

Ethnic Inequality and the Strength of Ethnic Identities in Sub-Saharan Africa

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Abstract

Ethnic inequality has been argued to have numerous pernicious effects. Among other things, scholars have argued that it breeds political violence, destabilizes democracy, and impedes economic development. While the arguments developed by these literatures implicitly assume that ethnic inequality increases the degree to which individuals identify with their ethnicity, this assumption has yet to be tested empirically at the individual-level. This paper argues and empirically demonstrates that between-ethnic group inequality does strengthen ethnic identities. However, we also find that the magnitude of its effect weakens as inequality within ethnic groups increases. That is, individuals identify most strongly with their ethnic identity when ethnicity is reinforced by economic inequality. Using the Afrobarometer, we provide the first cross-national empirical test of the effect of ethnic inequality on the strength of ethnic identities at the individual-level. Our dataset covers 21 sub-Saharan African countries and 85 ethnic groups. Results strongly support our hypothesis.

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1. Introduction

Ethnic inequality has been argued to have numerous pernicious effects. Among other things, scholars have argued that ethnic inequality breeds civil wars (Cederman et al. 2011; Gubler and Selway 2012; Østby 2008) and coups (Houle and Bodea 2017), destabilizes democracies (Houle 2015), impedes economic development (Alesina et al. 2016), reduces the provision of public goods (Baldwin and Huber 2010), and encourages individuals to vote along ethnic lines (Houle et al. 2017; Huber and Suryanarayan 2016). The arguments developed by these literatures, however, rely on the implicit assumption that ethnic inequality increases the degree to which individuals identify with their ethnicity. If ethnic inequality does not strengthen ethnic identification, there is little reason to believe that it should, for example, increase people's willingness to vote along ethnic lines. Although based on an influential literature (Hechter 1975; Bates 1974), this key assumption has yet to be tested empirically at the individual-level. We have no large-N quantitative evidence supporting the claim that ethnic inequality strengthens ethnic identification.

This paper fills this gap. We argue and empirically demonstrate that individuals identify more strongly with their ethnicity when their ethnic group is either much poorer or much richer than other groups of their country. The magnitude of the effect of between-ethnic group inequality (BGI), however, depends on how wealth is distributed among the members of the ethnic group: BGI's effect strengthens as within-ethnic group inequality (WGI) decreases. That is, individuals identify most strongly with their ethnic identity when ethnicity is reinforced by inequality.

We posit that the relationship is driven by two main mechanisms. First, when WGI is low, BGI increases the salience of ethnicity. This mechanism draws from the classical literature on coinciding and reinforcing cleavages (e.g., Lipset 1960). When ethnicity is reinforced by inequality, individuals are more likely to identify with their co-ethnics because they share similar

living conditions as them but have very different living conditions than members of other ethnic groups. The second mechanism operates through the effect of ethnic inequality on policy preferences. Between-group inequality increases the gap in the preferences over economic policies between members of different ethnic groups. For example, members of poor groups will be more supportive of pro-poor policies, such as a public health, than members of richer groups. At the same time, when WGI is low, members of the same ethnic groups tend to share similar policy preferences. Therefore, individuals will perceive themselves as closer to their co-ethnics, and will be more likely to identify with them.

We test our hypothesis using data from rounds 3, 4 and 5 of the Afrobarometer. The dataset covers 21 sub-Saharan African countries and 85 ethnic groups. Using ordered logit models with country and survey round fixed-effects, we find strong support for our hypothesis: BGI increases the likelihood that a respondent identifies with his/her ethnicity (as opposed to his/her nationality), and the effect strengthens as WGI decreases. At very high levels of WGI, the effect of BGI fails to attain statistical significance. The results are robust to multiple sensitivity tests. In addition to testing the effect of BGI and WGI on the strength of ethnic identities, we test several implications of the two causal mechanisms we propose.

The empirical focus on sub-Saharan Africa is mainly motivated by practical issues. The Afrobarometer has particularly good questions on the strength of ethnic identities. While other large cross-national surveys, such as the World Value Survey (WVS), also have questions on whether respondents identify with their ethnicity or nationality, the questions of the Afrobarometer better capture the concept of interest. Wave 3 of the WVS, for instance, has a binary question for whether respondents identify more with their nationality or ethnicity. The Afrobarometer,

however, has a more precise question that ranges from one to five. It thus captures the *intensity* of ethnic identities, not only whether the respondent identifies with ethnicity or not.

2. The Strength of Ethnic Identities

Following the previous literature, we define the terms ‘ethnicity’ or ‘ethnic group’ as “the nominal [membership] of an ascriptive category such as race, language, caste, tribe, or religion” (Chandra 2004: 2). Although necessary, nominal membership in an ethnic group is not sufficient for someone to identify primarily with his/her ethnicity. People have multiple sources of identity beside ethnicity, such as nationality, gender, class, and region. Ethnicity needs to be ‘activated’ in order to serve as a relevant source of identity. We can only consider ethnicity as being ‘activated’ if an individual professes attachment to his/her nominal ethnic category (Chandra 2012: 9). We thus adopt a ‘constructivist’ rather than a ‘primordialist’ view of ethnicity. The latter would suggest that ethnicity is inevitably salient. Instead, our argument relies on the assumption that the strength of people’s ethnic identities can change in response to a variety of socio-economic and political factors. We posit that ethnic inequality is one of these factors.

There is a large ‘constructivist’ literature that explores the determinants of the strength of ethnic identities.³ Scholars argue that a variety of socio-economic factors affect the potency of ethnic identities, including modernization (Deutsch 1953; Gelner 1983), social pressures within ethnic communities (Laitin 1998), ethnically-bounded patronage networks (Bates 1974; Chandra 2004), and information shortages in new democracies (Birnie 2007; Conroy-Krutz 2012). Another strand of research demonstrates that ethnic identities are politically constructed through particular institutions (e.g. Posner 2005; Roeder 2007) or violence (Shayo and Zussman 2011; Sambanis and Shayo 2013). For instance, Posner (2005) argues that competitive elections in Zambia prompted

³ See Fearon and Laitin (2000) and Chandra (2012) for reviews of this literature.

individuals to shift their identities from small tribe-based communities to large ethno-linguistic groups. Investigating judicial decisions in Israel, Shayo and Zussman (2011) find that terrorism increases the likelihood that judges make decisions favorable to their co-ethnics.

A number of authors have employed individual-level surveys to study the determinants of ethnic identification (e.g., Elkins and Sides 2007; Eifert et al. 2010). For example, Eifert et al. (2010) demonstrate that, in Africa, political competition encourages individuals to identify with their ethnicity. Building on their work, Higashijima and Nakai (2016) show that political competition also plays a key role in the Baltic states. They find that temporal proximity to competitive elections fuels ethnic attachments whenever there are strong ethnic parties. Elkins and Sides (2007), for their part, show that minority groups are more likely to identify with their ethnicity than groups that form a majority. They also find that, contrary to what a celebrated literature argues, federalism and proportional representation have little effect on whether members of minority groups identify with their nation rather than their ethnicity. Gibler et al. (2012) explore the impact of conflicts. They show that interstate territorial disputes strengthen national identities in targeted states, while civil conflicts foster ethnic identification.

3. Ethnic Inequality and The Strength of Ethnic Identities

Most authors working on the effect of ethnic inequality, for example on civil wars, ethnic voting or democratic consolidation, assume that between-ethnic group inequality (BGI) strengthens ethnic identities (e.g., Cederman et al. 2011; Huber and Suryanarayan 2016). The question of the effect of within-ethnic group inequality (WGI), however, is much more contentious. The literature can be divided into two camps.

A first group of authors – whose focus is on ethnic civil wars – argues that ethnic groups with high WGI levels are more likely to instigate civil wars (e.g., Esteban and Ray 2008; Kuhn

and Weidmann 2015; Gates 2002).⁴ On the one hand, WGI creates a large group of poor individuals with low opportunity costs that are willing to fight for low salaries and access to spoils. On the other hand, WGI concentrates resources in the hand of a small elites within the ethnic group, which can finance the war. According to these authors, WGI thus promotes civil war because it enhances the capacity of the group to mobilize fighters and finance the war.

The second group of authors instead posits that WGI weakens ethnic identities (e.g., Gubler and Selway 2012; Houle 2015; Houle and Bodea 2017; Houle et al. 2017; Sambanis and Milanovic 2011; Stewart 2000). Their argument is based on the classical literature on reinforcing and cross-cutting cleavages (Lipset and Rokkan 1967; Rae and Taylor 1970). While most authors from the first school of thought work on civil wars, authors in this second group work not only on civil wars but also on democratic consolidation, coups, and ethnic voting, among other subjects. This latter point is important because democratic breakdowns, coups and ethnic voting, for example, unlike civil wars, do not require the prolonged mobilization of large fighting forces. According to these authors, WGI reduces an ethnic group's cohesion, which, for example, decreases ethnic voting.

This paper espouses the view of the second group of authors. The argument made by the first group – while highly relevant to phenomena that require prolonged large-scale mobilization such as civil wars – is not as relevant when one looks at the question of the strength of ethnic identities. The latter authors focus on the effect of WGI on a group's ability to *finance* a war. Yet simply identifying with ethnicity does not require large financial resources or the mobilization of

⁴ It must be noted that these authors – with the exception of Kuhn and Weidmann (2015) – focus on the direct effect of WGI, not on whether WGI conditions the effect of BGI. Therefore, the question they address is fundamentally different than ours.

large fighting forces.⁵ We thus argue that members of ethnic groups that are either much richer or much poorer than other groups of the same country should be more likely to identify with their ethnicity, and that the magnitude of the effect of between-group differences is conditional on the level of inequality within ethnic groups: BGI's effect weakens as WGI increases.⁶ In other words, individuals identify more strongly with their ethnicity when ethnic and economic cleavages reinforce one another than when they cross-cut each other.

Hypothesis 1: BGI strengthens ethnic identities and its effect weakens as WGI increases.

To be clear, our argument is not totally new to the literature. Horowitz (1985, 1971), in particular, distinguishes between ranked group systems – in which class reinforces ethnicity – and unranked group systems – in which class cross-cuts ethnicity.⁷ Despite the similarities, there are at least two important differences between our argument and Horowitz's (1985, 1971). The first difference is

⁵ It remains possible that WGI concentrates resources among political entrepreneurs, which may enable them to mobilize their co-ethnics and strengthen ethnic identities. Which effect dominates is ultimately an empirical question. The evidence provided below suggests that WGI weakens the effect of BGI.

⁶ This also implies that, for example, groups with high (or intermediate) WGI and low (or intermediate) BGI should only weakly identify with their ethnicity. Under such conditions, there is little difference between members of different groups and members from the same group lack cohesiveness. Individuals should identify with their social class rather than their ethnicity. As shown in the right panel of Figure 2, our results indeed suggest that such groups have low levels of ethnic identification.

⁷ Horowitz (1971) employs the terms horizontal and vertical ethnic arrangements instead.

conceptual. Ranked groups are not only ranked in terms of class but also in terms of political and social statuses. In contrast, we do not assume that a group's political and social statuses always coincide with its economic status. In fact, in our dataset many poor groups have historically been politically dominant (e.g., Hausas-Fulanis in Nigeria), and many rich groups are politically marginalized.⁸

The second distinction pertains to the argument itself. Contrary to us, Horowitz (1985, 1971) does not argue that ethnicity is more relevant among ranked than unranked systems, or that the former are more likely to experience ethnic conflicts. Instead, according to him, they are simply susceptible to different *kinds* of conflicts: in ranked systems conflict takes the form of a social revolution, and in unranked systems of competition over resources and political power (Horowitz 1985: 29-32). The former is a form of class conflict, while the latter is purely ethnic. In contrast, our argument suggests that ethnicity is *more* relevant when it is reinforced by inequality.

We theorize that the relationship is driven by two mechanisms. First, large differences in income/wealth across ethnic groups combined with low levels of inequality within groups increase the salience of ethnicity. A large literature on reinforcing and cross-cutting cleavages finds that individuals are more likely to identify with other members of their groups along one cleavage (e.g., ethnicity) when they find themselves in the same group as them along other cleavages (e.g., social class) (Bates 1974; Hetcher 1975; Houle 2015; Lipset 1960; Rae and Taylor 1970; Selway 2011).

⁸ Of the 20 ethnic groups that are coded as politically excluded in our dataset (based on the Ethnic Power Relations dataset), 10 are poor and 10 are rich. Therefore, there is little correlation between economic and political statuses.

For example, using experimental data, Dunning and Harrison (2010) show that cross-cuttingness reduces ethnic voting in Mali.

These arguments suggest that between-group inequality should intensify ethnic identities whenever within-group inequality is low. Individuals are particularly likely to identify with their co-ethnics when they live under economic conditions similar to theirs (WGI is low) but very different from those of members of other groups (BGI is high). Large economic differences between groups, combined with within-group homogeneity, encourage individuals to draw sharp lines between ‘us’ and ‘them,’ which erode feelings of belonging to the same nationality and strengthen ethnic attachments. When BGI is high and WGI low, members of different ethnic groups are also likely to be part of different social networks, which reduces interactions among them.

Moreover, when ethnic cleavages are salient, political entrepreneurs have incentives to appeal to ethnicity to gain political power, which magnifies the salience of ethnic identities even further (Posner 2005; Higashijima and Nakai 2015). Politicians appeal to their co-ethnics by adopting ethnically exclusive policies and by rallying around symbols that allegedly express the history and memories of the ethnic group, thereby ‘scapegoating’ members of other groups. These tactics are likely to be most successful when ethnicity is reinforced by economic inequality because such conditions create clear demarcations between ‘insiders’ and ‘outsiders.’ These different effects are mutually reinforcing and result in a process whereby ethnic identities becomes gradually more and more salient (Eifert et al. 2010).

Section 1 of the online appendix tests two of the implications of this mechanism. Both tests rely on data from the Afrobarometer. First, this mechanism implies that, whenever BGI is high, individuals ‘correctly’ perceive BGI as being elevated. We thus show that BGI indeed increases

the extent to which individuals believe that inequality between ethnic groups is high, and that its effect weakens as WGI increases.⁹ Second, we demonstrate that BGI reduces trust toward members of other ethnic groups and that its marginal effect is strongest at low levels of WGI.¹⁰ This suggests that reinforcing ethnic and economic cleavages do enhance animosity between groups.

Contrary to the first mechanism, the second one operates through the effect of ethnic inequality on policy preferences. It relates strictly to the programmatic aspects of politics. When BGI is high and WGI is low, members of different ethnic groups tend to have radically different preferences over policies. At the same time, members from the same groups have similar policy preferences. Members of poor ethnic groups should be more supportive of pro-poor policies, such as income redistribution, public education or a high minimum wage, while members of richer groups should be opposed to such policies.¹¹ When WGI is low, BGI increases the degree to which members of different ethnic groups support different economic policies and political parties. Under such conditions, individuals will be less likely to identify with their nationality, because they perceive members of other groups as having fundamentally different ideologies and policy

⁹ See Table A1 and Figure A1.

¹⁰ See Table A2 and Figure A2.

¹¹ This argument is essentially an extension of the arguments of Boix (2003) and Acemoglu and Robinson (2006) about the effect of inter-group inequality on preferences over economic policies to a situation in which groups are ethnic groups (rather than social classes). Acemoglu and Robinson (2006: 109-113) extend their model to include between- and within-ethnic group inequality and arrive to conclusions similar to ours.

preferences. Instead, they will identify with their co-ethnics with whom they share preferences over policies and parties.

Houle et al. (2017) directly test the effect of BGI across WGI levels on preferences for redistribution among poor and rich ethnic groups. They use a total of 67 questions from the Afrobarometer, the Latinobarometer, the World Value Survey and the Comparative Study of Electoral Systems to construct a group-level indicator of support for redistribution. It captures the degree to which an average member of the ethnic group supports pro-poor policies and income redistribution toward the poor. They also compute group-level measures of BGI and WGI using a methodology similar to ours (see below). Their dataset covers 62 countries and 202 ethnic groups worldwide. Consistent with our argument, they find that, among rich ethnic groups, BGI *reduces* support for pro-poor policies but only when WGI is low. When WGI is elevated, however, BGI has no effect. Among poor groups, BGI *increases* support for redistribution and again, the relationship only holds when WGI is low. Houle et al.'s (2017) findings provide strong evidence in favor of the second mechanism since they show that, when BGI is high and WGI is low, members of different ethnic groups have different policy preferences.

Section 1 of the online appendix reports an additional test of this mechanism that uses data from the Afrobarometer. We measure respondents' preferences for redistribution using a methodology similar to that of Lieberman and McClendon (2013), who employ a question asking respondents to list the three policy issues that they think are the most important. Our measure ranges from 0 to 3 and indicates the number of policy issues named by the respondent that relate to redistribution or other pro-poor policies. Table A3 tests the effect of BGI on preferences for redistribution by including interaction terms between the variables capturing ethnic inequality

(BGI, WGI, BGI*WGI), on the one hand, and a dummy variable that takes the value one if the group is poorer than the average citizen of its country.

Consistent with our argument, we find that, at low levels of WGI, BGI increases the gap between the preferences of poor and rich ethnic groups. Among poor groups, BGI increases support for pro-poor policies and its effect weakens as WGI increases.¹² Its effect among rich groups, although in the expected direction, is not significant. In any event, our argument is about the effect of BGI/WGI on the *difference* in policy preferences between groups, not necessarily its effect on rich groups in particular. Our estimations do show that BGI creates a gap in policy preferences: the interaction terms between BGI and BGI*WGI and the dummy variable for poor groups are highly significant. If BGI strongly increases support for redistribution among poor groups and weakly reduces it among rich groups, then it does widen the gap in preferences between poor and rich ethnic groups.¹³ In fact, as discussed above, Houle et al. (2017) do find that BGI and WGI affect support for redistribution in the way expected by our argument for both poor *and* rich groups.¹⁴

¹² See Figure A3.

¹³ Moreover, respondents may be reluctant to openly state to an interviewer that they do not support helping the poor. This would reduce the estimated effect of BGI on hostility toward pro-poor policies, and could explain why the magnitude of the relationship is weaker for members of rich groups (who are more likely to oppose such policies both according to our argument and the empirical findings).

¹⁴ Also, we find no evidence that the effect of BGI on the strength of ethnic identities is stronger among poor groups (model 1 of Table A7, online appendix).

Although scholars have long suggested that ethnic inequality activates ethnic identities (Hechter 1975; Bates 1974), to our knowledge, there is no large-N cross-national analysis of the effect of ethnic inequality on the strength of ethnic identities. Solt (2011) and Ray (Forthcoming) are among the few studies that employ survey data to examine the effect of inequality on national and ethnic identities. Using the World Values Survey, Solt (2011) finds that economic inequality (measured with Gini coefficients) fosters nationalism. However, unlike us, he focuses on general income inequality, not ethnic inequality. Ray (Forthcoming) examines the implications of political and economic inequalities between ethnic groups. He finds that, although between-group political inequality is negatively associated with national pride, between-group economic inequality has little effect. His research, however, does not consider the possibility that the impact of between-group economic inequality is conditional on the distribution of wealth within groups. As our theory and empirics show, the effect of between-group inequality on the strength of ethnic identities varies across within-group inequality levels.

Finally, while this is the first study to look at the effect of ethnic inequality on the strength of ethnic identities, there are a number of other studies that have examined the effect of ethnic inequality on ethnic voting. Huber and Suryanarayan (2016), who focus on India, and Kolev and Wang (2010) find that ethnic inequality fosters ethnic voting. However, they do not look at whether the effect is conditional on the level of inequality within groups. In addition, Houle et al. (2017), in a clear parallel to us, find that between-ethnic group inequality increases ethnic voting and that its effect weakens as within-ethnic group inequality increases. However, the questions of the effects of ethnic inequality on ethnic voting and the strength of ethnic identities are two fundamentally different questions. It is not because co-ethnics vote for the same political parties that they necessarily identify with their ethnicity rather than their nationality (Eifert et al. 2010).

Moreover, these three studies employ the country or the ethnic group as the unit-of-analysis. By contrast, in this paper, we look directly at the effect of ethnic inequality on the strength of ethnic identities at the individual-level.

4. Data and Testing Strategy

We test our hypothesis with survey data from rounds 3, 4 and 5 of the Afrobarometer. The unit-of-analysis is the individual (respondent) and the sample covers around 50,000 respondents. It covers 21 sub-Saharan African countries and 85 ethnic groups.¹⁵ Our dependent variable (the strength of ethnic identities) and independent variables (BGI and WGI) are always constructed using the *same* survey.

The indicators of BGI and WGI are ethnic group-level variables. This is important because our argument is primarily about how the economic situation of a given ethnic group affects the identity of members of *that* particular group rather than of all groups in a country. Moreover, there is considerable variation across ethnic groups of the same country in both BGI and WGI. For example, in Senegal, while the Diola have an average BGI level at the 99th percentile of the distribution, that of the Mandingues is below the 34th percentile. Therefore, country-level indicators would be poor proxies for group-level indicators. In fact, our analysis uses country fixed-effects and thus controls for country-specific factors.

We identify ethnic groups using the Ethnic Power Relations (EPR) dataset, which only includes ethnic groups that are deemed politically relevant. We omit some of the countries covered by the Afrobarometer because they are coded as ethnically homogenous in the EPR (e.g., Lesotho).

¹⁵ The countries are listed in Table A5 of the online appendix.

We cannot calculate indicators of inequality between and within ethnic groups for such countries. Moreover, the question of the strength of ethnic identities is less relevant for them.

We have omitted South Africa from the sample.¹⁶ Groups in South Africa are races whereas in other countries they are linguistic groups or tribes. Respondents, especially White respondents, may feel uncomfortable reporting that they identify with their race rather than their nation, which creates a strong social desirability bias. For example, in round 3 of the South African survey, only 4 White respondents (1 English-Speaker and 3 Afrikaners) answered that they only identify with their racial group. We observe a similar pattern for Black groups. This is especially striking given that ethnic identities are known to play a central role in South African elections (Ferree 2006). In fact, South African elections have been called ‘racial censuses.’¹⁷

4.1 Dependent Variable and Testing Strategy

Our dependent variable, *Strength of Ethnic Identities*, is a categorical variable ranging from 1 to 5. It is based on the following question from the Afrobarometer, which is also used in previous research to measure ethnic identification (Gibler et al. 2012):

Let us suppose that you had to choose between being a national ID and being a [R’s Ethnic Group]. Which of the following best expresses your feelings?

- 1= I feel only (R’s ethnic group),
- 2= I feel more (R’s ethnic group) than national ID
- 3= I feel equally national ID and (R’s ethnic group)
- 4=I feel more national ID than (R’s ethnic group)
- 5= I feel only national ID

We reverse the index such that higher values on *Strength of Ethnic Identities* indicate that the respondent identifies more closely with his/her ethnic group as oppose to his/her national identity.

¹⁶ However, results are unchanged when we include data from all three rounds of the South Africa surveys (Table A19, online appendix).

¹⁷ Summary statistics for all variables are available in Table A4 of the online appendix.

Since our dependent variable is categorical, we employ ordered logit models. We include survey round and country fixed-effects to control for temporal and country-level heterogeneity. Our empirical strategy is thus similar to that of Eifert et al. (2010), although they use logit models (rather than ordered logit models) because their dependent variable is binary. We also redo the analysis using ethnic group fixed-effects (rather than country fixed-effects) and survey round fixed-effects to deal with the possibility that ethnic inequality is correlated with group-level unobserved factors.

4.2 Independent Variables

Our indicators of BGI and WGI are ethnic group-level indicators that, for each of the 85 ethnic groups included in the analysis, measure the level of inequality between an average member of the group and an average citizen of the country, and the level of inequality among members of the ethnic group, respectively. Our methodology is similar to that of Houle (2015), Houle and Bodea (2017) and Houle et al. (2017). The Afrobarometer asks the respondents to identify their ethnicity. We construct our measures of BGI and WGI by matching the ethnic groups reported by the respondents in the Afrobarometer with those identified by the EPR.

Unfortunately, the Afrobarometer has no question on the respondents' income. One of the reasons is that a large proportion of the population in sub-Saharan Africa are subsistence farmers who have little access to monetized income (Baldwin and Huber 2010; Bratton 2008). However, the Afrobarometer does ask questions that are meant to capture the wealth of the respondents. The previous literature that relies on the Afrobarometer has used these questions to construct indicators of asset-based wealth (ABW) (e.g., Dionne et al. 2014; Houle 2015; Houle and Bodea 2017; Østby 2008). We follow this approach. The Afrobarometer asks questions on the ownership of a television, a radio and a motor vehicle. We use the answers to these questions to construct an

indicator that takes the value 0 if the respondent has none of these goods and 3 if he/she owns all three goods (we then normalize the index such that it ranges from 0 to 1).

One possible problem with this approach is that the ABW tends to underestimate inequality because it does not differentiate between respondents that own all three assets and that are well-off without being rich, and those that own the three assets and that are rich (Huber and Mayoral 2014). In other words, it does not distinguish between the well-off and the very rich at the top of the income/wealth distribution. We do not believe that this is a major problem for our analysis for two main reasons. First, only about eight percent of the respondents in our sample have all three goods, which limits the potential impact of this issue on our indicators. Second, the main problem with using ABW arises when one also uses other surveys that rely on other types of questions (e.g., questions that directly ask the income of the respondents). In those instances, inequality would be underestimated for some countries (or groups) but not for others, which would introduce bias. In our case, however, inequality is always calculated using the ABW.

Between-group inequality (BGI) of ethnic group l of country v is measured as follow:

$$BGI_{l,v} = \left[\log \left(\frac{\bar{g}_{l,v}}{\bar{G}_v} \right) \right]^2$$

where $\bar{g}_{l,v}$ refers to the average *ABW* score of members of group l of country v , and \bar{G}_v to the average *ABW* score of country v . *BGI* captures the difference in asset-based wealth between an average member of a given group and an average citizen of the country. This is the same formula as employed by Cederman et al. (2011) and Houle (2015).

We also construct a second measure of BGI. Instead of using \bar{G}_v in the denominator, this indicator uses $\bar{G}_{-l,v}$ which captures the average *ABW* score of members of *other* groups from country v (rather than all citizens). Therefore, this second BGI indicator measures the difference

in asset-based wealth between an average member of a given group and an average individual from the same country but from a different ethnic group.¹⁸

To calculate within-ethnic group inequality (WGI), we group all members of each ethnic group together, and then calculate a different Gini coefficient for each ethnic group. The Gini coefficient measures inequality among members of the ethnic group. The Gini coefficient is calculated as follow:

$$WGI_{l,v} = \frac{\sum_{i=1}^n \sum_{j=1}^n |g_{i,l,v} - g_{j,l,v}|}{2 n^2 \bar{g}_{l,v}}$$

where $g_{i,l,v}$ is the *ABW* score of member i of group l of country v , $g_{j,l,v}$ is the *ABW* score of member j of the same group (l) / country (v), and n is the total number of individuals in group l .¹⁹

Our analysis, however, could be affected by reverse causality. Groups that identify most strongly with their ethnicity may vote along ethnic lines and adopt policies that are only beneficial to their co-ethnics. This, in turn, would increase inequality between groups. Unfortunately, we are not aware of any exogenous group-level instruments for ethnic inequality that we could use to conduct an instrumental variable analysis. However, we do not believe that reverse causation

¹⁸ The models that use this variable are reported in Table A6 (online appendix).

¹⁹ The distributions of *BGI* and *WGI* are shown in Figures A4 and A5 (online appendix), respectively. Since there are a number of outliers with high *BGI* values, we redo the analysis without *BGI* values above the 90th, 95th and 99th percentiles of the distribution and without observations with a Cook's distance above 4/n in the online appendix. Figures A11 and A12 show the variation in *BGI* and *WGI* within groups over time, respectively (they only include groups for which there is more than one survey).

drives our results. Evidence suggests that ethnic inequality significantly predates the creation of states. Yet it is only within the context of a multiethnic state that individuals can use political power to favor their co-ethnics. For example, Alesina et al. (2016: 428) examine “the roots of ethnic inequality and establish that differences in geographic endowments across ethnic homelands explain a sizable fraction of the observed variation in economic disparities across groups.” They find that variation in geographic endowments across groups explains about 55 percent of the variation in ethnic inequality across countries. This suggests that our results are primarily driven by the effect of ethnic inequality on the strength of ethnic identities rather than the opposite. However, we concede that reverse causality potentially remains an important limitation with our analysis.

There are two alternative group-level measures of BGI and WGI that warrant discussion: Houle (2015) and Kuhn and Weidmann (2015). Our indicators of BGI and WGI are constructed using a similar methodology to Houle (2015). However, apart from the Afrobarometer, he also uses data from five additional survey sources. In addition, he only covers democracies. Since there are few consolidated democracies in sub-Saharan Africa, we could not use his data. In any event, we believe it is preferable to use the same survey to construct our measures of the strength of ethnic identities and ethnic inequality.²⁰

Kuhn and Weidmann (2015) also construct group-level indicators of BGI and WGI. Rather than using survey data, however, they rely on data on nightlight emissions along with maps on

²⁰ The indicators used by Houle and Bodea (2017) and Houle et al. (2017) are also similar to those developed by Houle (2015) (and ours). The main difference is that they use slightly different survey data sources.

ethnic group settlement. Cederman et al. (2011) and Alesina et al. (2016) employ a similar methodology to calculate measures of BGI (but not WGI), although Cederman et al. (2011) use data on the spatial dispersion of wealth rather than nightlight emissions.

Despite its advantages, this approach also has a number of drawbacks (Huber and Mayoral 2014). In particular, whenever people from different ethnic groups live in the same area, it is difficult to differentiate between inequality across and within groups. Authors that employ these methods have to assume either that the area is ethnically homogeneous or that WGI and BGI are the same in the area (Huber and Mayoral 2014). Both assumptions are problematic, especially since our aim is to distinguish between BGI and WGI. Indicators based on survey data do not suffer from these problems because we can identify the ethnicity of each respondent.²¹

Cederman et al. (2011) provide another group-level dataset of BGI, but they do not have a measure of WGI. In addition to these group-level datasets, a number of scholars have developed country-level measures of BGI (but not WGI) (e.g., Alesina et al. 2016; Baldwin and Huber 2010; Østby 2008). Finally, Selway (2011) has constructed an indicator of the level of cross-cuttingness of ethnic and economic cleavages (i.e. the degree to which people from different ethnic groups share the same class affiliations). Again, this indicator captures cross-cuttingness at the country-level, not the group-level.

4.3 Control Variables

²¹ Table A20 (online appendix) shows that our results are robust when we employ the indicators of Kuhn and Weidmann (2015). We cannot redo the models that employ ethnic group fixed-effects because the indicators of Kuhn and Weidmann (2015) do not vary within ethnic groups over time.

We include individual-level, group-level and country-level control variables. We take individual-level variables from the Afrobarometer: the age of the respondents, dummy variables for female respondents, employed respondents and respondents living in urban areas, and a variable capturing the respondents' level of education. We also include *ABW*, which, as explained above, captures the wealth of the respondents.

Our analysis also controls for a number of group-level variables. We control for the size of the ethnic group (EPR) because it may be related to the salience of ethnicity (Posner 2004). Moreover, the effect of ethnic inequality may depend on whether an ethnic group is rich or poor. It is possible, for example, that ethnic inequality creates more grievances among poor groups. We thus include a dummy variable that indicates whether the average *ABW* score of the ethnic group is lower than the average *ABW* score of the country. It is possible that ethnic exclusion incites individuals to identify with their ethnic groups. Therefore, we include a dummy variable that takes the value one if an ethnic group is coded as being politically excluded according to the EPR (Wimmer et al. 2009).

At the country-level, we control for GDP per capita logged as well as the growth rate (World Development Indicators). According to the modernization theory, individuals should be less likely to identify with their ethnicity in richer countries. Individuals may be particularly likely to identify with their ethnicity in partial democracies. Such countries often have weak political parties. Weak party labels create incentives both for voters to use ethnicity as an information cue and for political entrepreneurs to appeal to ethnicity (Birnie 2007). We thus include the Polity score along with its square.

As explained above, Eifert et al. (2010) find that electoral competitiveness increases ethnic identification in Africa. We control for electoral competitiveness by calculating the difference in

vote shares of the two top candidates in the most recent presidential election in presidential systems, and the difference between the two parties with the most votes in the most recent election in parliamentary systems (*Electoral Margin*). Additional control variables included in robustness tests are discussed in Section 5.2 below.

5. Empirical Results

5.1 Main Analysis

Models 1 and 2 of Table 1 test the effect of BGI on the strength of ethnic identities with country and survey round fixed-effects. All models employ ordered logit. In order to test our hypothesis that the effect of BGI is conditional on WGI, we include an interaction term between *BGI* and *WGI*. Our hypothesis would be supported if the coefficient on *BGI* is positive and that on *BGI*WGI* is negative. Under such conditions, BGI would strengthen ethnic identification but its effect weakens as WGI increases.

[Table 1 about here]

Model 1 estimates the relationship without control variables. The coefficients on *BGI* and *BGI*WGI* are of the expected signs and statistically significant at the 0.001 level. Model 1 of Table A9 (online appendix) redoes model 1 of Table 1 without the interaction term between *BGI* and *WGI*. BGI strengthens ethnic identification but its effect is not statistically significant. Moreover, we run a Wald test of whether adding *BGI*WGI* in model 1 of Table 1 increases the fit of the model, and we find that it does (chi-square= 33.94, p-value<.0001).²² These findings are consistent

²² *BGI* is significant in other models of Table A9. However, in all models reported in Table 1 adding the interaction term increases the fit of the model: model 2 (chi-square=65.69, p-

with those of Ray (Forthcoming), who finds that economic inequality between ethnic groups has little effect on the strength of national identities. Contrary to us, however, he does not account for the possibility that the effect of *BGI* is conditional on *WGI*.

[Figure 1 about here]

Model 2 of Table 1 adds the control variables. Results are unchanged. Figure 1 estimates the marginal effect of *BGI* on the likelihood that a respondent identifies only (left panel) or mostly (right panel) with his/her ethnic group at different levels of *WGI* (values 5 and 4 on the *Strength of Ethnic Identities* variable, respectively). The shaded areas represent 95 percent confidence intervals. The control variables are set at their means. The marginal effect of *BGI* weakens as *WGI* increases. In both panels, when *WGI* attains about 0.45, the effect of *BGI* is no longer statistically significant at the five percent level. When *WGI* is above 0.53 the effect of *BGI* even becomes negative and significant. However, less than two percent of observations have *WGI* values above 0.53, so this is largely an out-of-sample result.²³

[Figure 2 about here]

Figure 2 shows the effect of *BGI* on the predicted probability that a respondent *only* identifies with his/her ethnicity among ethnic groups with low *WGI* (10th percentile of the distribution) and high *WGI* (90th percentile). Again, control variables are set at their means. While *BGI* strongly increases

value<.0001); model 3 (chi-square= 29.34, p-value<.0001); and model 4 (chi-square= 49.59, p-value<.0001).

²³ Figures A6-A8 (online appendix) redo Figure 1 separately for the three other values of the *Strength of Ethnic Identities* variable. As expected, *BGI* reduces the likelihood that an individual identifies more with his/her nationality than his/her ethnicity when *WGI* is low.

the likelihood that an individual only identifies with his/her ethnicity in groups with low *WGI*, it has virtually no effect in those with high *BGI*.²⁴

Models 3 and 4 redo the analysis using ethnic group fixed-effects rather than country fixed-effects (survey round fixed-effects are still included). Variables that are constant within groups over time (*Size* and *Poor*) are not included in model 4. Our findings are unchanged.²⁵

Results on most control variables are consistent with the findings of the previous literature. Individuals that are richer (as captured by *ABW*), more educated and that are employed are more likely to identify with their nationality rather than their ethnicity. Respondents are more likely to identify with their ethnicity in partial democracies, when elections are highly competitive and when a country is experiencing an economic crisis. Consistent with Huber (2012), who finds that ethnic voting is more elevated in rich countries, our results suggest that individuals identify more closely with their ethnicity in African countries with relatively high income per capita. Like Elkins and Sides (2007), we find that members of small groups are more likely to identify with their ethnicity. Finally, members of poor ethnic groups identify more strongly with their ethnicity.

5.2 Robustness Tests

The online appendix shows that our results are robust to a large number of additional tests. Our indicators of *BGI* and *WGI* are constructed from the Afrobarometer surveys. Some ethnic groups

²⁴ Figure A9 (online appendix) shows the effect of *BGI* on the predicted probability that a respondent *mostly* identifies with ethnicity at low and high *WGI* levels. The relationship follows a similar pattern as in Figure 2.

²⁵ Figure A10 (online appendix) redoes Figure 1 based on model 4.

are relatively small and so our measures for these groups rely on a small number of respondents. We thus omit groups that account for less than five percent of the population of the country.²⁶

There are a number of observations with very large *BGI* values.²⁷ We redo the analysis without observations with *BGI* levels above the 90th, 95th and 99th percentile of the distribution. We also exclude observations with a Cook's distance above $4/n$.²⁸

We include additional control variables:²⁹ a dummy variable for whether the respondent is poorer than an average member of his/her ethnic group (*Poor Respondent*); number of years between the survey and the nearest election (*Electoral Distance*);³⁰ a dummy variable for whether there is an ongoing civil war (PRIO; Gleditsch et al. 2001), the time since the last civil war, a dummy variable for whether there is a militarized interstate dispute (Correlates of War); dummy variables for whether a group is regionally-based, urban- and regionally-based or dispersed (Geo-EPR); a variable capturing the proportion of members of the group that live in urban areas (constructed from the Afrobarometer); a group's presence in commerce, farming and the military

²⁶ See Table A10.

²⁷ See Figure A4.

²⁸ See Tables A8 and A21, respectively.

²⁹ See Tables A11-A18.

³⁰ The variable *Electoral Distance* takes the value 0 if there is an election in the same year as the survey, 1 if there were an election the year before the survey or the year after the survey, and so on. Since Eifert et al. (2010) argue that the effect of electoral distance is conditional on electoral competitiveness, we rerun the analysis with an interaction term between *Electoral Margin* and *Electoral Distance* (Table A12).

(constructed from the Afrobarometer); a group's historical access to power (constructed from the EPR); a group's history of conflict (constructed from the EPR).³¹

It is possible that the effect of ethnic inequality depends on whether an ethnic group is rich or poor. Model 1 of Table A7 includes interaction terms between *Poor Group*, on the one hand, and *BGI*, *WGI* and *BGI*WGI*, on the other hand. We find that the effect of ethnic inequality is stronger among rich groups. These results suggest that the effect of BGI is not completely driven by feelings of economic deprivation. We also estimate whether the relationship differs depending on whether the respondent is rich or poor using two tests. First, we interact *Poor Respondent* with *BGI*, *WGI* and *BGI*WGI* (model 2). In the second test, we interact *ABW* with *BGI*, *WGI* and *BGI*WGI* (model 3). Both tests suggest that the effect of BGI does not depend on whether the respondent is rich or poor.

Finally, we make sure that there is no multicollinearity between *BGI* and *WGI* (the correlation between the two variables is 0.0648). We rerun model 2 of Table 1 (without the fixed effects and *BGI*WGI*) using OLS and calculate the variance inflation factor (VIF) for all variables included in the model. No variable has a VIF above ten, which is the threshold used to detect multicollinearity. The VIFs of *BGI* and *WGI* are 1.27 and 1.76, respectively.

6. Conclusion

In this paper, we argue that BGI strengthens ethnic identities and that its effect weakens as WGI increases. We test this hypothesis by conducting the first large-N test of the effect of ethnic inequality on the strength of ethnic identities at the individual-level. We find strong evidence that

³¹ See the notes below the tables for more information on how the variables have been constructed.

members of ethnic groups with high BGI levels identify more strongly with their ethnicity and that the effect is stronger among ethnic groups with low WGI levels.

This paper contributes to the literature on identity politics in at least three ways. First, we provide robust evidence linking ethnic inequality and the intensity of ethnic identification. Previous research has found that high ethnic inequality leads to civil war, democratic breakdown, and ethnic voting, among other things. This research relies on the implicit assumption that ethnic inequality strengthens ethnic identifications. Our findings complement this literature by providing the first direct test of this assumption. We find that ethnic inequality does activate ethnic identities.

Second, our analysis suggests that the effect of between-group inequality is contingent on the level of inequality within ethnic groups: BGI's effect is strongest when WGI is low. This finding implies that patterns of social cleavages constrain people's repertoire of identity: in societies in which ethnic cleavages are reinforced by inequality, people tend to identify with their ethnicity. However, in societies with cross-cutting cleavages, people are more likely to identify with their nationality. This finding also contributes to the debate on the effect of WGI on the strength of ethnic identities. While a number of authors suggest that WGI weakens ethnic identities (e.g., Houle 2015; Stewart 2000), others argue that this effect is weak and that WGI may actually foster civil wars, for example (e.g., Esteban and Ray 2008; Kuhn and Weidmann 2015). Our results are consistent with the view of the first group of authors.

Third, we provide empirical evidence for the two causal mechanisms we propose. First, we show that as BGI increases, individuals are indeed more likely to perceive BGI as elevated, especially when WGI is low. Second, BGI decreases trust toward members of other ethnic groups and again its effect weakens as WGI increases. Finally, when WGI is low, BGI increases the gap between the preferences over economic policies of poor and rich ethnic groups.

Our result suggests that, instead of looking at each social cleavage in isolation, the literature ought to focus on the political implications of the structure of social cleavages (Lipset 1960). The mere presence of multiple ethnic groups does not imply that individuals necessarily identify mostly as members of their ethnicity. Other factors are needed to explain why in some cases people identify with their ethnicity rather than their nationality. Our findings suggest that how ethnicity interacts with economic cleavages is one of these factors: ethnicity is likely to have more influence when it is reinforced by inequality. In the future, the literature on the effect of between-group inequality on civil war, democratic consolidation and public good provision, among other subjects, should account for the conditioning effect of within-group differences.

One caveat with our analysis is that the sample is restricted to sub-Saharan Africa. As explained above, this choice is primarily practical: questions on the strength of ethnic identities from the Afrobarometer better capture the concept of interest. However, we do not believe that our argument only applies to Africa. Many of the authors that assume that ethnic inequality reinforces ethnic identities – for example, Cederman et al. (2011), Houle (2015), and Huber and Suryanarayan (2016) – argue that the relationship holds worldwide or focus on non-African countries (e.g., India in the case of Huber and Suryanarayan 2016). Whether or not the structure of ethnic inequality has the same effect on the strength of ethnic identities outside sub-Saharan Africa, however, is ultimately an empirical question. Extending this research to other regions is a promising avenue for future research.

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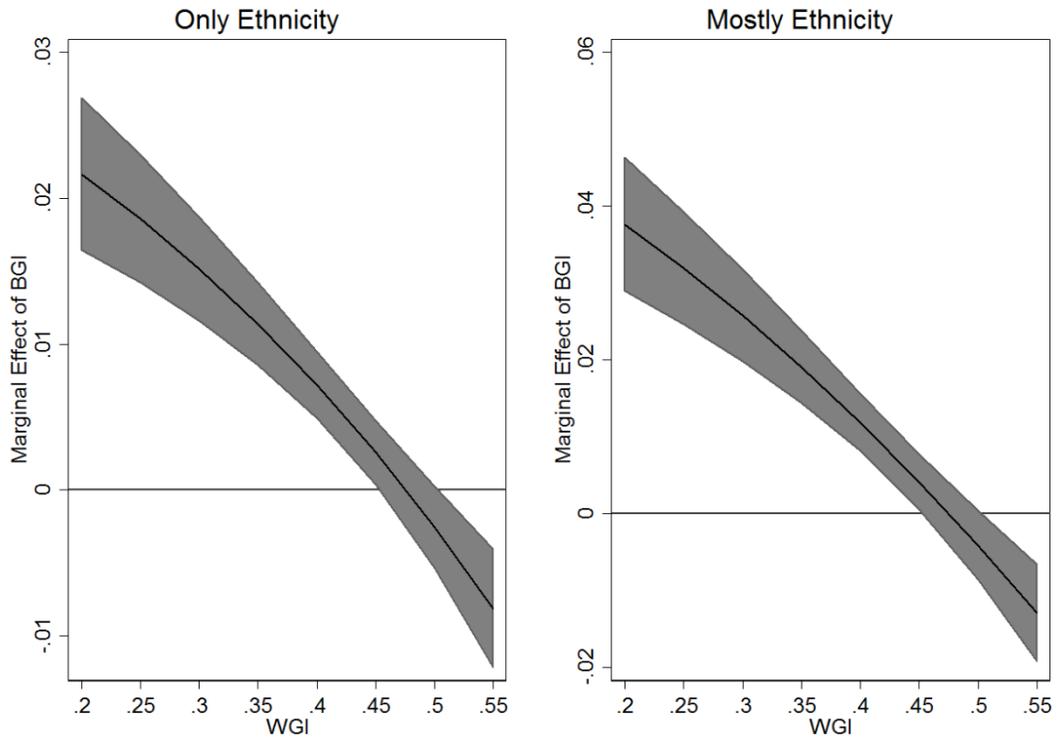
Tables and Figures

Table 1: Ordered Logit Analysis of the Effect of Ethnic Inequality on the Strength of Ethnic Identities

	(1)	(2)	(3)	(4)
BGI	0.752*** (0.124)	1.109*** (0.129)	1.091*** (0.168)	1.494*** (0.173)
WGI	2.145*** (0.199)	1.726*** (0.306)	0.522 (0.266)	1.905*** (0.308)
BGI*WGI	-1.603*** (0.275)	-2.332*** (0.288)	-1.973*** (0.364)	-2.610*** (0.371)
ABW		-0.146*** (0.0331)		-0.133*** (0.0333)
Age		0.000791 (0.000647)		0.000508 (0.000652)
Education		-0.0827*** (0.0121)		-0.0920*** (0.0124)
Employed		-0.0732*** (0.0186)		-0.0843*** (0.0188)
Urban		-0.0651** (0.0194)		-0.0791*** (0.0197)
Female		-0.0931*** (0.0173)		-0.0884*** (0.0174)
Size		-0.373*** (0.0710)		
Poor Group		0.150*** (0.0285)		
Excluded Group		-0.0233 (0.0421)		-0.272* (0.101)
Electoral Margin		-0.00883*** (0.000970)		-0.00975*** (0.00100)
Polity		0.369* (0.121)		0.636*** (0.126)
Polity Squared		-0.0343* (0.0106)		-0.0563*** (0.0110)
GDP pc (logged)		1.258*** (0.241)		1.324*** (0.246)
Growth		-0.00714*** (0.00141)		-0.00800*** (0.00144)
Country FEs	Y	Y	N	N
Group FEs	N	N	Y	Y
Survey Round FEs	Y	Y	Y	Y
N	51,720	49,367	51,720	49,367
Pseudo log-lik.	-66379.045	-62978.581	-65817.682	-62473.767

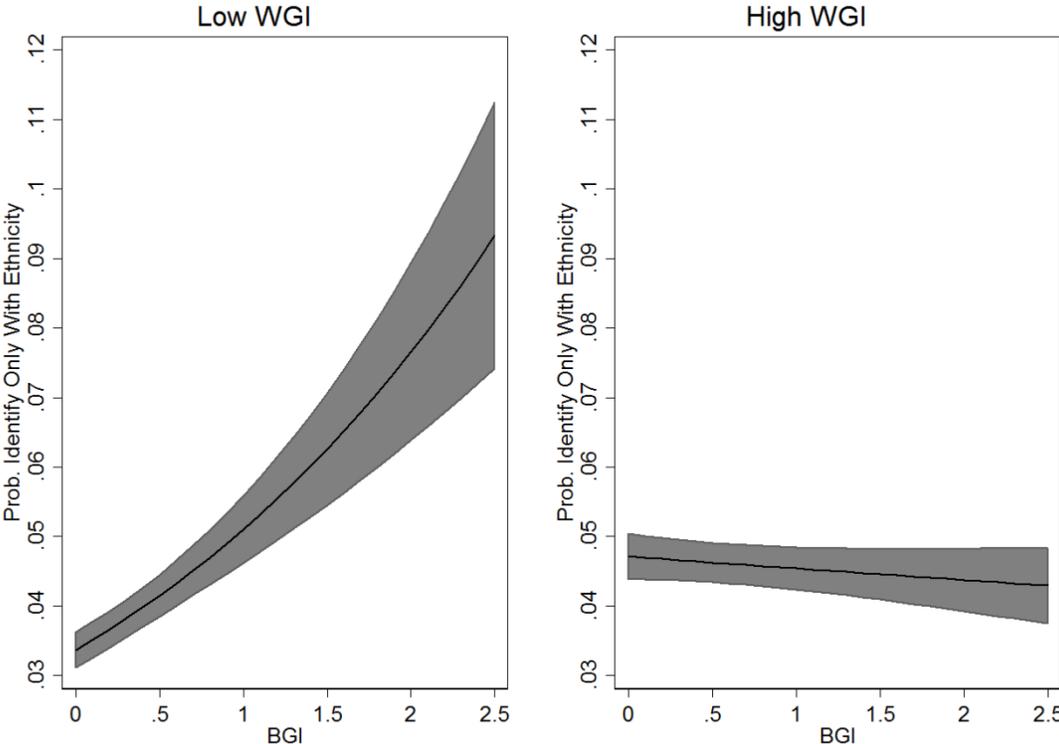
Robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05

Figure 1: Marginal Effect of BGI on the Probability that a Respondent Identifies Only/Mostly with Ethnicity Across WGI Values



Based on Model 2 of Table 1. Shaded areas represent 95 percent confidence intervals.

Figure 2: Effect of BGI on the Predicted Probability that a Respondent Identifies Only with Ethnicity among Ethnic Groups with Low and High WGI Levels



Based on Model 2 of Table 1. Shaded areas represent 95 percent confidence intervals.