group to support the party most closely associated with the group. The implications are straightforward. If, on the one hand, we find that multi-ethnics express similar preferences as mono-ethnics, then we can be assured that current measurement practices and theoretical approaches are justified despite the growth of Africa’s mixed population. If, on the other hand, we discover that multi-ethnics are distinct, then we will have good reason to update theoretical approaches and measurement strategies to take account of multi-ethnicity.

Using data from a large national survey in Malawi and a smaller urban survey in Kenya, we find that multi-ethnics in both countries are consistently less likely than mono-ethnics from the same self-identified group to support the party associated with their ethnic community, by about eight percentage points in both Malawi’s national and Kenya’s urban sample. These differences are especially pronounced among multi-ethnics whose parents’ ethnic groups cut across the ethno-partisan divide. The results are robust to the inclusion of a wide range of controls that account for individual and contextual factors, and to various specifications that code group-party affiliations by more or less stringent criteria. The consistency of the effect – observed in two cases with differing levels of ethnic inter-mixing – suggests that the results likely have relevance to other cases in Africa and elsewhere.

The remainder of this article is organized as follows. First, to examine the prevalence of multi-ethnicity in Africa we turn to data from Demographic and Health Surveys (DHS) conducted since the late-1980s. While the DHS data does not provide a direct measure of the mixed population, we are able to examine inter-marriage – a correlate of and precursor to multi-ethnicity – across a large sample of African countries. The DHS data shows that the median country-level rate of ethnic inter-marriage for a sample of 23 African countries is over 20%, and that inter-marriage rates are increasing over time.² Second, we outline a set of theoretical expectations for whether and how multi-ethnics might differ from mono-ethnics in adhering to group-level norms of ethnic bloc voting. We focus on identity measurement, the linkages between identities and political preferences, and the diversity of social networks. Third, we turn to survey data from Malawi and Kenya to show that multi-ethnics are distinct

²See Bandyopadhyay and Green (2019) and Crespin-Boucaud (2020) for more on inter-ethnic marriage and its correlates in Africa.

in their political orientations. We then draw on additional analysis from the survey data and focus groups conducted in one country (Malawi) to explore possible mechanisms. The results indicate that multiple mechanisms are likely at work and suggest avenues for future research. The final section concludes by discussing the implications of the findings for measurement strategies, research on ethnic voting, and broader theories of ethnic political behavior.

Inter-marriage and Multi-ethnicity in Africa

To explore how inter-marriage is changing the ethnic landscape in Africa, we turn to data from DHS surveys. Ideally, we would like to track the prevalence of multi-ethnics across countries and over time. This, however, is not possible because the DHS – like most population surveys – only captures singular ethnic affiliations for respondents and does not record the ethnic identities of respondents’ parents. Instead, we focus on inter-marriage rates, which can be tracked by comparing the ethnicities of couples included in the studies. Nonetheless, because inter-marriage and multi-ethnicity are directly related (albeit with a time lag), the DHS data provides a useful window into the changing nature of ethnicity in Africa.

DHS surveys are conducted across a wide range of developing countries in Africa and elsewhere. The surveys collect data from nationally-representative samples of women and men of reproductive age (typically women 15-49 and men 15-59) and date back to the late-1980s, making it possible to track trends in inter-marriage over time.³ Most DHS surveys conducted in Africa record ethnicity information for respondents, though in several countries the surveys omit ethnicity questions for some or all years (e.g., Tanzania, Zimbabwe, Uganda in some years, Rwanda after 1992), making these datasets unsuitable for inclusion here. In most cases, the ethnic coding schemes used by DHS are similar to other common measures (we use Fearon (2003) as a benchmark). However, in some instances the ethnicity codes are substantially more disaggregated and would artificially exaggerate the extent of inter-marriage. In such cases, we aggregate the ethnicity coding scheme to match Fearon (2003) as closely as possible, excluding surveys that could not be aggregated. Also, in some countries the ethnicity coding schemes used by DHS changed from one survey to the next. In these

³Estimates of inter-marriage rates include couples living together who are not married.

cases, we aggregated the coding for all surveys to match the least-disaggregated scheme used in any of the surveys. In total, our sample includes data from 58 surveys in 23 countries. Additional details are provided in the online Supplemental Information (SI) Section 12.

Figure 1: Inter-marriage Rates, DHS Surveys (most recent years)

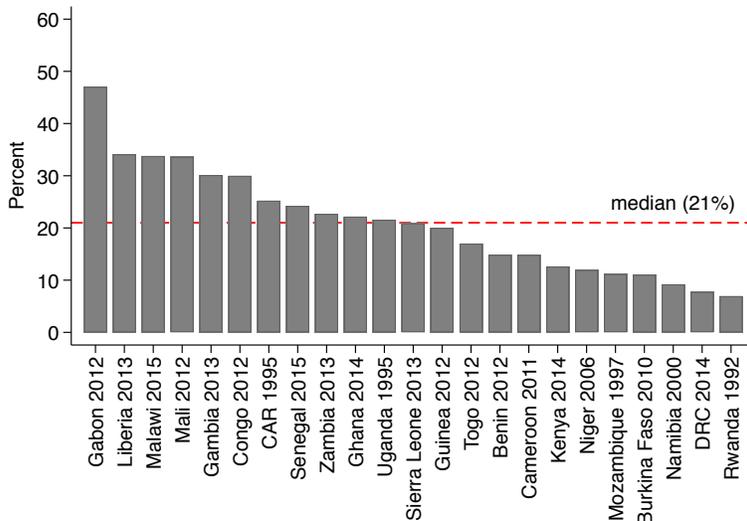


Figure 1 plots inter-marriage rates from the most recent DHS survey for countries included in the sample (Table SI.12 reports intermarriage rates across time by country).⁴ Most estimates are from surveys conducted between 2010 and 2015, but in some instances we rely on earlier data because more recent surveys either did not contain ethnicity information (e.g., Rwanda) or the DHS ethnicity coding scheme used in more recent surveys could not be matched to standard convention (e.g., Niger).

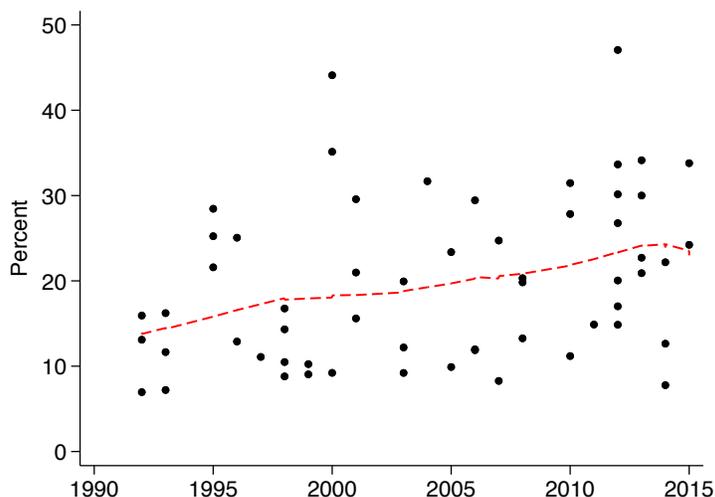
The median country-level inter-marriage rate is 21%, and we observe considerable variation across countries.⁵ At the higher end, several countries, including Gabon, Malawi,

⁴Our estimates of inter-marriage rates may be biased upward – relative to the full adult population in each country – due to the nature of the sample frame used in the DHS surveys. Because the DHS samples include only individuals of reproductive age, older people are excluded, which will likely bias our estimates of inter-marriage upward if inter-marriage is becoming more common over time. To get a sense of the size of the excluded population, the Afrobarometer round 6 surveys (conducted in 36 countries in 2014-2015) shows that 14.7% of the adult population (18+) falls outside of the DHS sample frame.

⁵Country-level estimates were weighted (using the women’s weights) to account for regional oversampling within countries.

and Liberia, register inter-marriages rates above 30%, while at the lower end, countries like Kenya, the Democratic Republic of Congo (DRC), and Namibia are below 10%. Our two cases of interest, Malawi and Kenya, fall at opposite ends of the spectrum, which increases the likelihood that findings from these countries will generalize to other parts of Africa. Figure 2 provides a scatterplot of country-year observations. The trend line (estimated with a lowess smoother) indicates an upward trend in country-level inter-marriage rates for the sample. It is noteworthy that Africa is often characterized as a continent cleaved by ethnic differences though one in five marriages now bridge ethnic divides in several countries.

Figure 2: Inter-Marriage Rates over Time



Notes: Figure is based on data from 58 national surveys in 23 countries between 1992 and 2015. Details are provided in SI Section 12. The dashed line is based on a lowess smoother (bandwidth=.8).

While we are unable to explore the connection between inter-marriage and multi-ethnicity for the full sample of DHS countries, we observe a close correlation in the two countries – Malawi and Kenya – for which we can make such a comparison using national survey data.⁶ In Malawi, data from a 2016 survey show that multi-ethnics make up 20.0% of the adult population, relative to an inter-marriage rate of 32.8% in the 2015 DHS survey. In Kenya,

⁶Survey data for Malawi are from the 2016 Governance and Local Development (GLD) survey (n=7,668) described below; survey data for Kenya (n=1,246) are from a 2016 survey (for details see Horowitz, 2019).

data from a 2012 survey show that multi-ethnics make up 8.3% of the adult population, relative to an inter-marriage rate of 12.6% in the 2014 DHS survey. Higher rates of inter-marriage, in comparison with multi-ethnicity, likely reflect the natural time lag between inter-marriage and when multi-ethnic offspring are born and are included in national surveys that typically sample only the adult population.

Multi-ethnics and Ethnic Bloc Voting

A large body of scholarship documents a connection between ethnicity and voter behavior in diverse settings in Africa and elsewhere (Chandra, 2004; Posner, 2005; Ferree, 2011; Carlson, 2015; Chauchard, 2016). To account for this connection, the literature develops both instrumental explanations that trace ethnic voting to the desire to secure access to state-controlled resources (Chandra, 2004; Posner, 2005; Wantchekon, 2003; Carlson, 2015), and expressive explanations that build on social identity theory (e.g., Tajfel and Turner (1979)) to argue that the preference for co-ethnic leaders may also stem from the psychological need to affirm the status of one's ethnic community (Horowitz, 1985). Missing from these treatments of ethnic voting, however, is a discussion of how multi-ethnicity may affect electoral preferences.

The omission of multi-ethnicity from the ethnic politics literature likely reflects the fact that much of the foundational scholarship on ethnic politics emerged at a time when ethnic inter-marriage was less common and multi-ethnics made up only a small share of electorates in diverse societies. Moreover, despite the rapid growth of survey research in recent decades, many surveys – including the Afrobarometer – continue to rely on traditional ways of measuring ethnicity as singular lineages. The increasing rates of inter-marriage across Africa documented in the prior section indicate that multi-ethnicity deserves greater attention. In this paper, we examine whether mixed voters differ in political outlooks and behaviors from mono-ethnic citizens, exploring specifically whether multi-ethnics are more likely to deviate from bloc voting patterns. We focus on contexts where ethnic bloc voting is commonplace, as is the case for many (though not all) electoral systems in Africa.⁷

⁷We do not examine – theoretically or empirically – the effects of inter-marriage on vote choice due to the practical challenge of disentangling selection effects from treatment effects. For multi-ethnics, by contrast, we can be more confident that because parents' ethnicity precedes that of their children, the effects of mixed

How might electoral preferences differ for mixed individuals relative to mono-ethnics? One answer is that multi-ethnics *may not differ* from mono-ethnics in their political preferences. Self-reported identities may reflect the strength of identification with the various sides of one's family lineage, as is commonly assumed in work on the identity choices of bi-racials in the U.S. (Davenport, 2016a,b; Campbell and Rogalin, 2006; Francis and Tannuri-Pianto, 2013; Lee, 1993; Nagel, 1995; Nobles, 2000). This may be especially true in cases like Malawi where social customs play an important role in structuring patterns of ethnic belonging. In Malawi, where most ethnic communities are matrilineal, it is generally assumed that children from matrilineal groups will identify as part of their mother's community and will oftentimes support the party associated with that group, with expectations reversed for children from patrilineal groups (on kinship traditions see Schneider, 1961; Davison, 1997). When multi-ethnics are asked to report their ethnic identity on a household survey, the answers they provide may represent the social definitions of ethnicity as determined by lineage traditions and as internalized by the respondent. For example, a voter with a Lomwe mother and Yao father (both matrilineal) might report her identity as Lomwe and support the party or candidate associated with the Lomwe, much like mono-ethnic Lomwes. In other contexts, where cultural traditions may not govern patterns of identification as forcefully – as in Kenya – stated identities may nonetheless reflect the strength of internal identity attachments. Thus, for example, a Luo-Kamba woman in Kenya who reports her ethnic identity as Luo may do so because she feels closer to the Luo side of her lineage and thinks of herself first and foremost as a Luo. Given this identification, in politics she may throw her lot in with the Luo side of her family, so to speak, and may, as a result, hold political preferences that mirror those of mono-ethnic Luos.

At the same time, multi-ethnics may differ in various ways that lead to preferences that diverge from mono-ethnics. We suggest four distinct possibilities relating to the meaning of self-reported identities, the link between identities and preferences, and the diversity of social networks. While these mechanisms are not mutually exclusive, we outline each individually to emphasize the distinctions between them.

lineage can be treated as causally prior to political attitudes and behaviors (Davenport, 2016a).

Identity Measurement. First, there is good reason to expect that for at least some multi-ethnics, stated identities in household surveys will not fully capture felt identity attachments, particularly when respondents are asked to provide only one identity answer. In these cases, there is likely to be a rough but imperfect correspondence between expressed identities and internal self-perceptions for mixed respondents.⁸ The potential mismatch between expressed and felt identities stems from multiple sources. Consider how social conventions may matter. In Malawi, cultural practice may lead a multi-ethnic whose parents are both from patrilineal ethnic communities to report her ethnicity as her father’s group even if she feels closer to her mother’s side of the family. Enumerator effects may also come into play. Recent work in Africa has shown that enumerator ethnicity alters how participants answer a variety of common survey questions (Adida et al., 2016). One particularly relevant study from Malawi (Dionne, 2014) documents a tendency by survey respondents to report their ethnicity to match that of the enumerator. This tendency may be particularly pronounced in contexts where survey respondents believe that they stand to gain materially from signalling their identification as part of the group(s) that holds power.⁹ While mono-ethnics may strategically misrepresent their identities too, the proclivity to do so may be especially pronounced among multi-ethnics, for whom “passing” as a member of multiple ethnic groups may be easier. Finally, multi-ethnics may alter their expressed identities to signal belonging to the locally-dominant ethnic community out of a desire to fit in and gain acceptance, even if they do not strongly identify with the dominant local group (Nagel, 1994; Albrecht et al., 2015).

For these reasons, stated ethnicities may not reflect actual ethnic attachments for multi-ethnics. Accordingly, we would not expect multi-ethnics who self-identify as members of particular groups to hold identical preferences to mono-ethnics from those same groups. A Chewa-Yao respondent in Malawi who reports her identity as Yao due to convention – or

⁸The difficulty of capturing perceived self-identities for ethnically-mixed individuals using single-answer questions has been studied extensively in the U.S., where the census allowed respondents to select only a single racial identity prior to 2000 (e.g., Hickman, 1997).

⁹Participants in household surveys in Africa routinely report that they think the survey is sponsored by the government. For example, in the Afrobarometer Round 6 surveys conducted in 36 countries in 2014 and 2015, 32% of respondents indicated that they thought the survey was sponsored by the national government. Given this, survey respondents may strategically self-identify as members of the president’s ethnic group (or other groups that make up the president’s broader coalition) in order to increase the perceived likelihood of receiving government benefits.

because she was interviewed by a Yao enumerator – may feel herself to be more closely allied with the Chewa branch of her family. Politically, she may lean toward the Malawi Congress Party (MCP), the party long associated with the Chewa, rather than the United Democratic Front (UDF), the party associated with the Yao in recent elections.

Ethnic Salience. Second, multi-ethnics may attach less weight to ethnicity than their mono-ethnic counterparts, increasing the likelihood of deviating from group voting norms. Multi-ethnics, of course, descend from parents who have chosen to enter into relationships with non-co-ethnic spouses or partners. These individuals may be atypically progressive in their outlook on ethnicity and may transmit such values to their children. In work on bi-racials in the United States, Davenport (2016a, 2018) proposes that children of bi-racial families come to adopt, through family socialization, a progressive orientation toward the place of race and ethnicity in society and politics. Bi-racial couples may also come into conflict with societal prejudices by virtue of being in mixed marriages, experiences that could lead to the rejection of prejudicial views that are then transmitted to children (Davenport, 2016a, 2018). Along these lines, we might expect multi-ethnics in Africa to hold especially strong disdain for ethnic politics, leading them to give less weight to ethnic considerations when forming electoral preferences.

Ethnicity may also matter less to multi-ethnics because they will be less inclined to view co-ethnic candidates (those who share their stated ethnic identity) as “ethnic champions” – faithful representatives of communal interests. Instrumental approaches to ethnic voting suggest that voters prefer the candidate or party that they believe will best represent the interests of their ethnic community, relying on candidate ethnicity and the broader ethnic profiles of parties as cues that signal likely future behavior – which groups will be favored and which will be neglected (Chandra, 2004; Posner, 2005; Ferree, 2011). For multi-ethnics, however, ethnicity may serve as a weak signal, since they have a foot in two different communities. Thus, a Luo-Luhya voter in Kenya may see Raila Odinga, the long-time Luo leader, as a less faithful representative of her “ethnic interests” than someone with two Luo parents. For expressive reasons, too, mixed individuals may have weaker ties to parties associated with either parent’s ethnic group: by aligning with one parent, the individual

denies the other side of her identity. For mixed individuals, then, ethnicity might exert a less powerful influence on voting decisions, leading multi-ethnics to give greater weight to other considerations and to deviate from bloc voting patterns more often than mono-ethnics.

Identity Repertoires. Third, multi-ethnics may be less likely to vote with their self-reported identity groups, not because ethnicity matters less, but because multi-ethnic voters have a wider array of options for ethnic voting. Here, we draw on the concept of identity repertoires developed by Posner (2005), that notes that voters typically have multiple ethnic identities that may serve as the basis for coordinated political action (e.g., tribal and linguistic identities in Zambia). Multi-ethnic voters may also be able to choose between multiple ethnic affiliations – mother’s group or father’s group – for strategic reasons. Thus, we might expect that multi-ethnics whose parents’ groups are associated with different candidates or parties will strategically select the option that has the greater chance of winning or securing benefits after the election. As a result, multi-ethnics may deviate from the voting patterns of their stated ethnic groups by politically aligning with their non-stated ethnic community. By this account ethnicity is no less salient politically for multi-ethnics; what differs is merely that mixed individuals have a wider menu of options for political affiliation when it comes to ethnic voting.

Social Networks. Finally, multi-ethnics may differ from mono-ethnics due to the distinct character of information and opinion flows within family and social networks. A large body of scholarship from a variety of contexts demonstrates that the diversity of family and social networks can affect individual preferences (Jennings and Niemi, 1976; Huckfeldt and Sprague, 1995; Jennings et al., 2009; Iyengar et al., 2018; Baker et al., 2006). Multi-ethnics are likely to be situated in more diverse networks, particularly when their parents come from groups associated with different political parties. Thus, a Luhya-Kikuyu voter in Kenya’s 2017 election would likely find herself exposed to competing arguments and social pressures in her routine interactions with family members, since Luhyas and Kikuyus typically held opposing preferences in that race – whereas mono-ethnic Luhyas and Kikuyus likely would not.

Context and Data

To explore whether multi-ethnics hold distinct preferences, we draw on survey data from Malawi and Kenya. Both are highly diverse countries in which no single ethnic group makes up more than about 20-30% of the population, as is true of most African countries.¹⁰ In both countries ethnic and regional bloc voting has been routine since the re-introduction of multiparty political competition in the early-1990s (Tsoka, 2009; Ferree and Horowitz, 2010; Dulani and Dionne, 2014; Ferree et al., 2014).

Our analysis employs data from large-scale household surveys. The Malawi data comes from a nationally-representative survey carried out by the Governance and Local Development (GLD) program in March-April 2016 (Lust et al., 2016). The sample size is 7,668 and covers 15 of Malawi’s 28 districts in all three of Malawi’s regions. The survey oversampled Malawi’s Northern Region, and in all analysis we weight the data to match the population distribution across regions based on the 2018 census. The Kenya data come from a more limited survey conducted in Nairobi County, the area that contains the nation’s capital, in June-July 2016 (N=2,203). Additional details on sampling for both surveys can be found in SI Section 2.

Multi-ethnics in the Survey Data

Both surveys include a variant of the standard ethnicity question (“what is your ethnic group?”) used in micro-level research throughout Africa and other parts of the world. In keeping with common practice, we did not prompt respondents to offer more than one answer. Our own experience using this question in various settings across Africa suggests that multi-ethnics have little difficulty responding to such questions and rarely offer multiple responses, perhaps indicating that multi-ethnicity as an identity category is not widespread. The surveys then asked respondents about their parents’ ethnic groups. We code multi-ethnics as those whose parents are from different groups. While the data does not allow us to explore the diversity of family lineages further back, the approach used here provides a

¹⁰The Afrobarometer Round 7 surveys conducted in 34 countries between 2016 and 2018, for example, found only seven countries where at least half of respondents identified with one ethnic group. For the remaining 27 countries, there was no majority ethnic group.

useful way of differentiating respondents in terms of proximate descent.

Table 1 reports the share of multi-ethnics in each sample, disaggregating results by self-reported ethnic group for all communities for which we have a sufficiently large sample (50 or more respondents). It shows that 20.0% of respondents in the Malawi sample are from mixed-ethnicity families, and the prevalence of mixed individuals ranges from 14.5% for those who self-identify as Yao to 32.8% for those who self-identify as Mang’anja. The Kenya sample shows that 13.7% of respondents in Nairobi County are from mixed backgrounds, with a range from 7.9% for those who self-identify as Kamba to 21.4% for those who self-identify as Luo. These findings are interesting in their own right, indicating that a substantial share of individuals conventionally coded as members of particular communities in fact have more diverse lineages. Whether this matters for our theories of ethnic political behavior, of course, depends on whether multi-ethnics differ politically from their mono-ethnic peers.

Table 1: Multi-ethnic Respondents by Self-Reported Ethnicity
(percentages)

Malawi		Kenya	
Chewa	16.4	Kikuyu	11.7
Lomwe	23.6	Luo	21.4
Yao	14.5	Kamba	7.9
Ngoni	24.1	Kisii	12.7
Tumbuka	15.2	Luhya	12.4
Mang’anja	32.8	Kalenjin	17.5
Sena	15.0	Meru	15.4
Tonga	19.6		
Lambya	25.8		
Nyanja	16.1		
TOTAL	20.0	TOTAL	13.7

While the data do not allow for a comprehensive examination of the factors that affect how multi-ethnics self-identify in survey settings, the patrilineal/matrilineal distinction appears to play an important role, though not uniformly so. In Kenya (Nairobi), where all groups are patrilineal, most multi-ethnics (73%) report their identity as their father’s ethnic group, though just over a quarter deviate from what appears to be standard convention. In Malawi, where several major ethnic groups are matrilineal, only 46% of multi-ethnics identify with their father’s ethnic group, and we observe the expected variation across patrilineal

and matrilineal groups, though again the patterns are not uniform. We expect that mixed individuals whose parents are both from patrilineal groups should be more likely to identify as part of their father’s group, while those whose parents are both from matrilineal groups should be more likely to identify with their mother’s community. Consistent with this expectation, 79% of multi-ethnics whose parents are both from patrilineal groups identify with their father’s group, while only 32% of those whose parents are both from matrilineal groups do so. Among multi-ethnics who have one parent from a matrilineal group and another from a patrilineal group, the majority (67%) identify with their father’s group. Whether these patterns reflect the strength of identity ties and/or some degree of convention remains a question for future research.

Group-Party Linkages

To examine whether multi-ethnics deviate from the bloc voting patterns of their self-reported ethnic groups more often than mono-ethnics, we first match groups to parties. For each ethnic group, we identify the most-preferred candidate or party at the time of the survey (using data from mono-ethnic respondents only). Group-party linkages are reported in Tables 2 and 3 for Malawi and Kenya respectively. The leading party for each group is shown in bold. In Malawi, we measure electoral preferences using a retrospective question on vote choice in the 2014 presidential elections (“Whom did you vote for president in the 2014 presidential elections?”), which was posed only to those who reported that they had voted in the election (82% of the sample). In Kenya, we measure electoral preferences using a prospective question about the 2017 presidential election (“Who would you vote for in the next election if it were held now?”).¹¹ Our measure of electoral preferences for Kenya shows higher rates of uncertainty, no preference, and refusal to answer than in the Malawi data, likely due to differences in question format.

In Malawi (Table 2), most groups expressed a clear first preference (50% or more), the exception being the Tumbuka. In Kenya (Table 3), bloc voting is less common in the survey

¹¹For Kenya, we code respondents who indicated an intention to vote for Uhuru Kenyatta as Jubilee supporters, and those who indicated an intention to vote for either Raila Odinga or Kalonzo Musyoka (CORD’s top two leaders at the time of survey) as supporters of CORD.

Table 2: Electoral Preferences by Ethnic Group – Malawi

	N	DPP	PP	MCP	UDF	Other	DK/RTA
Chewa	703	28.9	7.5	55.9	1.3	0.3	6.1
Lomwe	507	86.9	5.1	2.6	3.7	0.4	1.4
Yao	696	29.8	10.4	2.5	50.8	0.1	6.4
Ngoni	472	67.0	10.2	17.4	2.8	0.6	1.9
Tumbuka	1,143	44.0	36.5	15.4	1.1	0.3	2.7
Mang’anja	337	86.1	9.1	0.0	3.6	0.3	0.9
Sena	419	83.2	9.0	1.8	3.8	1.0	1.2
Tonga	181	22.4	56.5	11.9	4.6	2.0	2.3
Lambya	138	50.0	42.8	6.5	0	0	0.7
Nyanja	107	65.2	24.1	1.0	9.8	0	0

Notes: Most-preferred party shown in bold.

Table 3: Electoral Preferences by Ethnic Group – Kenya (Nairobi)

	N	Jubilee	CORD	Other	None	DK/RTA
Kikuyu	439	74.7	0.9	4.6	6.6	13.2
Luo	305	14.8	48.5	8.5	14.4	13.7
Kamba	255	38.0	34.9	5.1	7.8	14.1
Kisii	138	26.8	32.6	10.9	12.3	17.4
Luhya	325	28.3	30.7	12.9	11.4	16.7
Kalenjin	47	57.5	4.3	14.9	8.5	14.9
Meru	44	55.6	0.0	11.4	13.6	20.5

Notes: Most-preferred party shown in bold.

data, likely because the question used to measure electoral preferences was prospective rather than retrospective and because ethnic alliances were in flux at the time of the survey.¹² While ethnic bloc voting is less than uniform across ethnic groups in both surveys, the tests below include all ethnic groups. As a robustness test, we exclude groups with a weak first preference – i.e., those for which the most-preferred party is supported by less than 50% of the group (results reported in SI Section 5). Also, for several groups the most-preferred party is ambiguous since the gap between the most-preferred and second-preferred party is small and in some cases not significant (e.g., the Tumbuka in Malawi and the Kisii and

¹²Data from an exit poll conducted during Kenya’s prior election in 2013 shows that bloc voting rates at election time are substantially higher than observed in our survey data. The mean bloc voting rate (the vote share of the leading party in each ethnic community) in 2013 for the 10 largest ethnic groups was 69.4%, a number that likely under-estimates the actual bloc voting rate since 12% of respondents in the exit poll refused to provide an answer (see Ferree et al., 2014).

Luhya in Kenya). For groups that do not have a clear first preference, we might not expect to observe a difference in voting behavior between mixed respondents and mono-ethnics. Including these groups in the main tests reported below likely biases the results toward a null finding. As a robustness test we re-run the main models without ethnic groups for which the gap between the most-preferred and second party is less than 10% (results reported in SI Section 5).

Results

Our measure of vote choice comes from the questions used above in Tables 2 and 3 to probe electoral intentions in presidential contexts, retrospectively in Malawi and prospectively in Kenya (question wording for all items used in the analysis is in SI Section 1). The dependent variable is a dichotomous measure that takes a value of 1 for respondents who reported voting for (or in Kenya, intending to vote for) the party associated with their stated ethnic group, and 0 otherwise – based on the group-party linkages in Tables 2 and 3.¹³ The key independent variable – *mixed ethnicity* – is an indicator variable that takes a value of 1 for respondents who report parents of different ethnicities, and 0 for those who report parents from the same group (we exclude those who do not provide ethnicity information for both parents, or for themselves).¹⁴ Our tests ask whether mixed members of each group are more likely to deviate from group voting norms by supporting a party/candidate other than the one supported by the plurality of the group. For example, we examine whether multi-ethnics who self-identify as Chewa in Malawi or Kikuyu in Kenya are less likely to support the parties associated with those groups (the MCP and Jubilee, respectively) than mono-ethnic Chewas and Kikuyus.¹⁵

¹³We code “don’t know/refused to answer” as missing values in the Malawi data. For Kenya, we code only “refused to answer” as missing, and code “don’t know” as 0, since these two answer options were recorded separately in the Kenya survey.

¹⁴We also exclude respondents from the Malawi data whose reported ethnicity matches neither that of their mother or father, about 4% of the sample.

¹⁵This approach relates to the conceptualization of ethnic voting in Horowitz (1985), which treats ethnic voters as those who support the party associated with their ethnic group, regardless of whether the party’s candidate is a co-ethnic or not (see also Huber, 2012; Nathan, 2016). We do not, however, characterize our analysis as a test of ethnic voting since it is unclear whether mixed respondents should be treated as engaging in ethnic voting only when they support the party associated with their *stated* ethnic group or also when they support the party associated with their *non-stated* group (see Conclusion for additional discussion).

Table 4 shows that mixed-ethnics in both Malawi and Kenya (Nairobi) are less likely to support the party associated with their self-reported ethnic group than mono-ethnics, by 7.2 percentage points in Malawi and 8.3 points in urban Kenya (for urban Malawi the difference is 16.1 points). These differences are significant at the 5% level.

Table 4: Electoral Preferences
(% voting for group’s most-preferred party)

	Malawi	Kenya (Nairobi)
Mono-ethnics	66.7	52.9
Mixed	59.5	44.6
Difference	-7.2***	-8.3**

Notes: Two-sided t-tests. *** $p < .01$, ** $p < .05$, * $p < .10$

To explore these results more carefully, we estimate linear probability models using OLS that control for a variety of potential confounds. First, we control for local ethnic geography. Recent work from Ghana shows that voters are more likely to deviate from ethnic voting norms when they live in more diverse areas in which their own community makes up a smaller share of the local population (Ichino and Nathan, 2013; Nathan, 2016). Multi-ethnics in both Malawi and Kenya disproportionately reside in diverse localities.¹⁶ While including controls for local ethnic geography runs the risk of soaking up variation in the dependent variable that might be due to the effects of mixed-ethnicity, we take the more conservative approach by opting to include such measures. In Malawi, we use census data to estimate the ethnic composition of localities. Following Ichino and Nathan (2013), we measure local ethnic geography as the spatially-weighted proportion of each respondent’s ethnic group in a 30km radius around the respondent’s enumeration area (EA) in rural areas and a 0.5km radius in urban areas.¹⁷ In Kenya, where disaggregated census data is

¹⁶In the Malawi survey, 28% of those living in more diverse areas (localities with village-level ethno-linguistic fractionalization (ELF) scores above the median) are mixed compared to only 14% in less diverse areas ($p < 0.000$). In the Kenya survey the association is more muted since the data come only from an urban area: in more diverse parts of Nairobi County (ELF scores above the median), 15.8% of respondents are mixed, relative to 12.1% in less diverse areas ($p < .05$).

¹⁷We are able to estimate this measure for respondents from the 12 ethnic groups that are included in the census data. Its inclusion in the regression analysis means that respondents from smaller ethnic groups (including the Mang’anja) are excluded from the analysis due to missing data on this variable. The results for Malawi are robust to excluding this measures and to using alternative measures of ethnic composition:

not publicly available, we generate estimates for local ethnic composition using survey data. Because the Kenya sample is urban only, we measure co-ethnic share within .5km circles around each respondent. Given that random selection was used to identify respondents, we expect that these estimates should be noisy but not biased.¹⁸ The results for both countries are robust to alternative measures of local ethnic geography estimated with different sized radii (not shown).

Models include controls for education, wealth (using household asset indices for each country), age, gender, and a measure of the length of time respondents have lived in their current location (defined as a categorical variable: 0-5 years, 6-10 years, 11 years or more). We control for whether respondents were interviewed by a non-co-ethnic enumerator to account for potential enumerator effects (Adida et al., 2016). For mixed respondents, this is based on whether the enumerator matches their *stated* ethnicity. Note that for Malawi, where information on enumerator ethnicity is not available in the survey, we use data from a question that asked respondents what they believed the interviewers' ethnicity to be, excluding those who were uncertain (13.9% of the sample).¹⁹ We also include a set of country-specific controls. For Malawi, these include a measure of whether respondents live in urban areas and a measure of whether respondents' self-identified ethnic group is matrilineal.²⁰ The Kenya models include a control for whether respondents were affected by inter-ethnic violence in the 1992, 1997, and/or 2007 elections. All models include ethnic group fixed effects to account for different base rates of ethnic bloc voting across communities, and the Malawi models cluster standard errors by district.

The results are reported in Table 5. The estimated effect of *mixed ethnicity* is similar

dummy variables indicating whether or not the respondent's group is an ethnic minority in the Enumeration Area, Traditional Authority area, or district based on the census data, and a local (village/neighborhood) measure of ELF based on the survey data (results available upon request).

¹⁸The median number of respondents used to estimate local ethnic geography for individuals in the Kenyan survey was 17.

¹⁹While this measurement strategy differs from standard practice, we note that respondents' perceptions of interviewer ethnicity may matter more than actual ethnicity, since biases related to enumerator ethnicity would likely come into play only when respondents believe the enumerator to be a non-co-ethnic, regardless of whether he or she actually is from a different ethnic community.

²⁰The matrilineal nature of ethnic groups is determined by secondary sources (Berge et al., 2014; Peters, 1997). The results are robust to a measure of matrilineal heritage based on the survey question, "If you have children, would your children belong to the mother's side or the father's side?"

to the uncontrolled results in Table 4: multi-ethnics in Malawi are less likely to support their stated group’s most-favored party by 7.8 percentage points in the full sample (Model 1) and 8.0 points in urban areas (Model 2). Results for Kenya’s urban-only sample show that multi-ethnics are 8.1 points less likely to register an intention to vote for the party most closely associated with their stated ethnic group (Model 3).

Regarding control variables, we find that older respondents are more likely to support the party associated with their ethnic community.²¹ Consistent with Ichino and Nathan (2013) and Nathan (2016), we observe a positive association between local ethnic geography and ethnic party support, with respondents in both rural and urban localities being more likely to register support for the party associated with their stated ethnic community in more ethnically-homogeneous areas. Other control variables are either unrelated or are not systematically associated with the likelihood of voting with one’s stated group.

We present additional results and robustness tests in the Supplemental Information. First, we re-estimate the results by ethnic group for each country and show that the negative effect of mixed-ethnicity holds across most of the larger communities in each case, confirming that the results are not driven by any one group in either country (SI Section 4). Second, we exclude in turn groups that do not have a clear first preference and groups that have an ambiguous first preference, and find that the results are robust to each of these exclusions (SI Section 5). Third, we probe the role of matrilineality in Malawi and find that mixed ethnicity is associated with a reduced propensity to vote for the party associated with one’s stated group both among mixed respondents whose mother’s lineage is matrilineal and for those whose mother’s group is not, though the effect is only significant for the former group (SI Section 6). Fourth, we test the expectation that the negative effect of mixed ethnicity should be greater when mixed lineages cut across ethno-partisan divisions. Results in SI Section 7 confirm that the overall reductive effect is larger for mixed respondents whose parents’ groups are associated with different parties than for those whose parents’ groups are not. For mixed individuals whose parents’ groups are linked to the *same* party, we observe varied effects across groups and find that in some instances mixed respondents are *more likely* to support the party associated with their stated ethnic group than their mono-ethnic counterparts.

²¹In the Supplemental Information, we present results from models that iteratively add control variables.

Table 5: Models of Vote Choice

	(1)	(2)	(3)
	Malawi (national)	Malawi (urban)	Kenya (urban)
Mixed ethnicity	-0.078** (0.029)	-0.080** (0.020)	-0.081** (0.036)
Time lived in area	-0.015 (0.019)	-0.054 (0.027)	-0.027* (0.015)
Age	-0.002*** (0.000)	-0.002*** (0.000)	0.005*** (0.001)
Education	-0.021* (0.010)	-0.021*** (0.002)	-0.006 (0.006)
Male	-0.010 (0.017)	-0.062*** (0.011)	-0.013 (0.024)
Wealth (asset index)	-0.016*** (0.005)	-0.013 (0.009)	0.010 (0.010)
Co-ethnic share	0.205** (0.095)	0.330** (0.082)	0.097* (0.056)
Non-co-ethnic interviewer	0.009 (0.022)	0.020 (0.016)	-0.067** (0.030)
Constant	0.675*** (0.073)	0.834*** (0.141)	0.551*** (0.090)
Country-specific controls	yes	yes	yes
Ethnic group FEs	yes	yes	yes
Observations	5,066	693	1,542
R ²	0.121	0.181	0.142

Notes: OLS models of vote choice in which the dependent variable takes a value of 1 for respondents who report voting for (in Kenya, intending to vote for) the party most-preferred by their stated ethnic group, and 0 otherwise. *Co-ethnic share* is defined as the share of co-ethnics in a 30km radius in rural areas and a .5km radius in urban areas, based on census data for Malawi and survey data for Kenya. Country-specific controls for Malawi include a measure of whether respondents' stated ethnic group is matrilineal and an urban indicator (full sample only), and for Kenya an indicator for whether respondents were affected by inter-ethnic violence related to elections in 1992, 1997, or 2007. Note that respondents who identify as Mang'anja in Malawi (about 8% of the sample) are dropped from the analysis because *co-ethnic share* is missing for these respondents (the census data does not report Mang'anja share at the EA level). The Malawi data is weighted to adjust for regional oversampling. Details for other survey-based items are in SI Section 1. Robust standard errors in parentheses, clustered by district for Malawi models. ***p<.01, **p<.05, *p<.10

These varied effects appear to be driven by differential base rates of ethnic voting across the ethnic communities among which inter-marriage is common, especially in Malawi (see SI Section 7 for additional discussion).

Finally, we address measurement bias. Given that the data used here is based on self-reported vote choice/intentions – rather than actual voting behavior – bias is a potential concern. As noted, to address possible bias introduced by enumerator effects, we control for interviewer ethnicity in all models (based on perceived ethnicity in Malawi and actual ethnicity in Kenya). In addition, we show in SI Section 11 that the negative effect of multi-ethnicity obtains both among those interviewed by non-co-ethnics and co-ethnics, though in Kenya the results are not significant in the latter case due to the reduced sample size (only 22% of the Kenyan sample – 437 respondents – were interviewed by a co-ethnic enumerator). A separate concern is that respondents may over-report support for the incumbent party (Adida et al., 2019), which could bias the survey data in problematic ways if multi-ethnics are systematically more likely to misrepresent their electoral choices in this way. However, comparing district-level estimates of vote choice from the Malawi survey to official returns shows that while bias in favor of the incumbent appears to be widespread, the magnitude of the bias does not differ appreciably across mono- and multi-ethnics (see SI Section 11).

Discussion

Why are multi-ethnics different? While our data are not sufficiently rich to allow for definitive conclusions, additional analysis of the survey data from both countries and focus groups conducted in Malawi provide suggestive evidence that multiple mechanisms are at work. We examine each mechanism in turn.

Identity Measurement. To probe patterns of identification and identity expression, we conducted 10 focus groups in Southern Malawi in September 2017. A total of 80 participants were involved, including both mixed and mono-ethnic individuals. The focus groups were conducted by local research assistants and supervised by one of the authors (Dulani). While the sample was not intended to be representative of Malawi’s multi-ethnic population, the

focus groups provide useful insights regarding the fluid and context-specific nature of identity expression. Participants indicated that multi-ethnics hold complex identities that are not captured well by standard survey questions. In the following examples, multi-ethnics in Malawi describe themselves as “between” two cultural communities, suggesting that singular answers to identity measures used in household surveys do not represent the dual-nature of felt identities for at least some respondents.

“Each parent in the house, they mind about their cultural heritage; in so [doing], leaving the children divided. The parents try to raise the children in one cultural heritage, but it is hard for them both to do this. The children are like in between there.” (Participant 2, Zomba)

“Each cultural heritage is of importance because when the father is telling the children [about his ethnic heritage], he is sure that he is doing the right thing; same with the mother that she is telling the children the right thing [when she emphasizes her ethnic heritage]. So we cannot say that one is [more] important than the other. All is equal.” (Participant 1, Zomba)

Focus group participants indicated that expressed identities may change according to location. Speaking about multi-ethnics, one participant reported that, “They go to matrilineal and they are Yao there. The other day they go to patrilineal and they are Lomwe there” (Participant 1, Zomba).²² Others noted that identification varies across localities according to local custom. Finally, others suggested that even in the South of Malawi, where most groups are matrilineal, it is common to identify with the father’s tribe due to the father’s customary leadership role in the family. For example, one respondent reported that, “We identify ourselves with the tribe of the father because he is dominant in the family” (Participant 3, Zomba).

To gain some leverage on whether and how self-reported ethnicities for mixed individuals vary according to context, we examine the association between stated identities in Malawi (where we have a larger mixed sample than in Kenya) and enumerator ethnicity. Analysis

²²Though both Yao and Lomwe are matrilineal communities, this quote suggests that identification may vary across localities where maternal and paternal groups reside.

reported in Table SI.8 shows that enumerator ethnicity is associated with a clear pattern in self-reporting, with mixed respondents on average more likely to report their ethnicity as their father’s or mother’s group by 11-13 percentage points when the enumerator is perceived to be from either group (relative to an enumerator perceived to be from neither). Because enumerators were not randomly assigned, we cannot infer a causal effect; yet the pattern is consistent with the notion that individuals may alter how they self-identify in response to contextual factors.

To the extent that stated identities vary across context rather than capturing stable self-images, we should not be surprised to find that multi-ethnics are less likely to adhere to the group voting patterns of their self-reported ethnic groups. A priority for future research will be to investigate the connection between stated identities and internal identity attachments, and the factors that influence self-reported identities among multi-ethnics.

Ethnic salience. Multi-ethnics may be distinct because they attach less weight to ethnicity – relative to other considerations – than mono-ethnics in political decision making. While measuring the electoral salience of ethnicity with survey data is no simple task, the Malawi survey provides relevant evidence from two indicators that probe beliefs about how important it is that: 1) the members of one’s ethnic group vote together and 2) one’s ethnic group elects a co-ethnic representative to office.²³ We find that mixed respondents are about 4.9 percentage points ($p=.06$) less likely than mono-ethnics to feel that it is important for members of their stated ethnic group to vote together (54.6% vs. 59.5%) and about 6.0 points ($p<.01$) less likely to believe it is important that their stated ethnic group elects a co-ethnic representative to office (70.1% vs. 76.1%).²⁴ However, when we regress vote choices on these salience measures using the full sample (see Table SI.9 in SI Section 9), we do not observe a systematic reduction in bloc voting among those for whom ethnicity is less politically salient.

²³The questions were: 1) How important do you believe it is for members of your ethnic group/tribe to vote for the same candidate? and 2) How important is it to you that your ethnic group elects a representative to the parliament from your constituency? For each, we create a dichotomous measure that takes a value of 1 for respondents who said it was “somewhat” or “very important,” and 0 for those who chose “not important” or “not at all important.”

²⁴The difference related to the perceived importance of co-ethnic representation holds after accounting for the set of controls used in Table 5, while the difference for voting together falls below conventional levels of significance when controls are added.

Thus, the data only partially support the notion that mixed-ethnics are less likely to vote with their stated ethnic group because they are less inclined than mono-ethnics to value coordinated political action or ethnic representation.

Ethnic repertoires. Multi-ethnics may deviate from the bloc voting norms of their stated ethnic groups because they have a wider “choice set” for ethnic voting. We explore this proposition by examining the voting behavior of multi-ethnics who do not support the party associated with their stated ethnic group in Malawi.²⁵ We expect that if the proposition is correct, such voters should: 1) prefer the party associated with their non-stated identity group over parties associated with neither side of their family lineage, and 2) be especially likely to support the party associated with their non-stated identity when the party associated with their stated group is not viable.

We find support for both propositions. First, Table 6 displays vote choices in Malawi’s 2014 presidential election from our survey data. It shows in Column 2 that multi-ethnics who chose not to support the party associated with their stated ethnic group were slightly *less* likely to vote for the party associated with their non-stated group than for parties associated with neither group (17.6% vs. 22.9%) – a finding that appears to be at odds with the ethnic repertoires hypothesis. However, it is important to note that about half of all multi-ethnics in the sample have parents whose ethnic groups are associated with the same party. Our coding scheme counts such individuals as voting for the party associated with their stated ethnic group, though of course in doing so they are also voting for the party associated with their non-stated group. A better test of the ethnic repertoires mechanism is offered in Column 3, which examines only multi-ethnics whose parents’ communities are associated with different parties. Among this subset, we observe that voters who do not support the party associated with their stated ethnic group are considerably more likely to vote for the party associated with their non-stated identity than for parties not associated with neither group: 34.2% vs. 20.8%, a difference of 13.4 percentage points ($p < .01$). Though only suggestive, this finding is consistent with the notion that multi-ethnics may deviate from the bloc voting patterns

²⁵Kenya does not allow for a test of this proposition because there were only two major parties at the time of the Kenya survey. In this case, not voting with one parent’s group by default entails voting with the other.

of their stated ethnic groups because they have alternative options for identity voting.

Table 6: Vote Choice – Malawi 2014 Presidential Election (percentages)

	(1)	(2)	(3)
	Mono-ethnics	Multi-ethnics (all)	Multi-ethnics (groups cross)
Vote for party associated with...			
stated ethnic group	66.7	59.5	45.0
non-stated ethnic group	n/a	17.6	34.2
neither	33.3	22.9	20.8
Observations	4,556	1,046	497

Notes: Column 2 includes all multi-ethnic respondents. Column 3 includes only multi-ethnics whose parents’ ethnic groups are associated with different political parties.

Second, we find some evidence that multi-ethnics are particularly likely to abandon the party associated with their stated ethnic group in favor of the party associated with their non-stated group when the first option is not viable. Due to the complex nature of Malawi’s 2014 election, in which a crowded field of candidates competed for the presidency amid shifting partisan allegiances (Dulani and Dionne, 2014), assessing the viability of one’s preferred candidate was likely a challenge for most voters. Nonetheless, we observe that multi-ethnic voters from groups linked to the parties that ultimately proved least successful in the election were more prone to deviate from the bloc voting norms of their stated ethnic groups. Consider the Yao and the Tonga. The Yao were the only major group associated with the United Democratic Front (UDF), whose candidate, Atupele Muluzi, came in fourth, winning only 13.7% of the popular vote according to the official results. The Tonga were the only group associated with the People’s Party, whose candidate, the incumbent president Joyce Banda, came in third, securing 20.2% of the official vote. Results in Table SI.3 show that mixed Yaos and mixed Tongas were substantially more likely to deviate from group voting patterns relative to mixed respondents whose stated ethnic communities were aligned with other more viable parties – by 19.4 and 13.1 percentage points respectively, relative to 4.5 points for mixed respondents in all other groups. And among both the Yao and Tonga, multi-ethnics whose parents’ groups were linked to different parties were more likely to support the party associated with their non-stated identity group than parties associated with neither side of

their lineage.²⁶ Thus, while these patterns are again only suggestive, they lend credence to the notion that having a diverse “menu of options” for ethnic voting may help to explain why multi-ethnics more frequently deviate from the group voting norms of their stated groups than mono-ethnics.

Social networks. Multi-ethnics may also hold different preferences than mono-ethnics because they are situated within more diverse social networks and are therefore more likely to encounter a wider array of partisan opinions, information, and social pressures. The Kenya survey data confirms that multi-ethnics have more diverse social networks, finding that only 33% of multi-ethnics report that all or most of their “close friends and family members” are from their stated ethnic group, relative to 49% for mono-ethnics, a difference of 16 percentage points ($p < .01$).²⁷ In part, this difference may reflect educational disparities (79% of multi-ethnics in the Kenya sample report having completed secondary school or beyond, relative to 73% of mono-ethnics) and the fact that multi-ethnics in Nairobi are more likely to have been born in Nairobi (32% vs. 21%). Yet, in regression models the difference in social network diversity remains significant after accounting for differences in birth location and education, as well as the larger set of controls included in Table 5 (results not shown). When we regress voting intentions on this measure of the diversity of social networks for the full sample (see Table SI.10 in SI Section 10), we find that Kenyan respondents are more likely to adhere to the bloc voting norms of their self-reported ethnic groups when they are situated in more ethnically-homogeneous social networks. While these data obviously cannot demonstrate that greater network diversity affects preference formation, they provide suggestive evidence

²⁶Among mixed Yaos whose parents’ groups were linked to different parties, 39.3% reported voting for the party associated with their non-stated ethnic group, relative to 33.6% for the party associated with neither group. For mixed Tongas, the results were 44.1% vs. 18.4%.

²⁷Data from a separate nationwide study conducted in Kenya in 2012 (see Horowitz, 2019) shows that the greater diversity of social networks increases the likelihood of discussing politics with members of groups other than one’s stated ethnic community. The survey, conducted on a national basis ($n=1,246$), asked respondents to identify up to four individuals with whom they discuss “politics and elections” and to report the ethnic identity of each named individual. Multi-ethnics were more than twice as likely to list one or more non-co-ethnic discussion partner compared to mono-ethnics (17.4% vs. 8.2%, $p=.001$). These data, moreover, indicate that the greater propensity among multi-ethnics to discuss politics with non-co-ethnics comes not only from having more diverse families but also from having more diverse friend networks. The survey recorded the nature of respondents’ relationships with each stated discussion partner. When we exclude family members and spouses, multi-ethnics are still more likely than mono-ethnics to report discussing politics with one or more non-co-ethnics (13.9% vs. 7.4%, $p=.03$).

for a mechanism that merits further exploration.

In sum, we find suggestive evidence in favor of all four proposed mechanisms. Though the findings in this section are preliminary, it is worth noting that the alternative mechanisms outlined here have distinct implications for expectations regarding whether and how multi-ethnicity alters broader patterns of ethnic political behavior in multiparty systems. Identity voting is often characterized as an impediment to democratic accountability. Thus, to the extent that ethnic inter-mixing reduces the propensity for voters to follow group bloc voting norms, prospects for election-based accountability may be enhanced. This, however, depends on *why* multi-ethnics deviate from group norms. If, on the one hand, they do so because ethnicity matters less in their electoral calculations or the greater diversity of their social networks leads to more sustained engagement with alternative perspectives, the growth of multi-ethnicity may contribute to a shift away from identity as the foundation for electoral behavior. If, on the other hand, the explanation has more to do with a broader choice set for ethnic political organization or the imperfect nature of common survey items used to measure ethnic identities among multi-ethnics, the increasing electoral weight of multi-ethnics will likely have little effect on ethnic political dynamics. Our exploration of mechanisms, limited as it may be, suggests that both interpretations are correct. A priority for future research will be to explore these competing accounts more fully.

Conclusion

This paper documents the widespread prevalence of ethnic inter-marriage and the concomitant rise of multi-ethnicity across Africa. It explores one implication of the blurring of ethnic lines by demonstrating that multi-ethnics in Malawi and Kenya are less likely to conform to the group voting patterns of their stated ethnic communities than mono-ethnics. The consistency of these results across two contexts with different rates of ethnic inter-marriage suggests that these findings may generalize to other cases. Though our ability to probe the mechanisms is limited, we provide suggestive evidence in favor of multiple explanations related to identity measurement, the salience of ethnicity, identity repertoires, and the di-

iversity of social networks. We conclude by discussing implications and avenues for future research.

The results have several implications for the study of ethnic politics. First, with regard to measurement, scholars of ethnic politics should amend standard practices used to measure ethnicity on surveys. At a minimum, it would be useful to include questions regarding the ethnicity of respondents' parents (and perhaps grandparents) that will allow one to distinguish mixed individuals from mono-ethnics, and to test whether theories of ethnic political behavior apply equally well to both. Additionally, future research could profitably explore alternative ways to measure ethnicity, for example, by 1) using survey questions that encourage multiple identity responses (Nathan, 2016), 2) allowing respondents to report whether they self-identify as being from the same ethnic group as a particular leader or candidate (Adida et al., 2017), or 3) measure ethnic attributes that are associated with group membership (Harris, 2019). Each approach has potential benefits and limitations depending on the specific research question and context; all improve upon standard practice that implicitly views individuals as belonging to a single ethnic lineage. Relatedly, the effects documented here pose a challenge for aggregate measures of social diversity – e.g., ethnolinguistic fractionalization, politically-relevant ethnic groups, and ethnic segregation – that are used throughout the ethnic politics literature. Should such measures be amended to reflect the growth of mixed populations? If so, what coding procedures are appropriate? To answer these questions scholars must develop an improved understanding of how ethnic inter-mixing affects perceived identities. Additionally, these findings suggest that it will be important to control for mixed ethnicity in a variety of research agendas. For example, work by Ichino and Nathan (2013) and Nathan (2016) has recently drawn attention to the importance of local ethnic geography. Given that local ethnic diversity is associated with ethnic inter-mixing, future research on ethnic geography should strive to disentangle these related factors.

Beyond measurement, there is work to be done on understanding patterns of identification for mixed respondents across Africa's diverse contexts. Our limited exploration suggests that tradition (particularly the matrilineal/patrilineal distinction) plays a role. But we also find that such factors leave much unexplained. As a result, we know very little about what drives

mixed respondents to provide the answers they do to identity questions. Do such answers reflect the strength of individuals' self conceptions, social norms governing identification, social context, or something else entirely? Particularly important for future research will be efforts to measure the strength of self-perceived identity attachments separately from expressed identities in order to better understand the extent to which conventional measures accurately capture internal self-perceptions.

The findings also raise questions for the literature on ethnic voting. Standard practice is to define ethnic voting as voting for the party or candidate associated with one's ethnic group (e.g., Horowitz (1985); Huber (2012); Nathan (2016)). This approach works less well for multi-ethnics. If we define ethnic voting only as supporting the party associated with voters' stated ethnic groups, we run the risk of under-estimating ethnic voting among mixed respondents. Likewise, if we conceptualize ethnic voting for mixed individuals as supporting the party associated with either side of one's lineage, we run the risk of exaggerating the extent of ethnic voting among multi-ethnics. And in cases like Kenya's 2017 presidential elections, where there were only two major-party candidates, all voters would be treated as ethnic voters since multi-ethnics who did not support the candidate associated with one parent's ethnic group by definition support the candidate associated with the other side of their family lineage. Clearly, better approaches are required. At present, however, we lack sufficient understanding of how identity affects the electoral motivations of multi-ethnics to propose better strategies. Given the increasing weight of multi-ethnic voters in African electorates, a priority for future research will be to improve our conceptual framework for understanding what ethnic voting means for multi-ethnics and how to measure it in practice.

More fundamentally, increasing rates of inter-marriage and ethnic mixing raise a series of deeper questions for theories of ethnic politics. Africa is often described as a continent where ethnicity reduces cooperation, entrenches political rivalries, and breeds distrust and conflict. As ethnic inter-marriage continues, scholars will do well to consider its effects on the relationships they seek to explain. If ethnic diversity undermines public goods provision, can increases in intermarriage and multi-ethnicity reduce barriers to cooperation? As the prevalence of multi-ethnicity grows, should we expect to see a general decrease in ethnic bloc voting as ethnic political rivalries are bridged? Will patterns of electoral mobilization

continue unchanged as these trends continue, or will basic political dynamics shift in more fundamental ways as the lines between ethnic groups blur? These questions will only grow in importance in coming years, as multi-ethnics continue to make up an increasing share of African electorates.

References

- Adida, C., J. Gottlieb, E. Kramon, and G. McClendon (2019). Response bias in survey measures of voter behavior: Implications for measurement and inference. *Journal of Experimental Political Science*, 1–7.
- Adida, C. L. (2015). Do African Voters Favor Coethnics? Evidence from a Survey Experiment in Benin. *Journal of Experimental Political Science* 2, 1–11.
- Adida, C. L., N. Combes, A. Lo, and A. Verink (2016). The spousal bump: Do cross-ethnic marriages increase support in multiethnic democracies? *Comparative Political Studies* 49(5), 635–661.
- Adida, C. L., K. Ferree, D. N. Posner, and A. L. Robinson (2016). Who’s asking? interviewer coethnicity effects in African survey data. *Comparative Political Studies* 49(12), 1630–1660.
- Adida, C. L., J. Gottlieb, E. Kramon, and G. McClendon (2017). Reducing or reinforcing in-group preferences? an experiment on information and ethnic voting. *Quarterly Journal of Political Science* 12(4), 437–477.
- Albrecht, M., B. Jacobs, A. Retief, and K. Adamski (2015). The role of important values and predominant identity in the dress practices of female muslim students attending a south african university. *Clothing and Textiles Research Journal* 33(4), 248–264.
- Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat, and R. Wacziarg (2003). Fractionalization. *Journal of Economic growth* 8(2), 155–194.
- Baker, A., B. Ames, and L. Renno (2006). Social context and campaign volatility in new democracies: Networks and neighborhoods in brazil’s 2002 elections. *American Journal of Political Science* 50(2), 382–399.
- Bandyopadhyay, S. and E. Green (2019). Explaining inter-ethnic and inter-religious marriage in Sub-Saharan Africa. *Working Paper*.

- Berge, E., D. Kambewa, A. Muthali, and H. Wiig (2014). Lineage and land reforms in Malawi: Do matrilineal and patrilineal landholding systems represent a problem for land reforms in Malawi? *Land Use Policy* 41, 61–69.
- Brambor, T., W. R. Clark, and M. Golder (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis* 14(1), 63–82.
- Campbell, M. and C. Rogalin (2006). Categorical imperatives: The interaction of Latino and racial identification. *Social Science Quarterly* 87(5), 1030–1052.
- Carlson, E. (2015). Ethnic Voting and Accountability in Africa: A Choice Experiment in Uganda. *World Politics*.
- Chandra, K. (2004). *Why Ethnic Parties Succeed: Patronage and Ethnic Head Counts in India*. Cambridge University Press.
- Chauchard, S. (2016). Unpacking ethnic preferences: Theory and micro-level evidence from North India. *Comparative Political Studies* 49(2), 253–284.
- Crespin-Boucaud, J. (2020). Interethnic and interfaith marriages in sub-Saharan Africa. *World Development* 125, 104668.
- Davenport, L. (2018). *Politics Beyond Black and White: Biracial Identity and Attitudes in America*. Cambridge University Press.
- Davenport, L. D. (2016a). Beyond black and white: Biracial attitudes in contemporary u.s. politics. *American Political Science Review* 110(1), 52–67.
- Davenport, L. D. (2016b). The role of gender, class, and religion in biracial Americans’ racial labeling decisions. *American Sociological Review* 81(1), 57–84.
- Davison, J. (1997). *Gender, Lineage, and Ethnicity in Southern Africa*. Westview Press.
- Dionne, K. Y. (2014). The politics of local research production: Surveying in a context of ethnic competition. *Politics, Groups, and Identities* 2(3), 459–480.

- Dulani, B. and K. Dionne (2014). Presidential, parliamentary, and local government elections in Malawi. *Electoral Studies* 36, 218–225.
- Fearon, J. (2003). Ethnic and cultural diversity by country. *Journal of Economic Growth* 8, 195–222.
- Ferree, K. and J. Horowitz (2010). Ties that bind? the rise and decline of ethno-regional partisanship in Malawi, 1994-2009. *Democratization* 17(3), 534–563.
- Ferree, K. E. (2011). *Framing the Race in South Africa: The Political Origins of Racial Census Elections*. Cambridge University Press.
- Ferree, K. E., C. C. Gibson, and J. D. Long (2014). Voting behavior and electoral irregularities in kenya’s 2013 election. *Journal of Eastern African Studies* 8(1), 153–172.
- Francis, A. and M. Tannuri-Pianto (2013). Endogenous race in brazil: Affirmative action and the construction of racial identity among young adults. *Economic Development and Cultural Change* 61(4), 731–753.
- Harris, A. S. (2019). At the borders of identity: Identity construction and racial block voting. forthcoming *Journal of Race, Ethnicity, and Politics*.
- Hickman, C. B. (1997). The devil and the one drop rule: Racial categories, African Americans, and the US Census. *Michigan Law Review* 95(5), 1161–1265.
- Horowitz, D. L. (1985). *Ethnic Groups in Conflict*. California University Press: Los Angeles.
- Horowitz, J. (2019). Ethnicity and the Swing Vote in Africa’s Emerging Democracies: Evidence from Kenya. *British Journal of Political Science* 49(3), 901–921.
- Huber, J. D. (2012). Measuring ethnic voting: Do proportional electoral laws politicize ethnicity? *American Journal of Political Science* 56(4), 986–1001.
- Huckfeldt, R. and J. Sprague (1995). *Citizens, Campaigns, and Social Communication: Information and Influence in an Election Campaign*. Cambridge University Press.

- Ichino, N. and N. L. Nathan (2013). Crossing the Line: Local Ethnic Geography and Voting in Ghana. *American Political Science Review* 107(2), 344–361.
- Iyengar, S., T. Konitzer, and K. Tedin (2018). The home as a political fortress: Family agreement in an era of polarization. *Journal of Politics* 80(4).
- Jennings, M. and R. Niemi (1976). *The Political Character of Adolescence*. Princeton University Press.
- Jennings, M., L. Stoker, and J. Bowers (2009). Politics across generations: Family transmission reexamined. *Journal of Politics* 71(3), 782–799.
- Lee, S. (1993). Racial classifications in the us census: 1890–1990. *Ethnic and Racial Studies* 16(1), 75–94.
- Lust, E., A. Harris, K. Kao, P. F. Landry, B. Dulani, A. Zgambo, A. Chiweza, H. Kayuni, R. L. Muriaas, L. Rakner, V. Wang, L. Benstead, F. Hartmann, and S. Nickel (2016). The Local Governance Performance Index (LGPI) Malawi Truncated Dataset.
- Nagel, J. (1994). Constructing ethnicity: Creating and recreating ethnic identity and culture. *Social problems* 41(1), 152–176.
- Nagel, J. (1995). American Indian ethnic renewal: Politics and the resurgence of identity. *American Sociological Review* 60(6), 947–965.
- Nathan, N. L. (2016). Local ethnic geography, expectations of favoritism, and voting in urban Ghana. *Comparative Political Studies* 49(14), 1896–1929.
- Nobles, M. (2000). *Shades of Citizenship: Race and the Census in Modern Politics*. Stanford University Press.
- Peters, P. E. (1997). Against the odds: Matriliney, land, and gender in the shire highlands of Malawi. *Critical Anthropology* 17(2), 189–210.
- Posner, D. (2005). *Institutions and Ethnic Politics in Africa*. Cambridge University Press.

- Posner, D. N. (2004). Measuring ethnic fractionalization in Africa. *American Journal of Political Science* 48(4), 849–863.
- Schneider, D. M. (1961). Introduction to matrilineal kinship, ed. *David M. Schneider and Kathleen Gough, Berkeley and Los Angeles: University of California Press, 1961*, 1–33.
- Tajfel, H. and J. C. Turner (1979). *Psychology of Intergroup Relations*, Chapter The Social Identity Theory of Intergroup Behavior, pp. 7–24. Chicago: Nelson-Hall.
- Tsoka, M. (2009). GIGA Working Papers No 68. Available online at <http://afrobarometer.org/sites/default/files/publications/Briefing%20paper/AfrobriefNo75.pdf>. Accessed 29 March 2017.
- Wantchekon, L. (2003, April). Clientelism and voting behavior: Evidence from a field experiment in Benin. *World Politics* 55, 399–422.
- Wimmer, A., L.-E. Cederman, and B. Min (2009). Ethnic politics and armed conflict: A configurational analysis of a new global data set. *American Sociological Review* 74(2), 316–337.

Supplemental Information

Section 1 Survey Questions and Measures

Vote choice:

Kenya: “Who would you vote for in the next election if it were held now?”

Malawi: “Whom did you vote for president in the 2014 presidential elections?”

The dependent variable used in the analysis takes a value of 1 for respondents who reported voting for / intending to vote for the party supported by the plurality of respondents in their stated ethnic group. In the Kenya data we code respondents who refused to provide an answer as missing, and in Malawi we code refused to answer / don't know (a single answer category on the survey) as missing. Note also that in Malawi, the question on electoral preferences was posed only to respondents who previously indicated that they had voted in the election (6,315 of 7,668 respondents, 82.4%).

Mixed ethnicity: Coded as 1 for respondents who report that their parents are from different ethnic groups. We exclude respondents who did not know (or did not report) the ethnicity of one or both parents. In Kenya we asked “What is your father's (mother's) ethnic group?” and “What is your ethnic group?” In Malawi we asked “What is your father's (mother's) ethnic community, cultural group, or tribe?” and “What is your ethnic community, cultural group, or tribe?”

Matrilineal: A respondent was coded as matrilineal if her/his mother come from a matrilineal ethnic group (regardless of the father's heritage) and as patrilineal otherwise. The following groups are identified as matrilineal: Chewa, Lomwe, Yao, Ngoni (patrilineal in Mzimba), Nyanja (Nyanja in Likoma are patrilineal but Likoma is not in our sample), and Mang'anja. The following groups are identified as patrilineal: Tumbuka, Sena, Tonga, and Lambya.

Time lived in area:

Kenya: “How long have you lived in Nairobi?” Responses were recorded in years, from which a categorical variable was generated: 0-5 years, 6-10 years, 10 years or more.

Malawi: “How long have you lived in [village/neighborhood name]?” Responses were recorded in range categories, from which a categorical variable was generated: 0-5 years, 6-10 years, 10 years or more.

Urban: A dummy variable coded by enumerators (small towns are considered urban).

Age: “How old are you?”

Education:

Kenya: “What is the highest level of education you have completed?” Answer options: 1) no formal school; 2) standard 1; 3) standard 2; 4) standard 3; 5) standard 4; 6) standard 5;

7) standard 6; 8) standard 7; 9) standard 8; 10) form 1; 11) form 2; 12) form 3; 13) form 4; 14) college; 15) some university; 16) university completed; 17) graduate degree.

Malawi: “What is your highest level of education?” Answer options: 1) no formal schooling; 2) informal schooling only (including Koranic schooling); 3) some primary school completed; 4) primary school completed; 5) intermediate school or some secondary school/high school; 6) secondary school/high school completed; 7) post-secondary qualifications other than university (e.g. a diploma or degree from a polytechnic or college); 8) some university; 9) university completed; 10) post-graduate.

Male: Coded by enumerator.

Wealth (asset index):

Kenya: Based on principal component analysis of questions [yes/no] regarding household ownership of: mobile phone, gas cooker, radio, television, bicycle, motorcycle, car, computer.

Malawi: Based on principal component analysis of questions [yes/no] regarding household ownership of: mobile phone, radio, bicycle, car or motorcycle.

Affected by violence (Kenya only): Coded as 1 for respondents who were individually affected or whose family was affected by violence related to the 1992, 1997, or 2007 elections. Based on questions that asked: “Were you or any members of your family affected by the violence [that followed the 2007 election / before the 1997 election / before the 1992 election]?”

Non-co-ethnic interviewer:

Kenya: Based on enumerators’ self-reported ethnicity.

Malawi: Respondents were asked, “What ethnic group do you believe I am from?” (the last question in the survey). Interviewer is coded as non-co-ethnic if the respondent did not perceive the interviewer to be from her/his ethnic group. Coded as missing for respondents who were uncertain.

Section 2 Sampling

The Malawi survey is a nationally-representative survey that includes respondents from 15 of the country's 28 districts. The sample was allocated across districts and within districts according to population size. In order to increase the number of respondents from patrilineal groups, the sample for the Northern Region (where patrilineal groups predominate) was increased. Households were selected using a standard random walk procedure with the center of the village as the starting point, and individuals within households were chosen randomly using the Kish Grid. The survey team sampled 22 Traditional Authorities (TA). Within each TA, we selected four enumeration areas (EAs) defined by the census. Within each EA, we sampled four villages, with an average of 31 respondents per village across 261 villages (Lust et al. 2016). All analysis uses regional weights to adjust for over-sampling the North.

The Kenya survey covers Nairobi County, which contains Kenya's capital city, Nairobi. The sample was stratified by parliamentary constituency, according to population size. Starting points (usually polling places) were chosen randomly. Enumerators were instructed to follow a standard random-walk procedure to select households. Within households, respondents were randomly selected from among those who were home at the time of the visit.

In both countries, we use data only from the ethnic groups for which we have sufficiently large sub-samples (40 or more mono-ethnic respondents) to estimate group-level preferences.

Section 3 Additional Regression Results

Tables SI.1 and SI.2 show that the main results presented in the text are robust to adding the control variables iteratively. Results indicate that for both countries the effect of mixed ethnicity is negative and significant in all specifications.

Table SI.1: Models of Vote Choice – Malawi

	(1)	(2)	(3)	(4)	(5)
Mixed ethnicity	-0.072*	-0.107***	-0.084***	-0.084***	-0.078***
	(0.028)	(0.020)	(0.027)	(0.027)	(0.028)
<i>Controls:</i>					
Ethnic group FEs		✓	✓	✓	✓
Urban			✓	✓	✓
Co-ethnic share			✓	✓	✓
Age				✓	✓
Male				✓	✓
Matrilineal				✓	✓
Time in area (years)					✓
Education					✓
Wealth (asset index)					✓
Co-ethnic interviewer					✓
Observations	5,602	5,602	5,105	5,091	5,066
R ²	0.004	0.108	0.111	0.115	0.121

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10

Table SI.2: Models of Vote Choice – Kenya

	(1)	(2)	(3)	(4)	(5)
Mixed ethnicity	-0.083** (0.035)	-0.086*** (0.034)	-0.083** (0.034)	-0.072** (0.034)	-0.082** (0.035)
<i>Controls:</i>					
Ethnic group FEs		✓	✓	✓	✓
Co-ethnic share			✓	✓	✓
Age				✓	✓
Male				✓	✓
Time in area (years)					✓
Education					✓
Wealth (asset index)					✓
Co-ethnic interviewer					✓
Observations	1,686	1,686	1,686	1,686	1,542
R ²	0.003	0.136	0.137	0.143	0.152

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10

Section 4 Results by Ethnic Group

The analysis by group in Table SI.3 shows that in most groups mixed-ethnicity respondents are less likely to support the party associated with their stated community. Effects at the group level, however, are imprecisely estimated due to the small sub-group sample sizes, particularly in the Kenya data.

Table SI.3: Models of Vote Choice, by Ethnic Group

A. KENYA		(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Mixed	Kikuyu	-0.08	-0.13**	-0.04	-0.15	0.02	0.21	-0.21		
Ethnicity		(0.07)	(0.06)	(0.08)	(0.12)	(0.14)	(0.19)	(0.24)		
Observations		444	322	314	247	132	42	41		
R ²		0.03	0.12	0.04	0.04	0.09	0.31	0.14		
B. MALAWI		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mixed	Chewa	-0.08*	-0.08***	-0.19**	0.08	-0.12	0.03	-0.14**	-0.02	-0.04
Ethnicity		(0.04)	(0.02)	(0.06)	(0.06)	(0.09)	(0.07)	(0.05)	(0.05)	(0.06)
Observations		799	638	746	630	1,262	475	210	180	126
R ²		0.14	0.08	0.07	0.18	0.05	0.05	0.26	0.06	0.10

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10.

Section 5 Excluding Groups with Weak First Preferences or Ambiguous First Preferences

Weak first preferences. We exclude groups with a weak first preference, defined as those for which no single party enjoyed 50% or more support at the time of the survey. In Malawi, this includes only the Yao, and in Kenya the Luo, Kamba, Kisii and Luhya. The results are robust to the exclusion of these groups in both countries (Table SI.4). The Malawi results are largely unchanged. For Kenya, while the coefficient on mixed ethnicity (-0.084) is nearly identical to that for the full sample reported in the main text (-0.081), it is less precisely estimated due to the smaller sample size in this test (p-value=0.13). Model specifications are based on Table 5.

Table SI.4: Models of Vote Choice Excluding Groups with Weak First Preference

	Malawi	Kenya
Mixed Ethnicity	-0.07*** (0.02)	-0.08 (0.06)
Observations	3,804	527
R ²	0.12	0.05

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10

Ambiguous first preferences. We identify groups that do not have a “clear preference” as those groups whose most-preferred party receives less than 10% more support than the next most favored party. In Malawi, these are the Tumbuka and Lambya, and in Kenya, these are the Kamba, Kisii and Luhya. The results are robust to the exclusion of these groups in both countries.

Table SI.5: Models of Vote Choice Excluding Groups with Ambiguous First Preference

	Malawi	Kenya
Mixed Ethnicity	-0.07*** (0.02)	-0.11** (0.04)
Observations	3,624	849
R ²	0.12	0.13

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10

Section 6 Matrilineality in Malawi

In Malawi, we examine whether the likelihood of deviating from the voting habits of one's stated ethnic group is more likely under different lineage traditions. We re-estimate Model (1) from Table 5 and interact *mixed ethnicity* with an indicator for matrilineality, which takes a value of 1 for respondents whose mother's ethnic group is matrilineal. The results are reported in Table SI.6. We find that the negative effect of *mixed ethnicity* obtains for both respondents whose mother's group is matrilineal and for those whose mother's group is patrilineal, though the effect is significant only for the former (the sum of *Mixed Ethnicity* and *Mixed Ethnicity X Matrilineal* is -0.095, $p < .01$).

Table SI.6: The Effects of Mixed Ethnicity, Condition on Matrilineality – Malawi

Mixed Ethnicity	-0.031 (0.071)
Matrilineal	0.098 (0.060)
Mixed Ethnicity X Matrilineal	-0.064 (0.068)
Controls included in main analysis	yes
Ethnic group FEs	yes
Observations	5,066
R ²	0.122

Notes: Model specification based on Table 5 (results for control variables not shown). Robust standard errors in parentheses. *** $p < .01$, ** $p < .05$, * $p < .10$

Section 7 Effects of Mixed Ethnicity, Conditional on Whether Parents' Groups Cross Party Lines

We expect that the effects of mixed ethnicity should be greater for mixed individuals when their parents' groups are linked to different parties than when they are both associated with the same party. Some of the proposed mechanisms – particularly the arguments related to ethnic repertoires or diverse social networks – would likely come into play only for those in the former category.

To test this proposition, we estimate models for each country that interact the main independent variable (*mixed ethnicity*) with an indicator variable (*groups cross*) that takes a value of 1 for mixed respondents whose parents' groups are linked to different parties, and 0 otherwise. Standard practice in interactive models is to include both of the constituent terms in the model – e.g., *mixed ethnicity* and *groups cross* in this case (Brambor et al., 2006). However, it is not possible to include *groups cross* separate from the interaction with *mixed ethnicity* because by definition there are no non-mixed individuals whose parents' groups cross ethno-partisan lines.

We presents results in Table SI.7 for the full sample in each country and by ethnic group. Note that for groups with a small sub-sample, the estimates are not reliable since there are very few respondents in some categories. For example, for the Meru in Kenya there are four mixed respondents (out of a total sub-sample of 39), but only 1 of the four has parents' groups that cross ethno-partisan lines. For the Kalenjin in Kenya, there are eight mixed respondents (out of a total sub-sample of 39), but there is only one respondents whose parents groups do not cross ethno-partisan lines. And for the Lambya in Malawi, there are 58 mixed respondents (out of a total sub-sample of 222), but only one respondents whose parents' groups do not cross ethno-partisan lines. We include models for these groups for completeness, but the results should not be taken as reliable estimates. Note also that for three groups in Malawi – the Chewa, Yao, and Tonga – we are unable to estimate interactive models because by definition all mixed Chewa, Yao, and Tonga are coded as having parents' groups that are linked to different parties.

Results in Table SI.7 show that for the full samples we observe a large negative effect for mixed individuals whose parents' groups are associated with different parties. For mixed respondents whose parents' groups are associated with the same party (given by the coefficient on *mixed ethnicity*), we observe a negative effect of 5 percentage points in Kenya, though the coefficient is not significant at conventions levels. For Malawi, however, we observe a *positive* effect (3 percentage points) that is not significant.

Examining the results for Malawi in Table SI.7 indicates that the positive coefficient on *mixed ethnicity* in the full sample masks considerable heterogeneity across ethnic groups, and the overall association is driven by a large positive coefficient for one group, the Ngoni, and smaller positive associations (though not significant) for the Sena, Lambya, and Nyanja. The explanation for these positive coefficients relates to the differing base rates of ethnic bloc voting among groups that share the same first party preference. To see why, consider the Ngoni as an example. In our sample, we code the DPP as the most-preferred party among the Ngoni (recall from Table 2 in the main text that 67.0% of mono-ethnic Ngonis report voting for the DPP in the 2014 election). Our sample includes 884 respondents who

identify as Ngoni, of whom 248 report a mixed lineage. Of these mixed Ngoni-identifiers, we code 58 as having parents from groups that are both linked to the same party, the DPP. Most such respondents have a non-Ngoni parent who is Lomwe (36 of 58, 62%) or Sena (14 of 58, 24%) – groups in which the base rate of support for the DPP was considerably higher at the time of our survey (the base rate was 86.9% and 83.2% respectively among mono-ethnic Lomwes and Senas). Thus, it is unsurprising to find that mixed Ngoni-identifiers who trace their lineage in part to the Lomwe or Sena would have a higher propensity to support the DPP than mono-ethnic Ngonis. The broader point illustrated by this example is that while mixed ethnicity overall is associated with a reduced propensity to support the party associated with one’s stated ethnic community, the effect may be positive, negative, or null for mixed individuals whose parents’ groups are both linked to the same party. Finally, the overall negative association between mixed ethnicity and adhering to the group voting norms of one’s stated ethnic group obtains because in Malawi the majority of mixed respondents (71%) have lineages that cross ethno-partisan lines (in Kenya the share is smaller – 33% – but we observe a negative effect both for mixed respondents whose parents’ groups cross ethno-partisan lines and for those whose parents’ groups do not).

Table SI.7: Effects of Mixed Ethnicity, Conditional on Whether Parents' Groups Cross Party Lines

A. KENYA		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	Full sample	Kikuyu	Luo	Luhya	Kamba	Kisii	Meru	Kalenjin			
Mixed ethnicity	-0.05 (0.05)	-0.00 (0.09)	-0.04 (0.08)	-0.10 (0.11)	-0.10 (0.15)	-0.25 (0.18)	0.24 (0.30)	0.47 (0.62)			
Mixed ethnicity X Groups cross	-0.14* (0.08)	-0.25* (0.14)	-0.30** (0.14)	0.20 (0.18)	-0.41 (0.29)	0.49* (0.25)	-0.40 (0.59)	-0.64 (0.65)			
Observations	1,504	427	316	309	243	131	39	39			
R ²	0.15	0.04	0.12	0.04	0.05	0.12	0.32	0.16			
B. MALAWI		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Full sample	Chewa	Lomwe	Yao	Ngoni	Tumbuka	Sena	Tonga	Lambya	Nyanja	
Mixed ethnicity	0.03 (0.04)	-0.08** (0.04)	-0.01 (0.04)	-0.24*** (0.06)	0.15 (0.09)	-0.07 (0.04)	0.01 (0.09)	-0.14** (0.05)	-0.15 (0.26)	0.09 (0.08)	
Mixed ethnicity X Groups cross	-0.18** (0.06)	-0.19** (0.08)			-0.11 (0.09)	-0.09 (0.12)	-0.04 (0.16)			-0.42*** (0.11)	
Observations	4,964	789	629	736	624	1,240	467	210	143	126	
R ²	0.13	0.13	0.10	0.08	0.18	0.05	0.05	0.26	0.05	0.12	

Notes: Model specification based on Table 5 (results for control variables not shown). In Malawi the interaction model cannot be estimated for several groups because all mixed individuals are coded as having parents' groups that are either linked to different parties or the same party. Robust standard errors in parentheses. ***p<.01, **p<.05, *p<.10

Section 8 Enumerator Ethnicity and Self-identification

As a way to explore whether self-reported ethnicities for mixed individuals vary according to context, we examine the association between self-reported identities in Malawi (where we have a larger mixed sample than in Kenya) and enumerator ethnicity. We estimate an OLS model in which the dependent variable takes a value of 1 for mixed respondents who report their ethnicity as their father’s group, and 0 for their mother’s group. We include separate indicator variables for whether interviewer ethnicity matches respondents’ mother’s group or father’s group (with the omitted category being neither). Recall that because enumerator ethnicity is not available for the Malawi survey, we rely on a survey question that asked respondents what group they thought enumerators were from. We include Enumeration Area (EA) fixed effects to account for geographic determinants of identity expression. Results in Table SI.8 show that perceived enumerator ethnicity is associated with a clear pattern in self-reporting, with mixed respondents on average more likely to report their ethnicity as their father’s or mother’s group by 11-13 percentage points when the enumerator is perceived to be from either group (relative to an enumerator perceived to be from neither). Results are similar when we include enumerator fixed effects and/or controls for whether respondents’ parents are from matrilineal or patrilineal groups. Because enumerators were not randomly assigned, we cannot infer a causal effect; yet the pattern is consistent with the notion that individuals may alter how they self-identify in response to contextual factors.

Table SI.8: Self-identification among Mixed Respondents – Malawi
(DV=self-identify as part of father’s group)

Enumerator from father’s ethnic group	0.11*** (0.04)
Enumerator from mother’s ethnic group	-0.13*** (0.04)
Constant	0.50*** (0.02)
EA fixed effects	yes
Observations	1,031
R ²	0.17

Notes: OLS model with robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1

Section 9 Ethnic Salience

Table SI.9 reports results from a series of regression models using data from the full sample in the Malawi survey in which the dependent variable is the measure of group voting and the independent variables are the two measures of ethnic salience. To recall, these measures were based on questions that asked: 1) How important do you believe it is for members of your ethnic group/tribe to vote for the same candidate? and 2) How important is it to you that your ethnic group elects a representative to the parliament from your constituency? For each, we create a dichotomous measure that takes a value of 1 for respondents who said it was “somewhat” or “very important,” and 0 for those who chose “not important” or “not all all important.” The results show that both measures of ethnic salience are positively associated with following the group voting norms of one’s stated ethnic group in one or more of the specifications, though the associations are not statistically significant. (Note that the sample sizes for models that include *group voting important* are smaller because this question was used for a split sample of roughly one third of respondents). Thus, while we observe that mixed respondents are less likely to view ethnicity as politically salient on both measures, we fail to find consistent evidence linking those perceptions to reported voting patterns.

Table SI.9: Models of Ethnic Salience and Vote Choice – Malawi

	(1)	(2)	(3)	(4)
Group voting important	0.038 (0.024)	0.025 (0.021)		
Electing ethnic rep. important			0.018 (0.018)	-0.011 (0.012)
Ethnic FEs	yes	yes	yes	yes
Controls	no	yes	no	yes
Observations	1,938	1,739	5,837	5,259
R ²	0.085	0.104	0.101	0.120

Notes: Model specifications and controls are identical to Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Section 10 Social Networks

Table SI.10 reports results from a series of regression models using data from the full sample from the Kenya survey in which the dependent variable is the measure of group voting and the independent variable is a measure of the diversity of respondents' social networks. This measure is based on responses to a question that asked, "How many of your close friends and family members are [R's ethnic group]?" We create a dichotomous measure (*homogeneous social network*) that takes a value of 1 for respondents who said "most" or "all," and 0 for those who said "some," "just a few," or "none." Recall from the main text that mixed-ethnics have more diverse social networks: 33% of mixed-ethnics report that all or most of their close friends and family members are from their stated ethnic group, relative to 49% for mono-ethnics – a difference 16 percentage points ($p < .01$). The results in Table SI.10 show that more homogeneous social networks are systematically related to a greater likelihood of following the bloc voting patterns of one's reported ethnic group, suggesting that the negative effect of mixed ethnicity may stem in part from mixed individuals – on average – having more diverse social networks.

Table SI.10: Models of Social Networks and Vote Choice - Kenya

	(1)	(2)	(3)
Homogenous social network	0.102*** (0.024)	0.069*** (0.022)	0.060** (0.024)
Ethnic FEs	no	yes	yes
Controls	no	no	yes
Observations	1,760	1,760	1,607
R ²	0.010	0.132	0.147

Notes: Model specifications and controls are identical to Table 5 (results for control variables not shown). Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Section 11 Measurement Bias

Section 11.1 Enumerator Effects

One potential concern is that because our measures of voter preferences are based on self-reported preferences – rather than actual voting behavior – the results could be affected by biases that come into play in the context of household surveys. While there are a variety of potential biases that might affect self-reported electoral preferences, a particular concern is social desirability bias related to enumerator ethnicity. Recent research (Adida et al., 2016) has shown that in Africa’s ethnically-diverse countries, the ethnicity of interviewers (whether they match respondents’ ethnicity or not) systematically affects respondents’ answers across a range of outcomes, including political preferences.

In the context of the current study, we would be particularly concerned if enumerator effects differed across mixed respondents and mono-ethnics. There are two ways that differentially-sized effects could bias the results in favor of the main hypothesis that multi-ethnics are more likely to deviate from group bloc voting norms than mono-ethnics. First, multi-ethnics who genuinely support the party linked to their stated ethnic group could be more prone than mono-ethnics to alter their reported preferences when interviewed by a non-co-ethnic enumerator. Second, mono-ethnics who do not support the party linked to their ethnic group could be more prone to say that they do when interviewed by a co-ethnic, relative to multi-ethnics who self-identify as part of the same group. In either case, we would be at risk of mistakenly attributing observed differences in party support to multi-ethnicity rather than to differential enumerator effects.

We find evidence that enumerator ethnicity could be a concern.²⁸ Table SI.11 shows the results of interactive models in which the dependent variable is again reported vote choice and the independent variables include dummies for *non-co-ethnic interviewer*, *mixed ethnicity*, and the interaction between the two. The interaction term is negative in both country samples (and significant in Malawi), indicating that the effect of being interviewed by a non-co-ethnic interviewer varies across multi-ethnics and mono-ethnics. However, the results also indicate that the effect of *mixed ethnicity* remains negative among those interviewed by co-ethnics in both countries and is significant in Malawi (in Kenya the negative effect is 4 percentage points but is not significant). These results indicate that the overall negative effect we observe in the full samples cannot be attributed solely to enumerator bias.

²⁸In Malawi, multi-ethnics are less likely to be interviewed by a non-co-ethnic interviewer (that is, an interviewer from an ethnic group that does not match the respondent’s stated group) by 11 percentage points (26% vs. 37%, $p < .01$). In Kenya, multi-ethnics are slightly more likely (79% vs. 75%, difference = 4 points, $p = 0.15$). As noted in the main text, all analysis includes an indicator variable for non-co-ethnic interviewer to account for potential bias introduced by this variation.

Table SI.11: Vote Choice, Conditional on Enumerator Ethnicity

	(1)	(2)
	Malawi	Kenya
Mixed ethnicity	-0.05** (0.02)	-0.04 (0.07)
Non-co-ethnic interviewer	0.02 (0.02)	-0.06* (0.03)
Non-co-ethnic interviewer X mixed ethnicity	-0.09* (0.05)	-0.06 (0.08)
Observations	5,066	1,542
R ²	0.122	0.15

Notes: Model specifications and controls are identical to Table 5 (results for control variables not shown). Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Section 11.2 Comparing Self-Reports to Election Returns

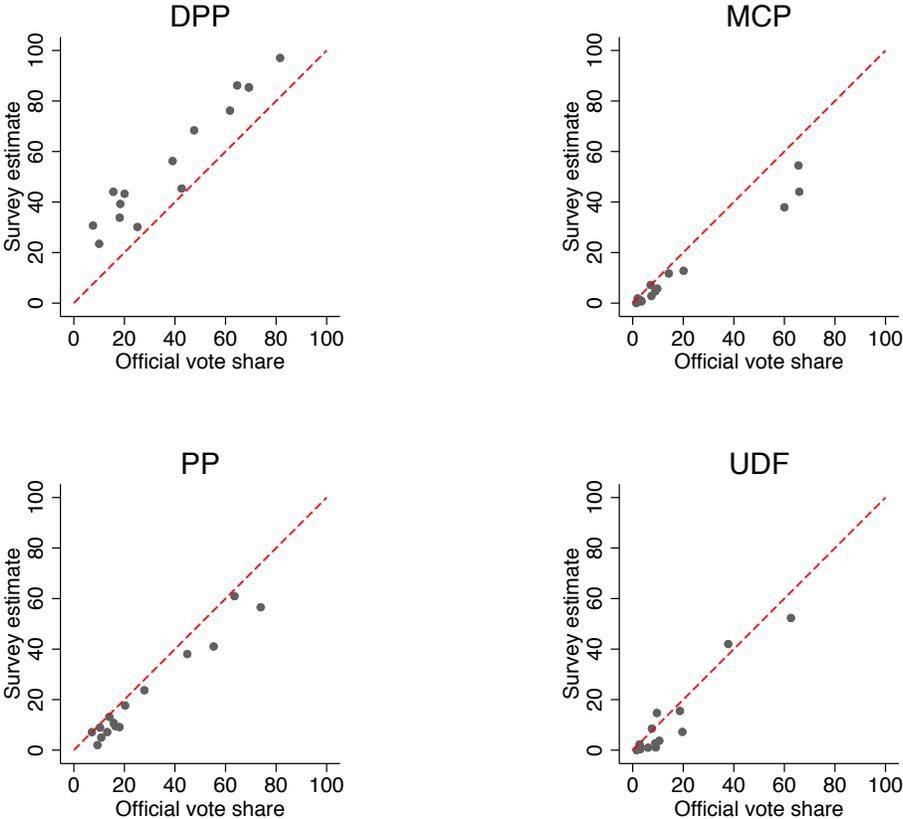
Another type of bias that often comes into play with regard to self-reported voter behavior is a well-documented pattern by which respondents over-report support for the incumbent party in surveys (Adida et al., 2019). For Malawi, we can compare the survey data to election returns at the district level (this type of comparison is not possible for Kenya because the Kenya survey asked about prospective voting intentions – “Who would you vote for in the next election if it were held now?” – not actual vote choices in the prior election).

Figure SI.1 shows district-level correlations based on the survey data and official election returns from the Malawi Electoral Commission for the 15 districts included in the survey. We show scatterplots for each of the four main parties, whose candidates collectively garnered 98.1% of the official vote. If the survey estimates perfectly match the official returns, they should line up on the superimposed 45-degree line. However, we do not expect a perfect match given that: 1) the survey data does not account for turnout and 2) the official records may have been subject to manipulation, as alleged by prominent leaders at the time of the 2014 election.²⁹ Despite this, Figure SI.1 shows a high correlation between the survey estimates and the official returns for each party. And, we observe a pattern that suggests a substantial amount of over-stating support for the DPP, the 2014 election winner and incumbent at the time of the survey. This type of bias likely affects baseline levels of bloc voting by increasing the baseline among groups for whom the DPP is the most-preferred party and lowering the baseline among groups for whom the most-preferred party is not the DPP. The extent of the bias, however, appears to be similar for both mono-ethnics and multi-ethnics. District-level survey estimates of support for the DPP are on average greater

²⁹For example: <https://www.bbc.com/news/world-africa-27515684>, accessed on December 12, 2019.

than the official results by 16.5 percentage points and 18.9 points respectively for mono- and multi-ethnics.

Figure SI.1: Survey Estimates and Election Returns by District – Malawi



Section 12 Details on the construction of inter-marriage estimates in the DHS surveys

Country-level estimates for all surveys included in the analysis are shown in Table SI.12. To estimate country-level inter-marriage rates, we use the “couples recode” files provided by DHS, which include all male-female pairs who reported being married or living together. We encountered two challenges. First, the ethnic coding schemes vary in the level of aggregation considerably across surveys and years. Often there is no obviously correct way to deal with alternative categorization schemes. For example, the Akan in Ghana are often treated as a single ethnic group in political science scholarship, but can also be sub-divided as Asante, Fante, Akim, and so forth. Using a more disaggregated coding scheme would produce a higher estimate of inter-marriage. An Asante-Fante couple, for example, would be coded as ethnically-mixed if we used a scheme based on sub-tribe but not if we aggregated sub-tribes to a higher level (Akan in this case). Unfortunately, the DHS provides no documentation regarding the decision rules that were used to construct ethnic categorizations. Given the inherent arbitrariness of any decisions we might make, we used the list from Fearon (2003) – a common dataset used by political scientists – as our guide, excluding surveys in which the ethnic coding scheme was substantially more disaggregated than that from Fearon (2003). We also found variations in the DHS ethnicity codes across years for individual countries. In most cases, we were able to generate a uniform coding scheme by collapsing the codes to the least disaggregated level used in the surveys. We excluded surveys that could not be aggregated. We also exclude all DHS surveys that did not collect data on ethnicity. Table SI.13 below presents the ethnic group categorization schemes used for all included surveys, relative to the group list from Fearon (2003).

A second challenge is that the DHS surveys typically include an “other” category for members of smaller ethnic groups. We coded couples as ethnically mixed when the ethnicity of one individual was provided and the other was listed as “other.” We excluded couples in which both members of the couple were coded as “other” since we had no way of knowing whether the two were from the same ethnic group.

DHS samples often over-sample parts of the country. To adjust for this, we weight our estimates using the “women’s weights” that are designed for generating population estimates for the female population.

Table SI.12: Inter-marriage Rates

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Benin				12.9						15.6		
Burkina Faso		11.7						9.0				12.2
Cameroon												
Central African Republic				25.2								
Congo - Brazzaville												
Congo - Kinshasa (DRC)												
Gabon									44.1			
Gambia												
Ghana		16.2					16.8					19.9
Guinea								10.2				
Kenya		7.2					8.8					9.2
Liberia												
Malawi									35.1			
Mali				28.5						29.6		
Mozambique						11.1						
Namibia									9.2			
Niger	13.1						14.3					
Rwanda	7.0											
Senegal	15.9											
Sierra Leone												
Togo							10.5					
Uganda				21.6								
Zambia				25.1						21.0		
Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Benin			11.9						14.9			
Burkina Faso							11.2					
Cameroon								14.9				
Central African Republic												
Congo - Brazzaville									30.2			
Congo - Kinshasa (DRC)				8.3							7.8	
Gabon									47.1			
Gambia										30.0		
Ghana					19.8						22.2	
Guinea		9.9							20.0			
Kenya					13.3						12.6	
Liberia										34.1		
Malawi	31.7						31.5					33.8
Mali			29.4						33.7			
Mozambique												
Namibia												
Niger			12.0									
Rwanda												
Senegal		23.4					27.8		26.8			24.2
Sierra Leone					20.3					20.9		
Togo									17.0			
Uganda												
Zambia				24.7						22.7		

Table SI.13: Ethnic Coding Schemes

COUNTRY	DHS	FEARON (2003)
Benin 1996; 2001; 2006; 2011/12	Adja & related Bariba & related Betamaribe & related Dendi & related Fon & related Peulh & related Yoa & Lokpa and related Yoruba & related Other	Bargu Fon Peul (Fulani) Yoruba-Nagot
Burkina Faso 1992/93; 1998/99; 2003; 2010	Bobo Dioula Fulfude (Peul) Gourmantche Gouroussi Lobi Mossi Senoufo Touareg Bella Other	Busansi Bwa Dagara Fulani (Peul) Grunshi (Ghhgurunshi) Gurma (Gubarma) Lobi Mossi Senoufo Songhay Western Mande
Cameroon 2011	Adamaoua-Oubangui Arab-Choa/Peulh/ Haoussa/Kanuri Biu-Mandara Bantoede South-West Grassfields Bamilike /Bamoun Cetier /Ngoe/Oroko Beti/Bassa/Mbam Kako/Meka/Pygme Stranger/Other	Beti Bamileke Bassa-Dakoko -Douala Bamoun Eastern Nigritic Fulani Kirdi Northwest Southwest
CAR 1994/95	Haoussa Sara Mboum Gbaya Mandjia Banda Ngbaka-Bantou Yakoma-Sango Zande-Nzakara Other	Banda Mbaka (Bwaka) Riverene-Sango- Mandjia (Mandja, Mangbai) Gbaya (Baja,Baya) Sara Mbum (Bum)
Congo 2011/12	Kongo Punu	Lari Kongo-Sundi -Bembe-Kota- Echira-Kamba

	Duma	-Dondo
	Mbere/mb	Teke
	Teke	Mbete
	Mbochi	Vili
	Sangha	Sanga
	Kota	Kouyou
	Makaa	
	Oubangui	
	Pygmee	
	Etranger	
	Other	
DRC 2007; 2013/14	Bakongo Nor. And Sou.	Azande-Mangbetu cluster
	Bas-Kasai & Kwilu-Kwngo	Ngbandi
	Cuvette Central	Tetela-Kusu
	Ubangi And Itimbiri	Bakongo
	Uele Lake Albert	Kwilu Region
	Basele-K	Ngbaka
	Kasai, Katanga, Tanganika	Tutsi
	Lunda	-Banyamulenge
	Pygmy	Mongo
	Others	Lunda-Yeke
		Luba Shaba
		Luba Kasai
		Kivu Province
		Lulua
		Mbandja
Gabon 2000; 2012	Fang	Fang
	Kota-Kele	M'bete
	Mbede-Teke	Kota
	Myene	Njebi
	Nzabi-Duma	Duma
	Okande-Tsogho	Teke
	Shira-Punu/Vili	Eshira
	Pygmee	French
	Other	Bapounou
		Nkomi
		Tsogo
		Baloumbou
		Mpongwe
		Orungou
Gambia 2013	Mandinka/Jahanka	Mandingo
	Wolof	Fulani (Fula, Peul)
	Jola/Karoninka	Wolof
	Fula/Tukulur/Lorobo	Diola-Jola
	Serere	Serahuli (Sarakohe)
	Serahuleh	Serer
	Creole/Aku Marabout	Mandjak
	Manjago	
	Bambara	
	Other	
	Non-Gambian	
Ghana 1993; 1998;	Akan	Ashanti, Asante

2003; 2008; 2013/14	Ga/Dangme Ewe Guan Mole-Dagbani Grusi Gurma Mande Other	Mossi-Dagomba, Ewe Guan Fanti, Fante Ga Abangbe Nzema Konkonba Anyi-Bawle Yoruba Mande
Guinea 1999; 2005; 2012	Guerze Kissi Malinke Peulh Soussou Toma Other	Fulani Mande Mande-Fu West Atlantic
Kenya 1993; 1998; 2003; 2008/09; 2014	Kalenjin Kamba Kikuyu Kisii Luhya Luo Meru/Embu Mijikenda/Swahili Somali Taita/Taveta Other	Kikuyu-Meru -Embu Luhya Luo Kamba Kalenjin Gusii-Kisii Mijikenda Turkana Somali Masai Boran Rendille
Liberia 2013	Bassa Gbandi Belle Dey Gio Gola Grebo Kissi Kpelle Krahn Kru Lorma Mandingo Mano Mende Sarpo Vai Other	Kru Kissi Loma Mandingo Vai Krahn(Guere) Americo-Libs Bassa Grebo Gio Gola Mano Ghandi(Bandi) Kpelle(Guerze)
Malawi 2000; 2004/05; 2010; 2015/16	Chewa Tumbuka Lomwe Tonga Yao	Chewa Lomwe (Nguru) Mananja-Nyanja Yao Ngoni

	Sena	Northerner (Nkonde-Tonga-Tumbuka)
	Nkonde	
	Ngoni	
	Other	
Mali 1995/6; 2001; 2006; 2012/13	Bambara	Mande
	Malinke	Peul (Fulani)
	Peulh	Senufo
	Sarakole/Soninke/Marka	Sarakole-Soninke
	Sonrai	Songhai
	Dogon	Tuareg
	Tamacheck	Dogon
	Senoufo/Minianka	Bozo
	Bobo	Moor
	Other	Xaasongaxango
Mozambique 1997	Xitsonga & Similiar	Chopi
	Emakua & Similiar	Islamic Coastal
	Cisena & Similiar	Makonde-Yao
	Elomue & Emarenjo	Makua-Lomwe
	Xitswa & Similiar	Shona
	Portugues	Tsonga
	Other	Zambezi
Namibia 2000	Afrikaans	Ovambo
	Damara>Nama	Kavango
	English	Herero, Mbanderu
	Herero	White
	Kavango Languages	Nama
	Caprivi Languages	Damara
	Oshiwambo	Coloured
	San	Basubia
	Tswana	Mafwe
	Other	San
		Baster
Niger 1992; 1998; 2006	Arab	Hausa
	Djerma/Songhai	Djerma (Zarma, Jerma)-Songhai
	Gourmantche	Tuareg
	Haoussa	Kanuri
	Kanouri	Gourmantche
	Peul	Toubou
	Touareg	
	Toubou	
	Other	
Rwanda 1992	Hutu	Hutu-Twa
	Tutsi	Tutsi
	Twa	
	Other	
Senegal 1992; 2005; 2010/11; 2012/14; 2015/16	Wolof	Wolof
	Poular	Peul (Fulani/Tukulor)
	Serer	Serer
	Mandingue	Mandinka
	Diola	Diola

	Soninke Not A Senegalese Other	Soninke
Sierra Leone 2008; 2013	Temne Mende Kriole Mandingo Loko Sherbro Limba Kono Other Sierra Leone Other Non Sierra Leone	Creole Kissi Kono Koranko Limba Loko Mende Sherbo Susu Temne
Togo 1998; 2012/13	Adja-Ewe/Mina Kabye/Tem Akposso/Akebou Ana-Ife Para-Gourma/Akan Other Togolese Stranger	Ouatchi/Mina Ewe(Ethoue, Eibe, Ephe, Krepe) Kabre(Cabrai, Bekaburum, Kabure, Kaure) Gurma Moba(Bmoba, Moab, Moare, Mwan) Kotocoli (Cotocoli, Tem,Chaucho, Chaucho,Temba,Timn) Losso Adja Akposso Bassari Konkomba
Uganda 1995	Acholi Alur Baamba Badama Bafumbira Baganda Bagisu Bagwere Bahororo Bakiga Bakonjo Banyankole Banyarwanda Banyole Banyoro Barulli Barundi Basoga Batoro Iteso Kakwa Karimojong Kumam Langi	Acholi Alur Ankole Baganda Banyarwanda Banyoro Basoga Gisu Kakwa Karamojong Kiga Lango Lugbara Madi Padhola Rwenzururu Sebei Teso Toro

	Lugbara	
	Madi	
	Nubiam	
	Samia	
	Sebei	
	Other	
Zambia 1996; 2001/02; 2007; 2013/14	Barotse	Barotse
	Bemba	Bemba Speaker (Mambwe)
	Lunda-Kaonde	Lunda-Kaonde
	Nyanja	Nyanja Speaker (Tumbuka)
	Tonga-Ila-Lenje	Tonga-Ila-Lenje