

Working Paper No. 176

# **The autocratic trust bias: Politically sensitive survey items and self-censorship**

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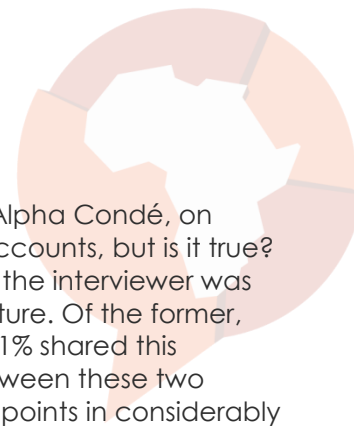
## Abstract

Because of a perceived risk of repressive action, some survey questions are likely sensitive in more autocratic countries while less so in more democratic countries. Yet survey data on potentially sensitive topics are frequently used in comparative research despite concerns about comparability. In a novel approach to examining the comparability of politically sensitive questions, I employ a multilevel analysis with more than 140,000 respondents in 36 African countries to test for systematic bias when survey respondents believe (fear) that the government, rather than an independent research institute, has commissioned the survey. The findings indicate that fear of the government induces a substantial and significant bias on questions regarding the citizen-state relationship in more autocratic countries, but not in more democratic countries. Moreover, respondents who think the government commissioned the survey do not answer differently on innocuous, apolitical questions than respondents who believe the survey to be independent, regardless of regime type. This has practical implications for the comparative use of survey data.

## Acknowledgements

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## 1. Introduction

When Guineans were asked in 2013 how much they trusted President Alpha Condé, on average 45% said “a lot.” This is considered strong approval by most accounts, but is it true? When respondents are divided into two groups, one that believes that the interviewer was sent by the government and one that does not, we get a different picture. Of the former, 56% indicated “a lot” of trust in Condé, while in the latter group, only 31% shared this sentiment. In contrast, in highly democratic Ghana, the difference between these two groups of respondents was only 4 percentage points, compared to 25 points in considerably less democratic Guinea.<sup>1</sup> There seems to be something going on here with respect to perceived survey sponsor and the type of regime respondents live in.

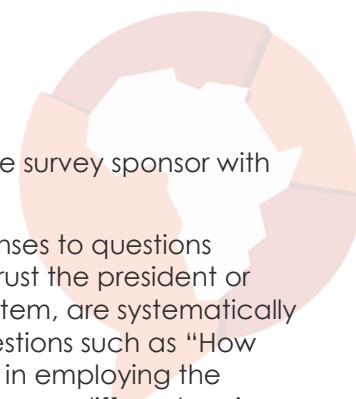
It is well known that respondents tend to give untruthful answers to sensitive survey questions due to “social desirability bias.” If their true opinions deviate from a strong societal norm, it can be socially desirable for respondents to misreport their opinions or preferences regarding sensitive issues such as sexuality, race, or income (Tourangeau & Yan, 2007). In autocratic countries, certain questions are sensitive for reasons beyond privacy and social adaptation – in particular questions regarding citizens’ relation with, and attitudes toward, the authorities. Respondents subjected to autocratic rule may practice “preference falsification” to align their answers with the perceived wishes of the regime (Kuran, 1997). Given that authoritarian regimes often pay close attention to what their citizens do and say in order to sanction those who challenge the official discourse (Linz, 2000), there is a real risk that respondents will associate public opinion surveys with government intelligence gathering. Respondents can therefore be expected to appease the regime with their responses out of fear that failure to do so may result in repression, physical or otherwise. In semi-democratic systems dominated by patronage politics, voters who fail to show their political support for the government may fear, not outright repressive actions, but being excluded from patronage networks and expected benefits (Bratton, Bhavnani, & Chen, 2012). To the extent that citizens practice self-censorship in any form, and that the prevalence of this depends on the perceived risk of repressive action or exclusion, responses on sensitive issues are systematically biased across countries and are therefore not comparable between countries where the perceived risks differ.

Yet despite this, scholars conduct comparative studies of both the causes and effects of, for example, trust in government, democratic attitudes, regime support, and political legitimacy across countries with varying regime types (see Gilley, 2006b; Gilley, 2006a; Booth & Seligson, 2009; and Moehler, 2009), relying on data derived through direct questions on these (in some countries, but not in others) potentially sensitive topics. Other researchers simply omit suspicious outliers from their samples, such as China and Vietnam, where some 90% of respondents trust the national government “quite a lot” or a “great deal” (Asian Barometer, 2008). This restricts academic inquiry regarding trust in the government to democracies and low-trust autocracies. It is difficult to say which approach is less problematic.

In order to test the extent to which citizens practice self-censorship when responding to surveys in countries where they experience different perceived (and real) risks of repressive action, I employ a simple, yet novel, research design that utilizes the fact that some respondents think the government sent the survey enumerator to interview them while others believe the enumerator works for an independent research organization. I then analyze whether these two groups of respondents answer systematically differently to potentially sensitive questions, and whether this difference is a function of the climate of political repression as proxied by the level of democracy and measures of political violence. In a multilevel design, I draw upon data from more than 140,000 respondents across 36 African

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<sup>1</sup> The results summarized in this paragraph are drawn from the Afrobarometer Round 5 survey ([www.afrobarometer.org](http://www.afrobarometer.org)).



countries to test the interaction effect of respondents' beliefs about the survey sponsor with the level of democracy in the respondents' country.

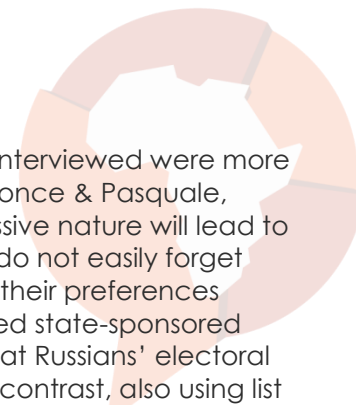
The results indicate that there is indeed an autocratic trust bias. Responses to questions related to the citizen-state relationship, such as whether respondents trust the president or prime minister and whether they think democracy is a "preferable" system, are systematically biased with the level of democracy in the country, while apolitical questions such as "How much do you trust your neighbors?" are not. Thus caution is warranted in employing the former type of survey items, but not the latter, in comparative studies across different regime types. Lastly, I provide an example of how we can account for the systematic bias enjoyed by more autocratic regimes by replicating Bratton, Bhavnani, and Chen's (2012) study *Voting intentions in Africa: Ethnic, economic or partisan?* and show how the interpretation of one of their hypotheses changes when we introduce the cross-level interaction. Their main results are resilient to a robustness check using only data from respondents who believe in the independence of the enumerator.

## 2. Self-censorship and how to estimate it

Survey respondents can feel the need to censor their responses if a question invades private matters, if it elicits responses that can be socially undesirable or politically incorrect, or if respondents fear that their responses can have consequences if disclosed (Tourangeau & Yan, 2007). Thus questions related to, for example, income (Chung & Monroe, 2003), voter turnout (Holbrook & Krosnick, 2010), prejudice against other ethnic or religious groups (Kuklinski, Cobb, & Gilens, 1997), and drug abuse or other illegal activities (Krumpal, 2013) can cause respondents to hide the truth because of (a) concerns about their image, (b) fear of social sanctioning from peers, or (c) fear of punishment. This can lead to high rates of systematic non-responses and/or biased answers, resulting in poor data. While (a) and (b) induce social desirability bias in surveys conducted in both democratic and autocratic regimes, (c) is of greater concern in autocratic and semi-autocratic contexts, where the perceived risk of repressive action is likely to be higher. Indeed, Kuran (1997) argues that citizens subjected to authoritarian rule have strong incentives to practice "preference falsification," and Schedler (1999) raises concerns about the possibility of obtaining reliable measures of regime legitimacy through representative public-opinion surveys or qualitative interviews in autocracies because of the opaque and repressive features of those regimes. Fear of repercussions for failing to give the officially desired answer is expected to have an effect on responses, especially when respondents are uncertain about their anonymity.

So what does this mean for cross-country comparative studies if we are interested in, for example, approval ratings, regime support, or the legitimacy of the regime attributed by citizens? If the levels of self-censorship are more or less equal across countries on proxies for or components of said question or indexes, the issue is less problematic. We would simply have to deal with either inflated or deflated numbers across the board. However, if the propensity to self-censor depends on some traits that are heterogeneous across countries, such as the level of democracy or political repression, the size of the bias differs between countries, and thus restricts the possibility of comparative analysis. In a comparative study of political approval ratings in 128 countries, Guriev and Treisman (2016) make an effort to account for the influence of fear by including repression in their analysis and controlling for whether leaders receive higher ratings during years of increased repression. While they find no clear relationship between repression and approval, I would expect the effects of repression to be long-lasting, especially in the absence of a regime transition.

Some recent findings warrant caution regarding the reliability of survey responses in repressive and non-democratic settings. A recent study by Garcia-Ponce and Pasquale (2015) in Zimbabwe – where government repression and insecurity are commonplace – indicates that an upward bias of survey respondents' reported level of trust in the president and the ruling party is affected by recent experiences of state-led repression. Respondents



who had experienced state-led violence up to 30 days prior to being interviewed were more likely to believe that the state had commissioned the survey (Garcia-Ponce & Pasquale, 2015). While this suggests that a recent reminder of the regime's repressive nature will lead to inflated levels of reported trust, it is reasonable to believe that citizens do not easily forget what kind of regime they are subjected to and should therefore falsify their preferences (perhaps to a lesser degree) even if they have not recently experienced state-sponsored violence. Kalinin (2016) employs a series of list experiments and finds that Russians' electoral support for Vladimir Putin is inflated by about 20 percentage points. In contrast, also using list experiments, Frye, Gehlbach, Marquardt, & Reuter (2017) estimate Putin's approval ratings at about 10 percentage points below those received through direct questioning but conclude that direct survey questions largely reflect the attitudes of Russian citizens. In the Chinese context, Jiang and Yang (2016) show an increase in preference falsification in the aftermath of a major political purge in Shanghai. While these studies show that approval and political support were still staggeringly high, they support concerns that respondents inflate their approval in autocratic settings.

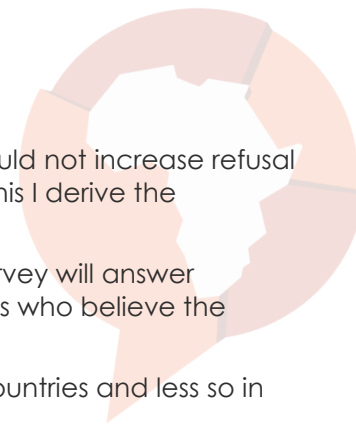
Does this mean that we cannot trust citizens' trust in government, or their political preferences in general? To answer this question, we need to move away from single-country case studies and test for systematic bias across a larger sample of countries. To test for response bias due to perceived fear of the government, I turn to Afrobarometer data, specifically the last item of the Afrobarometer battery, which asks, "*Just one more question, who do you think sent us to do this interview?*"<sup>2</sup> Even though the enumerators conducting the survey introduce themselves as affiliated with "an independent research organization" that does not "represent the government or any political party," in the sixth round of the Afrobarometer survey, 38% of respondents believed that the survey was sponsored by the government, while 48% considered it to be independent and 13% stated that they did not know. With the help of this survey question, I divide respondents into three groups: non-suspecting (those who believe the survey to be independent), suspecting (those who believe the government was sponsoring the survey), and a "Don't know" group.

This item has been featured as a proxy for the "costliness of dissent" or "fear of the government" in models predicting vote choice in 16 African countries (Bratton, Bhavnani, & Chen, 2012) and voting intentions in Zimbabwe (Bratton & Masunungure, 2012). In contrast to these authors, I argue that the propensity to suspect the government as sponsor of the survey in one country is not very informative or a good proxy for political fear in that country. This is illustrated by the fact that in the most democratic and the most autocratic countries in the 2012 sample, Cape Verde and Sudan, virtually the same percentage of respondents (46-47) believed the government to be sponsoring the survey. In the full sample of 36 countries, suspecting the government as survey sponsor is only correlated with the country's level of democracy at a level of .11. It is clear that this variable in and of itself is a poor proxy for costliness of dissent. Instead, beliefs about survey sponsorship should have an impact only to the extent that respondents also fear punishment from the authorities. Studying the anomaly of Ethiopians' views of democracy, Mattes and Teka (2016, p. 31) note the surprising fact that respondents who believed the state to have ordered the survey were "less likely to state that they feared speaking their mind about politics." This does, however, make sense considering that the very question about whether or not one must be careful of what one says about politics is itself potentially a sensitive question.

In sum, suspicion of the survey sponsor should lead to preference falsification on potentially sensitive topics, but not on questions that are apolitical in nature. If you falsify your preferences out of fear of the regime, you should be more likely to do so when you believe the regime will learn what you say. Following the same reasoning, suspicion of the survey

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<sup>2</sup> I am not aware of any other survey that includes a similar question, which is why I have been able to test my proposition only in the African context.



sponsor may increase “Don’t know” answers on sensitive issues but should not increase refusal and dropout rates, as these are too blatantly non-compliance. From this I derive the following hypotheses:

**H1:** Respondents who believe the government is behind the survey will answer differently on politically sensitive questions compared to citizens who believe the survey to be independent.

- **H1.1:** This will be more prevalent in more autocratic countries and less so in democratic countries.

**H2:** Respondents who believe the government is behind the survey will not answer differently on non-sensitive questions compared to citizens who believe the survey to be independent.

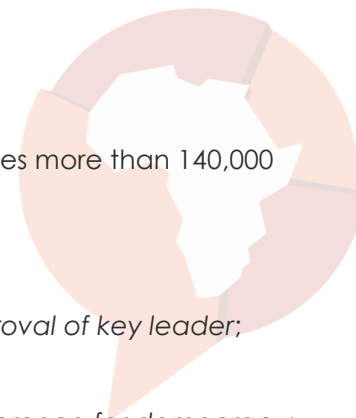
To get an indication of whether preference falsification is taking place, I analyze respondents’ propensity to state that they have high trust in their country’s key leader if they believed (feared) that the survey was conducted on behalf of the government, did not know, or believed that it was indeed carried out by an independent research institute, and how their perceptions interact with the level of democracy in their country. The level of democracy functions as a proxy for the “fear of government” mechanisms theorized to induce self-censorship. Using more than 140,000 observations in 36 countries over five survey rounds, I employ multilevel logistic regressions with a set of control variables on the country and individual levels.

It should be noted that although this design can tell us something about variation in the level of self-censorship, it does not allow us to estimate the absolute level of self-censorship at hand. Even among respondents who believe that the survey truly is independent, self-censorship may be taking place. They may still be wary that the authorities can use the survey to trace unsanctioned opinions to an individual, a neighborhood, or a village. To the extent that respondents adopt a better-safe-than-sorry approach, the overall response bias will be larger, as this would reduce between-group differences. The results reported in this paper include this potential built-in downward bias of the estimates. Bearing in mind that the absolute levels of response bias cannot be established, the findings do show that between-group differences are clear and meaningful.

Moreover, the research design does not allow me to determine whether the effects I find stem from bias caused by believing that the government has sent the enumerator or by believing that the enumerator is from an independent organization, or from a combination of the two. While I have strong theoretical reasons to suspect that the bias stems from the former, especially for questions evaluating the regime, my empirical strategy offers no leverage to separate these two effects. Questions relating to economic well-being, access to food, etc. could, for example, suffer from bias caused by the respondents’ belief that an independent organization is more likely to be connected with development aid and that reporting hardship will induce future aid flows.

### 3. Data and modeling strategy

Individual-level data are taken from the second, third, fourth, fifth, and sixth rounds of the Afrobarometer surveys (Afrobarometer, 2016). I match the various survey rounds with country-level data for the corresponding year from the Varieties of Democracy data set (Coppedge et al., 2017b). I present results from each round, although I first and foremost base my analysis on data from the Afrobarometer fifth and sixth rounds, as they allow for the highest number of respondents across the highest number of countries, with more than 40,000 respondents nested in 34 and 36 countries, respectively. While Afrobarometer has included the question regarding perceived survey sponsor since its second round, early rounds cover considerably fewer countries. As a robustness check, I run all models using a pooled data set including rounds 2, 3, 4, 5, and 6, and match them with V-Dem data for 2003, 2005, 2008, 2012, and



2014, respectively (see Appendix, Table 7). This pooled data set provides more than 140,000 respondents nested in 124 country years.

### Dependent variables (DVs)

- Most sensitive DVs: *Trust key leadership figure/ruling party; Approval of key leader; Perception of corruption in president/PM office*
- Somewhat sensitive DVs: *Trust the police/opposition party; Preference for democracy; Country moving in right direction; Perception of corruption police/taxation agency*
- Non-sensitive DVs: *Trust your neighbors; Trust your relatives*

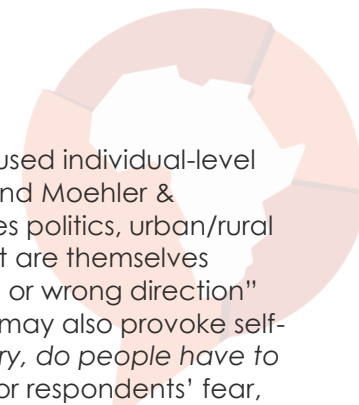
For the first DVs regarding trust in various authorities, respondents indicating “Not at all” or “Just a little” or “I trust them somewhat” are coded as 0, and “I trust them a lot” are coded as 1. This allows for a clear binary logit regression instead of an ordinal logit. Moreover, I theorize that preference falsification (may) occur in this binary divide. If you tend to falsify your preferences, you are likely to look for the safest possible option. However, acknowledging the possibility that stating that you trust the president “somewhat” may be safe enough in most environments, whereas “Not at all” or “Just a little” might be sensitive in some circumstances, I replicate all model specifications using this binary divide (see Appendix, Table 9). For the variables regarding how many in the president’s office/tax office the respondent believes are corrupt, respondents indicating “All of them” or “Most of them” are coded as 1, and “Some of them” and “None” are coded as 0. For *Preference for democracy*, respondents indicating that “Democracy is preferable to any other kind of government” are coded as 1, and “In some circumstances, a non-democratic government can be preferable” and “For someone like me, it doesn’t matter what kind of government we have” are coded as 0. For *Approval of key leader*, “Approve” and “Strongly approve” are coded as 1, and “Disapprove” and “Strongly disapprove” are coded as 0. *Country moving in right direction* is binary in the surveys, where 1 indicates “Right direction” and 0 indicates “Wrong direction.” For the non-sensitive DVs *Trust your neighbors*<sup>3</sup> and *Trust your relatives*, “Not at all” and “Just a little” are coded as 0, and “I trust them somewhat” and “I trust them a lot” are coded as 1.

### Independent variables

The main independent variable, *Survey sponsor*, is generated from the question item “*Just one more question: Who do you think sent us to do this interview?*” Respondents who indicate that they believe the enumerator was sent by the local, regional, or national government, or any of its agencies, are coded as 1, while those who believed the survey to be commissioned by a non-governmental organization (NGO), a university, a research company, etc. are coded as 0. Of the complete sample, 53% reported that they believed that the government was behind the survey, while 32% believed it to be independent and 15% said they did not know. The “Don’t know” group of respondents is excluded in the main analysis but is coded as 1, together with the “suspecting” group, in robustness checks of all model specifications (see Appendix, Table 8), the rationale being that not knowing who the sponsor is likely also induces preference falsification in repressive settings, albeit to a lesser degree than suspecting the government. The variance of suspecting the government as sponsor at a country level is between 30% in Egypt and 75% in South Africa, producing sufficiently large numbers of respondents in each category and country for analysis. This variation only correlates with the level of democracy at a .11 level.

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<sup>3</sup> This question item is unfortunately available only in rounds 3 and 5. For Round 4, I instead employ the similar and also apolitical question “*Do you trust other people you know?*”



In all model specifications, I control for the following set of commonly used individual-level variables (cf. Adida, Ferree, Posner, & Robinson, 2016; Carlson, 2014; and Moehler & Lindberg, 2009): age, gender, education level, how often one discusses politics, urban/rural residency, and lived poverty.<sup>4</sup> I purposely do not include variables that are themselves sensitive items. Whether you believe the country is “moving in the right or wrong direction” may indeed predict whether you trust the key leadership figure, but it may also provoke self-censorship. Likewise, the item “*In your opinion, how often, in this country, do people have to be careful of what they say about politics?*” would offer a direct test for respondents’ fear, were it not for the fact that respondents who are fearful and who believe that the government sponsored the survey would not answer truthfully on either item. In addition to theoretically justifying the exclusion of politically sensitive items as predictors in my model specifications, I run two models with the aforementioned items as dependent variables. The results show that indeed both are associated with similar bias as the main dependent variables, further motivating their exclusion.

### Country level

As a proxy for the perceived risk of repressive actions at the country level, I employ the Varieties of Democracy’s Electoral Democracy Index (Teorell, Coppedge, Skaaning, & Lindberg, 2016; Coppedge et al., 2017b). It’s an aggregated index building on more than 30 fine-grained sub-components of freedom of expression and association, suffrage, elections quality, and the election of the chief executive (see Coppedge et al., 2017a; Coppedge et al., 2017c; Marquardt & Pemstein, 2017; and Pemstein et al., 2017 for more detail). The rationale for using a highly aggregated index of the level of democracy is to be able to test whether existing studies that draw conclusions from comparative survey data from countries at vastly different levels of democracy suffer from biases (cf. Gilley, 2006a; Moehler & Lindberg, 2009). Arguably an aggregated measure may be a crude proxy for a perceived risk of repressive actions. I therefore employ an index of freedom from political killings and torture by the government (Coppedge et al., 2017a) in additional model specifications. Both indexes are continuous measures ranging from 0 to 1, where 1 corresponds to a perfect electoral democracy and full physical integrity, respectively.

In addition, I control for the logged level of gross domestic product (GDP) per capita and corruption at the country level, which have been shown to predict several of the dependent variables (cf. Rothstein, 2011, and Boränng, Nistotskaya, & Xezonakis, 2017). Data of GDP per capita are taken from UN Statistics (2016). The level of corruption is assessed as an index of political corruption composed of expert assessments of the pervasiveness of corruption in the executive, the legislature, the public sector, and the judiciary (McMann, Pemstein, Seim, & Lindberg, 2016; Coppedge et al., 2017a). The index is continuous and ranges from 0 to 1, where 0 indicates no corruption and 1 widespread corruption.

Because respondents are not randomly distributed but clustered within countries, I employ multilevel models that take these data hierarchies into account and allow testing for the effect of a two-level interaction between survey sponsor (individual level) and level of democracy (country level). The model is a logistic random slope model. The specification of the baseline multilevel model is as follows:

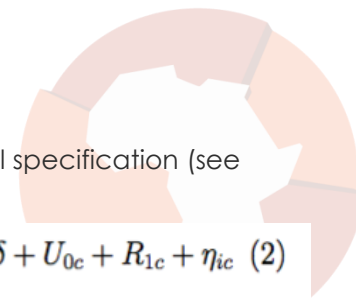
$$y_{ic} = \gamma_{00} + \gamma_1 dem_c + \gamma_2 sponsor_{ic} + X'_{ic} \lambda + Z'_c \delta + U_{0c} + R_{1c} + \eta_{ic} \quad (1)$$

Adding the two-level interaction term between individual-level suspicion of survey

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<sup>4</sup> For a discussion of the Lived Poverty Index, see Mattes (2008).





sponsor and country-level democracy, we get the full multilevel model specification (see Aguinis, Gottfredson, and Culpepper, 2013):

$$y_{ic} = \gamma_{00} + \gamma_1 dem_c + \gamma_2 sponsor_{ic} + \gamma_3 (dem_c \times sponsor_{ic}) + X'_{ic} \lambda + Z'_c \delta + U_{0c} + R_{1c} + \eta_{ic} \quad (2)$$

where  $y_{ic}$  is the dependent variable for individual  $i$  in country  $c$ ,  $\gamma_{00}$  is the average individual-level intercept,  $dem_c$  is the country-level democracy,  $sponsor_{ic}$  is an individual's perception of survey sponsor,  $X'_{ic}$  and  $Z'_c$  are vectors of individual- and country-level controls,  $U_{0c}$  is the intercept variance,  $R_{1c}$  is the slope variance (for  $sponsor_{ic}$ ), and  $\eta_{ic}$  is the individual-level error term. I do not discuss or present model building, the slope, and intercept variance in the main text and tables. In short, the intercept variance is reduced in each step of building up the model, and the slope variance is reduced when introducing the two-level interaction, i.e. it explains some of the between-country variance (for details, see Appendix, Table 4).

Because multilevel logistic regression coefficients are somewhat difficult to interpret, even without two-level interaction terms, I proceed by graphing the interaction effects (Brambor, Clark, & Golder, 2006) and then visualizing the effects in each country expressed in odds ratios.

#### 4. Results

Figures 1A, B, C, D, and E plot the coefficients for the main independent variable of interest, perceived survey sponsor, and its interaction effect with the level of democracy from 26 generalized linear mixed models (GLMM), including individual and country controls. With the exception of E, each plot displays the estimates from the five survey rounds for each dependent variable. Estimates where the confidence intervals do not overlap with the dotted line are statistically significant at the 0.05 level. For the sake of simplicity, individual- and country-level controls are not displayed in the coefficient plots, but they can be found in the regression tables in Appendix, Table 5. In the baseline model, testing the effects of the individual-level and country-level predictors on the propensity to indicate "a lot" of trust in the country's key leadership figure, the strongest individual predictor is believing the government to be behind the survey, followed by rural residency. Higher age is associated with higher levels of trust, while higher education and lived poverty exhibit negative relationships.

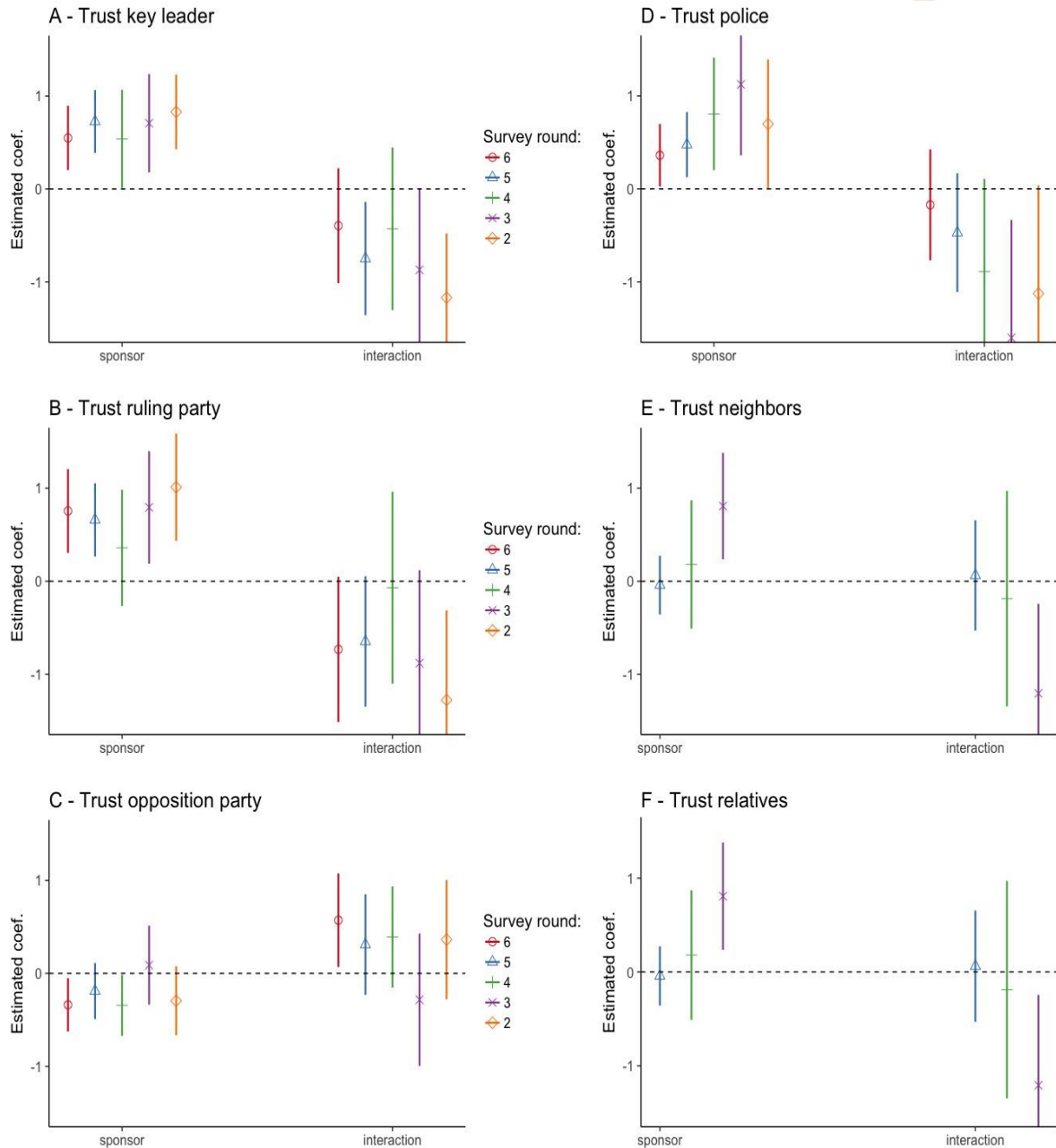
Discussing politics more frequently is associated with higher trust. In contrast to what we see in Western Europe and North America, women are less likely than men to trust the key leader, the police, the ruling party, and their neighbors. On the country-level, higher corruption is associated with lower trust.

Figure 1A displays the estimates of the effect of suspecting the government of sponsoring the survey and the interaction with level of democracy on trust in the country's key leadership figure. Introducing the cross-level interaction does not substantively change the magnitude or direction of the aforementioned control variables outside of the interaction. The direction and (often) significance of the interaction term support the hypothesis that respondents who believe the government sponsored the survey will inflate their answer on a politically sensitive question like trust in the president or prime minister. This effect is large in countries at low levels of electoral democracy, and decreases with higher democracy scores. The models from the different survey rounds provide similar estimates, although the confidence intervals are larger in earlier rounds with fewer individual and country observations.

Figure 1B shows a very similar pattern for indicating "a lot" of trust in the ruling party, albeit not clearly so in Round 4. If we instead look at the estimates for trust in the opposition party (Figure 1C), the pattern is reversed. While the magnitude is smaller for trust in the opposition party, and indeed not significant in all rounds, in more autocratic countries opposition parties receive less stated trust from respondents who think it is the government and not an

independent research organization that is asking. As expected, this effect diminishes with rising levels of democracy and is insignificant and unsubstantial in more democratic regimes. This phenomenon might help to explain the puzzle of why Africans tend to trust under-performing incumbents, and indeed questions the explanation put forward by Logan (2008, p. iii) that "Africans place especially high social value on respect for their 'father-leaders.'"

**Figure 1: Coefficient plots for all trust DVs, for rounds 2-6**

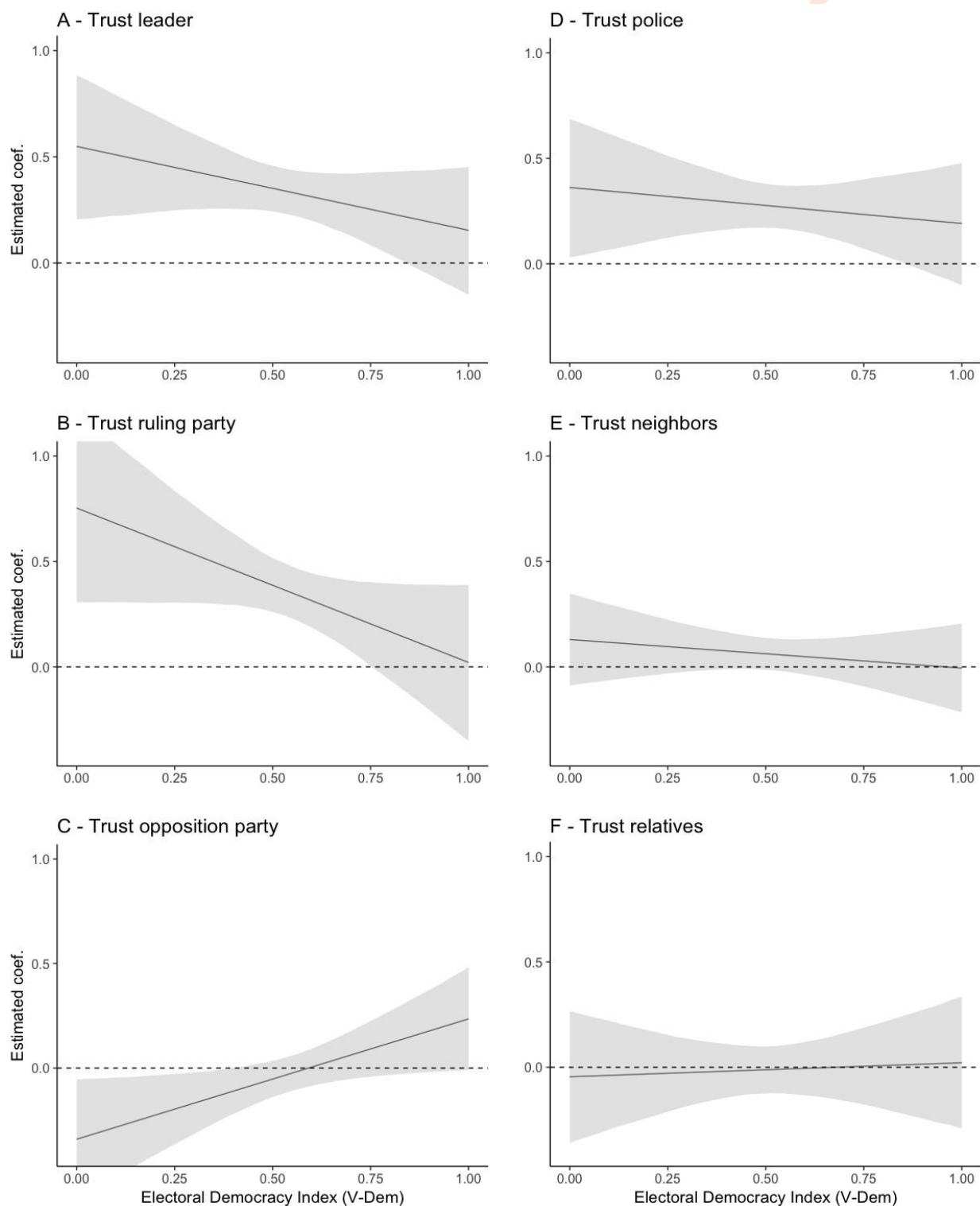


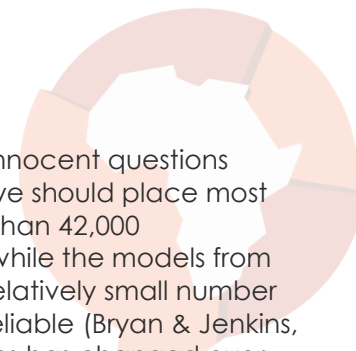
Substituting the dependent variable with trust in the police (Figure 1D) corroborates that questions relating to the regime and its performance suffer from systematic response bias across regime types. While the interaction effect does not show as significant in all rounds, in the coefficient plots there is still a significant effect at lower levels of democracy, which is visualized in the interaction graph in Figure 2 below. In short, the empirical findings suggest that more repressive regimes indeed enjoy the autocratic trust bias. Turning to the placebo



test of using similar but innocuous and apolitical questions, figures 1E and F show that, as expected, there is no effect of perceived survey sponsor, or the interaction between survey sponsor and level of democracy, with regard to respondents' propensity to trust their neighbors or relatives in rounds 4 and 5.

**Figure 2: Marginal effects of suspecting the government on all trust DVs, conditioned on level of democracy**

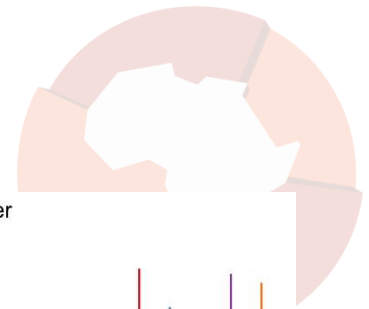




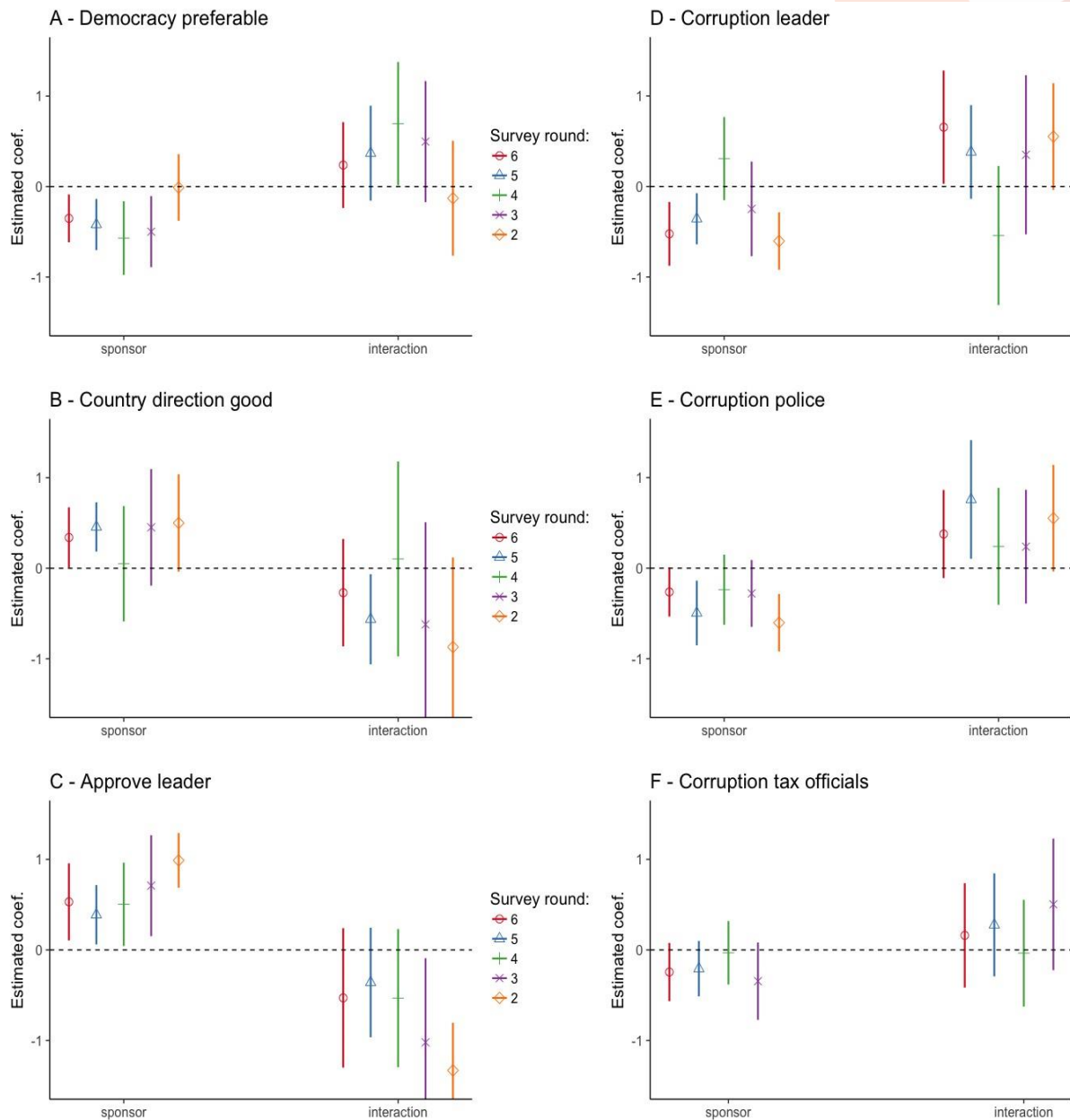
In contrast, the estimates from Round 3 suggest that these seemingly innocent questions suffer from similar bias as the political items. I want to emphasize that we should place most confidence in the models from Round 5, as these are based on more than 42,000 respondents in 34 countries and the confidence intervals are narrow, while the models from Round 3 are based on about 19,000 respondents in 17 countries. The relatively small number of countries in the latter models do make cross-level interactions less reliable (Bryan & Jenkins, 2015). Yet it might also be the case that the sensitivity of these questions has changed over time. It is plausible that in authoritarian regimes the private used to be more political a decade ago than it is today. Unfortunately, these question items are not available in rounds 2 and 6 of Afrobarometer, prohibiting further investigation into potential temporal differences.

In order to make the interaction effects more interpretable, figures 2A, B, C, D, and E visualize the average marginal effects of suspecting the survey to be sponsored by the government over the full range of the Electoral Democracy Index for the most recent round of trust models in Figure 1, i.e. for the models that have the largest number of respondents and countries for each dependent variable. The marginal effect plots include all control variables from the respective models (see Appendix, Table 5). Figure 2A shows how the effect of suspecting the survey sponsor on trust in the president or prime minister decreases with an increase in the level of electoral democracy, all else equal. At low levels of democracy, the effect is substantive and significant, whereas it diminishes at higher levels of democracy and is no longer significant in countries with a level of democracy above .8. Figure 2B shows an even more pronounced pattern for trust in the ruling party. For opposition parties, the opposite is true (Figure 2C): Believing that the government sponsored the survey is associated with lower stated trust for the opposition in more autocratic regimes. Compared to previous models, the effect diminishes earlier and is no longer distinguishable from 0 at a level of democracy of .4. In the model specification where the less (but still) sensitive item regarding trust in the police is employed as the dependent variable, we again note a tendency to inflate the reported level of trust. As illustrated in Figure 2D, this bias is substantively smaller, yet significant and systematically related to the level of democracy. As expected, there is no effect with regard to the apolitical and non-sensitive items regarding trust in your neighbors and relatives (Figure 2E and F). In both models, the effect is unsubstantial and insignificant over the full range of the Electoral Democracy Index.

In addition to items regarding trust in rulers and institutions, there is a wide array of survey items that might suffer from varying degrees of systematic bias. The coefficient plots in figures 3A, B, C, D, E, and F show the estimated effect of suspecting that the government sponsored the survey conditioned on the level of democracy for six dependent variables. Again, each plot contains estimates from four or five generalized linear mixed models (i.e. one model for each survey round where the DV is included) with individual- and country-level controls. Estimates for the control variables can be found in Appendix, Table 6. The general pattern is the same as before. All the dependent variables, save for respondents' perceptions of corruption among tax officials, are clearly associated with systematic bias. Suspecting the survey sponsor in a more autocratic country is associated with respondents being less likely to state that democracy is a preferable system (Figure 3A), more likely to state that the country is moving in the right direction (3B), and more likely to approve of the performance of the president or prime ministers work in the past 12-month period (3C). All three measures of corruption perceptions show a pattern of downward bias. Suspecting survey respondents are less likely to see corruption among "all" or "most" in the president's or prime minister's office (3D) and on the police force (3E) if the respondents live in more autocratic countries. The two groups of respondents do not report statistically significantly different levels of perceived corruption among tax officials (3F), and this is only weakly related to level of democracy. While a few estimates stick out, the estimates from most rounds follow the same pattern. The key estimates of interest are those from rounds 5 and 6, which build on considerably more data than earlier rounds.



**Figure 3: Coefficient plots for additional DVs, for rounds 2-6**



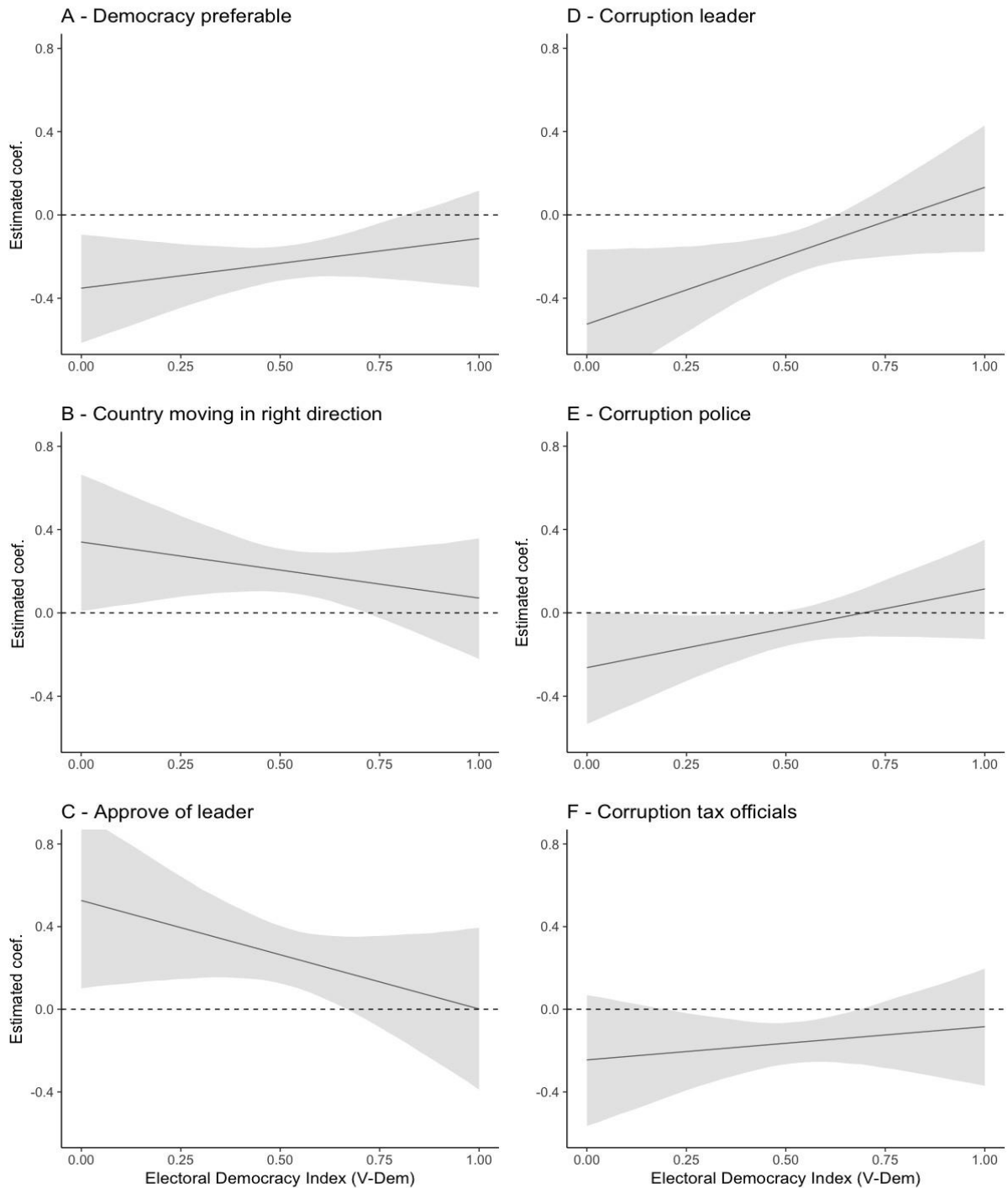
For additional illustration, figures 4A, B, C, D, E, and F plot the average marginal effects of suspecting the survey to be sponsored by the government over the full range of the Electoral Democracy Index for all of the dependent variables from the Round 6 models.

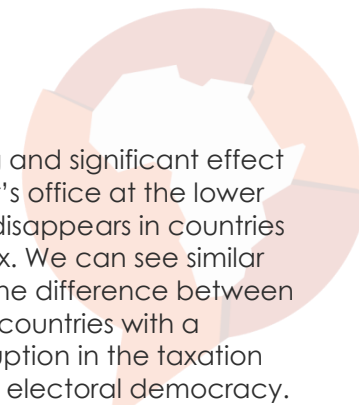
Figure 4A shows how respondents' preference for democracy is systematically biased across the level of democracy. All else equal, respondents who believe it is the government that is asking are less likely to answer that democracy is a preferable system, compared to those who believe the question is coming from a research organization. Studies concerned with public demand for democracy (cf. Mattes & Bratton, 2007) likely underestimate the true demand due to this downward bias in more autocratic countries. Question items asking respondents to evaluate the general direction that the country is moving in "wrong" or "right" also suffer from a systematic bias as illustrated by Figure 4B. It is only in very



democratic countries that we no longer see a difference between the propensities of the two groups of respondents to say that the country is going in the right direction. Approval of the president's or prime minister's performance over the last 12-month period (Figure 4C) displays an almost identical relationship with perceived survey sponsor and level of democracy as the question item probing respondents' trust in their country leader; the effect of perceived survey sponsor is substantial at the more autocratic side of the democracy index while insignificant in more democratic countries.

**Figure 4: Marginal effects of suspecting the government on additional DVs, conditioned on the level of democracy**





Turning to the issue of corruption, Figure 4D shows that there is a strong and significant effect on stated perceptions of corruption in the president's or prime minister's office at the lower end of the democracy spectrum, whereas this effect decreases and disappears in countries with a level of democracy above .6 on the Electoral Democracy Index. We can see similar effects with regard to corruption among police (Figure 4E), although the difference between the two groups of respondents is smaller and becomes insignificant in countries with a democracy level above .5. When it comes to perceptions about corruption in the taxation agency, the effect is less substantial, and insignificant at most levels of electoral democracy. Taken together, figures 4C, D, E, and F show that the autocratic bias is more pronounced in respondents' evaluation of rulers than of civil servants such as the police and tax officials.

#### 4.1 Robustness checks

As mentioned above, the values of the dependent variables, with the exception of whether the country is moving in the right or wrong direction, have been recoded from an ordinal into a binary scale to facilitate a straightforward analysis. The results presented here are robust to a different coding of the trust variables, with "I trust them somewhat" coded as 1 (along with "I trust them a lot") instead of 0 (with "Not at all" and "Just a little") (see Appendix, Table 9). Furthermore, recoding the main independent variable so that respondents who "Don't know" who commissioned the survey are collapsed with those who believe it was the government does not change the results (see Appendix, Table 8). The results also hold when all rounds are pooled, resulting in more than 140,000 respondents nested in 124 country-years (see Appendix, Table 7). It should be noted that when changing the Level 2 unit of analysis from country to country-years, the Level 2 units are no longer independent from each other, nor is this balanced, as some countries are only represented by one country-year while others are represented by five country-years.

In an attempt to tease out which aspects of democracy induce bias on politically sensitive questions, I substitute the Electoral Democracy Index with an index of physical integrity and reproduce all models from Figure 1, using the most recent available survey round. The pattern is almost identical and shows how the propensity to indicate high trust on sensitive questions decreases as a function of freedom from torture and political killings when the respondent believes that the survey is administered by the authorities (see Appendix, Table 10). Again, there is no effect with respect to respondents' stated trust in their neighbors or relatives.

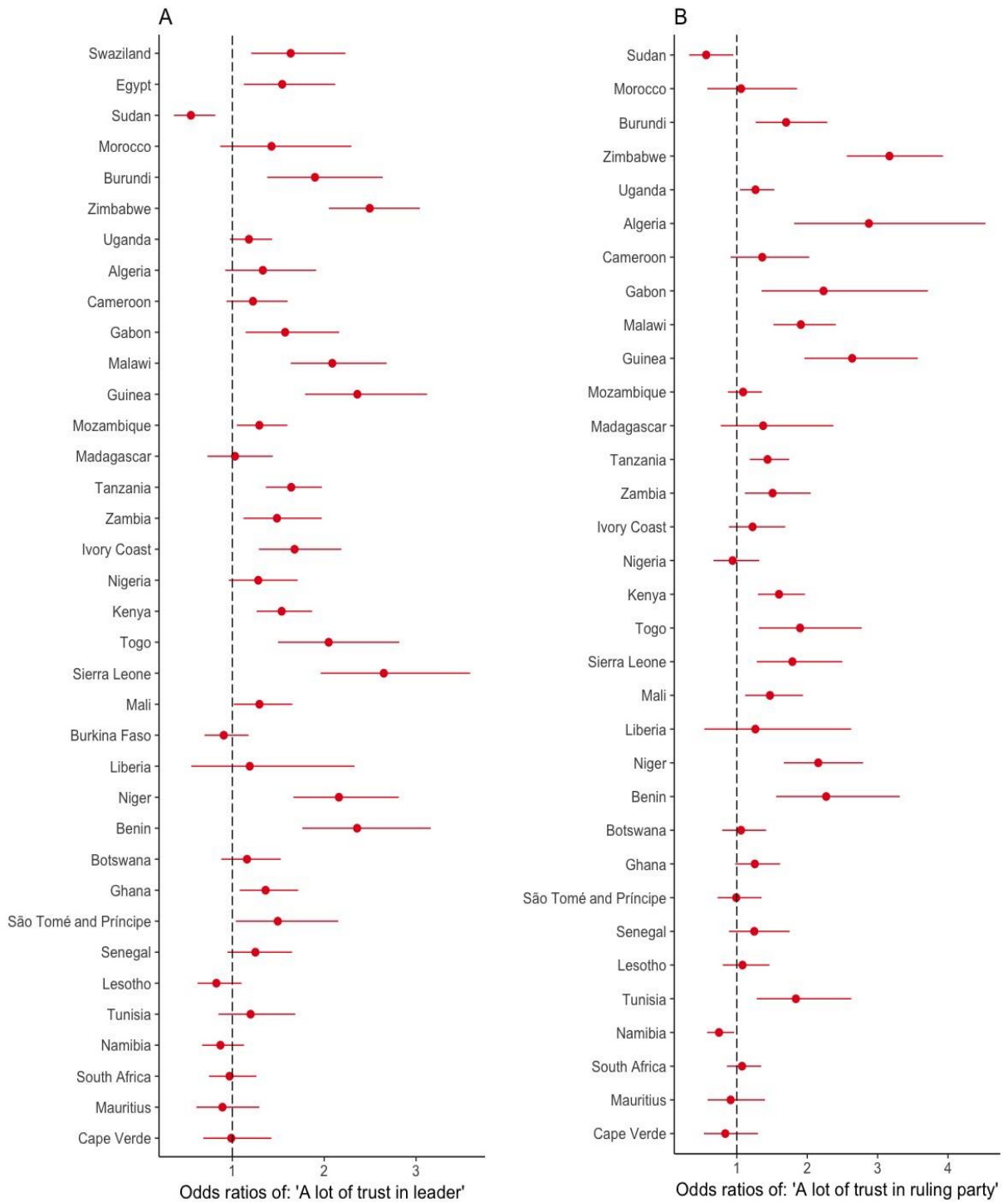
#### 4.2 Self-censorship by country

In this sub-section, I drill down one level to examine self-censorship in each country. Breaking down the results by country, figures 5A and B display estimated effects of suspecting the government as sponsor of the survey for each country in Afrobarometer Round 6. In the list, the countries are sorted in order of their Electoral Democracy Index scores, from low to high levels of democracy. In order to make the estimated effects easily interpretable in substantive terms, the effects are expressed as the odds ratio of a respondent who believes the government sponsored the survey to indicate "a lot" of trust in the country's key leader (5A) and ruling party (5B), with 95% confidence intervals. Estimates for which the confidence intervals do not overlap with 1 (dotted line) indicate a statistically significant difference between the two respondent groups' propensity to report a lot of trust, after we control for the above-mentioned set of individual-level predictors. In substantive terms, the estimated effect in Guinea, for example, is to be interpreted as follows: Suspecting respondents are 2.4 times more likely to report a lot of trust in the president than non-suspecting respondents. By and large this plot lends credence to the autocratic trust bias hypothesis. In countries with high levels of democracy, the effect is small or insignificant, and in more autocratic countries, the effect is more often larger and significant. Figure 7 in the Appendix shows the effect for each of the 124 country-years in the full sample, producing the same pattern. It is noteworthy that a number of arguably very repressive regimes do not enjoy the autocratic trust bias.

Sudan stands out among autocratic countries as respondents who believe the government was sponsoring the survey are in fact less inclined to report high trust in President al-Bashir. Furthermore, the variation among countries at comparable, and comparatively high, levels of electoral democracy is intriguing and calls for investigation into whether this might be driven by an interaction between suspecting the government as sponsor and patronage or prevalence of vote buying on the country level.



**Figure 5: Trust bias by country in Round 6**

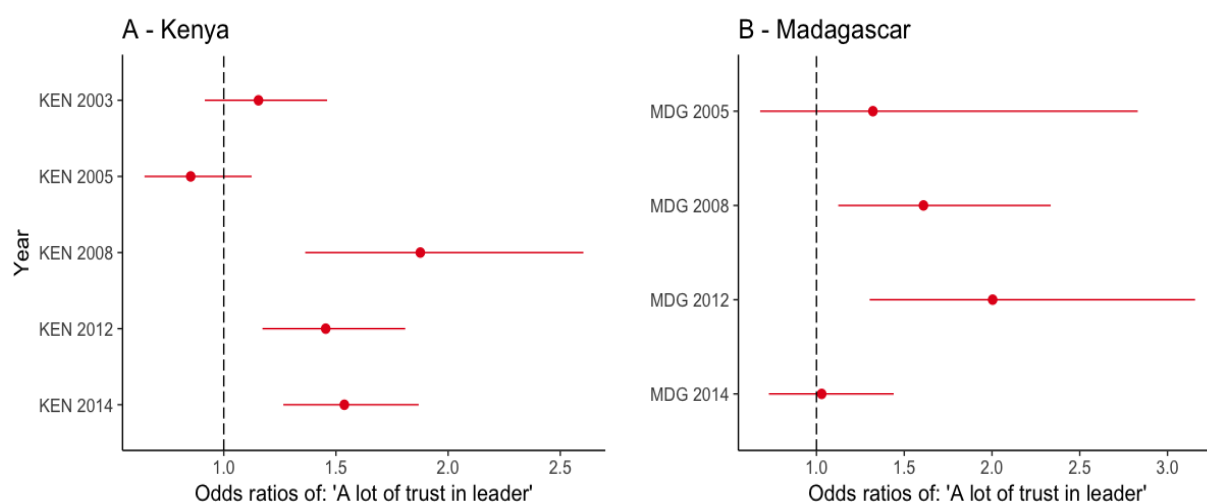




Figures 6A and B highlight two cases where we observe large changes over time in the propensity to indicate “a lot” of trust in the country’s president when the respondent suspects government survey sponsorship. In Kenya, there was no significant effect of believing that the government had sent the enumerator on respondents’ propensity to indicate high trust in the country’s president in 2003 and 2005. In the aftermath of the 2007-2008 Kenyan crisis, which saw some 1,300 people killed and 600,000 people displaced following violence that was politically motivated (Kagwanja & Southall, 2009; Rutten & Owuor, 2009) and allegedly state-sponsored (Human Rights Watch, 2008), respondents were statistically significantly and substantively (1.86 times) more likely to indicate that they trusted President Kibaki “a lot” when they believed that the survey was not independent. Expressed in predicted probabilities, the between-group difference is 12 percentage points when the control variables are held at their means. In the subsequent Afrobarometer rounds, there is still a significant effect of suspecting the survey sponsor, albeit weaker.

Madagascar suffered the sample’s largest decrease in electoral democracy scores between 2005 and 2012, from 0.53 to 0.23. Following the 2009 Malagasy political crisis, which culminated in an unconstitutional transfer of executive power, political repression increased in the country (Ploch & Cook, 2012). In line with my expectations, respondents’ propensity to self-censor has increased over this time period, and in 2012, respondents who believed that the government was sponsoring the survey were more than twice as likely to report that they had “a lot” of trust in President Rajoelina. In 2013 and 2014, Madagascar’s electoral democracy score improved to a more moderate .48, and in the most recent Afrobarometer round, we no longer observe a significant difference in effect between these two groups of respondents.

**Figure 6: Changes over time in Kenya and Madagascar**



### 4.3 Item non-response and ‘don’t knows’

A note is warranted on the issue of item non-response. Are people who believe that the enumerator is asking a question on behalf of the government more likely to refuse to answer or simply state that they “Don’t know” when asked political questions? I find no empirical evidence for that – neither in very autocratic nor very democratic regimes. This is consistent with theories of preference falsification, which propose that fearful respondents will resort to the safest possible answer (Havel & Wilson, 1985). Saying that you do not know or refuse to answer whether you trust the president or ruling party can likely raise suspicion. Across the board, being female and being of higher age are associated with higher non-response or



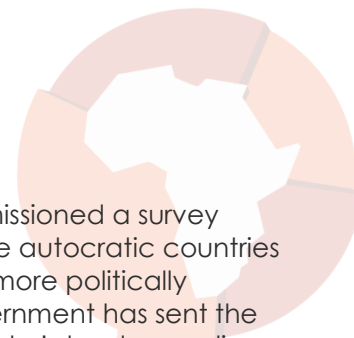
“don't know” answers, while being more educated and discussing politics more frequently are associated with low non-response (see Appendix, Table 3).

#### 4.4 Who suspects the government?

I have already noted that there is no correlation between the average country levels of suspecting that the government sponsored the survey and countries' levels of democracy. The next issue is to examine whether there is something particular about those individuals who suspect the survey sponsor that also makes them more likely to state high trust in the key leader or ruling party, less likely to trust the opposition party, etc. than the population at large. Moreover, it would need to be a peculiarity that alters their behavior only in more autocratic countries but not in more democratic countries. The balance of individual-level covariates for the different groups of respondents shows only minor differences. If we split the sample by applying a threshold in the middle of the Electoral Democracy Index, and look at the covariate balance between the two groups of respondents in more autocratic countries and more democratic countries, the pattern of differences is the same. For example, in the democratic sample, the mean level of poverty for those who suspect the government as survey sponsor is 0.15 higher than for those who believe in the survey's independence; in the autocratic sample, this difference is 0.13 (see Appendix, Table 2). The differences in means between the two groups are very similar in both samples, and the differences are always in the same direction for all variables. In other words, there are no observable individual characteristics that can explain why only those who live in authoritarian countries and who suspect the government to be behind the survey are more likely to provide regime-friendly responses to political questions.

#### 4.5 Incorporating the autocratic trust bias: A replication of Bratton, Bhavnani, and Chen (2012)

To show how we can account for the systematic bias enjoyed by more autocratic regimes, I replicate the analysis from the Bratton, Bhavnani, and Chen (2012) study “*Voting intentions in Africa: Ethnic, economic or partisan?*” using data from the latest round of Afrobarometer. The main outcome variable is respondents' intention to vote for the ruling party or not. From what I have shown in this paper, responses to this question are expected to suffer from bias across levels of democracy. In Table 1 (Appendix), Model 1, I replicate the results from the 2012 study's main model with very minor differences. Its findings using 2005/2006 data – that Africans engage in both ethnic and economic voting – are very similar using data from 2014 (including more countries and individuals across the continent). The authors include the variable on survey sponsor (termed *Expectation of compulsion*) and conclude from the substantial and significant effect that respondents who (wrongly) suspect that the government has sent the enumerator are more likely to state that they intend to vote for the ruling party's candidate (confirming their Hypothesis 3C). In Model 2, I introduce the two-level interaction term to Bratton, Bhavnani, and Chen's (2012) model and show two things. First, *Expectation of compulsion* has an even larger effect on respondents' intended vote choice than suggested by the authors, but only in more autocratic countries (see Appendix, Figure 8). Second, the dependent variable is indeed sensitive, which warrants an additional robustness check of the main results. In the next step, I estimate the authors' main model by including only respondents who believe the survey to be independent to help rule out that preference falsification accounts for the results. Save for small changes in effect sizes, Bratton, Bhavnani, and Chen's (2012) findings survive this robustness test. In fact, in the subsample, respondents' evaluation of the incumbent's policy performance is awarded an even higher premium, whereas belonging to the incumbent's ethnic group has a substantively smaller effect (compare models 1 and 3 in Appendix, Table 11).



## 5. Discussion

This paper shows that survey respondents' belief about who has commissioned a survey substantially influences answers on politically sensitive questions in more autocratic countries while having no impact on responses in very democratic countries. In more politically repressive environments, respondents who believe (fear) that the government has sent the interviewer are more likely to state that they have high trust in the country's leader or ruling party, and less likely to report trust in opposition parties, as compared to respondents who think that the interviewer works on behalf of an independent research organization. I want to point out that, while the estimated effects are already large enough to cause concern about the comparability of several of the survey items tested in this paper, I am if anything underestimating the true effects. This is because even respondents who believe the enumerator to come from an independent research organization may adopt a better-safe-than-sorry-approach out of fear that the authorities can use the survey to trace unsanctioned opinions to an individual, a neighborhood, or a village.

This study provides a significant contribution to comparative public opinion research in general and to the study of political behavior and public opinion in authoritarian regimes in particular. It is, to the best of my knowledge, the first study that estimates self-censorship on a large number of survey items across a large number of countries. I provide strong evidence that several commonly used survey items – ranging from regime legitimacy and popular support for incumbents to corruption perceptions and preferences for democracy – suffer from systematic bias. Sensitive questions evaluating rulers suffer from a larger bias than do questions evaluating those exercising public power. This is evident by the larger effect on trust in the key leadership figure or ruling party compared to trust in the police, as well as by the difference in the effect on stated perceptions of corruption in the president/prime minister's office and in the tax authorities. Innocuous apolitical questions, such as trust in your neighbors or relatives, provide perfect placebo tests for the autocratic trust bias hypothesis, as one would expect no difference between the two groups of respondents' answers, no matter the level of political repression. Indeed, there is none.

The autocratic trust bias is not only of methodological concern. Insofar as good-governance or democracy-promotion initiatives are informed by survey items measuring corruption perceptions or demand for democracy, this bias is also of direct political relevance. The usefulness of a survey item probing respondents' sense of anonymity should be evident. Given the low implementation cost, such an item should be added to surveys with the ambition to be comparable across countries where the doubt of anonymity is likely to produce different response behavior. Save for Afrobarometer, large-scale public opinion surveys do not include a similar item, and thus fail to provide data users with an easy and effective method of estimating the varying sensitivity of survey items across countries. Studies using data where such a variable is available should ideally include an interaction term in the analysis to determine the presence of systematic bias. In the presence of bias, running the analysis using only the sub-sample of respondents who believe the survey to be independent provides an excellent robustness check for the problem of preference falsification. Having estimated the bias for a set of sensitive items, another avenue forward would be to construct reliability weights to enable the researcher to account for biases in the analysis while retaining the full sample.



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## Appendix

**Table 1: Summary statistics**

Statistic	N	Mean	St. dev.	Min	Max
Sponsor (government)	155,425	0.620	0.485	0	1
Sponsor (government+don't know)	183,332	0.678	0.467	0	1
Trust leader	177,392	0.365	0.482	0	1
Trust police	180,688	0.255	0.436	0	1
Trust ruling party	171,692	0.261	0.439	0	1
Trust opposition party	171,692	0.261	0.439	0	1
Trust neighbor	103,113	0.623	0.485	0	1
Trust relatives	103,113	0.815	0.388	0	1
Prefer democracy	185,332	0.673	0.469	0	1
Country right direction	130,064	0.516	0.500	0	1
Approve leader	169,710	0.668	0.470	0	1
Corruption president	131,777	0.322	0.467	0	1
Corruption tax agency	135,946	0.434	0.496	0	1
Rural	185,332	0.610	0.488	0	1
Female	185,332	0.501	0.500	0	1
Discuss politics	183,339	0.883	0.719	0	2
Poverty	180,633	1.219	0.938	0	4,6
Education	185,327	3.284	2.129	0	9
Age	183,319	36.851	14.597	18	105
GDP pc	124	7.049	0.978	5.438	9.242
Electoral democracy	124	0.536	0.173	0.129	0.853
Physical integrity	124	0.663	0.219	0.055	0.968
Corruption	124	0.503	0.072	0.294	0.634

**Table 2: Balance table**

Perceived sponsor	Don't know	Government	Independent	Gov. (dem)	Ind. (dem)	Gov. (aut)	Ind. (aut)
Age	36.62	37.25	36.41	38.32	36.95	35.90	35.73
Education	2.73	3.01	3.94	2.92	3.84	3.11	4.05
Poverty	1.24	1.26	1.13	1.19	1.04	1.36	1.23
Discuss	0.71	0.88	0.96	0.87	0.97	0.89	0.95
Rural	1.61	1.65	1.54	1.60	1.50	1.70	1.59
Female	1.58	1.50	1.45	1.50	1.45	1.50	1.45
N	27654	956289	57681	53375	32098	42254	25583

*Note: In the last four columns, the sample is split into more democratic countries and more autocratic countries by applying a threshold on the Electoral Democracy Index score at .5*



Table 3: Item non-response

	<i>Dependent variable - Non response:</i>				
	trust leader (1)	trust ruling party (2)	trust police (3)	prefer democracy (4)	approve leader (5)
sponsor	-0.103 (0.289)	0.248 (0.301)	0.058 (0.481)	0.096 (0.268)	0.102 (0.243)
democracy	-2.434 (1.502)	-3.689** (1.463)	-1.027 (1.502)	-3.425*** (1.235)	-1.473 (1.205)
gdp pc (log)	-0.136 (0.222)	0.136 (0.210)	-0.057 (0.207)	0.112 (0.207)	0.033 (0.210)
corruption	-0.501 (0.324)	-0.259 (0.275)	-0.166 (0.303)	-0.208 (0.265)	-0.443 (0.275)
rural	-0.100 (0.073)	0.076 (0.062)	0.215** (0.093)	0.087 (0.061)	-0.021 (0.052)
age	0.113*** (0.031)	0.017 (0.028)	0.096** (0.040)	0.027 (0.028)	0.106*** (0.023)
education	-0.234*** (0.040)	-0.555*** (0.035)	-0.460*** (0.052)	-0.549*** (0.034)	-0.099*** (0.027)
poverty	-0.038 (0.034)	0.085*** (0.029)	0.013 (0.042)	0.075*** (0.028)	0.032 (0.025)
female	0.286*** (0.064)	0.577*** (0.057)	0.294*** (0.082)	0.569*** (0.056)	0.402*** (0.046)
discuss politics	-0.341*** (0.034)	-0.477*** (0.032)	-0.435*** (0.046)	-0.475*** (0.031)	-0.325*** (0.025)
sponsor* democracy	0.078 (0.530)	0.332 (0.573)	0.199 (0.868)	0.585 (0.522)	-0.172 (0.447)
Constant	-2.754*** (0.852)	-2.563*** (0.811)	-4.446*** (0.861)	-2.705*** (0.681)	-2.607*** (0.670)
Observations	41,744	41,744	41,744	42,827	42,827
Countries	33	33	34	34	34

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

**Table 4: Model building**

<i>Dependent variable: Trust key leader</i>				
	null model	inc ivs	inc random slope	inc interaction
	(1)	(2)	(3)	(4)
sponsor		0.352*** (0.025)	0.330*** (0.058)	0.726*** (0.172)
democracy		-0.555 (0.842)	-0.184 (0.838)	-0.139 (0.825)
sponsor * democracy				-0.748** (0.311)
individual controls	no	yes	yes	yes
country controls	no	yes	yes	yes
Constant	-0.545*** (0.126)	-0.502 (0.471)	-0.698 (0.469)	-0.721 (0.461)
random intercept (var)	0.516 (0.718)	.369 (0.607)	0.341 (0.584)	0.343 (0.586)
random slope (var)			0.086 (0.293)	0.070 (0.265)
Observations	40,614	40,614	40,614	40,614
Countries (lvl 2)	33	33	33	33
Log Likelihood	-25,029	-24,415	-24,375	-24,372
Akaike Inf. Crit.	50,062	48,854	48,778	48,775

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 5: Trust variables

	<i>Dependent variable - Trust:</i>					
	leader (1)	ruling party (2)	opposition (3)	police (4)	neighbors (5)	relatives (6)
sponsor	0.549*** (0.177)	0.755*** (0.230)	-0.338** (0.146)	0.362** (0.171)	0.132 (0.112)	-0.042 (0.161)
democracy	-1.295* (0.768)	-0.869 (0.815)	1.054** (0.469)	-0.739 (0.702)	-0.0004 (0.866)	1.446 (1.239)
gdp pc (log)	-0.310*** (0.119)	-0.341*** (0.110)	-0.147** (0.063)	-0.276*** (0.104)	-0.380** (0.159)	-0.622*** (0.205)
corruption	-0.271** (0.135)	-0.434*** (0.125)	0.065 (0.076)	-0.434*** (0.125)	-0.182 (0.199)	-0.108 (0.279)
rural	0.252*** (0.024)	0.348*** (0.028)	0.115*** (0.023)	0.364*** (0.027)	0.340*** (0.024)	0.226*** (0.030)
age	0.137*** (0.011)	0.096*** (0.013)	0.031*** (0.011)	0.060*** (0.012)	0.123*** (0.012)	0.057*** (0.015)
education	-0.190*** (0.013)	-0.255*** (0.015)	-0.028** (0.012)	-0.239*** (0.014)	-0.107*** (0.013)	-0.053*** (0.016)
poverty	-0.195*** (0.013)	-0.201*** (0.014)	-0.070*** (0.012)	-0.143*** (0.014)	-0.099*** (0.012)	-0.136*** (0.015)
female	-0.016 (0.022)	0.019 (0.025)	-0.073*** (0.021)	-0.003 (0.024)	-0.121*** (0.022)	-0.036 (0.027)
discuss politics	0.041*** (0.011)	0.081*** (0.013)	0.087*** (0.011)	-0.010 (0.012)	-0.004 (0.011)	-0.008 (0.014)
sponsor* democracy	-0.395 (0.315)	-0.734* (0.399)	0.572** (0.257)	-0.171 (0.304)	-0.138 (0.205)	0.062 (0.303)
Constant	-0.228 (0.423)	-1.145** (0.456)	-1.067*** (0.262)	-1.047*** (0.387)	0.482 (0.482)	1.194* (0.686)
Observations	44,142	40,935	41,242	44,347	42,685	42,694
Countries	36	33	34	36	34	34

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

**Table 6: Additional dependent variables**

	<i>Dependent variable:</i>					
	democracy preferable (1)	country right direction (2)	approve leader (3)	corruption leader (4)	corruption police (5)	corruption tax officials (6)
sponsor	-0.352*** (0.135)	0.340** (0.170)	0.530** (0.217)	-0.523*** (0.180)	-0.263* (0.139)	-0.245 (0.164)
democracy	1.270* (0.714)	-1.648* (0.976)	-0.944 (0.898)	0.707 (0.670)	0.610 (0.635)	0.264 (0.565)
gdp pc (log)	-0.293*** (0.106)	-0.139 (0.142)	-0.110 (0.149)	0.135 (0.095)	-0.098 (0.097)	0.078 (0.086)
corruption	-0.060 (0.126)	-0.308* (0.163)	-0.254 (0.167)	0.381*** (0.114)	0.305*** (0.114)	0.265*** (0.102)
rural	-0.010 (0.024)	0.207*** (0.024)	0.204*** (0.025)	-0.208*** (0.025)	-0.191*** (0.023)	-0.193*** (0.023)
age	0.086*** (0.012)	0.003 (0.011)	0.084*** (0.012)	-0.029** (0.012)	-0.040*** (0.011)	-0.015 (0.011)
education	0.336*** (0.013)	-0.020 (0.013)	-0.107*** (0.013)	0.077*** (0.013)	0.094*** (0.012)	0.090*** (0.012)
poverty	-0.083*** (0.012)	-0.446*** (0.013)	-0.307*** (0.013)	0.235*** (0.013)	0.156*** (0.012)	0.189*** (0.012)
female	-0.244*** (0.022)	0.019 (0.022)	0.038* (0.022)	-0.077*** (0.023)	-0.094*** (0.021)	-0.065*** (0.021)
discuss politics	0.207*** (0.012)	0.002 (0.011)	-0.032*** (0.012)	0.036*** (0.012)	0.050*** (0.011)	0.044*** (0.011)
sponsor* democracy	0.238 (0.242)	-0.270 (0.303)	-0.530 (0.393)	0.655** (0.319)	0.377 (0.248)	0.160 (0.294)
Constant	0.457 (0.393)	0.475 (0.537)	0.849* (0.496)	-0.863** (0.371)	-0.164 (0.350)	-0.284 (0.311)
Observations	44,922	43,415	41,559	39,526	42,366	41,500
Countries	36	36	34	35	36	36

*Note:*

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

Table 7: All five rounds pooled - Trust variables

	<i>Dependent variable - Trust:</i>					
	leader (1)	ruling party (2)	opposition (3)	police (4)	neighbors (5)	relatives (6)
sponsor	0.660*** (0.098)	0.687*** (0.116)	-0.219*** (0.080)	0.558*** (0.112)	0.176* (0.105)	0.106 (0.144)
democracy	0.016 (0.533)	0.391 (0.568)	0.949** (0.379)	0.196 (0.470)	-0.082 (0.587)	1.033 (0.939)
gdp pc (log)	-0.254*** (0.084)	-0.369*** (0.082)	-0.073 (0.055)	-0.162** (0.080)	-0.228** (0.101)	-0.371*** (0.141)
corruption	-0.258*** (0.096)	-0.400*** (0.093)	0.052 (0.065)	-0.404*** (0.092)	-0.084 (0.114)	-0.065 (0.168)
rural	0.286*** (0.014)	0.343*** (0.015)	0.088*** (0.013)	0.297*** (0.015)	0.316*** (0.017)	0.230*** (0.021)
age	0.121*** (0.006)	0.094*** (0.007)	0.031*** (0.006)	0.053*** (0.007)	0.125*** (0.008)	0.068*** (0.010)
education	-0.210*** (0.008)	-0.241*** (0.009)	-0.049*** (0.007)	-0.243*** (0.009)	-0.110*** (0.009)	-0.081*** (0.012)
poverty	-0.162*** (0.007)	-0.150*** (0.008)	-0.035*** (0.007)	-0.098*** (0.008)	-0.070*** (0.008)	-0.101*** (0.010)
female	-0.027** (0.012)	-0.012 (0.014)	-0.113*** (0.012)	-0.058*** (0.013)	-0.113*** (0.015)	-0.066*** (0.019)
discuss politics	0.053*** (0.006)	0.075*** (0.007)	0.067*** (0.006)	-0.020*** (0.007)	0.013* (0.008)	0.009 (0.010)
sponsor* democracy	-0.678*** (0.170)	-0.677*** (0.200)	0.299** (0.138)	-0.617*** (0.195)	-0.269 (0.182)	-0.137 (0.254)
Constant	-0.974*** (0.297)	-1.862*** (0.320)	-1.102*** (0.213)	-1.617*** (0.262)	0.377 (0.332)	1.116** (0.528)
Observations	143,871	139,547	138,041	146,392	84,391	84,486
Country years	123	120	121	124	71	71

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

Table 8: Government sponsor and 'don't knows' - Trust variables

	<i>Dependent variable - Trust:</i>					
	leader (1)	ruling party (2)	opposition (3)	police (4)	neighbors (5)	relatives (6)
sponsor	0.549*** (0.177)	0.755*** (0.230)	-0.338** (0.146)	0.362** (0.171)	0.132 (0.112)	-0.042 (0.161)
democracy	-1.295* (0.768)	-0.869 (0.815)	1.054** (0.469)	-0.739 (0.702)	-0.0004 (0.866)	1.446 (1.239)
gdp pc (log)	-0.310*** (0.119)	-0.341*** (0.110)	-0.147** (0.063)	-0.276*** (0.104)	-0.380** (0.159)	-0.622*** (0.205)
corruption	-0.271** (0.135)	-0.434*** (0.125)	0.065 (0.076)	-0.434*** (0.125)	-0.182 (0.199)	-0.108 (0.279)
rural	0.252*** (0.024)	0.348*** (0.028)	0.115*** (0.023)	0.364*** (0.027)	0.340*** (0.024)	0.226*** (0.030)
age	0.137*** (0.011)	0.096*** (0.013)	0.031*** (0.011)	0.060*** (0.012)	0.123*** (0.012)	0.057*** (0.015)
education	-0.190*** (0.013)	-0.255*** (0.015)	-0.028** (0.012)	-0.239*** (0.014)	-0.107*** (0.013)	-0.053*** (0.016)
poverty	-0.195*** (0.013)	-0.201*** (0.014)	-0.070*** (0.012)	-0.143*** (0.014)	-0.099*** (0.012)	-0.136*** (0.015)
female	-0.016 (0.022)	0.019 (0.025)	-0.073*** (0.021)	-0.003 (0.024)	-0.121*** (0.022)	-0.036 (0.027)
discuss politics	0.041*** (0.011)	0.081*** (0.013)	0.087*** (0.011)	-0.010 (0.012)	-0.004 (0.011)	-0.008 (0.014)
sponsor* democracy	-0.395 (0.315)	-0.734* (0.399)	0.572** (0.257)	-0.171 (0.304)	-0.138 (0.205)	0.062 (0.303)
Constant	-0.228 (0.423)	-1.145** (0.456)	-1.067*** (0.262)	-1.047*** (0.387)	0.482 (0.482)	1.194* (0.686)
Observations	44,142	40,935	41,242	44,347	42,685	42,694
Countries	36	33	34	36	34	34

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

Table 9: Recoded - Trust variables

	<i>Recoded dependent variables - Trust:</i>					
	leader (1)	ruling party (2)	opposition (3)	police (4)	neighbors (5)	relatives (6)
sponsor	0.467** (0.220)	0.391* (0.219)	-0.142 (0.190)	0.256* (0.144)	0.299* (0.159)	0.149 (0.125)
democracy	-0.904 (0.803)	-0.427 (0.735)	0.799 (0.641)	-0.814 (0.713)	0.390 (0.765)	1.745* (1.021)
gdp pc (log)	-0.141 (0.124)	-0.139 (0.106)	-0.385*** (0.080)	-0.047 (0.122)	-0.393*** (0.135)	-0.719*** (0.180)
corruption	-0.105 (0.143)	-0.177 (0.116)	-0.099 (0.093)	-0.278** (0.136)	-0.209 (0.171)	-0.126 (0.239)
rural	0.271*** (0.023)	0.317*** (0.024)	0.181*** (0.033)	0.344*** (0.023)	0.401*** (0.027)	0.152*** (0.024)
age	0.129*** (0.011)	0.087*** (0.011)	0.061*** (0.015)	0.069*** (0.011)	0.121*** (0.012)	0.039*** (0.012)
education	-0.103*** (0.012)	-0.158*** (0.013)	-0.092*** (0.018)	-0.160*** (0.012)	-0.282*** (0.015)	-0.097*** (0.013)
poverty	-0.227*** (0.012)	-0.215*** (0.012)	-0.035** (0.016)	-0.165*** (0.012)	-0.056*** (0.013)	-0.083*** (0.012)
female	0.017 (0.021)	0.074*** (0.022)	-0.128*** (0.029)	0.020 (0.021)	-0.164*** (0.024)	-0.023 (0.022)
discuss politics	-0.005 (0.011)	0.032*** (0.011)	0.101*** (0.015)	-0.001 (0.011)	0.007 (0.012)	-0.012 (0.012)
sponsor* democracy	-0.362 (0.391)	-0.264 (0.381)	0.504 (0.332)	-0.223 (0.257)	-0.187 (0.291)	-0.241 (0.230)
Constant	0.585 (0.442)	-0.173 (0.412)	-2.353*** (0.359)	0.253 (0.396)	-1.501*** (0.425)	-0.168 (0.569)
Observations	44,142	40,935	41,242	44,347	42,685	42,694
Countries	36	33	34	36	34	34

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

Table 10: Physical integrity index - Trust variables

	<i>Dependent variable - Trust:</i>					
	leader (1)	ruling party (2)	opposition (3)	police (4)	neighbors (5)	relatives (6)
sponsor	0.462** (0.180)	0.723*** (0.217)	-0.390*** (0.135)	0.385** (0.173)	0.082 (0.119)	-0.073 (0.169)
physical integrity	-1.196** (0.537)	-1.006* (0.548)	0.326 (0.344)	-0.409 (0.506)	-0.358 (0.703)	0.711 (1.004)
gdp pc (log)	-0.258** (0.115)	-0.306*** (0.107)	-0.166** (0.068)	-0.256** (0.104)	-0.393** (0.159)	-0.627*** (0.210)
corruption	-0.234** (0.117)	-0.419*** (0.106)	-0.017 (0.071)	-0.391*** (0.110)	-0.224 (0.190)	-0.194 (0.274)
rural	0.252*** (0.024)	0.348*** (0.028)	0.115*** (0.023)	0.364*** (0.027)	0.340*** (0.024)	0.226*** (0.030)
age	0.137*** (0.011)	0.096*** (0.013)	0.031*** (0.011)	0.060*** (0.012)	0.123*** (0.012)	0.057*** (0.015)
education	-0.190*** (0.013)	-0.255*** (0.015)	-0.028** (0.012)	-0.239*** (0.014)	-0.107*** (0.013)	-0.053*** (0.016)
poverty	-0.195*** (0.013)	-0.201*** (0.014)	-0.070*** (0.012)	-0.143*** (0.014)	-0.099*** (0.012)	-0.136*** (0.015)
female	-0.016 (0.022)	0.019 (0.025)	-0.073*** (0.021)	-0.003 (0.024)	-0.121*** (0.022)	-0.036 (0.027)
discuss politics	0.041*** (0.011)	0.081*** (0.013)	0.087*** (0.011)	-0.010 (0.012)	-0.004 (0.011)	-0.008 (0.014)
sponsor* physical integrity	-0.185 (0.255)	-0.538* (0.300)	0.529*** (0.187)	-0.170 (0.244)	-0.032 (0.175)	0.101 (0.254)
Constant	-0.123 (0.372)	-0.929** (0.388)	-0.717*** (0.243)	-1.168*** (0.353)	0.721 (0.489)	1.489** (0.697)
Observations	44,142	40,935	41,242	44,347	42,685	42,694
Countries	36	33	34	36	34	34

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01



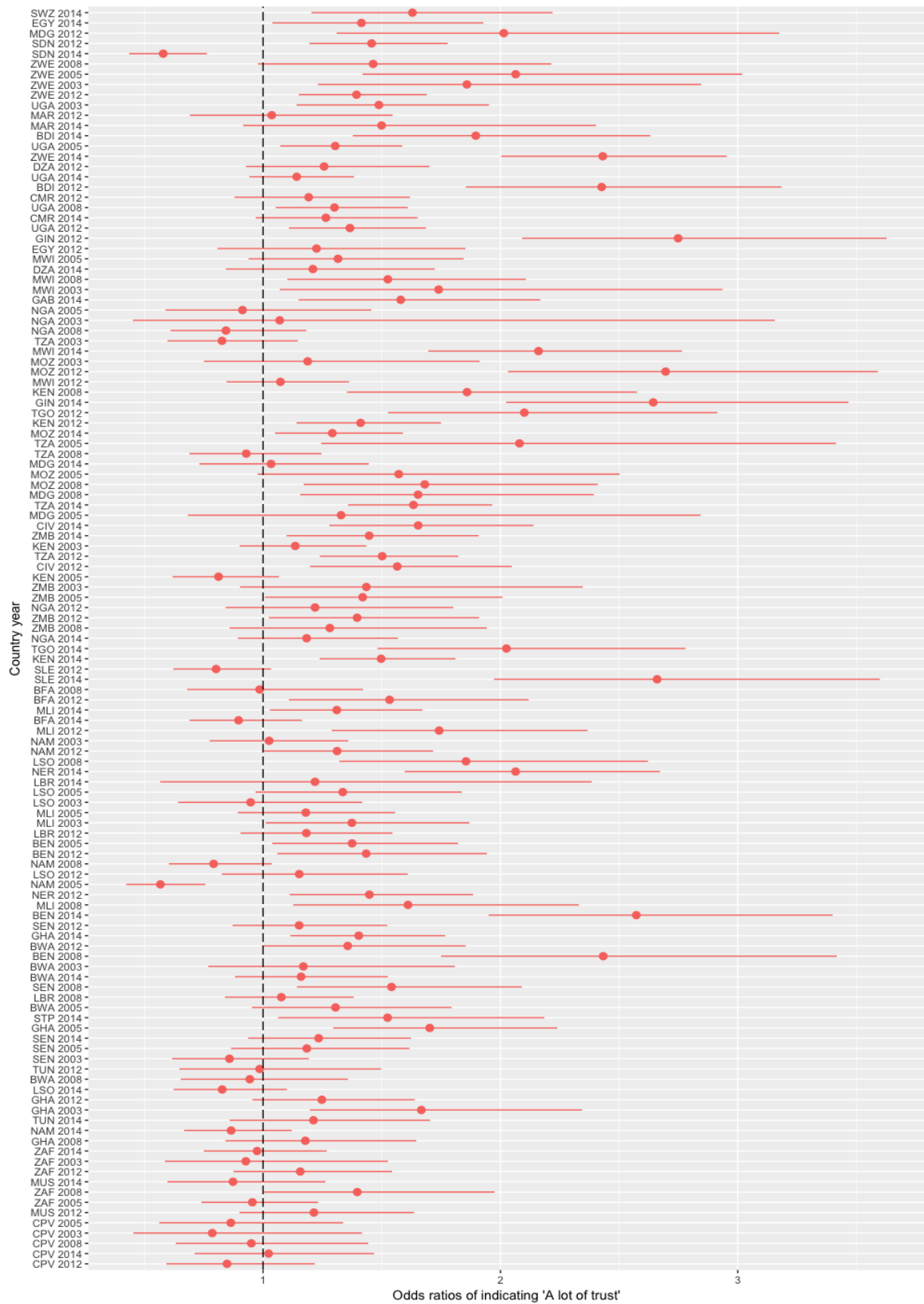
Table 11: Replication of Bratton, Bhavnani, and Chen (2012)

	(Replication)	(With interaction)	(Robustness check, sponsor $\bar{\nu}$ independent)
sponsor	0.241*** (0.029)	0.416*** (0.116)	
partisan	2.866*** (0.068)	2.864*** (0.068)	2.841*** (0.090)
<i>Ethnic identities:</i>			
member largest ethnic group	-0.480*** (0.037)	-0.482*** (0.037)	-0.332*** (0.051)
member EGIP	0.969*** (0.042)	0.971*** (0.042)	0.835*** (0.058)
ethnic salience	0.025** (0.012)	0.025** (0.012)	0.015 (0.018)
ethnic distrust	0.039*** (0.013)	0.039*** (0.013)	0.053*** (0.019)
ethnic discrimination	-0.221*** (0.017)	-0.221*** (0.017)	-0.237*** (0.024)
<i>Economic interests:</i>			
retrospective sociotropic	0.085*** (0.015)	0.085*** (0.015)	0.110*** (0.020)
prospective sociotropic	0.203*** (0.014)	0.203*** (0.014)	0.193*** (0.019)
present egocentric	0.052*** (0.014)	0.052*** (0.014)	0.040** (0.019)
economic policy	0.744*** (0.022)	0.743*** (0.022)	0.803*** (0.030)
<i>Demographic controls:</i>			
female	-0.007 (0.028)	-0.007 (0.028)	-0.024 (0.038)
age	0.003*** (0.001)	0.003*** (0.001)	0.003** (0.001)
education	-0.065*** (0.008)	-0.065*** (0.008)	-0.063*** (0.010)
poverty	0.028 (0.018)	0.028 (0.018)	0.013 (0.025)
rural	0.250*** (0.031)	0.250*** (0.031)	0.210*** (0.042)
<i>Country level variables:</i>			
inflation	0.035 (0.038)	0.034 (0.038)	0.039 (0.036)
growth	0.020 (0.084)	0.020 (0.084)	0.004 (0.080)
ethnic fractionalization	0.347 (1.036)	0.344 (1.036)	0.409 (0.989)
presidential constitution	-0.467 (0.461)	-0.474 (0.460)	-0.489 (0.437)
democracy	-1.603 (1.128)	-1.467 (1.138)	-1.548 (1.081)
<i>Cross-level interaction:</i>			
sponsor*		-0.321 (0.205)	
democracy			
Constant	-2.993** (1.169)	-3.049*** (1.170)	-3.076*** (1.122)
Observations	30,725	30,725	17,109
Countries	29	29	29
Log Likelihood	-16,001.880	-16,000.670	-8,647.327

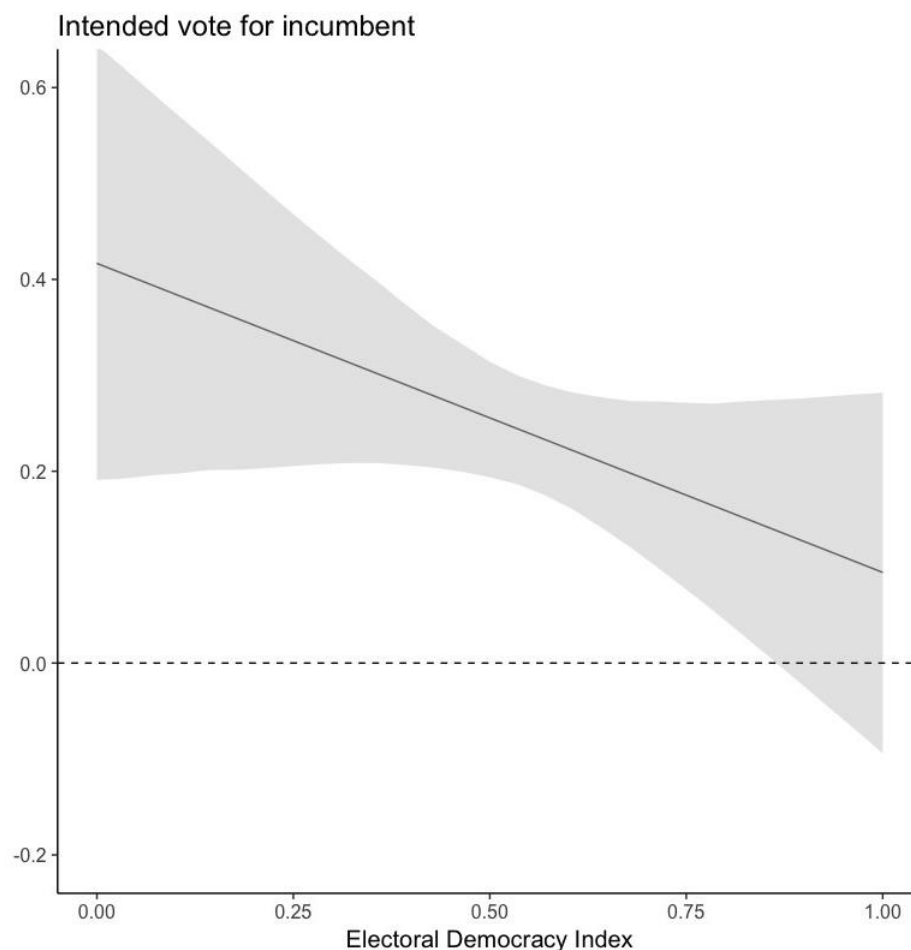
Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

**Figure 7: Effects of suspecting the government on trust in key leader (rounds 2-6)**



**Figure 8: Replication of Bratton, Bhavnani, & Chen (2012) – Marginal effect of suspecting the government on intended vote for the incumbent, conditioned on level of democracy**



**Notes on the replication of Bratton, Bhavnani, and Chen (2012):** Instead of using data from Afrobarometer Round 3 (2005/2006), I replicate the study using Afrobarometer Round 6 (2014/2015). In doing this, I extend the authors' analysis from 16 to 29 countries. This also facilitates a test of the cross-level interaction term. The results in the replication model are strikingly similar to the original study's main model for all the key variables of interest (see Bratton, Bhavnani, and Chen (2012), Table 2, Model 2). A few variables differ between the replication and the original model. Because the individual-level variables for Retrospective egocentric and Prospective egocentric are not available in Round 6, I replace these with a similar item where respondents evaluate their present economic condition (Present egocentric). The survey item that was used to code Expectation of patronage has also been dropped in the most recent round, with no good replacement variable available. Please note that this variable exerted only a minor influence on the original model. On the country level, I had to substitute the measures of Ethnic fragmentation and Ethnic polarization with Alesina et al.'s (2003) measure of Ethnic fractionalization. None of the three measures has a significant effect in any model specification.



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