I can’t get (no) satisfaction?
A multilevel study on the satisfaction with democracy of individuals, ethnic groups and countries.

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Abstract
Democratization research focuses mainly on either countries or individuals. Ethnicity is, however, seen as one of the most relevant factors that hinders democratization. In its most extreme outcome, ethnic tensions cumulate to ethnic violence. But how does ethnic group membership influence democratization? Do individual or group-based factors explain satisfaction with democracy? In this study, the effects of individuals and their membership to ethnic groups are analyzed. Additionally, two power-sharing institutions are included in the analysis. Due to the structure of the Afrobarometer, previous survey studies have not yet incorporated both country and time effects. In this paper, a multilevel approach is used allowing a comparative analysis over time, countries, ethnic groups, and individuals.

Introduction
Research on democratization does mainly analyze either countries or individuals. This is surprising since in many African cases ethnic groups are seen as the main actors that hinder democratization (see e.g. Byman 2002; Horowitz 1985; Wimmer et al. 2004; Wolff 2006). For example, ethnic diverse societies are more conflict prone than ethnic homogeneous countries

*Many thanks to Roos van der Haer for useful comments and to Andreas Tiemann, who helped a lot in creating the dataset used in this study.
(Elkins, Ginsburg, and Melton 2008). Ethnic groups, however, are more than unitary actors. First and foremost, although ethnicity is based on individual identity, members differ in their amount of congruence. Identity, though, might be stronger than members differences and enables groups to act like unitary actors. In these cases, ethnic groups per se are indeed responsible for their doings. In this study, I will shed light on the relations between members differences and ethnic group performances. So far, most studies focus either on individuals excluding their membership to ethnic groups (e.g. Wells and Krieckhaus 2006) or aggregate the ethnic groups’ position over all members (e.g. Cederman, Wimmer, and Min 2008).

When democracies deteriorate, other social deficits are apparent. For example, a decline in democratic support, trust in democratic institutions and/or satisfaction with democracy can be observed. To avoid further deterioration, many scholars and policy makers are interested in the mechanisms that explain the increase (and decrease) of these indicators, which are considered to be warning sings (Norris 2008; World Bank Development Committee 2006). They agree that to be successful, democracy has to be strengthened. Strengthening democracy, however, is a fragile process that needs the support of all citizens. As soon as major ethnic groups (and their members) are excluded from the political decision-making arena, the risk of instability and conflict increases (see e.g. Cederman, Wimmer, and Min 2008). Other structural inequalities like underrepresentation of ethnic groups – intentionally or not – face the same risk.

Since the beginning of the third wave of democratization (Huntington 1993), Africa has been in the focus of scholars and politicians around the world. One factor identified for the bad African democratic performance are political institutions. Since African countries mostly adopt the political system left by their colonial powers, majoritarian democracy is the most implemented political system. However, scholars challenge the ability of such systems in reducing ethnic tensions (see e.g. Reynolds 1999, 269). They are mostly in favor for power-sharing democracy. Power-sharing democracy is characterized by either consociational (see e.g. Lijphart 1977, 2004, 2008; McGarry and O’Leary, 2006a, 2006b; O’Leary 2005) or intergrative (see e.g. Horowitz 1985; Sisk 1996; Reilly 2001; Wimmer et al. 2004) political institutions. So far, any study that includes ethnic groups ignored individual effects, whereas any study that analyzes individual attitudes towards these power-sharing institutions ignored ethnic groups (see e.g. Anderson and Guillory 1997; Cho and Bratton 2006).

In this study, both, individuals, ethnic groups, countries and years are combined in a multilevel analysis. The analysis concentrates on the relations between individuals and their mem-

1 For an overview, see (Wolff 2007).
bership to ethnic groups in Africa. It is shown that group deviations in satisfaction with democracy to a large extent explain respondents satisfaction. To explain these deviations, this study includes three sets of independent factors: socio-economic variables on the individual level, ethnic group-based variables, and political institutions at the country level. The results demonstrate that both individual and group-based factors explain satisfaction with democracy. Political institutions, however, seem only to be relevant for subjects that define their identity as ethnicity-based and not national-based.

The paper is organized as follows: After introducing the measure of democratization in section one, I briefly present the theories that explain satisfaction with democracy at different units of analysis. Thereafter, I discuss some major challenges of the Afrobarometer data and present the research design. The results of the analysis are given in section five. Section six concludes.

The measure of Democratization

Democratization is a concept that can be measured in various terms, regarding the object of analysis. Most studies agree that democratization refers to a transition towards a free and stable political democratic system. The most prominent measures are Polity IV scores and Freedom House. However, both indicators of democracy do not measure democratization per se, but the current state of democracy. Furthermore, these measures evaluate the current state of democratization at the country level at the country level.

At the individual level, measuring democratization becomes more challenging. One reason for this, is that individuals conceptualize democracy differently: there is no overall definition to which subjects refer to. For example, for some people, democracy is just economic freedom; others consider democracy more as something to do with political participation. Although, the conceptualization differ per person, studies like Bratton and Mathes (2009) have shown that most people are able to give an answer to the question of democracy. The given answers are similar across cultures and of continental backgrounds.

In general, two different individual conceptualizations of democracy can be distinguished: satisfaction with democracy and trust in political institutions. Whereas the latter indicator is seen as valid and reliable (Norris 2011), the first indicator is highly discussed (Canache, Mondak, and Seligson 2001; Linde and Ekman 2003). Canache, Mondak, and Seligson (2001, 511), for example, list five problematic issues of the indicator satisfaction with democracy. One of these
is that survey respondents have to contrast the current state of democracy with some other state. However, it is not clear on which other state respondents correspond to. They might make their evaluation in comparison to other points in time or in comparison to other countries’ states of democracy. Canache, Mondak, and Seligson (2001, 256) conclude that the indicator satisfaction with democracy fails the fundamental tests of validity and reliability. Contrary to Canache, Mondak, and Seligson (2001), Cho and Bratton (2006, 748) conclude that “[i]f the object of study is democratization, then satisfaction with democracy is clearly the preferable indicator” over indicators that just measure trust in democratic institutions. Satisfaction with democracy is the wider indicator and taking this indicator allows this study to be compared to others.

**Satisfaction with democracy**

Studies that analyze satisfaction with democracy can be categorized by the level they are referring to. Almost no quantitative studies concentrate exclusively on using the individual level in their analyses. Either they use the group or the country level as the unit of analysis. The largest amount of research is done with using country level data. This branch of research regards states as unitary actors. If the hypotheses, however, actually apply to lower levels than the national level, inference is misleading\(^2\). Therefore, it is important to include all levels of society.

**Individual factors**

Most studies on democratization are not primarily interested in the effects of individual factors. Rather, these factors are included as control variables. This is surprising because all studies agree that much of the variation in satisfaction with democracy is due to individual differences. Those studies that have used individual factors identified economic well-being as the most important difference: the higher the individual economic situation, the more satisfied individuals are. The same applies to happiness (Frey and Stutzer 2002). If compared to nation wide economic measures, political institutions are even more important than the economic situation within a country (Ibid.). This enforces the importance of individual socioeconomic determinants on the satisfaction with democracy.

\(^2\) See also Buhaug and Rød (2006) who analyze conflict occurrence dependent on geographic micro-level determinants.
Another important individual factor that contributes to the general level of satisfaction is the difference between electoral losers and winners (see e.g. Lingling 2010; Wells and Krieckhaus 2006). It can be shown that individuals that supported a political party that lost the election are more dissatisfied than constituents of a winning party (Ibid.). These effects are, however, mitigated by the political system: the higher the amount of power-sharing, the smaller the gap in satisfaction with democracy between winners and losers (Cho and Bratton 2006, 745).

An often mentioned control factor in these studies is gender. As Kittilson and Schwindt-Bayer (2010) conclude, power-sharing explains citizens engagement within democracy, but only with gender as an interaction variable, otherwise the results yield no support for their hypotheses.

The expected effects at the individual level can be concentrated in two hypothesis. H1a subsumes various socio-demographic expectations, e.g. the older the subjects are, the more critical and the more dissatisfied they are. However, it might also be possible that old(er) people remember colonial history and therefore they are more satisfied with the way how democracy works in their country. Most of these personal characteristics are, however, not of importance. The second hypothesis sums up the influence of the personal economic condition on the level of satisfaction with democracy.

**H1a** Individual socio-demographic determinants influence the individual evaluation of democratic performance.

**H1b** The higher (lower) the individuals economic conditions, the greater (lower) the satisfaction with democracy.

**Ethnicity-based factors**

Recently, despite some critical remarks (see Dunning and Harrison 2010; Gilley 2004; Mueller 2000; Selway 2011), a research branch has been reestablished that focuses solely on the ethnic group perspective. This was partly the result of the coding of a new dataset (EPR - Ethnic Power Relations) that includes all relevant ethnopolitical groups around the world (Cederman, Wimmer, and Min 2010). Studies that were conducted earlier relied on the Minorites at Risk dataset (see e.g. Bermeo 2002; Cohen 1997; Saideman and Ayres 2000; Toft 2003). However,

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3 The individual level is the first level of the multilevel model that is shown below. To differentiate between the various levels included in the model, the hypotheses labels correspond to the multilevel notation. Therefore, H1 refers to the first (individual), H2 to the second (group), and H3 to the third (country) level.

4 See esp. the special issue on “Disaggregating Civil War”, *Journal of Conflict Resolution*, Vol. 53, No. 4, 2009
this dataset includes only minorities “at risk” and therefore not all (relevant) ethnic groups. For example, ethnic groups that rule the government are not included in this dataset.

Even though the EPR dataset was released only in 2009, the results of two studies yield support that the risk of civil war onset increases as major ethnic groups are either excluded from the political arena, downgraded in comparison to other ethnic groups, or underrepresented in terms of political representation (see Cederman, Wimmer, and Min 2008, 2010). Both studies focus on the political inclusion or exclusion of ethnic groups. As this research agenda contributes to the understanding of conflict between groups, within group factors are not analyzed. Rather, ethnic groups are treated as unitary actors.

In his comparative work, Petersen (2002) develops and tests four explanations for why ethnic group rebel: fear, hatred, resentment, and rage. The main conclusion of his research is that resentment is the most effective explanation for ethnic group conflict in Eastern Europe. Resentment refers to structural inequalities between groups. As soon as the benefits of conflict exceed the emotion of being oppressed by other groups, the group attacks another that is “perceived to be farthest up in the ethnic status hierarchy [but] can be most surely subordinated” (2002, 25). This result yields support for the idea that the inclusion of ethnic group inequality measures are of importance in the explanation of satisfaction with democracy. Cho (2007, 1) enforces this argument: “A group of people feeling politically and economically alienated is likely to express lower levels of support for the political system”. As a consequence, this “may result in the collapse of fledgling democratic regimes” (1, see also Cho 2010).

Contrary to previous studies mentioned, but in line with Selway (2011), Chandra (2005) makes the counterintuitive claim that group identification is multi-dimensional: belonging to ethnic groups can change as time or issues change. Using game-theoretic models, she demonstrates that even in majoritarian democratic systems, peace can prevail. A necessary condition, however, is the existence of a symmetric cleavage structure, i.e. whereas some voters prefer one party on one issue dimension, the same amount of voters prefer another party on another issue. Overall, her results yield support that both individuals and groups are important actors that simultaneously influence democratic development. Therefore, both actors have be included in any analyses that focus on democracy. Implicitly, she stresses the importance of individual identification with one’s ethnic group. People that identify strongly with their ethnic group are more supposed to think in ethnic terms than people that identify themselves with the country’s national identity. Satisfaction with democracy is directly linked to the personal identification and should decrease the more people think in ethnic terms, vice versa.
At the group level, four hypotheses can be derived. Three of them include a different evaluation of group-based performance in comparison to other groups. The fourth hypothesis summarizes the expectation of people’s identification with their ethnic group versus identification in terms of country’s national identity.

**H2a** The higher (lower) the perceived economic performance of one’s ethnic group compared to other groups, the higher (lower) satisfaction with democracy.

**H2b** The greater (lower) the influence of an ethnic group compared to other groups, the more (less) satisfied individuals are.

**H2c** The more (less) equally an ethnic group is treated, the higher (lower) satisfaction with how democracy works.

**H2d** The stronger (weaker) identification with one’s ethnic group, the lower (higher) satisfaction with democracy.

**Political institutions**

Most studies that rely on satisfaction with democracy as the dependent variable include only some elements of a wider spectrum of political institutions. Even though Lijpharts theory of consociational democracy (Lijphart 1977, 2004, 2008) encompasses four institutions – broadbases or grand coalitions
\footnote{See the refinements made by O’Leary (2003, 2005) and McGarry and O’Leary (2006a, 2006b).}, minority vetoes, proportionality, and segmental autonomy – only governmental and electoral system designs are analyzed in detail. The main reason for this lack, is the data availability: while data for governmental and electoral systems are available, data for other power-sharing institutions are difficult to obtain. Although, these two institutions are of high importance as they characterize the main features of majoritarian and power-sharing democracy (see also Sisk 1996), they cannot adequately map theories of constitutional engineering.

Both, parliamentary governmental systems and proportional electoral systems are expected to increase satisfaction with democracy. Within these power-sharing institutions, the number of winners increase and therefore satisfaction with democracy will be higher compared to majoritarian systems (Norris 2011, 210). These institutions guarantee each group its share in politics – proportional to their constituency. Additionally, they help building cross-ethnic coalitions, which ensure parliamentary majority. And “if people consider that the rules of the game allow their preferred party to win a share of power, they are more likely to trust political institutions and to be satisfied with government and regime performance” (Cho and Bratton 2006, 736)
In general, Frey and Stutzer (2002) argue that people living in full democracies are happier than people living in partial democracies (422). No difference is made, however, between different theories of constitutional engineering. One of the first studies evaluating the design of institutions and their consequences on satisfaction with democracy was conducted by Anderson and Guillory (1997). The results of their country-level aggregated analysis highlight that differences in satisfaction with democracy within Western Europe societies are smaller in consensual democracies. Even though Norris (1999) contradicts their findings by evaluating the consequences of political institutions on trust in political institutions, their finding are supported by other scholars (Cho 2010; Lingling 2010). However, for power-sharing institutions, Norris’ (2011, 213) results “per se failed to determine overall levels of democratic satisfaction in any society”. Similarly, for Lesotho, Cho and Bratton (2006) summarize that “[the] reform of the electoral system ha[d] no direct, general effect on citizens’ satisfaction with democracy” (743). Only if electoral winners and losers are analyzed separately, proportional representation system increase satisfaction within winners, but decrease satisfaction within losers of the electoral reform (748). If, however, “[ . . . ] this concept is measured in terms of institutional trust, […] we have also found trace evidence among non-partisans in Lesotho that [majoritarian] […] rules are more conducive to political support” (748).

To sum up, two hypotheses can be constructed, both supporting power-sharing institutions.

H3a In parliamentary political systems, satisfaction with democracy is higher compared to presidential systems.

H3b Proportional representation electoral systems increase satisfaction with democracy compared to majoritarian first-past-the-post electoral systems.

Afrobarometer data

Since the beginning of the third wave of democratization, many scholars are interested in the factors that influence democratization. However, scholars interested in a comparative individual perspective highly depend on data availability. As of the beginning of 2000, there are two major sources for individual data in Africa: the World Value Survey and the Afrobarometer. Both research institutes conduct surveys in African countries. Country coverage for Afrobarometer, is however, higher than for the World Value Survey. The World Value Survey includes data for nine African countries, Afrobarometer includes data for 20 countries. Additionally, time
coverage is higher for Afrobarometer data. Therefore, I rely on the data provided by the Afrobarometer research project.

The Afrobarometer research project conducts surveys that are repeated regularly. It includes data for four rounds: 1999-2000, 2002-2004, 2005-2006, and 2008-2009. Between each round, the amount of countries covered subsequently increased. Additionally, some surveys that were not part of the regular cycle were conducted, e.g. for Nigeria in 2000 and 2007. Within each country and round – including surveys out of the regular cycle –, at least 1,200 (for large countries 2,400) respondents were asked the same questions. However, this only holds true for countries within the same Afrobarometer round. Question wording, question labeling and question codings changed between different rounds. Additionally, in later rounds, questions were added that previously were not part of the survey. The data structure is equivalent to a repeated or pooled cross-section. For a comparative analysis, however, it is essential, that both question wording and coding is identical. Therefore, a dataset had to be created that includes all questions that correspond to each other over all rounds. In some rare situations, codings had to be changed. If this was the case, the process is described in the section below.

Although the Afrobarometer is the most comprehensive dataset for Africa, it faces some anticipated challenges. In the context of this analysis, at least two survey errors are relevant: sampling errors and nonresponse. The first error refers to the possibility that some parts of the population are not included in the survey. Especially in Africa, not all geographic regions are easily accessible. The second error – nonresponse – is caused by the fact that not all respondents are willing or able to respond to the questions. For a complete list of possible errors see Groves (2004). However, these possible errors are discussed and adequately dealt within the Afrobarometer (see Curtice 2007).

From the four rounds of the Afrobarometer, the first round is characterized by the least comprehensive data collection. Some questions that are indispensable to the hypotheses relationships are not included. Due to the sparse data availability, round 1 of the Afrobarometer is excluded from the analysis.

Operationalizing satisfaction with democracy

The dependent variable results from the answers to the question: Overall, how satisfied are you with the way democracy works in [your country]?

The codebook and dataset is available shortly after publication.

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6 The codebook and dataset is available shortly after publication.
scriptive statistics across the different round show, however, that even if respondents deny any
democratic qualities to their country, some were very satisfied with the way how democracy
works in their country. These answers were recoded as missings. Additionally, the five-point
scale had to be transferred to a binary measure of satisfaction with democracy out of time
reasons. Running an ordered logit multilevel model without covariates took almost 5 hours.
The same model, but with the recoded binary dependent variable took “only” 2 hours. There-
fore, satisfaction with democracy equals 1 if respondents are “fairly” or “very” satisfied with
democracy; 0 if respondents are “not at all” and “not very” satisfied.

**Operationalization of independent variables**

Whereas only one source was used for the variables at the individual and group level (Afro-
barometer), variables at the country level were taken from three sources: the Database of
Political Institutions (Beck et al. 2001), the United Nations Statistics Division, and the Polity
IV project.

The variables at the individual level are operationalized as follows:

- **Age** Age is coded as the respondents natural age, i.e. no transformation has been applied.
- **Gender** Gender is coded as 1 for male and 2 for female.
- **Education** Education reflects the highest level of education and is measured at nine-point
  scale; from 0 “no formal schooling” to 9 “post-graduate examinations”.
- **Employment** Employment is operationalized as the individual’s employment status. It is
  measured at a six-point scale, including the current employment status and the behavior
  of respondents – whether they are looking for a new employment or not.
- **Individual’s living conditions** The scale used to measure these conditions ranges from 1
  “very bad” to 5 “very good”.

At the group level, four variables are used in the analysis. Similar to the previous variables, these
variables were also answered by individuals. However, the respondents had to make a compar-
ison between their ethnic group performance versus other groups’ performances. Respondents
could and did, however, not only identify themselves in ethnic terms. Other identifications
were made, e.g. age-related, religion-based, or based on their origin. In this study, only ethnic
groups are of interest. Respondents that identify themselves in other terms than in ethnicity
were recoded as not to belong to an ethnic group. The codings were then cross-checked with
In the Afrobarometer data, however, the respondents identity answers are only given in round 3 and 4. Previous round data is only available as raw categories, i.e. it is only coded whether the respondent answer was, for example, religion-based or ethnicity-based. As a consequence, most respondents in these rounds were coded as non-members of ethnic groups even if the self-description is coded as ethnicity-based. Therefore, as soon as ethnicity based variable are entered in the analysis, only rounds later than round 2 are included, which results in a decrease of observations.

**Economic conditions** The question used to measure this variable is: *Think about the condition of [your identity group]. Are their economic conditions worse, the same as, or better than other groups in this country?* The answers were recoded into a range from 0 meaning “much worse”, i.e. in the individual perspective, the economic conditions of their identity group is much worse compared to other groups, to 5 meaning “much better”.

**Influence** The same coding rules apply for the influence of one’s identity group: 0 equals “much less” and 5 equals “much more”.

**Treatment** To evaluate the ethnic group’s treatment, the following question was used: *How often [is your ethnic group] [. . . ] treated unfairly by the government?* The four-point scale ranges from 1 “never” to 4 “always”.

**Importance of ethnicity** This variable measures indirectly the degree of identification with the ethnicity in comparison to the national identity. However, this measure is only available for rounds 3 and 4. The answers were recoded binary – identification with the country’s identity is coded as 0, ethnic identification as 1.

The last subset of independent variables describe country-level characteristics.

**Polity IV** To verify whether respondents answers are in line with scientific evaluation of the current state of democracy, Polity IV was included in the analysis. Polity IV ranges from -10 to 10, with totally autocratic regimes coded -10 and totally or full democratic systems coded 10.

**Parliamentarism** Parliamentarism is a dummy variable that takes the value 1 for parliamentary governmental systems, 0 otherwise. The variable originates from Beck et al. (2001).

**Proportional election system** The electoral system is coded binary: proportional electoral systems are coded 1, 0 otherwise. This variable was taken from Beck et al. (2001).

**GDP** GDP measures the country’s economic performance. Due to the skewed distribution, the logarithm of GDP is used. The variable originates from the United Nations Statistics Division.
**Population size** To control for the size of population, the logarithm of population is included in the analysis. The variable was taken from United Nations Statistics Division.

**Structure of the dataset**

The dataset comprises individuals, ethnic groups, countries, and years. Starting at the lowest level, individuals are nested within ethnic groups. For individuals that identify not in ethnic terms, a blank ethnic group was generated. Groups, again, are nested within countries. However, some ethnic groups cross borders. It is expected that identification with the same ethnic groups has the same group-effects on both sides of a border. Therefore, the relationship is not strict hierarchical – some ethnic groups belong to more than one country. Countries, on the other hand, are nested within years. With the exception of Burkina Faso and Liberia, all surveys are at least conducted twice per country. Nevertheless, the clustered structure of the data is best suited to fit a cross-classified random-intercept multilevel model.

**Descriptive statistics**

Including all rounds, there are 107,162 individual observations in the constructed dataset. However, round 1 observations were dropped because of data availability resulting in 85,631 observations. The survey respondents in the final dataset are nested within 601 ethnic groups. Counting the number of ethnic group members, membership varies between 1 and 644 members. The mean is 256 members with a high standard deviation of 197. In the final dataset, 20 countries are nested in 9 years.

Comparing the variances of satisfaction with democracy at each level, it is shown that the variance within each level is higher than the variance between the levels, indicating the importance of using a multilevel model. In figure 1, the overall level of satisfaction with democracy per country is illustrated. For rounds 3 and 4, the upper part of the figure (a and b) demonstrates the mean level of satisfaction with democracy per country; the lower part (c and d) plots the standard deviation of the mean level of this indicator per ethnic group per country. Overall, the figure illustrates that both time and ethnic group effects have to be taken into account. Figure 1 shows that some country means of satisfaction with democracy change between round 3 and 4. Both, upward and downward trends can be identified. These trends can be also seen for the ethnic group means: in some countries, group differences in evaluation of satisfaction with democracy increase; in some they decrease. Also not shown here\(^7\), the same

\(^7\) The figures are available upon request.
patterns can be identified if one plots the country means and group differences for the three group variables.

**Figure 1:** Mean and group deviation of satisfaction with democracy for round 3 and 4

(a) Round 3: mean

(b) Round 4: mean

(c) Round 3: std.dev.

(d) Round 4: std.dev.

The country’s overall mean in satisfaction with democracy is presented in the upper part of the figure, i.e. figures (a) and (b). Standard deviation between ethnic group means are plotted in figures (c) and (d).

**Research Design**

Within the framework of the multilevel method, the effect of each level can be evaluated, i.e. individual, ethnic group, country, and time variations are included. Standard regression models assume that observations are independent from each other. This assumption is violated in the nested observations. However, within multilevel analysis, this possible selection bias is included.

8 Furthermore, in figure 1, country coverage can be seen.
The variation parameters, i.e. the variation across the unit of analysis per level, however, are more than error terms. They are explicitly modeled in the analysis.

Formally, in the notation of Rabe-Hesketh and Skrondal (2008), the probability of satisfaction with democracy is

\[
\logit\{Pr(y_{iecy} = 1 \mid x_{iecy}, \zeta_{cecy}, \zeta_{cy}, \zeta_{y})\} = \beta_1 + \beta_2 x_{2iecy} + \cdots + \beta_p x_{piecy} + \zeta_{cecy} + \zeta_{cy} + \zeta_{y}
\]

where \(x_{iecy} = (x_{2iecy}, \ldots, x_{piecy})'\) as the vector of covariates and

\[
\begin{align*}
\zeta_{cecy} | x_{iecy}, \zeta_{cy} & \sim N(0, \psi^{(2)}) \\
\zeta_{cy} | x_{iecy}, \zeta_{y} & \sim N(0, \psi^{(3)}) \\
\zeta_{y} | x_{iecy} & \sim N(0, \psi^{(4)})
\end{align*}
\]

as the cross-classified random intercepts. \(\zeta_{cecy}\) is a random intercept varying over ethnic groups, \(\zeta_{cy}\) is varying over countries, and \(\zeta_{y}\) is varying over years. The random intercepts are assumed to be independent of each other and across clusters, and, additionally, \(\zeta_{cecy}\) and \(\zeta_{cy}\) are assumed to be independent across units (see Rabe-Hesketh and Skrondal 2008, 445). The subscripts \(i, e, c,\) and \(y\) define the respective level: individual, ethnic group, country, or year. \(^9\)

**Results**

To evaluate the effects of the variance components, a null-model is specified. The results of model 1 can be interpreted as this baseline model. In the other three models, independent variables are subsequently included. Model 2 analyzes the effect of the individual variables on satisfaction with democracy. In model 3, the effects of ethnic group variables are analyzed. Model 4 emphasizes the effects for country-level variables. In model 5, all previous included variables are combined. And finally, model 6 includes the importance of one’s ethnic group, both as a raw coefficient and as an interaction effect with political institutions.

The coefficients are reported as odds-ratios. Due to this, one cannot compare the magnitude of the coefficients directly. Rather it depends on the scales of the variables. Values below 1 decrease the odds of being satisfied with democracy compared to a one-unit increase in the independent variable if all other variables are held equal; values above 1 increase the chance

\(^9\) The models were run in Stata 11.2 using xtmelogit, see Rabe-Hesketh and Skrondal (2008) for more details.
of satisfaction with the way how democracy works, ceteris paribus. Variance components are reported as standard errors.

Table 1 shows that the variance component of countries is highest across all models. Both, group and year variance components are smaller. This implicates that the most important factor for the evaluation of the differences in satisfaction with democracy are the country-level variables. The evaluation of satisfaction with democracy between years is rather time-invariant.

For model 1, the random coefficients and the appropriate standard errors for countries and years are shown in figure 2\textsuperscript{10}. For groups, the random coefficients are too many to be presented. Also, random coefficient standard errors are often higher than for years and groups because some groups consist of very few members\textsuperscript{11}.

Some scholars denote an overall decline in satisfaction with democracy (see e.g. Pharr and Putnam 2000). Figure 2(a), however, demonstrates that this temporal decline is not apparent in African countries. Years above the 0-line are characterized by an increased probability of democratic satisfaction compared to the overall probability. The variation of the random coefficients for countries is demonstrated in figure 2(b). With a range between -1.4 and almost 1, the country that performs best is Benin (number 434). Zimbabwe (number 552), however, has the lowest random intercept prediction.

Focusing on the coefficients, it can be seen throughout the models that the coefficients are robust. Even in the models that include only one level of analysis, the effects stay the same. Since the log-likelihood ratio-test can only be applied in cases of nested models, additionally, the Akaike Information Criterion (AIC) was calculated. Using this criterion, model 6 proves to be best. However, the difference to model 5 is only very small.

At the individual level, all variables beside of Employment are highly significant\textsuperscript{12}. Compared to younger people, older ones have a higher level of democratic satisfaction. Compared to males, females are less satisfied with the way democracy works. The odds-ratio of education reveals that an increase in education decreases the probability of being satisfied. Finally, the better the living conditions, the higher the satisfaction. Therefore, both hypothesis H1a and H1b are confirmed.

Turning to the group-level variables, H2a and H2b are confirmed. The higher the perceived economic performance of one’s ethnic group, the higher the probability of satisfaction with demo-

\textsuperscript{10}The reason for choosing this model’s random coefficients is due to missing data when other models are used, e.g. not all years are included. Overall, the effects for other models are more or less the same.

\textsuperscript{11}In the extreme case, only 1 respondent belong to an ethnic group.

\textsuperscript{12}This might be due to the coding, see operationalization of employment.
<table>
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<th>Model 1</th>
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<th>Model 3</th>
<th>Model 4</th>
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<td></td>
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<tr>
<td>Employment</td>
<td>0.996</td>
<td>1.001</td>
<td>1.001</td>
<td>1.001</td>
<td>(0.005) (0.007)</td>
<td></td>
</tr>
<tr>
<td>Living cond.</td>
<td>1.386***</td>
<td>1.308***</td>
<td>1.305***</td>
<td>1.305***</td>
<td>(0.010) (0.013)</td>
<td></td>
</tr>
<tr>
<td>Group level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic cond.</td>
<td>1.219***</td>
<td>1.167***</td>
<td>1.164***</td>
<td>1.164***</td>
<td>(0.015) (0.015)</td>
<td></td>
</tr>
<tr>
<td>Influence</td>
<td>1.109***</td>
<td>1.111***</td>
<td>1.108***</td>
<td>1.108***</td>
<td>(0.013) (0.014)</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0.753***</td>
<td>0.769***</td>
<td>0.775***</td>
<td>0.775***</td>
<td>(0.001) (0.001)</td>
<td></td>
</tr>
<tr>
<td>Ethn. Importance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.723***</td>
<td>(0.029)</td>
</tr>
<tr>
<td>Country level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polity IV</td>
<td>1.247***</td>
<td>1.422***</td>
<td>1.426***</td>
<td>1.426***</td>
<td>(0.034) (0.059)</td>
<td></td>
</tr>
<tr>
<td>Parliamentarism</td>
<td>0.613</td>
<td>0.874</td>
<td>0.831</td>
<td>0.831</td>
<td>(0.381) (0.625)</td>
<td></td>
</tr>
<tr>
<td>Parl × Importance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.412***</td>
<td>(0.146)</td>
</tr>
<tr>
<td>Prop. Representation</td>
<td>0.492</td>
<td>0.658</td>
<td>0.653</td>
<td>0.653</td>
<td>(0.222) (0.347)</td>
<td></td>
</tr>
<tr>
<td>PR × Importance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.094</td>
<td>(0.068)</td>
</tr>
<tr>
<td>GDP</td>
<td>1.046***</td>
<td>0.935***</td>
<td>0.938***</td>
<td>0.938***</td>
<td>(0.016) (0.018)</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.798</td>
<td>1.113</td>
<td>1.114</td>
<td>1.114</td>
<td>(0.163) (0.237)</td>
<td></td>
</tr>
<tr>
<td>Random coeff.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\sqrt{\psi^{(2)}_{group}}$</td>
<td>0.540</td>
<td>0.505</td>
<td>0.351</td>
<td>0.528</td>
<td>0.335</td>
<td>0.329</td>
</tr>
<tr>
<td>$\sqrt{\psi^{(3)}_{country}}$</td>
<td>0.641</td>
<td>0.638</td>
<td>0.711</td>
<td>0.877</td>
<td>1.061</td>
<td>1.068</td>
</tr>
<tr>
<td>$\sqrt{\psi^{(4)}_{year}}$</td>
<td>0.388</td>
<td>0.374</td>
<td>0.299</td>
<td>0.570</td>
<td>0.226</td>
<td>0.229</td>
</tr>
<tr>
<td>Model-fit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-47313</td>
<td>-45216</td>
<td>-25381</td>
<td>-45807</td>
<td>-23907</td>
<td>-23668</td>
</tr>
<tr>
<td>Observations</td>
<td>74700</td>
<td>73711</td>
<td>41399</td>
<td>72024</td>
<td>39400</td>
<td>39073</td>
</tr>
</tbody>
</table>

Significance levels:  * : 10%  ** : 5%  *** : 1%  
Figure 2: Random coefficients of years and countries

(a) Years

(b) Countries

Random coefficients and standard errors are deduced from model 1 in table 1. For better comparison, coefficients are sorted per rank. Coefficients are labeled with the corresponding year or with their country code. Note the different scales.

cracy. The same holds true for the influence of ethnic groups: the more influence a group has, the more likely an individual is satisfied with democracy. Since the variables are coded identical, the coefficients can be compared: economic conditions prove to be more important than the influence of an ethnic group. The hypothesized relationship in H2c is also as expected: individuals that describe the governments treatment of the ethnic group as always unfair are less satisfied with democracy. The last group hypothesis, H2d, is also confirmed. In model 6, the coefficient of the odds-ratio is as expected: subject that think in ethnic terms are more likely dissatisfied with democracy in their country.

To relax the assumption that for each group variable the probability of satisfaction with democracy per group is the same, a random slope model was analyzed. The overall model-fit however, indicates that the random-intercept model is superior. Additionally, random slope effects were small and the covariance matrix proved that no interesting covariations exist.\(^\text{13}\)

Finally, at the country level, only hypothesis H3a is confirmed. The results do not support hypothesis H3b. It is important to note, however, that the effect of parliamentary systems is only significant in interaction with the importance of ethnic groups. Survey respondents that identify themselves in ethnic terms are more likely to be satisfied with democracy in parliamentary systems than in majoritarian systems. For proportional representation electoral systems, the interaction effect is insignificant. Individuals evaluation of democracy is significantly linked to the extent of democracy: the higher the Polity IV measure of democracy, the higher the odds-

\(^{13}\)Results available upon request.
ratio of satisfaction. For the control variables, the effect of GDP changes between model 4 and models 5 and 6. In model 4, the effect of the country’s economic wealth is significantly higher than 1, in models 5 and 6, the effect reverses to a value significantly smaller than 1. This, again, proves the importance of including both individuals and countries adequately within the same model. As soon as individual economic living conditions are included in the analyses, the country’s economic performance loses relevance. For satisfaction with democracy, individual well-being is more important than country well-being.¹⁴

Conclusion

The analysis in this study proves that individual group evaluations are at least as important in explaining satisfaction with democracy than individual factors. Better economic conditions and more influence of ethnic groups increase satisfaction. Governments that are interested in citizens satisfaction with democracy – and on the long run in the stability of the society – could therefore introduce policies that increase the influence of ethnic groups. One of the major principles of democracy is, however, that all individuals have the same rights. Favoring particular ethnic groups and their members contradicts this principle. It might, on the long run, destabilize society. An equal treatment of ethnic groups is therefore strongly recommended. Members of ethnic groups demand the same rights than other groups within the society. Only a society in which each citizen has the same rights ensures peace and strengthens democracy.

Another strategy, although politically hard to enforce, is to strengthen the level of economic development. Individuals that perceive their living conditions as good, are satisfied with the way how democracy works in their country. Living conditions are, however, more than economic well-being. A good educational system, infrastructure, and housing also improve living conditions. At the group level, economic well-being inflates satisfaction. Again, this yields support for governmental strategies that improve economic development.

Regarding political institutions, individuals that identify themselves in ethnic terms are more likely satisfied with democracy in parliamentarian than majoritarian governmental systems. The effect of proportional representation electoral systems is insignificant. Though it might be challenging to include ethnic “hardliners” to daily politics, a parliamentary system seems to work best. However, a cautious note has to be made, however: data for parliamentary

¹⁴To evaluate the effect in more detail, an interaction term of individual and country wealth could be included in further analyses.
systems is rare. Within the sample there are only three African countries that are characterized by a parliamentary governmental system: Botswana, Lesotho, and Zimbabwe.

To improve the analysis, several steps should be made in future research. First, politics is also made at the local level. Therefore, whenever possible, the country’s sub-national entities should be included in further analysis. Whereas statistical challenges are to be faced, gathering the necessary data is a more complicated task. As long as sub-national entities are treated equally data can be collected. If, however, a state is characterized by an autonomous region, the data generating process must include geographic location of individuals and ethnic groups.

Another improvement that can be made, is to combine group-based datasets with individual survey data. The most comprehensive group-based dataset is the Ethnic Power Relations dataset (see Cederman, Wimmer, and Min 2010). This dataset includes all political relevant ethnic groups. Even if for Africa many ethnic groups that were identified by respondents as their ethnic group drop out because their group is not coded as relevant within EPR, it will improve further understanding of the correlations between ethnic groups and their members.

In conclusion, this study is the first important step towards a unified model of ethnicity. To further understand democratization processes, it is important to specify more models that unite individuals, their membership to ethnic groups, and country level influences. Policy makers rely on such models to implement the appropriate actions that strengthen democracy.
References


Rabe-Hesketh, Sophia, and Anders Skrondal. 2008. Multilevel and longitudinal modeling using Stata. 2nd. College Station, TX: Stata Press.


