

Methodological Note #003

Measuring Political Knowledge in the AmericasBarometer

Mollie J. Cohen and Elizabeth J. Zechmeister

Vanderbilt University

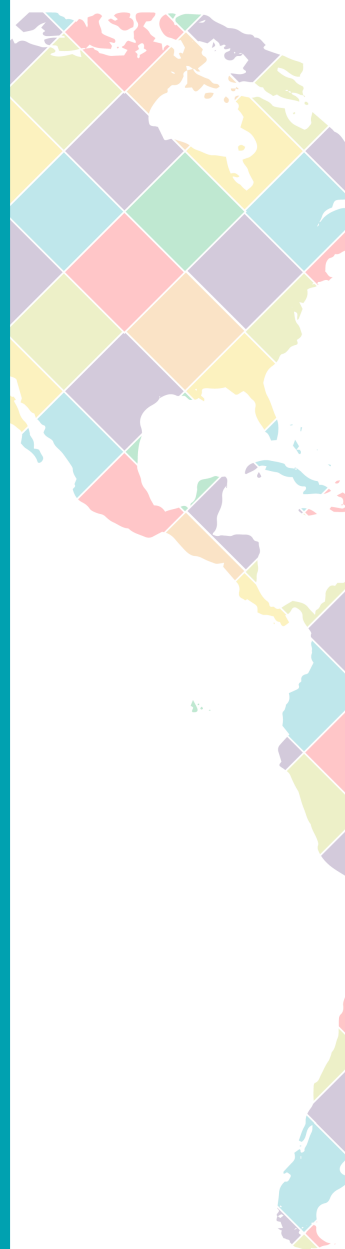
mollie.j.cohen@vanderbilt.edu

liz.zechmeister@vanderbilt.edu

March 6, 2018

Key Findings:

- We assess the reliability and validity of interviewer assessments of political knowledge in Colombia.
- Interviewer assessments correlate well with respondent-directed measures of political knowledge, political interest, and respondent education.
- Like factual knowledge questions, interviewer assessments of political knowledge are positively correlated with various measures of political participation and engagement.



People who are more knowledgeable about politics think and act differently than their less informed counterparts. Yet, reliable and valid measures of political knowledge are difficult to develop. This is especially true in comparative projects, where questions that are easy to answer in one context may be exceptionally difficult in another.¹

LAPOP's 2016/17 AmericasBarometer removed the factual political information battery (which we refer to as *Political Knowledge–Respondent*) from the core instrument. In its place is an interviewer assessment of the respondent's political knowledge (*Political Knowledge–Interviewer*).² Why discard the old, and how useful is the new measure of political knowledge?

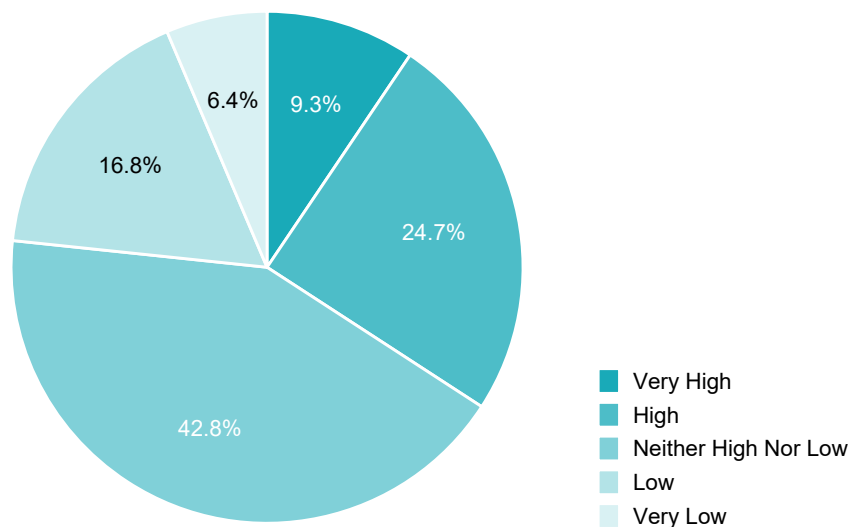
In this *Methodological Note*, we first introduce the new measure. We then present analyses that assess the reliability of the old, *Political Knowledge–Respondent*, measure and compare its performance to the new *Political Knowledge–Interviewer* measure. Next, we assess the validity of the measures. To accomplish these goals, we use data from the 2016 AmericasBarometer Colombia study, which included both items. We conclude that the new interviewer-driven measure has a number of properties that make it an efficient and effective proxy with which to gauge awareness and knowledge of politics.

The New Political Knowledge Item in the 2016/17 AmericasBarometer

In the 2016/17 AmericasBarometer, enumerators responded to the following item at the conclusion of each interview:

CONOCIM. Using the scale below, rate your perception of the level of political knowledge of the respondent.³

Response options ranged from 1–5, with 1 indicating “very high knowledge” and 5 indicating “very low knowledge.” Figure 1 shows the distribution



Perception of the Level of Political Knowledge

Source: © AmericasBarometer, LAPOP, 2004-2017; v.COL_1.0

Figure 1: Political Knowledge—Interviewer, LAC Region

of responses to this question for the Latin America and Caribbean (LAC) region. The 2016/17 round of the AmericasBarometer included 27 LAC countries; in 20 of these countries (the 18 Latin American countries, plus Jamaica and Haiti), *Political Knowledge—Interviewer* was included as a substitute for the respondent answered *Political Knowledge—Respondent* battery. In the case of Colombia alone, both knowledge measures were included.

Reliability of the Respondent-Driven Political Knowledge Measure in Colombia 2016

Respondents to the 2016 Colombia AmericasBarometer were asked to respond to three factual knowledge questions. Two were also included in the core questionnaire for the 2014 AmericasBarometer, while another is specific to Colombia:

GI1. What is the name of the current U.S. president?

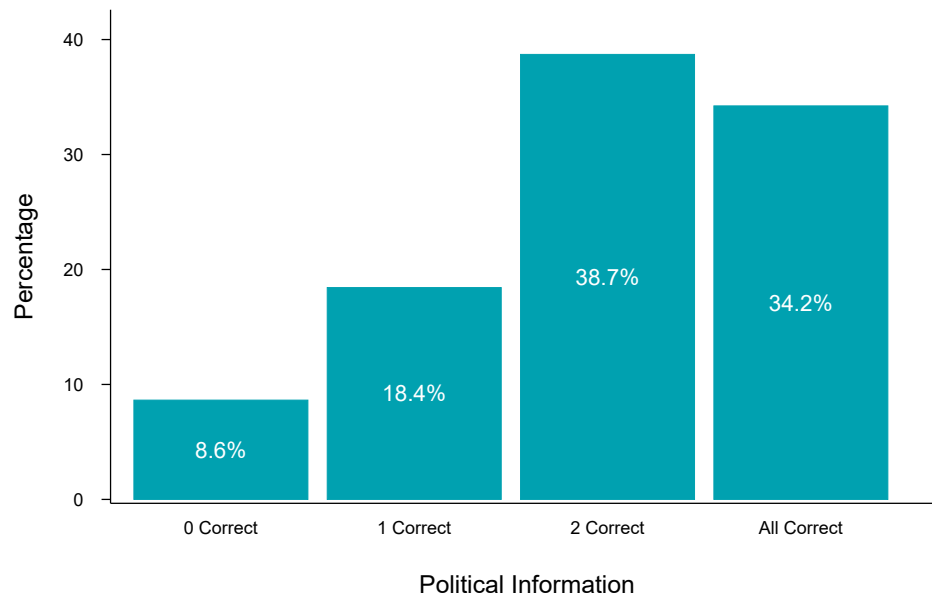
GI4. How long is the presidential term in Colombia?

GIX4. On which continent is Nigeria located?

Using instructions provided on the instrument, interviewers coded responses as “correct” or “incorrect”. The resulting political knowledge measure is the sum of the items the respondent answered correctly (“don’t knows” and refusals are treated as incorrect responses), divided by the total number of items. The measure ranges from 0 to 1, with 0 indicating no correct responses and 1 indicating that a respondent answered all three knowledge questions correctly.

Figure 2 presents the distribution of the *Political Knowledge–Respondent* measure. 72.9% of Colombians are above the midpoint of the scale, and 34.2% of Colombians score as having the “highest” level of political knowledge. One interpretation of these results is that Colombians are highly knowledgeable about politics relative to others in the region. However, results from previous AmericasBarometer studies (which used a slightly different battery of items) suggest this is not the case: in 2014, Colombia was the median country in the cross-national distribution of political knowledge across Latin American countries.⁴ An alternative, more likely interpretation is that in Colombia the 2016 information questions are not sufficiently difficult to be highly discriminating across levels of political knowledge.

To accurately measure political knowledge, some questions should be relatively easy to answer, while other questions should be difficult. Delli Carpini and Keeter (1993) recommend that 30-70% of respondents be able to answer a given knowledge item correctly to assure that the scale can discriminate across levels of knowledge. Only one of the items in this battery (**GIX4**–Nigeria) fits this criterion in the 2016 Colombia study, with 36.3% of respondents giving the correct answer. 74.4% of responses to the U.S. President item are correct and 87.8% of responses to the Colombia presidential term item are correct. In short, two of three items are too easy, resulting in an insufficiently discriminating measure.



Source: © AmericasBarometer, LAPOP, 2016; v.COL_1.0

**Figure 2: Distribution of Political Knowledge—
Respondent, Colombia 2016**

**Table 1: Description of Responses to Knowledge—
Respondent, Colombia 2016**

	US President	Length President Term	Nigeria
% Correct	74.41%	87.84%	36.28%
% Incorrect	2.18%	3.84%	9.09%
Don't Know	23.42%	8.32%	54.64%

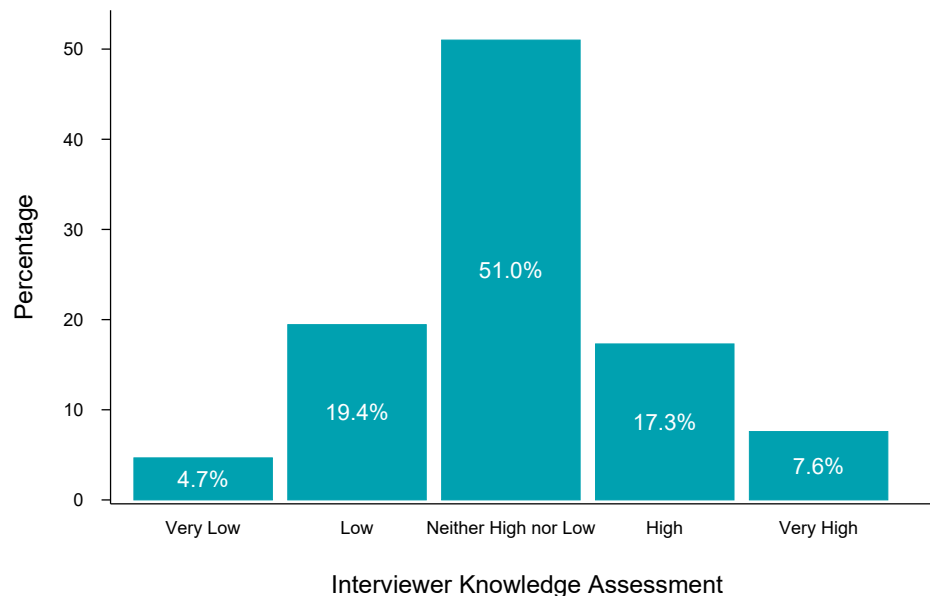
Scholars also assess items' scale reliability before creating political knowledge scales (for example, Cronbach's Alpha or Loevinger's H). In political science research, a Cronbach's Alpha of 0.7 or higher is often used as the threshold for indicating that a scale is sufficiently reliable to create an index; the calculated Cronbach's Alpha for the three-item knowledge battery in Colombia is 0.59, suggesting a weaker-than-ideal scale. An alternative measure, Loevinger's H, takes into account the relative difficulty of items when assessing a scale's consistency; strong scales have a Loevinger's H value of 0.5 or greater (Mokkan and Lewis 1982). The political knowledge scale performs well by this metric in Colombia in 2016: the Loevinger's H is 0.73.

These assessments of *Political Knowledge–Respondent* in Colombia suggest that there are some (not necessarily fatal) limitations to the 2016 module's performance as an ideal political knowledge index. There is insufficient variation in the relative difficulty of items, resulting in a leftward skew in estimated levels of political knowledge—with estimates biased toward the higher range of the scale—and measures of scale reliability yield mixed results.

Reliability of the Interviewer-Assessed Political Knowledge Measure in the Colombia 2016 Study

Interviewer assessments of respondents' knowledge of politics are an alternative measure of political knowledge. Some scholars (e.g., Zaller 1986) have shown that interviewer assessments perform as well as extensive political information batteries. The 2016/17 AmericasBarometer includes such an item in each national survey.⁵

In Figure 3, we recoded interviewer assessments of political knowledge in Colombia's 2016 study so that higher values indicate more political knowledge. The new measure is distributed normally: 51% of respondents are coded as having “neither high nor low” levels of political knowledge, and few respondents are ranked as having very low (4.7%) or very high (7.6%)



Source: © AmericasBarometer, LAPOP, 2016; v.COL_1.0

Figure 3: Distribution of Political Knowledge—Interviewer, Colombia 2016

knowledge of politics. This supports the notion that interviewer assessments can discern variation in survey participants' political knowledge.

Assessing the Validity of the Knowledge Measures in the Colombia 2016 Study

To test the validity of the knowledge measures, we assessed the correlation between *Political Knowledge–Respondent* and *Political Knowledge–Interviewer* and with alternative proxies for political knowledge: political interest (higher values indicate more interest) and years of education.

Knowledge–Respondent and *Knowledge–Interviewer* are moderately correlated ($\rho=0.43$). A respondent's education is positively correlated with both *Knowledge–Respondent* ($\rho=0.49$) and *Knowledge–Interviewer* ($\rho=0.37$). While we cannot be certain, it is possible that the slightly

Table 2: Correlations across Alternative Knowledge Measures

	<i>Knowledge– Respondent</i>	<i>Knowledge– Interviewer</i>	Education	Interest
<i>Knowledge–Respondent</i>	1.00			
<i>Knowledge–Interviewer</i>	0.42	1.00		
Education	0.49	0.37	1.00	
Interest	0.21	0.28	0.18	1.00

Correlations based on data from the AmericasBarometer 2016 survey of Colombia.

weaker correlation between education and *Knowledge–Interviewer* indicates one of the new measure’s strengths: political fluency or sophistication may not derive only from knowledge of facts to which more educated people have greater access. Political interest is also positively correlated with both knowledge measures, although these relationships are weaker ($\rho=0.21$ for *Knowledge–Respondent*, and $\rho=0.28$ for *Knowledge–Interviewer*).

Another way to test the validity of a measure is to check that it the measure predicts what it is supposed to predict. Measures of political knowledge are often used as predictors of other political behaviors, especially of political participation and engagement (Carreras and Irepoglu 2013; Cohen 2017; Delli Carpini and Keeter 1996; McMurray 2015). Below we present a series of models that predict five forms of political participation and engagement (turnout, partisanship, interest, internal efficacy, and news consumption) using, first, the new *Knowledge–Interviewer* measure and, second, the traditional *Knowledge–Respondent* measure. Once again, we are focused on the 2016 AmericasBarometer data for Colombia, where both knowledge measures were included. Each cell in Table 3 presents the coefficient on that political knowledge measure, from a single model regressing a given dependent variable on only that knowledge measure and demographic controls. Each row indicates a dependent variable. In all five cases, the two measures work similarly: the coefficients are positive and statistically significant.⁶

One concern about the *Knowledge–Interviewer* measure in Colombia is that the inclusion of the traditional *Knowledge–Respondent* module on the questionnaire in Colombia could have given enumerators additional information, resulting in a more valid indicator than we would obtain without including the respondent-driven questions. Does the *Knowledge–Interviewer* measure work as expected in the absence of direct questions that assess respondents’ political knowledge? We examined the predictive power of *Knowledge–Respondent* for the five dependent variables presented in Table 3 for each of the 18 Latin American countries included in the 2014 AmericasBarometer and compare these to results for those 18 countries using the new *Knowledge–Interviewer* measure

Table 3: Predicting Participation, Engagement with Political Knowledge

Dependent Variable	Independent Variable	
	Knowledge–Interviewer	Knowledge–Respondent
Turnout	0.80* (0.25)	0.92* (0.23)
Partisanship	1.37* (0.29)	1.19* (0.22)
Interest	0.90* (0.14)	0.39* (0.09)
Internal Efficacy	1.69* (0.25)	0.93* (0.18)
News Consumption	0.61* (0.14)	0.70* (0.12)

Sociodemographic variables included but not shown here; See Appendix for complete results. Standard errors in parentheses, * indicates $p \leq .05$. Analysis based on data from the AmericasBarometer 2016 survey of Colombia.

included in the 2016/17 survey.⁷

In 83 of the 90 estimated regressions that we ran, we found that the relationships between the two knowledge measures and the dependent variables are in the same direction within each country, with a similar level of statistical significance (see the appendix for these results). In sum, using *Political Knowledge–Respondent* in 2014, and *Political Knowledge–Interviewer* in 2016/17, we find consistently positive and significant associations between levels of knowledge and political interest, internal efficacy, turnout, partisanship, and news consumption. In a few cases, the direction of the estimated relationship between knowledge and the dependent variable differs across the two measures.⁸ In all but one of these instances (where the relationships differ), at least one of the estimated coefficients does not reach standard thresholds for statistical significance. We cannot know in these cases whether the discrepancy is the result of measurement error driven by the new or old measure.

Conclusion

The new *Political Knowledge–Interviewer* measure has several desirable properties: it is normally distributed and positively correlated with other variables (e.g., education, political interest) that past scholarship has linked to greater knowledge of politics.⁹ While new and old measures do not perform identically in regression analyses, their effects are similar in the analyses we present here.

Of course, the new measure is not completely interchangeable with the old. In a small number of cases, the estimated relationship between the new *Knowledge–Interviewer* measure and various measures of political engagement differs from the relationship estimated using data collected in 2014. Further, questions that depend on interviewer coding are especially prone to interviewer effects. Indeed, when we regress the *Knowledge–Interviewer* measure on dummy variables identifying each interviewer, we find evidence that some interviewers give consistently higher or lower scores.¹⁰ It may be, then, that those using interviewer-driven measures will want to test the robustness of their conclusions to models that include controls for the interviewer.

We leave it to future research to parse out these and other analytic issues in more detail. We close by noting that overall, the new, interviewer-driven measure appears to work at least as well as classic measures that capture levels of political knowledge, and does so while saving valuable space on the AmericasBarometer questionnaire.

Notes

1. See the discussion and analyses reported by Gidengil and Zechmeister in their blog contribution at this link: <http://www.csesblog.org/2016/12/the-tough-decision-to-remove-political-knowledge-from-the-cses-module-5/>.
2. Scholars often use the terms *political sophistication*, *political information*, and *political knowledge* interchangeably. In his classic work, Luskin (1987) defines political sophistication as varying along three dimensions: the *number* of political facts a person knows, the *range* of subject matter of those facts, and *constraint*, that is the organization of those ideas. Political information refers only to the possession of facts, which may be of broad or narrow range; a person may thus have high political information but still be relatively unsophisticated to the extent these facts are narrow or disorganized (“poorly constrained”). Most measures of political sophistication used in survey projects assess respondents’ knowledge of a range of specific political facts. Surveys rarely address constraint in measures of political sophistication. Rather, it is common to consider the factual measures, especially in combination with measures of education, ideology, and interviewer assessments of respondents’ knowledge, as good proxies for the underlying sophistication concept.
3. Interviewers were explicitly asked to assess respondents’ knowledge (“conocimiento”), not their sophistication (“sofisticación”). Prior to fieldwork, enumerators received extensive training, which included specific criteria on which to gauge respondents’ political knowledge. These included: their ability to quickly and easily understand questions; their ease and eloquence in discussing political issues; and correct understanding of response scales and options. The second and third criteria are especially likely to reflect constraint (see endnote 2). While we refer to our measure as a knowledge measure, we suspect that it will also be positively correlated with respondents’ underlying political sophistication.
4. Analyses not shown here to conserve space. In the 2014 AmericasBarometer study, a fourth knowledge item asked respondents how many members of congress belonged to the *lower house* in their country. Correct response to this item was poor, with only 19 participants giving the correct answer in Colombia (less than one percent of all respondents) and two-thirds of respondents replying that they did not know. Cronbach’s Alpha in Colombia was also quite low (0.36) and Loevinger’s H values are unreliable due to such low levels of correct response on the third item.
5. To maximize its value for comparative research, each field team was trained by LAPOP in the use of the new instrument with the same, standardized set of materials.

6. At first glance, the coefficients are fairly similar except in the cases of interest and internal efficacy, where the predictive power of *Knowledge–Interviewer* is a somewhat stronger predictor.
7. Due to its poor performance across countries, we exclude the number of legislators item (GI7) for the 2014 analysis.
8. The estimated relationship differs for political interest in Guatemala, Honduras, and Panama, for turnout the relationship differs in Brazil and the Dominican Republic, and for partisanship, the relationship differs in Bolivia and Panama. For political interest in Panama, the estimated relationship in 2016/17 is positive and significant, whereas the estimated relationship in 2014 is negative and significant.
9. We present the distribution of *Knowledge–Interviewer* for Colombia in this methodological note; results from other countries where the variable was included are also normally distributed and have similar statistical relationships to engagement variables (see Table 4).
10. These interviewer effects persist when we control for variables that are theoretically related to respondents' political knowledge, including the strata and respondent education.

References

- Carreras, Miguel, and Yasemin Irepoglu. 2013. "Trust in Elections, Vote Buying, and Turnout in Latin America." *Electoral Studies* 32 (4): 609–619.
- Cohen, Mollie J. 2017. "Protesting via the Null Ballot: An Assessment of the Decision to Cast an Invalid Vote in Latin America." *Political Behavior*: 1–20.
- Delli Carpini, Michael X., and Scott Keeter. 1993. "Measuring Political Knowledge: Putting First Things First." *American Journal of Political Science* 37 (4): 1179–1206.
- . 1996. *What Americans Know About Politics and Why It Matters*. New Haven: Yale University Press.
- Luskin, Robert C. 1987. "Measuring Political Sophistication." *American Journal of Political Science* 31 (4): 856–899.
- McMurray, Joseph C. 2015. "The Paradox of Information and Voter Turnout." *Public Choice* 165 (1): 13–23.
- Mokkan, Robert J., and Charles Lewis. 1982. "A Nonparametric Approach to the Analysis of Dichotomous Item Responses." *Applied Psychological Measurement* 6 (4): 417–430.
- Zaller, John. 1986. "Analysis of Information Items in the 1985 NES Pilot Study." ANES Pilot Study Report No. nes002261.

Appendix

Table 4

Country	Political Interest		Internal Efficacy		Turnout		Partisanship		News Consumption	
	2016/17	2014	2016/17	2014	2016/17	2014	2016/17	2014	2016/17	2014
Argentina	+	+	+	+	+	+	+	+	+	+
Bolivia	+	+	+	+	+	+	+	+	+	+
Brazil	+	+	+	+	+	—	+	+	+	+
Chile	+	+	+	+	+	+	+	+	+	+
Colombia	+	+	+	+	+	+	+	+	+	+
Costa Rica	+	+	+	+	+	+	+	+	+	+
Dominican Republic	+	+	+	+	+	—	+	+	+	+
Ecuador	+	+	+	+	+	+	+	+	+	+
El Salvador	+	+	+	+	+	+	+	+	+	+
Guatemala	+	—	+	+	+	+	+	+	+	+
Honduras	+	—	+	+	+	+	+	+	+	+
Mexico	+	+	+	+	+	+	+	—	+	+
Nicaragua	+	+	+	+	+	+	+	+	+	+
Panama	+	—	+	+	+	+	+	—	+	+
Paraguay	+	+	+	+	+	+	+	+	+	+
Peru	+	+	+	+	+	+	+	+	+	+
Uruguay	+	+	+	+	+	+	+	+	+	+
Venezuela	+	+	+	+	+	+	+	+	+	+

* indicates $p \leq .05$. Shaded cells indicate the estimated relationship between knowledge (*Political Knowledge–Respondent* in 2014, and *Political Knowledge–Interviewer* in 2016/17) and each dependent variable in 2016/17 and 2014 appear to run in opposing directions. In most of these cases, one of the estimated coefficients does not reach standard thresholds for statistical significance and the difference in the estimated coefficients in these cases is likely not statistically significant.

Table 5: Predicting Participation, Engagement with Political Knowledge Measures (Table 3 Complete)

	Turnout		Partisanship		Interest		Internal Efficacy		News Consumption	
<i>Knowledge–Interviewer</i>	0.80*		1.37*		0.90*		1.69*		0.61*	
	(0.25)		(.29)		(0.14)		(0.25)		(0.14)	
<i>Knowledge–Respondent</i>		0.92*		1.19*		0.39		0.93*		0.70*
		(0.23)		(0.22)		(0.09)		(0.18)		(0.12)
Education Levels	0.21	0.13	0.11	0.06	0.16*	0.18*	0.26*	0.26*	0.12*	0.06
	(0.11)	(0.12)	(0.13)	(0.13)	(0.04)	(0.04)	(0.08)	(0.08)	(0.05)	(0.05)
Female	0.07	0.14	−0.38*	−0.35*	−0.19*	−0.21*	−0.50*	0.07	0.11*	
	(0.10)	(0.12)	(0.13)	(0.13)	(0.05)	(0.06)	(0.10)	(0.11)	(0.06)	(0.05)
Urban Residence	0.51*	0.58*	0.20	0.25	0.09	0.09	0.01	0.05	−0.05	−0.01
	(0.16)	(0.15)	(0.16)	(0.16)	(0.05)	(0.05)	(0.13)	(0.14)	(0.07)	(0.07)
Age	0.46*	0.46*	0.28*	0.28*	0.01	0.02	0.07*	0.07*	0.11*	0.11*
	(0.04)	(0.04)	(0.05)	(0.05)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Wealth	0.03	0.02	−0.04	−0.05	−0.00	0.00	0.03	0.04	0.05*	0.4
	(0.04)	(0.05)	(0.06)	(0.06)	(0.02)	(0.02)	(0.04)	(0.04)	(0.02)	(0.02)
Constant	−2.40*	−2.51*	−3.00*	−3.02*	1.18*	1.32*	2.41*	2.61*	3.36*	3.31*
	(0.34)	(0.32)	(0.45)	(0.43)	(0.15)	(0.15)	(0.30)	(0.32)	(0.19)	(0.18)
Observations	1,495	1,515	1,502	1,521	1,503	1,523	1,483	1,503	1,505	1,525

* indicates $p \leq .05$. Standard errors in parentheses. Analysis based on data from the AmericasBarometer 2016 survey of Colombia.

Dr. Mollie J. Cohen is a postdoctoral research fellow at LAPOP.

Elizabeth J. Zechmeister is Cornelius Vanderbilt Professor of Political Science at Vanderbilt University and Director of LAPOP.

This report was edited by Dr. Mitchell A. Seligson. Auditing for this report was done by Euiyoung Emily Noh. This report was translated by Sebastian Larrea, Dr. J. Daniel Montalvo, and Dr. Juan Camilo Plata. Formatting, production, copy editing, graphics and report distribution were handled by Rubí Arana, Emma Tatem, and Zach Warner. Our data and reports are available for free download on the project website. Please follow us on Twitter or Facebook to stay in touch.

As a charter member of the American Association for Public Opinion Research (AAPOR) Transparency Initiative, LAPOP is committed to routine disclosure of our data collection and reporting processes. More information about the AmericasBarometer sample designs can be found at vanderbilt.edu/lapop/core-surveys.

This *Methodological Note* is made possible by the support of the American People through the United States Agency for International Development (USAID) and Vanderbilt University. The contents of this *Methodological Note* are the sole responsibility of its authors and LAPOP and do not necessarily reflect the views of USAID, the United States Government or any other supporting organization. LAPOP's AmericasBarometer surveys are supported predominantly by USAID and Vanderbilt University. The 2016/17 round also had support from the IADB, the UNDP, the Open Society Foundations, and academic partners and researchers across the Americas.

vanderbilt.edu/lapop
@lapop_barometro
@LatinAmericanPublicOpinionProject
lapop@vanderbilt.edu
+1-615-322-4033



230 Appleton Place, PMB 505, Suite 304, Nashville, TN 37203, USA

