


SHORT REPORT

Response Bias in Survey Measures of Voter Behavior: Implications for Measurement and Inference

Claire Adida^{1*}, Jessica Gottlieb², Eric Kramon³ and Gwyneth McClendon⁴

¹University of California, San Diego, CA, USA, ²Texas A&M University, College Station, TX, USA, ³George Washington University, Washington, DC, USA and ⁴New York University, New York, NY, USA

*Corresponding author. Email: cadida@ucsd.edu

Abstract

This short report exploits a unique opportunity to investigate the implications of response bias in survey questions about voter turnout and vote choice in new democracies. We analyze data from a field experiment in Benin, where we gathered official election results and panel survey data representative at the village level, allowing us to directly compare average outcomes across both measurement instruments in a large number of units. We show that survey respondents consistently overreport turning out to vote and voting for the incumbent, and that the bias is large and worse in contexts where question sensitivity is higher. This has important implications for the inferences we draw about an experimental treatment, indicating that the response bias we identify is correlated with treatment. Although the results using the survey data suggest that the treatment had the hypothesized impact, they are also consistent with social desirability bias. By contrast, the administrative data lead to the conclusion that the treatment had no effect.

Keywords: Field experiment; survey; election; voting; social desirability bias; accountability; Africa

We exploit a unique opportunity to identify response bias in survey questions about voter turnout and vote choice, two outcomes of fundamental interest to political scientists that are often measured using surveys (see, e.g., Barton, Castillo, and Petrie

Support for this research was provided by the Evidence in Governance and Politics Metaketa I. The data, code, and any additional materials required to replicate all analyses in this article (Adida et al. 2018) are available at the Journal of Experimental Political Science Dataverse within the Harvard Dataverse Network, at: <https://doi.org/10.7910/DVN/CXWIPM>. This study is part of the larger Metaketa initiative to accumulate knowledge about the relationship between information and accountability across country contexts. We thank Amanda Pinkston for sharing 2011 legislative election data and Ana Quiroz and Charles Hintz for excellent research assistance. This research was conducted in collaboration with the Centre de Promotion de la Démocratie et du Développement (CEPRODE), and we thank Adam Chabi Bouko for leading the implementation effort. Our project received ethics approval from the authors' home institutions. We also obtained permission to conduct the study from the President of the National Assembly of Benin. In each study village, permission to conduct research was obtained from the chief and consent was obtained from each surveyed participant in the study. The authors declare no conflict of interest.

© The Experimental Research Section of the American Political Science Association 2019.

2014; Broockman, Kalla, and Sekhon 2017; De La O and Rodden 2008; Greene 2011; Mvukiyehe and Samii 2017; Nathan 2016).¹ An extensive literature studies response bias in survey measures of voter turnout in advanced democracies (see, e.g., Belli, Moore and VanHoewyk 2006; Belli et al. 1999; Burden 2000; Clausen 1968; Greenwald et al. 1987; Holbrook and Krosnick 2010a, 2010b; Karp and Brockington 2005; Silver, Anderson, and Abramson 1986; Zeglovits and Kritzingner 2013). However, we lack information about the extent of this problem in *new democracies* or on survey measures of *vote choice*.

In a field experiment conducted in Benin (Adida et al. 2017), we measured voter turnout and vote choice through survey and official village-level administrative data.² The main results of our field experiment are based on administrative data precisely because of the bias introduced by the survey data, which we demonstrate below.³ Because our surveys are representative at the village-level, we can compare average outcomes across both measurement instruments in a large number of units ($N = 237$). This allows us to demonstrate the size and significance of the discrepancy between estimates of vote choice and voter turnout using these different instruments: survey respondents consistently overreport turning out to vote and voting for the incumbent. This bias is large, with implications for the interpretation of experimental results.

We implemented a randomized field experiment around the 2015 legislative elections in Benin (Appendix D in Supplemental Material) that randomly assigned villages to receive information about the performance of their incumbent legislator (Appendix B in Supplemental Material). Our administrative data consist of official polling station level results from these elections. We aggregate these data up (Appendix G in Supplemental Material) to produce village-level measures of incumbent vote share and voter turnout because our experiment intervened at the village level, and not at the polling station level.

We collected panel survey data on turnout and vote choice. Several weeks before the election, we administered a baseline survey (Appendix E in Supplemental Material) in a random sample of households in each study village ($N = 3,419$). In treatment villages, we provided performance information to 40–60 people from separate households, or 12–15% of households. The endline survey was conducted by phone in the days following the election and prior to the official announcement of results.

We deliberately constructed our vote choice question in *yes* or *no* format to protect respondent privacy and minimize social pressure (Table 1). Since the survey was conducted over the phone, no one but the respondent could understand the meaning of the *yes* or *no* response.⁴

¹See Appendix A in Supplemental Material for a more complete review of these studies.

²The registered pre-analysis plan for the Metaketa project can be found at: <http://egap.org/registration/736>. The registered pre-analysis plan for this particular study can be found at: <http://egap.org/registration/735>

³This bias, though uncovered in the midst of our analysis of our field experiment, informed our decision to rely on administrative rather than survey data when the two conflicted; but demonstrating the bias lay outside the scope of our substantive paper, and is the focus of this paper.

⁴Studies often rely on remote (phone or text) questioning to collect endline measures. Focusing the question wording on the incumbent alone could have inflated incumbent support. However, if this were the only source of bias we would see over-reporting of support in both good *and* bad information conditions. Instead, we see results more consistent with social desirability.

Table 1
Vote Choice Survey Question

We would now like to know which political party you voted for in the legislative elections. Your response is entirely confidential and it will not be shared with anyone outside of the research team. We would like to know if you voted for the political party of [NAME OF INCUMBENT]. The name of the party is [PARTY NAME] and its symbol is the [PARTY SYMBOL]. Just answer YES or NO. Did you vote for the party of [NAME OF INCUMBENT]?

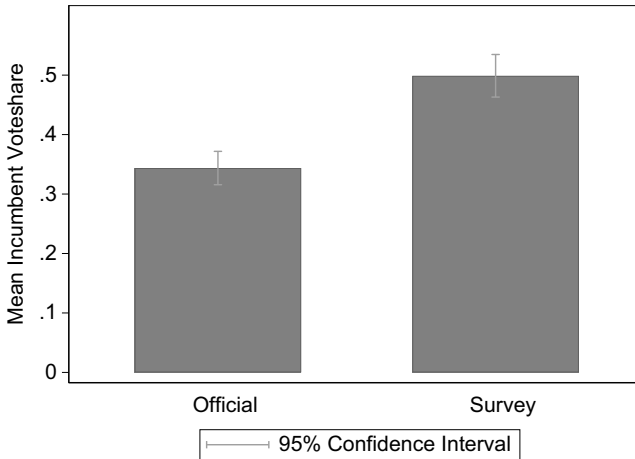


Figure 1
Official versus Survey Data: Incumbent Vote Share.

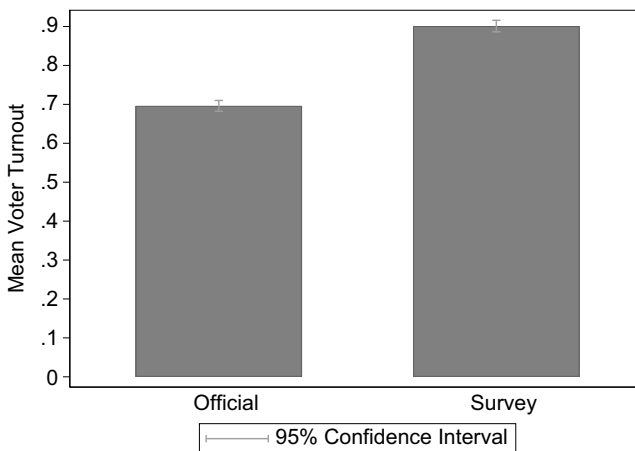


Figure 2
Official versus Survey Data: Voter Turnout.

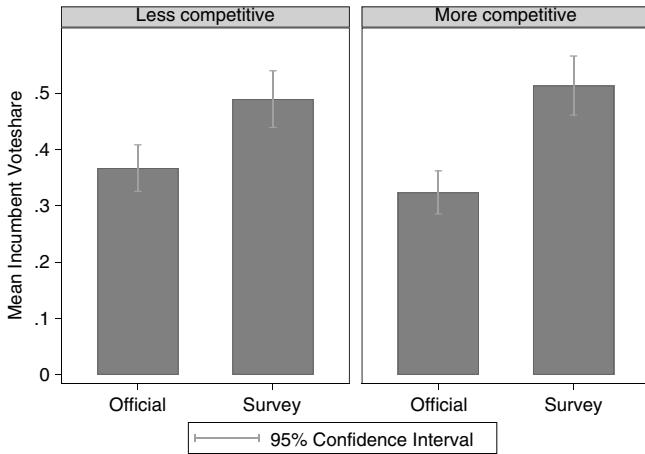


Figure 3
Official versus Survey Data: Incumbent Vote Share, by Competitiveness of 2011 Race.

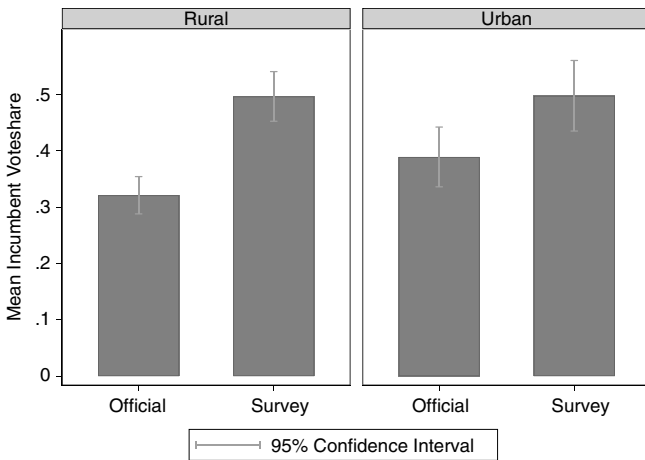


Figure 4
Official versus Survey Data: Incumbent Vote Share, by Urban.

To measure voter turnout, we asked respondents whether they voted in the legislative elections several days earlier, prefacing the question with the observation that some people were not able to vote, a face-saving element shown to reduce turnout overreporting (Zeglovits and Kritzinger 2013).⁵ We validated this measure with two follow-up questions respondents would be more likely to know if they voted: which hand and finger were stamped after voting to prevent fraud.

⁵We did not, however, include face-saving response items, e.g. saying no while giving a valid excuse, which Morin-Chassé (2018) has found to work better than face-saving preambles alone.

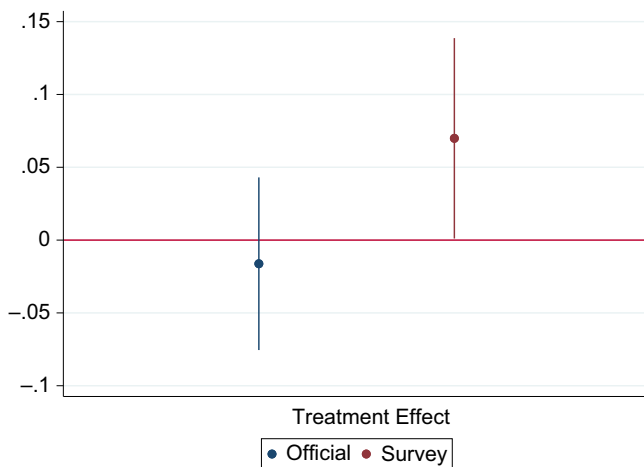


Figure 5

Treatment Effects on Incumbent Vote Share: Good News.

Notes: Preregistered regression estimates with block fixed effects and 95% confidence intervals.

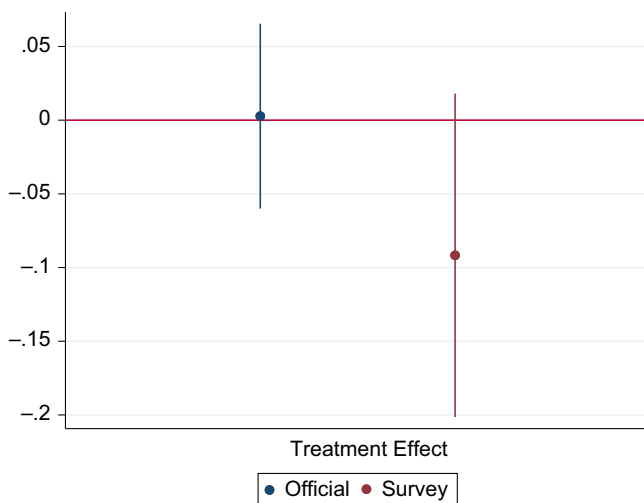


Figure 6

Treatment Effects on Incumbent Vote Share: Bad News.

Notes: Preregistered regression estimates with block fixed effects and 95% confidence intervals.

Figures 1 and 2 graph the differences of means across each measure for incumbent vote share and turnout: these are substantively large and statistically significant. For vote choice, average survey responses are 15 percentage points (half a standard deviation) higher than official data, an upward bias of 45%. For turnout, average survey responses are 20 percentage points (almost two standard deviations) higher than official data, an upward bias of 29%.

Are the differences above driven by sample differences rather than response bias? If our representative survey captures individuals who did not register to vote, we expect a downward bias in our turnout measure, yielding a more conservative estimate. As for reported vote choice, we do not have strong expectations about whether respondents who did not register to vote would systematically be more or less likely to overreport voting for the incumbent. The above analyses imply that overreporting is greater for the vote choice question than for the turnout question: even if survey participants who misreport turning out to vote *always* report voting for the incumbent, this cannot account for all the response bias in the vote choice question.

In Figures 3 and 4, we show that response bias in the vote choice question is more severe in more competitive and in rural localities – consistent with the expectation that bias increases with the sensitivity of the question. In competitive areas, the incumbent may be especially motivated to use repressive tactics, and rural voters may be especially worried about social sanctions if their vote choice is discovered.

We conclude by demonstrating the implications of this measurement bias for analyzing treatment effects in our field experiment. We prespecified that treatment would increase (decrease) the vote share of incumbents in areas where the incumbent had performed well (poorly) in office (Appendix H in Supplemental Material).

To test these hypotheses, we estimate treatment effects on incumbent vote share in good (Figure 5) and bad (Figure 6) performance areas (Appendix I in Supplemental Material). We find a striking difference in results based on the type of data analyzed. The survey data imply that the treatment elicited the expected effect: providing positive (negative) information about the incumbent increased (decreased) vote share. By contrast, the analysis of official results suggests precisely estimated null effects. In other words, we find measurement bias induced by our treatment, a serious form of measurement error.

Is this disparity attributable to differences in treatment intensity? Treatment was typically administered to a larger share of survey respondents than of registered voters in a given village. And yet, in a separate analysis, we find effects of a variant of this treatment even when administered to the same proportion of a village's population (Adida et al. 2017). Additionally, if treatment intensity were a moderator, we would expect – but do not find – heterogeneous treatment effects by village size.⁶

The conclusions we draw from our study thus seem to depend on the data we use. The results using the survey data are consistent with our preregistered hypotheses. However, they are also consistent with social desirability bias, where participants over(under)-report support for strong (weak) incumbents. By contrast, the administrative data lead to the conclusion that the treatment had no average treatment effect. Response bias in survey measures of vote choice and turnout in new democracies can be large and lead to Type-I errors.

Supplementary material. To view supplementary material for this article, please visit <https://doi.org/10.1017/XPS.2019.9>.

Author ORCIDs.  Claire Adida [0000-0002-3493-5539](https://orcid.org/0000-0002-3493-5539)

⁶We sought to recruit the same number of individuals into treatment in each treatment village, regardless of village population size, so village size acts as a reasonable proxy for treatment intensity across villages.

References

- Adida, Claire, Jessica Gottlieb, Eric Kramon and Gwyneth McClendon.** 2017. Breaking the clientelistic voting equilibrium: the joint importance of salience and coordination. AIDData Working Paper 48.
- Adida, Claire L., Jessica Gottlieb, Eric Kramon and Gwyneth McClendon.** 2018. Replication Data for: Response Bias in Survey Measures of Voter Behavior: Implications for Measurement and Inference. *Harvard Dataverse V3*. (doi: [10.7910/DVN/CXWIPM](https://doi.org/10.7910/DVN/CXWIPM)).
- Burden, Barry C.** 2000. Voter Turnout and the National Election Studies. *Political Analysis* 8(4): 389–98.
- Barton, Jared, Marco Castillo and Ragan Petrie.** 2014. What Persuades Voters? A Field Experiment on Political Campaigning. *The Economic Journal* 124(574): F293–F326
- Belli, Robert F., Michael W. Traugott, Margaret Young and Katherine A. McGonagle.** 1999. Reducing Vote Overreporting in Surveys: Social Desirability, Memory Failure, and Source Monitoring. *The Public Opinion Quarterly* 63(1): 90–108.
- Belli, Robert F., Sean E. Moore and John VanHoewyk.** 2006. An Experimental Comparison of Question Forms used to Reduce Vote Overreporting. *Electoral Studies* 25(4): 751–9.
- Broockman, David E., Joshua L. Kalla and Jasjeet S. Sekhon.** 2017. The Design of Field Experiments with Survey Outcomes: A Framework for Selecting more Efficient, Robust, and Ethical Designs. *Political Analysis* 25(4): 435–64.
- Clausen, Aage R.** 1968. Response Validity: Vote Report. *The Public Opinion Quarterly* 32(4): 588–606.
- De LaO, Ana L. and Jonathan A. Rodden.** 2008. Does Religion Distract the Poor? Income and Issue Voting Around the World. *Comparative Political Studies* 41(4–5): 437–76.
- Greene, Kenneth F.** 2011. Campaign Persuasion and Nascent Partisanship in Mexico's New Democracy. *American Journal of Political Science* 55(2): 398–416.
- Greenwald, Anthony G., Catherine G. Carnot, Rebecca Beach and Barbara Young.** 1987. Increasing Voting Behavior by Asking People if they Expect to Vote. *Journal of Applied Psychology* 72(2): 315.
- Holbrook, Allyson L. and Jon A. Krosnick.** 2010a. Measuring Voter Turnout by Using the Randomized Response Technique: Evidence Calling into Question the Method's Validity. *Public Opinion Quarterly* 74(2) :328–43.
- Holbrook, Allyson L. and Jon A. Krosnick.** 2010b. Social Desirability Bias in Voter Turnout Reports: Tests using the Item Count Technique. *Public Opinion Quarterly* 74(1): 37–67.
- Karp, Jeffrey A. and David Brockington.** 2005. Social Desirability and Response Validity: A Comparative Analysis of Overreporting Voter Turnout in Five Countries. *The Journal of Politics* 67(3): 825–40.
- Morin-Chassé, Alexandre.** 2018. How to Survey About Electoral Turnout? Additional Evidence. *Journal of Experimental Political Science* 5:1–4.
- Mvukiyehe, Eric and Cyrus Samii.** 2017. Promoting Democracy in Fragile States: Field Experimental Evidence from Liberia. *World Development* 95: 254–67.
- Nathan, Noah L.** 2016. Local Ethnic Geography, Expectations of Favoritism, and Voting in Urban Ghana. *Comparative Political Studies* 49(14): 1896–929.
- Silver, Brian D., Barbara A. Anderson and Paul R. Abramson.** 1986. Who Overreports Voting? *American Political Science Review* 80(2): 613–24.
- Zeglovits, Eva and Sylvia Kritzinger.** 2013. New Attempts to Reduce Overreporting of Voter Turnout and Their Effects. *International Journal of Public Opinion Research* 26(2): 224–34.

Cite this article: Adida C, Gottlieb J, Kramon E, and McClendon G (2019). Response Bias in Survey Measures of Voter Behavior: Implications for Measurement and Inference. *Journal of Experimental Political Science* 6, 192–198. <https://doi.org/10.1017/XPS.2019.9>