

The Ethnicity-Policy Preference Link in Sub-Saharan Africa

Forthcoming in the May 2013 issue of *Comparative Political Studies* (volume 46, issue 5).

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Key words: ethnicity, policy preferences, ethnic fractionalization, Africa, public goods

Word count: 9195

Abstract

Scholars have begun to investigate the mechanisms that link ethnic diversity to low levels of public goods provision but have paid only minimal attention to the role of preferences for public policies. On the one hand, some argue that ethnic groups hold culturally distinctive preferences for goods and policies, and that such differences impede effective policy-making, but these studies provide little evidence to support this claim. Others argue that preferences do not vary systematically across ethnic groups, but again the evidence is limited. In this paper, we engage in a systematic exploration of the link between ethnic identity and preferences for public policies through a series of individual- and aggregated- analyses of Afrobarometer survey data from 18 Sub-Saharan African countries. We find that in most countries, preferences do vary based on ethnic group membership. This variation is not merely an expression of individual-level socio-economic differences or of group-level cultural differences. Instead, we suggest that citizens use ethnicity as a group heuristic for evaluating public policies in a few predictable ways: We find more persistent disagreement about public policies between politically relevant ethnic groups and where group disparities of wealth are high.

I. Introduction

A large and influential body of scholarship has demonstrated that ethnic heterogeneity is associated with both bad policies and poor development outcomes across a range of sectors and in polities of varied scale (Easterly and Levine, 1997; Miguel, 2004; Alesina et al., 1999; Putnam, 2007; Montalvo & Reynal-Querol, 2005). While nuances have emerged concerning exactly how to conceptualize or to measure ethnic diversity, including an increasing focus on socially or politically relevant ethnic categories (Alesina et al., 2003; Posner, 2004a; Wimmer, Cederman & Min, 2009) and on the degree of economic inequality across ethnic groups (Baldwin & Huber, 2010), the overall pattern is consistent: ethnically diverse societies are more prone to policy conflict, less likely to enact development-enhancing public policies and to provide public goods,ⁱ and they tend to grow more slowly.

But what is the mechanism that links ethnic diversity to bad policies and poor development outcomes? Specifically, is the link preference diversity? Within studies identifying the negative consequences associated with ethnic diversity, scholars have often posited or implicitly assumed that ethnic groups have different preferences over public policies. They assume that citizens generally want *something* from government, such that the central question of demand is not *whether* to provide goods and services but *which ones and to whom*.ⁱⁱ Easterly and Levine (1997, pp. 1215-6) identify several examples in which scholars have claimed that ethnic groups will have different tastes for goods and services provided by governments. Other scholars have advocated decentralization, particularly in ethnically diverse countries, on the grounds that smaller and more localized groups are more likely to share preferences for public goods, making it easier to formulate and implement public policies (Wibbels, 2006). If members of different ethnic groups tend to systematically disagree over the *kinds* of public policies they want the

government to focus on, then, all else equal, it should be difficult in ethnically diverse places for citizens to coordinate lobbying efforts for public goods, or for politicians to gain wide support for public spending ventures (Habyarimana et al., 2009, Miguel, 2004).

But many scholars argue that ethnic group membership is not associated with policy preferences, focusing instead on the strategic nature of ethnic politics to explain the relationship between ethnic diversity and poor development outcomes. For example, Bates (1974), Chandra (2004) and Posner (2005) describe ethnic political competition as primarily a battle over *who* gets the spoils from public policies rather than over *what* those public policy priorities should be. Such works generally assume a greater universality to individuals' public policy preferences. In these models, the negative consequences of ethnic politics have more to do with ethnic nepotism.

A few recent studies have attempted to test the preference mechanism more directly but have found little evidence in its favor. Hopkins (2009), for instance, argues that ethnic diversification (rather than high levels of diversity) lowers local public spending by destabilizing expectations about future returns rather than by changing the constellation of citizen preferences. Habyarimana et al. (2009) show that there are no significant ethnic group differences in the prioritization of security, drainage maintenance, and garbage collection among individuals living in four parishes of Kampala, Uganda.ⁱⁱⁱ While these are both well-designed and well-executed studies, their findings are not sufficient to rule out the potentially important role of preferences in linking ethnic diversity to public policies and developmental outcomes across the wide range of contexts in which the broader, macro-level pattern has persisted. In both cases, the findings are either based on an indirect test or based on analyses of just one or two localities within a single country.

While it might be tempting to rest the inquiry with such findings, they fly in the face of

strong theoretical and empirical foundations. A deep social psychological literature has shown how group differences, including ethnic differences, routinely structure cognitions and preferences with respect to distributional concerns. Most prominently scholars contributing to the development of social identity theory (SIT), have highlighted that individuals derive at least two benefits from group categorization that ought to be relevant for the formation of preferences: uncertainty reduction and self-enhancement (Hogg and Abrams, 1999, p.120; Tajfel and Turner, 1986). When individuals are able to easily identify with a relevant group, they can make choices and form preferences more easily by assessing that group and its interests – by modeling a group “prototype” (Hogg and Abrams, 1999). Behavioral economists such as Akerlof and Kranton (2000) build on the minimum group paradigm – i.e., that only superficial distinctions are necessary to constitute groups – and argue that group identity affects individual utility functions. Among other things, individuals identify their position and needs as members of a group.

Particularly in the American context, scholars have argued that ethnicity can serve as a cognitive heuristic for interpreting problems and policies. Dawson (1994, 2001) argues that African-Americans are consistently influenced by perception of a “linked fate,” such that any individual who identifies as such will take into account the needs and policy implications with respect to the *group* rather than just considering her individual circumstances. Similarly, if ethnic groups function as extended networks (Christakis and Fowler, 2009; Fowler and Christakis, 2010), information about public policies may spread easily within groups but not as easily across them. Individual members might form similar preferences over public policies as a result.

In light of these theoretical arguments, we revisit the possible link between ethnic group membership and policy preferences by exploring the relationship between the two in sub-Saharan Africa – the region with the highest levels of ethnic diversity, and where ethnic conflict

has been routinely blamed as a root cause of under-development (Easterly and Levine, 1997; Posner, 2004a). We investigate the observable implications of one variant of the preference mechanism, namely that membership in an ethnic group influences an individual's public policy priorities: the issues that she thinks her government should focus on and devote resources to. There are other possible variants of the preference mechanism. Membership in an ethnic group might also influence an individual's opinions about *how* her government should go about addressing an issue, once it has been labeled a priority. It could be the case, for instance, that members of different ethnic groups agree that education policy should be a priority but disagree about the location of new school buildings or about the design of the curriculum. In other words, the preference mechanism could be about the salience of an issue or about the preferred means for addressing an issue. We investigate the former and find strong evidence in its favor. If future research finds evidence of the latter that would only bolster our argument that the preference mechanism is a plausible link between ethnic diversity and public goods provision.

The primary task we set for ourselves is to see whether there is strong variation in policy priorities across ethnic groups once we examine a broader swath of data than previous studies have done. A supplemental task is to offer possible explanations for any association between ethnic group membership and policy priorities, which we do in the second half of the paper. We argue that the association is not merely an expression of individual-level socio-economic differences or of group-level cultural differences. Instead, we find that citizens use ethnicity as a group heuristic for evaluating public policies leading to more persistent disagreement about public policies priorities between politically relevant ethnic groups and where group disparities of wealth are high.

The paper proceeds as follows. First, we describe our data. Second, we show that

indicators of ethnic group membership are routinely jointly significant in models of policy prioritization. Third, we demonstrate that the association is largely independent of individual-level socio-economic factors. Having established the strong association between ethnic group membership and policy priorities, we turn to possible explanations: We show that the relationship between ethnic group membership and policy priorities is *not* merely an expression of cultural differences. Rather, we find that political relevance and inter-group wealth disparities strongly mediate the relationship between ethnicity and policy preferences. In the penultimate section, we show that our results are not sensitive to the use of a subjective measure of identity. Finally, we conclude by highlighting opportunities for future research.

II. Research design and description of data

For our analysis, we use the third wave of the 18-country Afrobarometer survey conducted in 2005-6. Although political scientists are increasingly using experimental methods to generate causal inferences about a range of related outcomes and processes, ultimately, our explanatory variable is ethnic group membership, which poses certain challenges for experimental control. While it is possible to manipulate and to randomly assign the perception of *another* individual's ethnicity (as Habyarimana et al. 2009 do), or to prime one's strength of identification (Mendelberg, 2001; Valentino, Hutchings and White, 2002), it is difficult to randomly assign real-world ethnic identities. Moreover, if the development of policy priorities takes place over a long period of time, short-term experimental manipulation may not be an appropriate mode of investigation. We use a mix of differently specified statistical models and provide summary statistics for each of the variables in an online appendix.

As the primary measure of our dependent variable (policy priorities), we consider responses to the question, "In your opinion, what are the most important problems facing this

country that government should address?” Respondents were prompted for three open-ended responses. Across the 18 African countries, a total of 31 policy priorities were identified with numerical codes. We interpret the first response as the respondent’s top priority, but, for some of the analyses, we also created separate binary variables for each of the 31 problem responses indicating whether a respondent listed that issue among her top three policy priorities.^{iv} Virtually no respondents said they preferred a reduction in the provision of government goods or services, a finding consistent with the assumption that the political implications of preference diversity concern conflict over *what* to provide, not *whether* government should provide goods or services.

To be sure that our results also hold when individuals are asked explicitly to consider tradeoffs in the allocation of resources, we analyze responses to an additional question that asks individuals to make a choice between allocating government resources to AIDS and allocating resources to other policies like education. Our dummy variable for this question is coded 1 when individuals choose AIDS over the alternative.^v

Like Habyarimana et al. (2009, pp. 36-8), when studying the effects of ethnicity, we face substantive questions about how to conceptualize and measure individual ethnic group membership, the implications of which we discuss below. As our primary measure of ethnic identity, we use individual responses to the question, “What is your tribe? You know, your ethnic or cultural group.” This question was not asked in Zimbabwe, and in the case of Cape Verde, there were so few group-specific responses – 39 percent said their only identity was a national one; and 42 percent answered “don’t know” – that we do not analyze the relationship between ethnic group membership and policy priorities in those countries. While the cultural differences self-identified in a few of the countries in the sample – notably Lesotho and Botswana – are generally considered to be of low social and political salience, we retain these cases in our

analyses because we also explicitly consider salience as a factor that can vary across countries and groups.

In addition to this subjective measure, we also use a more “ascriptive” approach of classifying individuals. The survey question used for this category asked, “Which (country) language is your home language?” While individuals may make some subjective choice in answering this question, particularly if multiple languages are spoken in the home, the question does not ask respondents specifically to conceptualize a “group” affiliation. As discussed below, in most countries, the correlation between home language and subjective identity was so tight that there was virtually no difference between the two. However, for the few countries where “objective” information did not match subjective identities as closely, we exploit that distinction to compare the relative effects of these alternative framings of identity.

We analyze only those individuals who identified themselves with ethnic groups that contained at least 50 respondents in the Afrobarometer survey. For a series of analyses, we estimate various group means, such as group wealth, and for sub-samples of fewer than 50 respondents, we concluded that the estimation of group means would be too unreliable.

In suggesting possible explanations for a link between ethnic group membership and policy priorities in section five, we use the Ethnic Power Relations dataset introduced in Wimmer et al. (2009),^{vi} which identifies politically relevant groups and their power status based on an expert survey. Specifically, they highlight that within our sample, five countries contain no politically relevant ethnic groups: Botswana, Cape Verde, Lesotho, Madagascar, and Tanzania^{vii} – suggesting that ethnic groups are not organized in the political arena in a manner that allows them to compete explicitly against each other for power.

We also consider a number of individual-level covariates reported on the surveys when

assessing whether the association between ethnic group membership and policy priorities is a result of socio-economic differences across individuals. We create a dummy variable for female; an age variable (logged); a 10-point scale for education, which ranges from no formal schooling (0) to post-graduate education (9); a dummy variable for whether the respondent currently holds a paying job; a dummy variable for whether for whether the respondent lives in a rural (as opposed to urban) area. Following previous analyses of Afrobarometer data (Robinson, 2009), we also create a 4-point scale of wealth whereby a respondent receives a 3 if s/he reports owning a radio, a television and a car. 2 points indicates that the respondent owns a radio and a television; 1 point that s/he owns only a radio; and 0 indicates that s/he does not even own a radio. This measure has been found to be more reliable than questions about numerical cash income. Although this measure of wealth may not be easily comparable across countries, we conduct most of our analyses on a country-by-country basis. In addition, for the initial logistical analyses that consider each policy priority separately, we sometimes use a dummy variable for whether the respondent reported being a farmer/farm worker, as well as a 3-point scale for whether s/he reported being an active member, inactive member or not a member of a union. Respondents also report how many friends or close relatives they know who have died of AIDS as well as the number of times in the past year they have been the victim of a crime or gone hungry. Finally, we develop a 5-point measure of a respondent's access to the news, based on how often (4 = every day, 0 = never) they reported getting their news from the television, radio or newspaper in order to control for general awareness of public policy problems.

Because individuals identifiable with particular ethnic groups tend to live near to one another, and because they may have access to different local services, we control for the level of services observed by survey enumerators, including the presence or absence within the

enumeration area of a school, post office, police station, electric grid, piped water system, accessible sewage system, recreation facilities, or health clinic. We create a nine-point scale (0-9) by assigning one point for each state facility observed by the enumerator.

III. Tests for an association between ethnic identity and policy preferences

As a first test, we consider ethnic group membership to be associated with policy priorities where ethnic group dummy variables are jointly statistically significant (with a p-value for the chi-square statistic less than 0.05) in models of policy choice. We also consider ethnic group membership to be associated with policy priorities where the predicted probability of prioritizing a given policy for a given group of respondents is statistically distinguishable from that of the reference group. (Unless otherwise noted, in the discussion that follows, the standard for judging statistical significance of group differences is that a 95 percent confidence interval around the estimated difference does not include zero.) For comparison, the Habyarimana et al. (2009, p. 81) study takes a similar approach but finds that ethnic dummies are *never* jointly significant in their models of policy choice. Furthermore, across the three regression models, they find just two statistically significant differences between an ethnic group and the base category (the Baganda). Since each of their three models includes 9 ethnic groups besides the base category, there are 27 potential differences, of which just 2 (7.4%) are significant.

By contrast, in analogous analyses, we find substantial evidence that ethnic group membership *is* associated with policy priorities. For example, in Nigeria, 59 percent of Igbo identified unemployment as one of the top three priorities, while 47 percent of Yoruba and 37 percent of Hausa did so, and these differences are statistically different from zero. To conduct an approximate replication of the Habyarimana et al. (2009) approach, we first conducted a series of separate logistic analyses to estimate the probability of choosing each of the eight policies that

were identified most often in each national sample. Ethnic group dummy variables were routinely jointly significant at conventional levels in these models. When considering responses to the question about allocating resources to AIDS, for instance, ethnic group dummies were jointly significant in 14 out of 16 (88%) of the models. When modeling first responses to the open-ended policy priority question, ethnic dummy variables were jointly significant in 37% of the models and when modeling the appearance of an issue among any of the respondent's top three policy priorities, ethnic dummy variables were jointly significant in 63 % of the models.^{viii} Tables 1a and 1b show the p-values for the chi-square statistics for each model of the open-ended responses. Across the 128 models of responses to the open-ended question (eight issues for each of the 16 countries), we further found 238 statistically significant differences between ethnic groups and the base category, using the largest ethnic group in each country as the base category. These represent 35% of the possible group differences in the models.

[Table 1a about here]

[Table 1b about here]

Based on this simple analysis, it is clear that there is a link between ethnicity and public policy priorities. Even in Uganda, the site of the Habyarimana et al. (2009) study, we find that ethnic dummy variables are jointly significant in all but one of our logistic models of policy priorities. These findings suggest that the preference mechanism is worth further exploration in making sense of the broader theory linking ethnic diversity to policy conflict and paralysis.

Individual- and contextual-controls; alternate model specifications

We find a strong association between ethnic group membership and policy priorities, but are ethnic labels simply signposts for clusters of individual-level characteristics, which in turn drive policy preferences? Taking again the example from Nigeria, if a much larger share of Igbo

respondents were unemployed as compared with Hausa, and if unemployed individuals tend to prioritize jobs as a problem for the government to address, we would want to know if accounting for employment status wipes out the differences in policy priorities across ethnic groups. In the analyses that follow, we include the various individual-level controls described above. Because we conduct most of our analyses on a country-by-country basis, we are not concerned that our measures of covariates, such as wealth, might be context dependent.

One test is whether the inclusion of ethnic dummy variables improves the percent of correctly predicted policy preferences over a model that includes only individual-level characteristics. We re-estimated our logistic models with only individual-level covariates (gender, employment status, education, wealth, urban/rural, access to local services) and then again with both individual-level characteristics and ethnic group dummy variables included. We found that in 52% of the models, including the ethnic dummy variables improves the percent of correctly predicted policy priorities.

It is also possible, however, that the issue-by-issue logistic analyses presented above do not fully capture the underlying tradeoffs inherent in answering a question about policy priorities. To address this possibility, in subsequent analyses we fit a multinomial logistic model for each country. We identify the three most popular issues at the national level, and for each individual we investigate her likelihood of selecting those issues as her first-mentioned priority, relative to selecting any other issue. As in the earlier analyses, we use the largest ethnic group as the base category.^{ix}

Figure 1 presents results from the country-by-country multinomial logistic regressions, which include both ethnic group dummies and individual-level covariates. It plots the estimated differences between the predicted probability of selecting one of the top three most popular

issues as a first priority for a member of the reference group and the predicted probability of selecting that same issue for a member of each of the other ethnic groups. Individual level covariates are held at their means to estimate these differences. Because we are interested only in the magnitude, and not the direction, of *differences* in predicted probabilities, we present the absolute values of those estimates. Where the bars do not cross the zero line, the 95% confidence interval around estimated difference does not include zero. In order to make the statistically significant estimates visually apparent, we order the estimates by the magnitude of the difference between the lower bound of the 95% confidence interval and zero. Figure 1 shows estimated group differences for the three most popular policy issues in the 16 countries, for a total of 254 estimated differences.

[Figure 1 about here]

A full 19 percent of the group differences (49 of 254 estimates) remain statistically significant (Figure 1), as compared with 35 percent when no individual covariates were included.^x One way to think about whether 19 percent is large or small is to compare it to the percentage of possible group differences that might be statistically significant if groups had been randomly assigned. If membership in an ethnic group is meaningful in the ways we have suggested, we should observe more statistically significant group differences in policy priorities across real ethnic categories than across randomly assigned groupings. To make this comparison, for each country, we randomly assigned respondents to groups—the same number and size of groups as in the ethnic categories. For example, since we had seven ethnic groups in Benin, we randomly assigned respondents to seven groups of the same size as the seven ethnic groups. We then ran multinomial logistic regressions for each country, including the individual-level covariates but using indicators for the randomly assigned groups instead of the ethnic dummy

variables, and counted the number of statistically significant group differences. We repeated this process of randomly assigning respondents to groups in each country and conducting the multinomial logistic analysis one hundred times. Each time, the percentage of possible group differences that were statistically significant never rose above 4.7 percent. The average was 3.3 percent. By contrast, the percentage of possible *ethnic* group differences that were statistically significant was a much higher 19 percent.^{xi}

Figure 2 shows the group difference for each country-issue for which the estimated lower bound of the 95% confidence interval was furthest from zero. Even including individual-level covariates, in 14 of the 16 countries, at least one ethnic group exhibited distinctive preferences for at least one of the top three policy issues. In only Senegal and Lesotho does the inclusion of individual-level characteristics eliminate group differences in policy priorities – and Lesotho is a country that virtually all observers would describe as ethnically homogeneous. In six of the countries, we found ethnically distinctive preferences for all three of the most widely reported priorities; in seven of the countries, there were ethnic distinctions for two of the top issues; and for two countries, ethnic distinctions emerged over one issue. For country-issues where preferences were ethnically distinctive, the maximal change in predicted likelihood attributable to ethnic difference ranged from 6 percent in Zambia to 27 percent in Uganda.

[Figure 2 about here]

In analyzing responses to the question about allocating government resources to HIV/AIDS, we find even stronger results. Figure 3 shows the estimated group differences in the likelihood of wanting to allocate more resources to HIV/AIDS across countries. As in Figure 1, we show the absolute value of the estimates, ordered according to the magnitude of the difference between the lower bound of the 95 percent confidence interval and zero. Strikingly,

37 out of the 85 possible estimates (43.5 percent) are statistically significant. The average magnitude of the statistically significant estimated differences is 13 percentage points, and the magnitudes range from 8 to 42 percentage points.

[Figure 3 about here]

Again, it is worth reiterating that these are the results *net* of the effect of individual socio-economic factors, such as wealth, education, urban/rural residency, gender and access to local government services. In other words, wealthy individuals do not share all of the same policy preferences. Instead, their preferences are also conditioned by their ethnic group memberships. Rich members of poor groups share many of the policy priorities of their co-ethnics and have different preferences from rich members of rich groups. Because there are large socio-economic differences between certain ethnic groups, however, estimates of the association between ethnic group membership and policy priorities are greatly attenuated by the inclusion of individual-level covariates in some places. For example, once we include individual- and area-level controls, we do not find a statistically significant difference between Kikuyus and Kalenjins in terms of their prioritization of education, even though only 3.9% of the former and 10.5% of the latter indicated that issue as their top priority – a difference that is significant in a two-sample t-test. Kikuyus are for the most part richer and better educated than Kalenjins, which largely accounts for the difference in policy priorities across groups.

It is also useful to compare the estimated ethnic group differences in policy preferences relative to those associated with individual socio-economic characteristics. From the multinomial logistic analyses, we estimated 48 coefficients (regarding 3 issues for each of 16 countries) for each of the following individual-level covariates: gender, education, wealth, employment status, urban/rural and access to local services. We find that 15% of the coefficients for gender are

statistically significant; 33% for education; 10% for individual wealth; 19% for employment status; 31% for urban/rural; and 17% for local services. And we find that in 11 of the 16 countries, respondents' education and urban/rural residency were significantly associated with the selection of at least one of the top three issue areas. Employment status was significantly associated with the selection of at least one of the top three issue areas in 7 out of 16 countries. Access to local services was significantly associated with the selection of at least one of the top three issue areas in 6 out of the 16 countries. Gender and individual wealth were significantly associated with the selection of at least one of the top three issue areas in only 5 out of 16 countries. Thus, ethnic group membership turns out to be a more consistent predictor of policy preferences across these African countries than several other sources of individual diversity.

IV. Towards explanations of the ethnicity-preferences link

So far we have demonstrated that ethnicity is strongly associated with policy preferences in Sub-Saharan Africa and that this association is only partially due to individual-level differences. It is worth probing further to try to understand more about the nature of the group effect on individual preferences. Specifically, why would two individuals from the same country, with otherwise similar socio-economic profiles and enjoying similar levels of government services differ in their preferences for public policies simply because they come from or identify with different ethnic groups? One plausible explanation is the “minimal group” model of social identity. Even the most superficial and arbitrary of group divisions have been shown to generate substantive emotional and cognitive distinctions across groups within various experimental settings, and it may simply be the case that ethnicity, as a well-established marker of difference in certain settings, generates its power from the creation of in-group/out-group dynamics. Indeed, one of the seminal scholars in the study of comparative ethnic politics, Frederick Barth (1969)

argued that the content of ethnic groups was largely irrelevant, and that ultimately what mattered for conflict was the degree to which groups maintained substantial boundaries.

But before jumping to the minimal group paradigm as the explanation for the ethnicity-preference link, we consider several other possible drivers of preference divergence. While one may be able to identify individual examples of any of the following at work within a particular context, we seek to identify the best overall model of ethnic group membership as related to preferences for public policies in Sub-Saharan Africa. To do so, we consider the possible roles of “culture”, political power, and the material conditions of groups.

Culture

Our first concern is whether the ethnicity-policy link is primarily a “cultural” phenomenon. That is, do the customs and values associated with an ethnic group result in the socialization of members to want particular goods and policies no matter the particular political context in which they live? In certain cases, this is almost surely correct: Muslims are likely to express different preferences for policies with respect to alcohol consumption than non-Muslims simply because of doctrinal prohibitions against consumption. But we consider here whether the ethnicity-as-culture hypothesis also holds with respect to more general public policies, such as those relating to health, education, redistribution, security, etc. Some cultures may simply value education, health, or income equality more than others regardless of the political context.

If this were true, we should observe similar configurations of policy preferences among group members who happen to live in different states. Within the sample of Afrobarometer respondents in the 2005-2006 wave, there are a handful of groups that happen also to span political borders: the Chewas in Zambia and Malawi, the Yorubas in Nigeria and Benin, and the Luos in Kenya and Uganda. If patterns of policy prioritization are primarily culturally driven,

then respondents who belong to the same ethnic group but happen to live in different countries should report similar configurations of preferences over government policy. If, on the other hand, differences are shaped more by the political context than by culture *per se*, then we should see differences across borders in terms of the likelihood that members of the same group prioritize certain public policies. Colonial authorities drew these political borders in Sub-Saharan Africa with little knowledge of or sensitivity to the distribution of cultural groups (McCauley and Posner, 2007; Posner, 2004b), so we can treat the “assignment” of co-ethnics as roughly orthogonal to cultural affinities. Even though the borders were drawn more than 100 years ago, the cultural practices and rituals of the groups remain largely the same across borders (Posner, 2004b) but the political contexts vary.

[Figure 4 about here.]

Figure 4 presents the variation in an individual’s predicted probability of prioritizing policy issues, comparing members of the same ethnic group across political borders (i.e. Yorubas in Benin to Yorubas in Nigeria, Chewas in Malawi to Chewas in Zambia, Luos in Uganda to Luos in Kenya), and controlling for a battery of individual-level covariates. Results are shown for the eight issue areas most prioritized in the two countries that share an ethnic group. Co-ethnics give the same weight to some issues, such as education. However, on most issues, the estimated differences in likelihood are large: an average of 20 percentage points. In 15 out of the 24 models shown, policy preferences diverge significantly among co-ethnics who are citizens of different states. Especially for issues like poverty, food, and unemployment, living in a different political context alters the issues’ relative salience for individuals of the same cultural background. If the cultural differences were the *primary* driver of policy disagreements, we should not observe these differences.

Political relevance

A second, plausible source of ethnic preference divergence concerns the political relevance of ethnic groups (Wimmer et al., 2009; Posner, 2004a). Even among identifiable ethnic groups, only some exhibit organization or are salient in the social or political arenas. Only some of the groups actively compete for political power and/or are targeted for exclusion by the state. Ethnic groups that actually compete in the political arena or are explicitly excluded from the state are more likely to share a sense of linked fate and to be targeted with specific informational messages by politicians. Thus, we ought to find sharper policy disagreement between groups that are both politically relevant within a given country.

To explore the effects of political relevance, we reflect on the multinomial logistic results above and ask whether they are conditioned on the relevance of ethnic categories in the first place. To explore whether political relevance explains which estimates remained significant at conventional levels even controlling for individual-level differences, we split the original 254 estimates presented in Figure 1 into those that refer to two politically relevant ethnic groups and those that do not. We do so based on the categorization of groups in Wimmer et al. (2009). This yields 152 estimated differences between two politically relevant ethnic groups and 102 estimated differences referring to dyads with at least one non-politically relevant group. Among dyads with two politically relevant groups, we found that 40 of 152 (26.3%) estimates were statistically significant, whereas when at least one ethnic group was *not* politically relevant, only 9 of 102 estimates (8.8%) were statistically significant. A two-sample t-test demonstrates that the distribution of statistically significant differences between these two groups is itself statistically significant ($p=.004$).

Political relevance is not a pre-requisite for preference divergence, but differences in

policy prioritization are more likely between two politically relevant ethnic groups. Of course, the very reason that ethnic groups become politically relevant could be because they hold different policy preferences. Alternatively, ethno-political competition for power could itself be an exogenous influence on policy preference formation, as competing ethnic leaders emphasize the alternative perspectives in their political struggles, which are subsequently internalized among group members. Whichever the case, the political factors shaping the link between ethnic group membership and policy priorities deserve further research.

Materially-based group heuristics

A third question concerns whether policy disagreement is more likely between groups that differ substantially in *average* socio-economic circumstances, such as wealth. Individuals from such groups are more likely to come to very different conclusions if they use group “needs” as a heuristic for evaluating policies. In the American context, the relevant question would be whether African-Americans and whites are more likely to disagree over policy priorities than are Asian-Americans and whites, even controlling for individual socio-economic differences. If rich African-Americans formulate preferences based on the relative poverty of their group, we might expect sharper differences to remain between African-Americans and whites even controlling for individual characteristics. In cross-country analyses, Baldwin and Huber (2010) find that lower public goods provision is associated with higher levels of between-group inequality, a finding that would be consistent with a preference mechanism rooted in the relative material conditions of ethnic groups.

To explore the group inequalities hypothesis, we calculated the average wealth of each group, as reported on the survey. Although we included wealth as an individual-level covariate in previous models, we now consider whether individuals, especially those who deviate from their

own group's mean, develop policy preferences that reflect their *group's* standing relative to other groups.

As we did with political relevance, in order to test whether group wealth differences explain which estimates remained significant at conventional levels, we split the original 254 estimated changes into those that refer to individuals from ethnic groups whose group wealth differs from the reference group's by more than a standard deviation; and those from ethnic groups whose group wealth differs from the reference by a standard deviation or less.^{xii} This yields 167 estimates referring to the former, 87 estimates to the latter. We found that 26% of the estimates among the unequal dyads were statistically significant, while just 6% of the dyads with small wealth disparities were significant. (The p-value of a two-sample t-test across the two groups was 0.001.)^{xiii}

As a second test, we examined whether wealth differences across *all* groups in the 16 countries correlated with differences in the predicted probabilities that members of all these groups would prioritize unemployment. We examined unemployment because it is the one issue that at least some respondents in each of the 16 countries identified. Our theoretical prediction is that the more two groups differ in their average wealth, the more the predicted probability of prioritizing unemployment will differ across members of those two groups. We created a group-level dataset constructed out of mean scores from individual responses, and using the multinomial logistic model, we calculated the predicted probability of prioritizing unemployment for each group in the sample, holding other covariates at their means in each country. We then paired each ethnic group with every other ethnic group in the same country (for a total of 327 dyads) and calculated differences in average wealth and differences in the predicted probability of prioritizing unemployment for each group dyad. Figure 5 shows the relationship between

differences in wealth and differences in priorities. The correlation between the two is 0.28, which increases to 0.46 if only dyads with two politically relevant dyads are included.

[Figure 5 about here.]

In considering these tests alongside the hypothesis about political relevance, one might be concerned that group wealth disparity is the factor that makes ethnic categories politically relevant. If this were the case, it would be enough to focus on group differences in wealth when trying to understand the association between ethnic group membership and policy preferences. Yet, empirically, the correlation between group wealth disparities and political relevance is not particularly strong. Looking across the 327 group dyads in the 16 countries, the correlation between a dummy variable indicating joint political relevance and a dummy variable indicating large wealth disparities is only 0.17. Likewise, using the results presented in Figure 1, if we regress a dummy variable indicating whether an estimated group difference was statistically significant on both political relevance and group wealth disparity, we find that both independent variables are statistically significant ($p < .001$ for both coefficients). For example, in South Africa, some politically relevant groups, like the Zulus and the English, differ dramatically in wealth, while other politically relevant groups, like the Zulus and the Xhosas, do not. Meanwhile, the Zulus and the Pedis differ significantly in average group wealth but Pedi is not an ethnic identity that is mobilized in the political arena in South Africa.

The political relevance of ethnic groups and the magnitude of inter-group wealth differentials are thus *both* promising explanations for preference divergence among individuals from different ethnic groups. We leave it for future research to test these claims further.

V. Anticipating concerns about endogeneity

We have demonstrated a strong association between ethnic membership and policy

priorities, and we have identified some nuanced patterns conditioning that association across polities. This descriptive finding is theoretically consequential because, among other things, it suggests that the hypothesized preference link between ethnic diversity and public policy making is highly plausible. Such plausibility had been dismissed in similar tests in previous work.

However, one threat to our ability to shed light on this larger *causal* question is the possibility that policy preferences themselves may at times be the basis of ethnic group identification, even in the short term. One way to examine the possibility that identity itself is endogenous to preferences is to use a different measure of ethnic group membership. In the analyses above, we have used self-reported tribal/ethnic group affiliation, and indeed, scholars of comparative ethnic politics have long agreed that the social, political, and other relevance of ethnic categories are largely structured through various political processes, both historical and circumstantial (Waters, 1990; Cornell and Hartmann, 1997; Lee, 2008) such that an ethnic identity cannot simply be inferred from an individual's personal traits. Yet this "constructivist consensus" belies substantial disagreement about the fluidity of ethnic identities, especially at the individual level. If, on the one hand, individuals simply choose the ethnic labels and associations that they believe are most advantageous to themselves, then the direction of any observable link between ethnicity and policy preferences almost surely runs from preferences to identity, as people would self sort to their advantage. If, on the other hand, more objectively observable traits that are strong predictors of ethnic identification, such as spoken home language, were also associated with policy preferences, this would suggest that ethnicity influences preferences.

In seven of the countries (Benin, Ghana, Kenya, Mozambique, Namibia, Nigeria, and Uganda), the correspondence between ascriptive (home language) and subjective identities was so close in the survey—more than 90 percent of subjective descriptions of identity could be

predicted from home language and/or enumerator description of race alone—that it was not possible to distinguish the effects of one from the other. In Zimbabwe, the question about subjective identity was not asked, so it is impossible to assess the correspondence between answers to the ascriptive and subjective questions, and in Cape Verde, virtually no respondents reported a group affiliation when asked about subjective identities.

For the remaining nine countries in the Afrobarometer survey, we again repeat the multinomial logistic analysis summarized in Figure 1 using home language as the indicator of ethnic group membership. We find, in fact, there are *more* observable preference differences across groups using the home language (ascriptive) categories. A full 30 percent of the estimated group differences across these nine countries were statistically significant using home language. By contrast, only 16 percent of the estimated group differences across these nine countries were statistically significant at the same conventional level when subjective tribe/ethnic group was used. Differences in policy preferences across groups certainly persist even when we use a measure of ethnic identity that is extremely unlikely to be a function of policy preference formation.

VI. Conclusion

While the recent empirical literature on comparative ethnic politics has suggested that, across ethnic groups, individuals cannot be distinguished by their preferences and tastes for various government goods and policies, our analyses have demonstrated otherwise. We have shown that priorities over public policies do differ across ethnic groups, at least in Sub-Saharan Africa. Some of the observable difference in policy priorities can be attributed to individual socio-economic status, but there is also a remaining association with group membership. Citizens from different ethnic groups are likely to hold substantially different views about what they want

the government to focus on, and about how government should allocate resources as a result, holding other factors equal. This link is particularly strong among groups that are politically relevant and characterized by large disparities in average group wealth. Individuals are likely to be influenced by the relative position of their ethnic group, and to interpret political and policy circumstances from that perspective.

Of course, the dynamics of elite-level policymaking need not reflect popular policy priorities, and institutions certainly mediate the relationship between preferences, policies, and outcomes. But the evidence presented herein certainly suggests that ethnic diversity contributes to preference diversity, making it more difficult to generate stable or widely popular bargains in the political arena. Particularly if ethnic groups are well organized, and if in-group/out-group relations generate additional political passions, the overlay of systematic differences in priorities over programmatic policies should increase the likelihood of political conflict over policy-making. Future research might investigate the link between preference heterogeneity and public spending more directly and should also investigate whether the ethnic bases of preference heterogeneity are more intractable than other sources of preference heterogeneity. The causes and consequences of ethnically based policy preference divergence merit greater attention in future research.

References

- Akerlof, G., & Kranton, R. (2000). Economics and identity. *Quarterly Journal of Economics*, 115(3), 715-753.
- Alesina, A., Baqir, R., & Easterly, W. R. (1999). Public goods and ethnic divisions. *Quarterly Journal of Economics*, 114(4), 1243-1284.
- Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth*, 8(2), 155-194.
- Baldwin, K., & Huber, J. D. (2010). Economic versus cultural differences: Forms of ethnic diversity and public goods provision. *American Political Science Review*, 104(4), 644-662.
- Barth, F. (1969). *Ethnic groups and boundaries*. Boston, MA: Little, Brown.
- Bates, R. (1974). Ethnic competition and modernization in contemporary Africa. *Comparative Political Studies*, 6(4), 457-484.
- Bratton, M., Gyimah-Boadi, E. & Mattes, R. Afrobarometer round 3: The quality of democracy and governance in 18 African countries, 2005-2006. UCPSR22981-v1. Ann Arbor, MI: Inter-university consortium for political and social research. doi: 10.3886/ICPSR22981.
- Chandra, K. (2004). *Why ethnic parties succeed: Patronage and ethnic headcounts in India*. Cambridge, UK ; New York, NY: Cambridge University Press.
- Christakis, N. A., & Fowler, J. H. (2009). *Connected : the surprising power of our social networks and how they shape our lives* (1st ed.). New York, NY: Little, Brown and Co./Hachette Book Group.
- Cornell, S. E., & Hartmann, D. (1997). *Ethnicity and race: Making identities in a changing world*. Thousand Oaks, CA: Pine Forge Press.
- Dawson, M. (1994). *Behind the mule: Race and class in African-American politics*. Princeton, NJ: Princeton University Press.
- Dawson, M. (2001). *Black visions: The roots of contemporary African-American political ideologies*. Chicago, IL: University of Chicago Press.
- Easterly, W., & Levine, R. (1997). Africa's growth tragedy: Policies and ethnic divisions. *The Quarterly Journal of Economics*, 112(4), 1203-1250.
- Fowler, J. & Christakis, N. (2010). Cooperative behavior cascades in human social networks. *Proceedings of National Academy of Sciences*, 107(12), 5334-5338.
- Habyarimana, J., Humphreys, M., Posner, D., & Weinstein, J. M. (2009). *Coethnicity: Diversity and the dilemmas of collective action*. New York, NY: Sage.
- Ho, D., Imai, K., King, G., & Stuart, E. (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis*, 15(3), 199-236.
- Hogg, M., & Abrams, D. (1999). Social identity and social cognition: Historical background and current trends. *Social Identity and Social Cognition*, 1, 25.
- Hopkins, D. (2009). The diversity discount: When increasing ethnic and racial diversity prevents tax increases. *The Journal of Politics*, 71(1), 160-177.
- Lee, T. (2008). Race, immigration and the identity-to-politics link. *Annual Review of Political Science* 11, 457-478.
- McCauley, J. F., & Posner, D. (2007). African borders as sources of natural experiments. Unpublished Working Paper, University of California, Los Angeles.
- Mendelberg, T. (2001). *The race card : campaign strategy, implicit messages, and the norm of equality*. Princeton, NJ: Princeton University Press.
- Miguel, E. (2004). Tribe or nation? Nation building and public goods in Kenya versus Tanzania. *World Politics*, 56, 327-362.
- Montalvo, J. G., & Reynal-Querol, M. (2005). Ethnic diversity and economic development. *Journal of Development Economics*, 76(2), 293-323.
- Moyé, L. (2003). *Multiple analyses for clinical trials: Fundamentals for investigators*. New York, NY: Springer.
- Posner, D. (2004a). Measuring ethnic fractionalization in Africa. *American Journal of Political Science*, 48(4), 849-863.

- Posner, D. (2004b). The political salience of cultural difference: Why Chewas and Tumbukas are allies in Zambia and adversaries in Malawi. *American Political Science Review*, 98(4), 529-545.
- Posner, D. (2005). *Institutions and ethnic politics in Africa*. New York, NY: Cambridge University Press.
- Putnam, R. D. (2007). E Pluribus Unum: Diversity and Community in the Twenty-first Century The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies*, 30(2), 137-174.
- Robinson, A. (2009). National versus ethnic identity in Africa: State, group and individual level correlates of national identification. Afrobarometer Working Paper, 112.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago, IL: Nelson-Hall.
- Valentino, N. A., Hutchings, V. L., & White, I. K. (2002). Cues that matter: How political ads prime racial attitudes during campaigns. *American Political Science Review*, 96(1), 75-90.
- Waters, M. C. (1990). *Ethnic options : choosing identities in America*. Berkeley, CA: University of California Press.
- Wibbels, E. (2006). Madison in Baghdad?: Decentralization and federalism in comparative politics. *Annual Review of Political Science*, 9(1), 165-188.
- Wimmer, A., Cederman, L.-E., & Min, B. (2009). Ethnic politics and armed conflict: A configurational analysis of a new global data set. *American Sociological Review*, 74, 316-337.

Table 1a: P-values of Chi-square Statistics from Logistic Models, estimating the probability of a respondent identifying a given issue as her first priority as a function of ethnic group dummy variables

	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5	Issue 6	Issue 7	Issue 8
Benin (7)	0.016	0.231	0.001	0.000	0.310	0.003	0.000	0.131
Botswana (7)	0.443	0.639	0.105	0.555	0.520	0.151	0.925	0.284
Ghana (5)	0.960	0.002	0.003	0.000	0.980	0.010	0.290	0.040
Kenya (8)	0.003	0.360	0.110	0.300	0.001	0.070	0.580	0.000
Lesotho (6)	0.157	0.446	0.477	0.116	0.823	0.157	0.022	0.495
Madagascar (6)	0.745	0.156	0.069	0.413	0.131	0.144	0.000	0.668
Malawi (6)	0.000	0.020	0.010	0.280	0.180	0.560	0.020	0.220
Mali (6)	0.014	0.123	0.000	0.493	0.235	0.240	0.070	0.065
Mozambique (6)	0.000	0.205	0.571	0.000	0.003	0.358	0.147	0.815
Namibia (5)	0.004	0.240	0.150	0.940	0.020	0.260	0.290	0.120
Nigeria (6)	0.000	0.000	0.000	0.275	0.000	0.034	0.078	0.006
Senegal (4)	0.090	0.930	0.970	0.240	0.760	0.009	0.994	0.195
South Africa (11)	0.001	0.006	0.29	0.380	0.325	0.000	0.536	0.000
Tanzania (3)	0.003	0.025	0.078	0.092	0.912	0.226	0.550	0.003
Uganda (10)	0.000	0.183	0.000	0.000	0.000	0.000	0.001	0.000
Zambia (5)	0.020	0.680	0.184	0.875	0.006	0.798	0.473	0.080

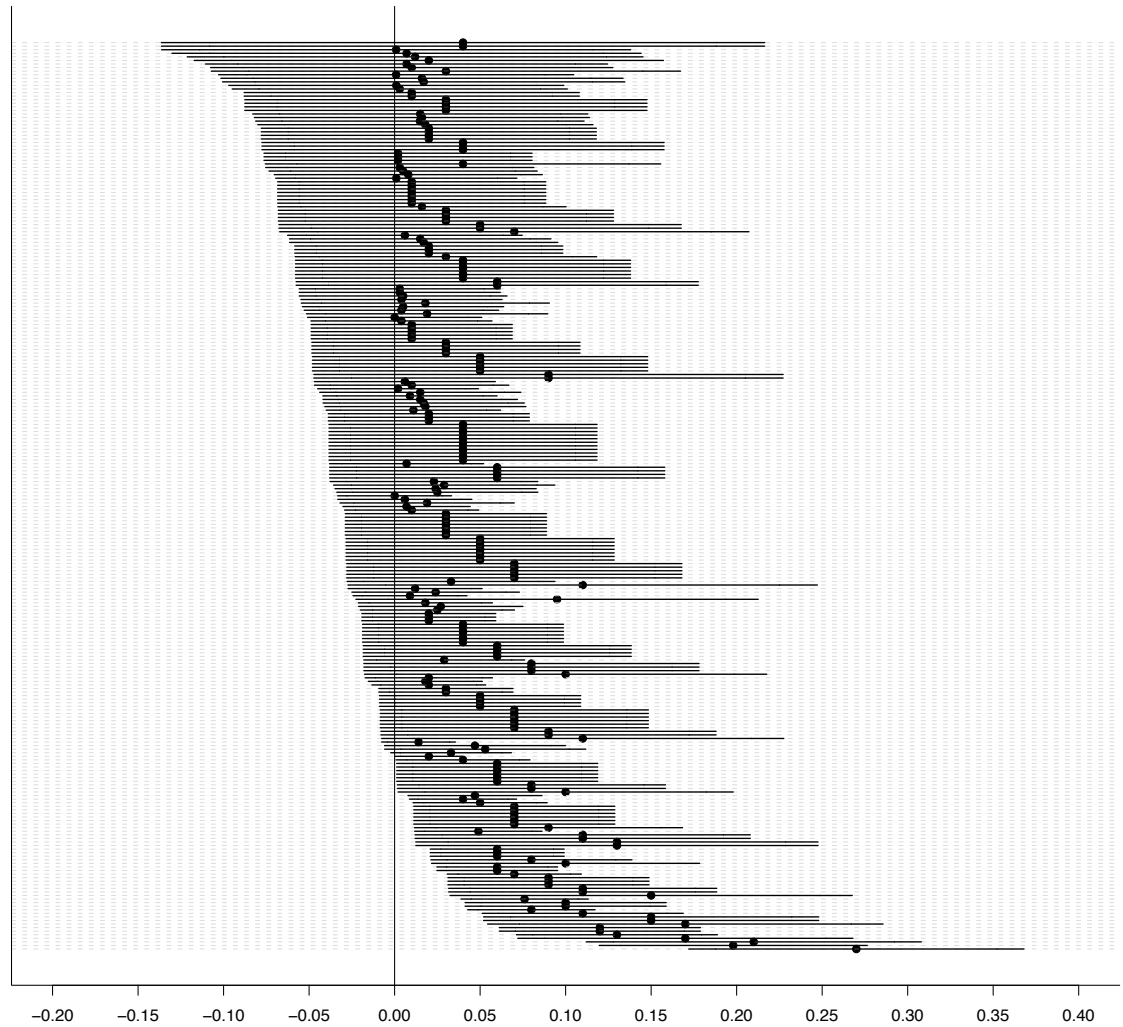
**In shaded cells, we can reject the null hypothesis of no systematic variation across ethnic groups, using a 95% confidence interval. Columns are ranked by the share of the population mentioning that problem as a priority in the survey. The number of ethnic groups with more than 50 respondents in the survey is shown in parentheses.

Table 1b: P-values of Chi-square Statistics, estimating the probability of a respondent identifying a given issue as any of her top three priorities as a function of ethnic group dummy variables

	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5	Issue 6	Issue 7	Issue 8
Benin (7)	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.010
Botswana (6)	0.210	0.010	0.500	0.910	0.200	0.010	0.330	0.000
Ghana (5)	0.960	0.002	0.003	0.000	0.980	0.010	0.290	0.040
Kenya (8)	0.003	0.360	0.110	0.300	0.001	0.070	0.580	0.000
Lesotho (6)	0.310	0.260	0.400	0.010	0.330	0.190	0.110	0.690
Madagascar (6)	0.250	0.340	0.000	0.001	0.150	0.060	0.000	0.510
Malawi (6)	0.004	0.020	0.001	0.080	0.460	0.240	0.160	0.003
Mali (6)	0.005	0.000	0.000	0.200	0.660	0.120	0.004	0.10
Mozambique (6)	0.000	0.000	0.070	0.000	0.000	0.040	0.010	0.020
Namibia (5)	0.002	0.004	0.040	0.280	0.000	0.080	0.090	0.110
Nigeria (6)	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.450
Senegal (4)	0.180	0.110	0.800	0.040	0.100	0.020	0.020	0.340
South Africa (11)	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000
Tanzania (3)	0.000	0.160	0.002	0.001	0.640	0.010	0.010	0.000
Uganda (10)	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000
Zambia (5)	0.001	0.070	0.000	0.001	0.009	0.150	0.000	0.001

**In shaded cells, we can reject the null hypothesis of no systematic variation across ethnic groups, using a 95% confidence interval. Columns are ranked by the share of the population mentioning that problem as a priority in the survey. The number of ethnic groups with more than 50 respondents in the survey is shown in parentheses.

Figure 1: Differences in Predicted Probability of Prioritizing Issues Relative to Reference Ethnic Group



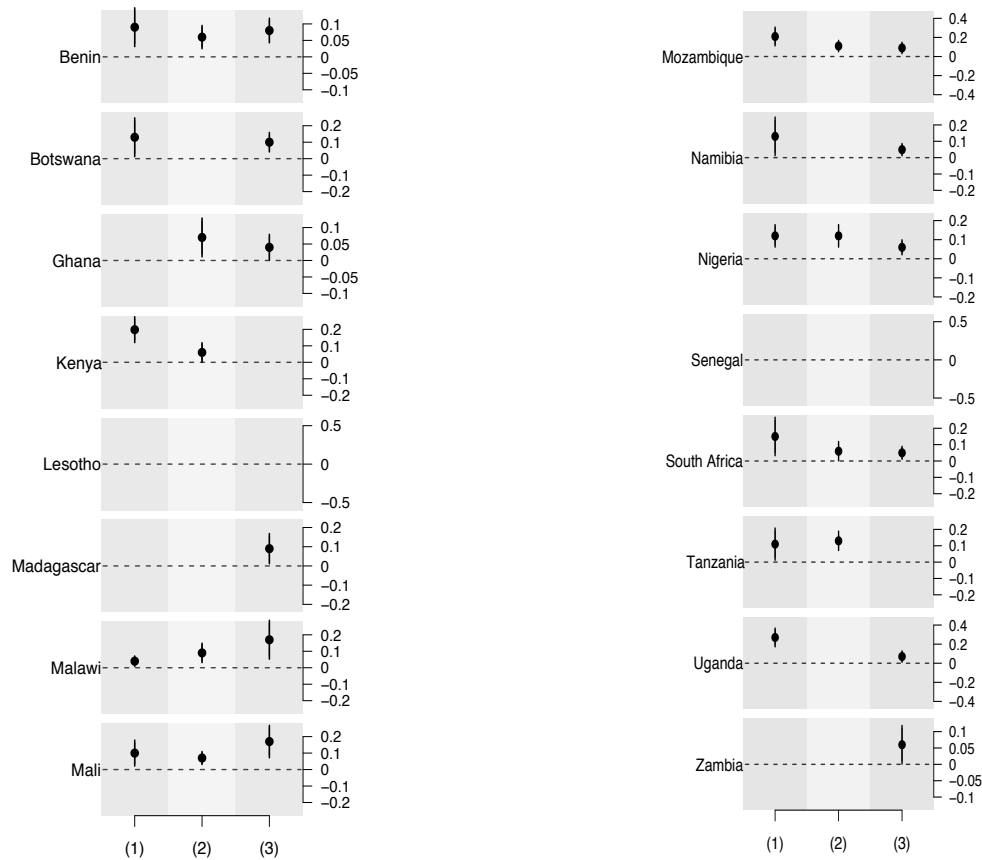
Absolute values of the estimated differences are shown and ordered by the size of the 95% CI's divergence from zero.

Reference groups: **Benin** = Fon; **Botswana** – Bangwato; **Ghana** = Akan; **Kenya** = Kikuyu; Lesotho – Bafokeng; Madagascar – Merina; **Malawi** = Chewa; Mali – Bambara; Mozambique – Makua; **Namibia** = Ovambo; **Nigeria** = Hausa; **Senegal** = Wolof; **South Africa** = Zulu; **Tanzania**: Msukuma; **Uganda** = Baganda; **Zambia** = Bemba.

Individual-Level Controls: female, employed, education, wealth, access to local services, urban.

Benin : n=1119, #groups = 7; Botswana: n= 792, #groups = 7; Ghana : n= 954, # groups = 5; Kenya: n= 928, #groups = 8; Lesotho: n= 830, #groups = 6; Madagascar: n=943, #groups = 6; Malawi: n= 1080, #groups = 6; Mali: n=848, #groups = 6; Mozambique : n=684, #groups = 6; Namibia: n= 751, #groups = 5; Nigeria: n= 1479, #groups = 6; Senegal: n= 1002, #groups = 4; South Africa : n=1824, #groups = 11; Tanzania: n= 306, #groups = 3; Uganda: n=1914, #groups = 10; Zambia: n= 745, #groups = 5

Figure 2: Differences in Predicted Probability of Prioritizing Issues Relative to Reference Ethnic Group; Maximal estimates, by country for top three policy priorities

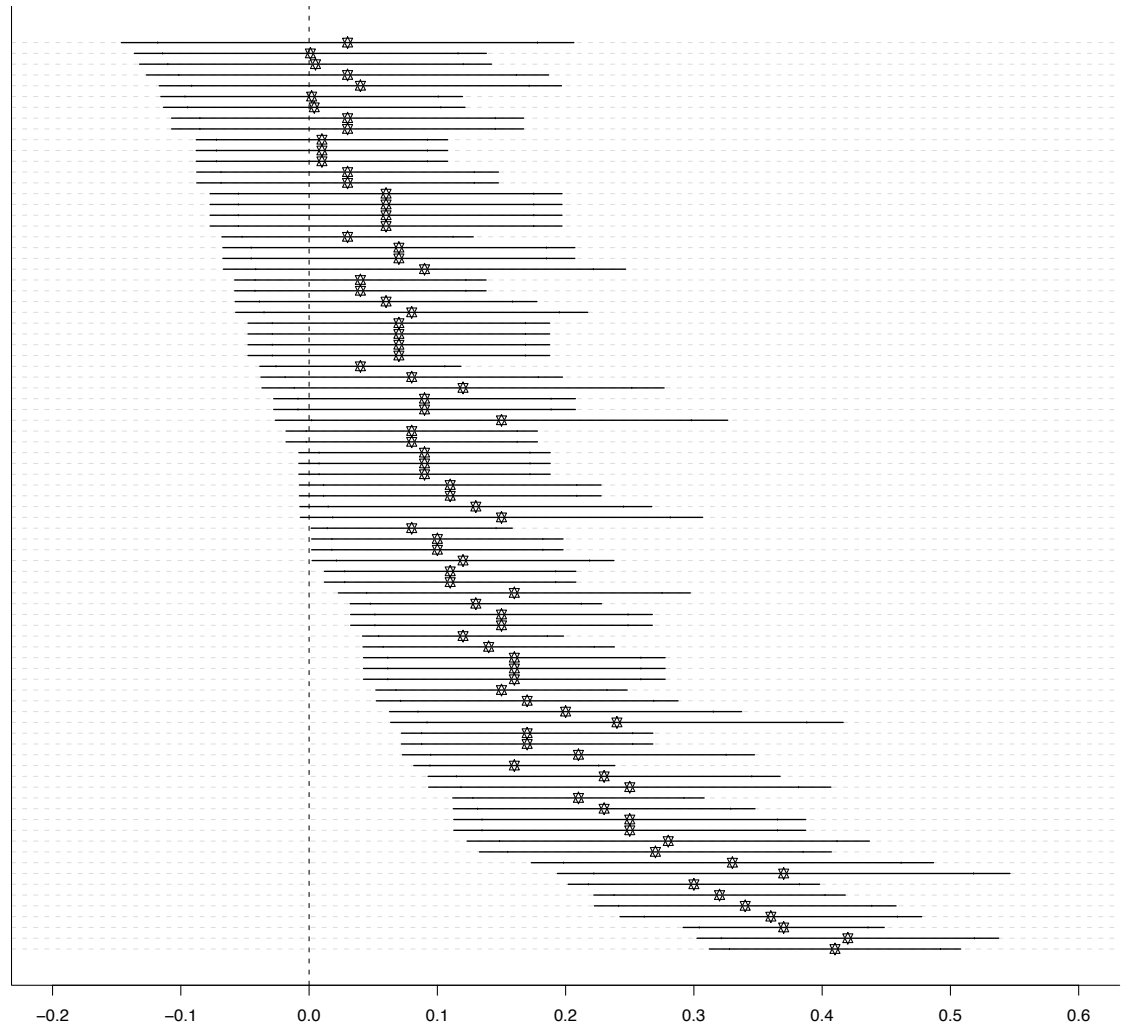


Reference groups: **Benin** = Fon; **Botswana** – Mongwato; **Ghana** = Akan; **Kenya** = Kikuyu; **Lesotho** – Bafokeng; **Madagascar** – Merina; **Malawi** = Chewa; **Mali** – Bambara; **Mozambique** – Makua; **Namibia** = Ovambo; **Nigeria** = Hausa; **Senegal** = Wolof; **South Africa** = Zulu; **Tanzania**: Msukuma; **Uganda** = Baganda; **Zambia** = Bemba

Individual-Level Controls: female, employed, education, wealth, access to local services, urban.

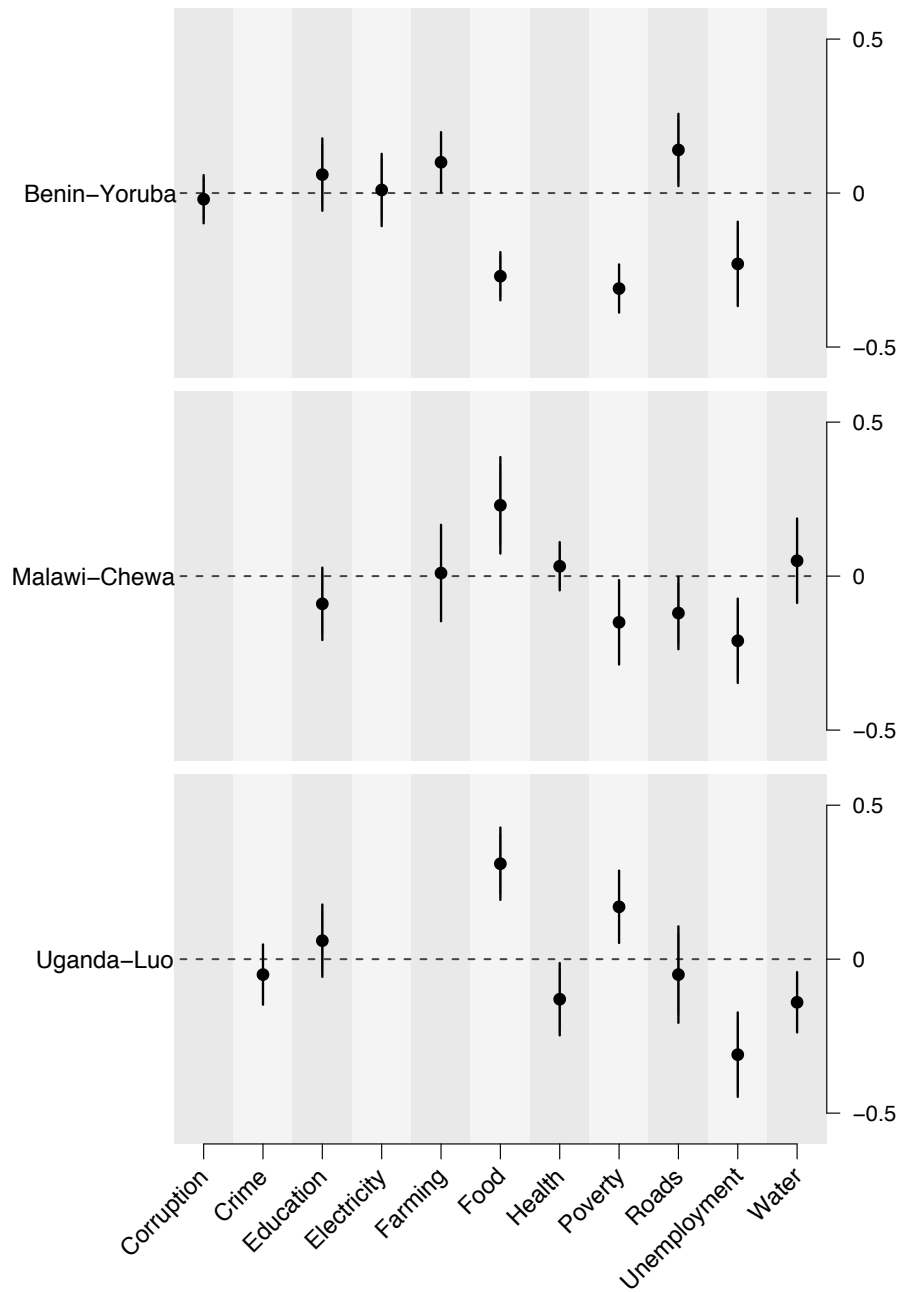
Benin : n=1119, #groups = 7; Botswana: n= 792, #groups = 7; Ghana : n= 954, # groups = 5; Kenya: n= 928, #groups = 8; Lesotho: n= 830, #groups = 6; Madagascar: n=943, #groups = 6; Malawi: n= 1080, #groups = 6; Mali: n=848, #groups = 6; Mozambique : n=684, #groups = 6; Namibia: n= 751, #groups = 5; Nigeria: n= 1479, #groups = 6; Senegal: n= 1002, #groups = 4; South Africa : n=1824, #groups = 11; Tanzania: n= 306, #groups = 3; Uganda: n=1914, #groups = 10; Zambia: n= 745, #groups = 5

Figure 3. Differences in Predicted Probability of Preferring to Allocate More Resources to HIV/AIDS (Absolute Values Shown)



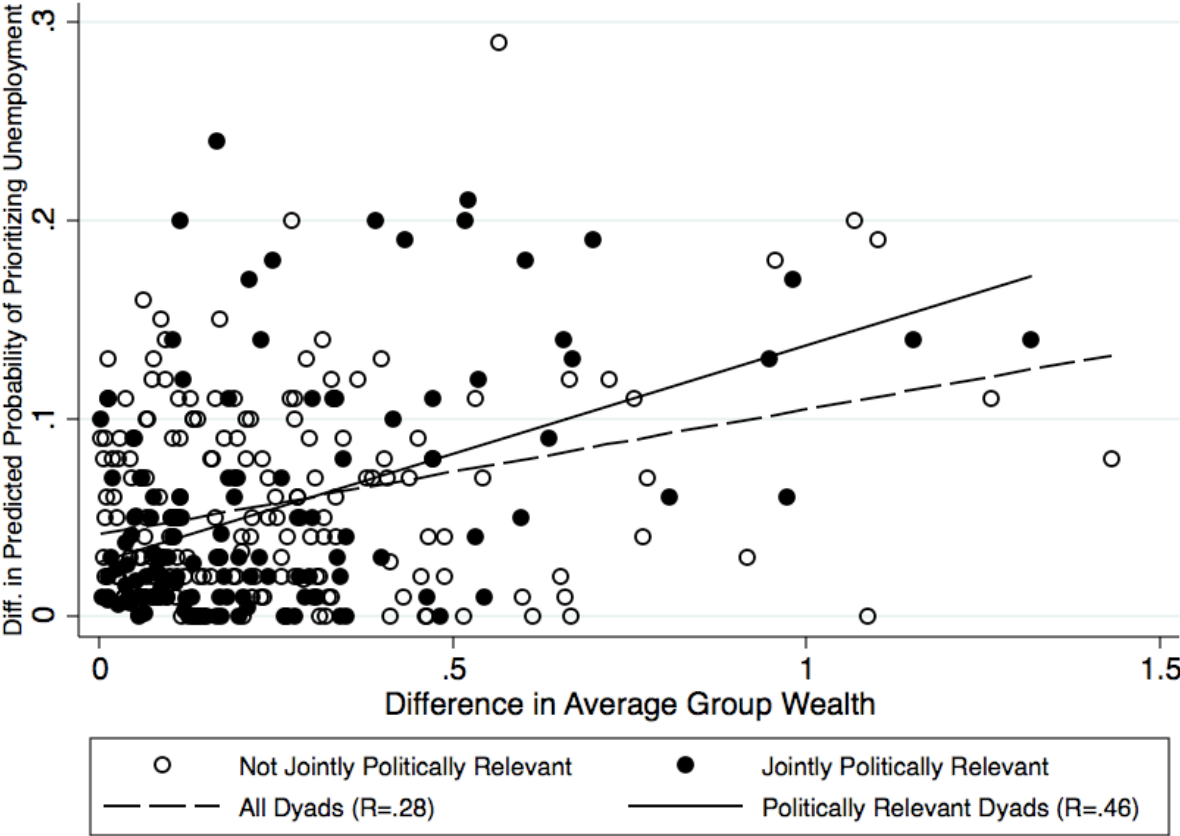
Reference groups: **Benin** = Fon; **Botswana** – Mongwato; **Ghana** = Akan; **Kenya** = Kikuyu; **Lesotho** – Bafokeng; **Madagascar** – Merina; **Malawi** = Chewa; **Mali** – Bambara; **Mozambique** – Makua; **Namibia** = Ovambo; **Nigeria** = Hausa; **Senegal** = Wolof; **South Africa** = Zulu; **Tanzania**: Msukuma; **Uganda** = Baganda; **Zambia** = Bemba.
 Individual-Level Controls: female, employed, education, wealth, access to local services, urban, friends died of aids, newsinterest.

Figure 4: Differences in Predicted Probabilities of Selecting Top Eight Most Popular Issues in Each Country, Comparing Cultural Groups Across Political Borders



Reference Groups: Yorubas (Nigeria), Chewas (Zambia), Luos (Kenya)
 Individual-Level Controls: female, log(age), employed, education, wealth, access to local services; urban, newsinterest.
 Additional control for crime: crime experience; for food: hunger experience.

Figure 5: Group Dyadic Differences in Predicted Probabilities of Prioritizing Unemployment v. Differences in Average Wealth



NOTES

ⁱ Consistent with the literature on this topic, our use of the term “public goods,” implies only those goods and services that are meant to be widely welfare enhancing over the long-term, as contrasted with policies that serve narrow, targeted interests.

ⁱⁱ The American case, in which many citizens say they prefer fewer government services, is obviously an exception, but such sentiments are virtually absent from the developing countries we consider here.

ⁱⁱⁱ Any differences between groups washed out once fixed effects for location were introduced.

^{iv} We make every effort with regard to both our dependent variable of interest (policy priorities) and our main independent variables of interest (ethnic categories) to be as agnostic as possible about the appropriate way in which to group categories. Thus for the analyses presented in the paper we generally use the fully disaggregated categories as coded in the Afrobarometer dataset. Nevertheless, one might ask whether all differences in policy priorities are equally indicative of preference heterogeneity. If, for instance, one respondent prioritizes jobs and the other prioritizes wages, is this a difference we should care about? Given this concern, we conducted additional analyses in which we grouped policies into five broad categories: infrastructure (transportation, roads, electricity, water), security (crime, corruption), social policy (health, education), redistribution (jobs, wages, housing, poverty), and agriculture (farming, food, land, drought). We find strong evidence of differences in priorities across ethnic groups using these issue groupings as well. For instance, in separate logistic analyses in each country for each of the five issue groups, ethnic dummy variables are jointly significant in 66 % of the models. Using the 31 categories from the survey does not overstate the degree in priority heterogeneity across ethnic groups.

^v Specifically, they were asked, “Which of these statements is closest to your view? ... A: The government should devote many more resources to combating AIDS, even if this means that less money is spent on things like education. B: There are many other problems facing this country beside AIDS; even if people are dying in large numbers, the government needs to keep its focus on solving other

problems.” Respondents could choose: 1=Agree Very Strongly with A, 2=Agree with A, 3=Agree with B, 4=Agree Very Strongly with B, 5=Agree with Neither. Here we differentiate only between agreement and disagreement with statement A, but the substantive results are unchanged if we use graded measures or include response 5 as an intermediate category.

^{vi} Lars-Erik Cederman; Brian Min; Andreas Wimmer, 2009-05-01, "Ethnic Power Relations dataset", <http://hdl.handle.net/1902.1/11796> UNF:5:k4xxXC2ASI204QZ4jqvUrQ== V1 [Version].

^{vii} Posner (2004a) identifies the small San group in Botswana in his classification of politically relevant groups, but there are virtually no San-identifying respondents in the survey. Posner (2004a) also does identify politically relevant groups in Tanzania.

^{viii} One might be concerned that we are over-representing the number of models in which ethnic dummies are jointly significant because we are testing multiple hypotheses using the same sets of data. To correct for this possibility, we used a sequentially rejective procedure (Moyé, 2003, pp. 94-5). Specifically, we ordered the eight p-values from each country from smallest to largest and required that the first (smallest) p-value be less than $0.05/8$ (.006), that the second p-value be less than $(2*.05)/8$ (.0125) and so on. Using this procedure reduces the percentage of models with jointly significant ethnic dummy variables only slightly: from 37% to 34% of models with first priority as the dependent variable and from 63% to 58% of models with any of the three priorities as the dependent variable. We are grateful to an anonymous reviewer for raising this concern.

^{ix} We present estimates from multinomial logistic models run country by country, rather than results from a pooled, multilevel multinomial model. Country-by-country findings are more directly comparable to extant analyses. Nevertheless, results from a three level (individual, group, country) multinomial model (not reported here) support the main conclusions in this section. For instance, without including the individual-level socio-economic covariates, 8% of the variance in respondents' first priorities can be explained by ethnic group membership. Including individual-level covariates (wealth, employment status, rural residency, education, gender, access to local services) reduces this percentage

only slightly, to 7%. The estimated percentage of variance in policy preferences explained by ethnic groups is statistically different from zero both with and without individual-level covariates.

^x Alternative modeling decisions, including selection of reference group, lead to slightly different results. Nevertheless, we have re-run the models presented in Figure 1 using different reference groups in order to estimate the percentage of *all* possible group differences that are statistically significant when including individual controls and the substantive findings remain unchanged.

^{xi} Because we consider the entire sample of respondents in the Afrobarometer survey, some respondents in the base category group may have exhibited wildly different characteristics than respondents from any of the given comparison groups, forcing extrapolation in constructing the estimates (Ho et al. 2007). As a robustness test, we conducted pre-estimation matching in the countries (Uganda, Benin, Botswana, Zambia) where an adequate balance across individual-covariates could be achieved between the base category group (the “control” group) and each of the other ethnic groups in that country (the “treatment” groups). (Balance on the covariates improved on average by 80%.) Each treatment group was matched to the base category based on individual wealth, education, gender, access to local services, urban/rural residency and employment status. Where sizeable sample sizes ($n > 250$) could be generated using nearest neighbor matching, that technique was used. Otherwise, optimal matching was used. Although 37%-54% of the observations were dropped in each analysis using this procedure, results from the matched samples were extremely close to the estimates from the unmatched samples. For instance, in Uganda—where our results using the unmatched sample were strongest—using a matched sample eliminated the statistical significance of only two out of 27 group differences.

^{xii} Standard deviations are from the distribution of average group wealth in each country.

^{xiii} We conducted similar analyses with respect to differences in the average level of government services enjoyed by members of ethnic groups, but we found no difference in the incidence of statistically significant differences in policy priorities when dividing group dyads by this criterion.