

AmericasBarometer 2023: Bolivia

Technical Information

Country	Year	Sample Size	Weighted/Unweighted	Fieldwork dates
Bolivia	2023	1,706	Self-weighted	April 21 st - May 25 th , 2023

LAPOP Lab AmericasBarometer 2023 Survey Round

The 2023 AmericasBarometer represents the 10th round of LAPOP Lab’s main project, which marks a significant milestone in the realm of public opinion research in the Americas. Over the past decade, the AmericasBarometer has emerged as a leading source of data, providing valuable insights into the political, social, and economic landscape of the region. With its rigorous methodology and extensive coverage, the survey has been instrumental in understanding the diverse perspectives and attitudes of citizens across Latin America and the Caribbean. The AmericasBarometer permits valid comparisons across countries, and time, via a common core questionnaire and standardized methods. Over the years, the AmericasBarometer has interviewed over 409,000 respondents across the region.

In the 2023 round of the AmericasBarometer, LAPOP Lab switched back to its conventional data collection mode (Face-to-Face household surveys). At the heart of the survey's methodology lies a robust and complex sample design. Following the methodology of previous rounds, the 2023 AmericasBarometer continues to use the sample strategy introduced in the 2012 round of the surveys and also employed in the 2014, 2016/17, and 2018/19 rounds. This sample design continues to use, in almost all cases, the same stratification employed since 2004, making adjustments where necessary when census information is updated. The sample design aims for representative results at the primary stratum level, accounting for urban/rural areas and the size of municipalities. This approach ensures a thorough and nuanced understanding of public opinion across different geographic and demographic segments. By stabilizing primary sampling unit (PSU) and cluster sizes and employing Probability Proportional to Size (PPS) method for PSU selection, the survey maximizes efficiency and minimizes intra-class correlation.

As in previous rounds of the AmericasBarometer, we conducted online surveys in the U.S. and Canada. In Haiti and Nicaragua CATI interviews were conducted using Random-Digit Dialing (RDD) using mobile phone numbers as sampling frames.

The quality control process for the AmericasBarometer 2023 round continues using the LAPOP's Fieldwork Algorithm for LAPOP Control over survey Operations and Norms (FALCON). FALCON gathers information about each interview such as recordings, interviewer images, question and questionnaire timing, and interviewer performance indicators that are daily monitored during data collection to guarantee that each interview meets LAPOP Lab's quality control standards.

For the 2023 AmericasBarometer, LAPOP Lab collected data in 26 countries in the Americas, from January to August 2023. All country datasets and reports available for download for free at www.LapopSurveys.org.

The remaining pages of this technical note describe the sample design of the 2023 AmericasBarometer survey in Bolivia.

2023 AmericasBarometer: Bolivia

This survey was carried out between April 21st and May 25th 2023, as part of LAPOP's 2023 AmericasBarometer. It is a follow up to LAPOP's AmericasBarometer Bolivia surveys of 2004, 2006, 2008, 2010, 2012, 2014, 2017, 2019, and 2021. The 2023 survey fieldwork was carried out by Ciudadania on behalf of LAPOP. Key funding came from Vanderbilt University and the Inter-American Development Bank.

Questionnaire pretesting took place between March 14th and March 16th 2023 and interviewer training took place from April 12th to April 13th, 2023. Pilot surveys were conducted between April 13th and 14th. A full copy of the 2023 AmericasBarometer Bolivia questionnaire can be found at LAPOP's website at www.LapopSurveys.org.

The project used a national probability sample design of voting-age population, with a total N of 1,706 people involving face-to-face interviews conducted in Spanish. In the 2023 round, LAPOP used the SurveyToGo© (STG) software, running on Android tablets and phones, to conduct 100% of the interviews.

The survey used a complex sample design, including stratification and clustering. The sample was developed by LAPOP, using a multi-stage probability design and was stratified by the 6 major regions of the country: La Paz, Santa Cruz, Cochabamba, Potosi-Oruro, Chuquisaca-Tarija, and Beni-Pando. The sample is representative at the national level and of the 6 regions as shown in the map below (see Figure 1). Each stratum was further sub-stratified by size of municipality¹ and

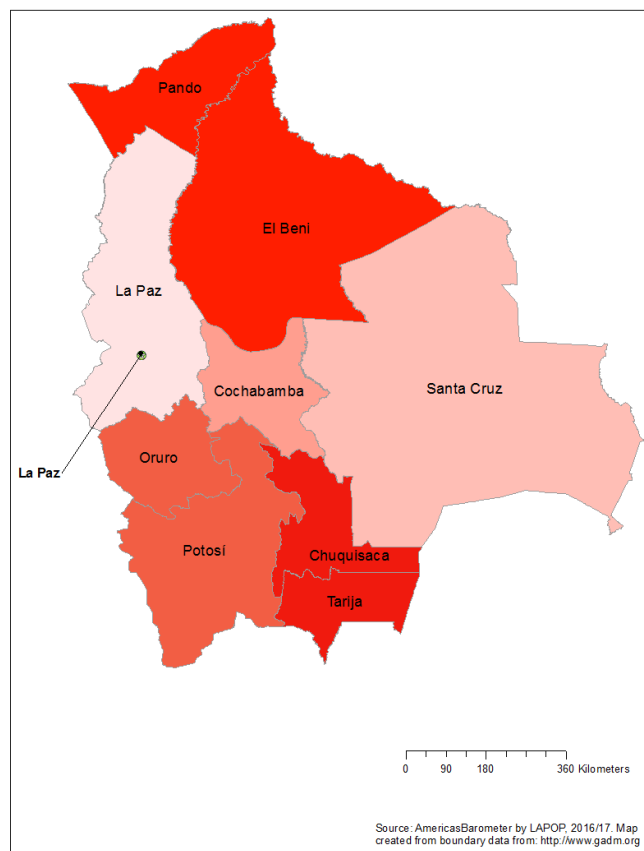
¹ The sample design includes three different strata of municipalities classified according to their size. Municipalities were grouped in sizes as follows: (1) Small municipalities with less than 25,000 inhabitants, (2) Medium-sized municipalities with between 25,000 and 100,000 inhabitants, (3) Large municipalities with more than 100,000 inhabitants.

by urban and rural areas within municipalities. Respondents were selected in clusters of 6 in urban and rural areas. Reported statistics or statistical analyses should be adjusted for the design effect due to the complex design of the sample.²

The sample frame used for the sample is the 2012 Population Census. The sample is representative of voting age population at the primary stratum level, by urban/rural areas, and by size of the municipalities. No areas or regions of the country were excluded from the design.

During fieldwork a total of 7 sampling points were substituted in Bolivia. Fieldwork substitutions were requested by our partners in Bolivia based on their knowledge of current local conditions. Most of the substitutions were because the selected enumeration areas no longer contained households as a result of urban renewal or spreading commerce. Following LAPOP's substitution protocols, the replacement sampling points were located within the same primary sampling unit (PSU) and in the same census sector.

Figure 1: Sample Stratification in Bolivia



The sample design consists of 84 primary sampling units and 280 secondary sampling units (sampling points) across 52 provinces in Bolivia. The sample achieved includes a total of 1,168 people in urban areas and 538 in rural areas. The estimated margin of error for the survey is ± 2.37 .

² For more information visit <http://www.vanderbilt.edu/lapop/survey-designs.php>

However, we recommend computing the margin of error for each variable considering the design effects. The final sample achieved in the survey is weighted.

Table 1 shows the sample size in each of the regions (primary stratum) and by municipality size.

Table 1: Sample sizes by Strata and Municipality Size in the 2023 AmericasBarometer Survey in Bolivia

Strata	Sample Size by Design	Number of Interviews (Unweighted)
La Paz	360	371
Santa Cruz	360	365
Cochabamba	288	294
Potosi-Oruro	240	241
Chuquisaca- Tarija	240	243
Beni- Pando	192	192
Total	1,680	1,706
Size of Municipality		
More than 100,000 inhabitants	792	811
Between 25,000 and 100,000 inhabitants	198	198
Less than 25,000	690	697
Total	1,680	1,706

Weighting of the Bolivia datasets

The dataset contains a variable called “wt” which is the “country weight” variable. Since in the case of Bolivia the 2023 sample is self-weighted, the value of each case =1. When using this dataset for cross-country comparisons, LAPOP reweights each country data set in the merged files so that each country has an N of 1,500. The weight variable for cross-country comparisons is called “weight1500.” In SPSS, this is done via the “weight” command. Weights are already activated in SPSS datasets. In Stata, the svyset command to weight the data and declare the sampling information to correctly compute standard errors that take into account the design effects is as follows: for single country, single year studies, the command is **svyset upm [pw=wt], strata(strata)**; for cross-country and/or cross-time studies, the command is **svyset upm [pw=weight1500], strata(strata)**. Stata datasets are preset; however, users must use the svy prefix with estimation commands to compute the weighted statistics and correct standard errors (see **help svy_ estimation** within Stata for more information).

Quality Control in Bolivia

In the 2023 AmericasBarometer, Quality Control was based on FALCON-CATI© (Fieldwork Algorithm for LAPOP’s Control over Survey Operations and Norms). It includes, but is not limited

to, an interviewer identity monitoring check, time checks, a reading control check, and data fabrication and falsification audits. The system also includes a quality control score that assigns penalties (or demerits) to interviews during the audit. In this system, higher scores indicate more serious errors, and we refuse to accept (that is, we require the cancelation of) low quality interviews.³

The local firm audited 100% of interviews. All interviews were also run through LAPOP's automatic flagging system, and then LAPOP's team manually audited a subset of the interviews. A total of 9 interviews were canceled in Bolivia in the 2023 AmericasBarometer. The most predominant reasons for canceling an interview were reading issues on the study information sheet, not reading questions completely or correctly, and skipping questions. There were 211 incomplete/early termination interviews.

Response Rates in Bolivia

In this section we present the survey response rates.⁴ The AmericasBarometer response rates are based on AAPOR's Standard Definitions. The response rate is the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample. LAPOP Lab has programmed in STG a module that permits the accurate recording of the number of refusals, ineligible respondents, or non-contact. This in turn allows for estimating the response rates in each country. Two definitions of response rates are provided below, ranging from the definition that yields the lowest rate to the definition that yields the highest rate, depending on how partial interviews are considered and how cases of unknown eligibility are handled.

Response rates reported below are:

$$\text{Response Rate 1 (RR1)} = \frac{C}{C+P+R+N+O+UH+UO}$$

$$\text{Response Rate 3 (RR3)} = \frac{C}{C+P+R+N+O+e(UH+UO)}$$

Where: where C refers to completed interviews, P to partial interviews, R to refusals, N for non-contacts, O for others, UH for unknown if household, UO to unknown others, and e is the eligibility rate calculated using the CASRO method: $e = \text{Eligible} / (\text{Eligible} + \text{Ineligible})$.

³ For additional information on quality control, see LAPOP's Methodological Note: "Improving Quality in Phone Surveys via LAPOP's Multi-Faceted FALCON-CATI Approach" By Sebastián Larrea, Valerie Schweizer, and Elizabeth J. Zechmeister (May 2021). Available at: <https://www.vanderbilt.edu/lapop/insights/IMN008en.pdf>

⁴ For additional information on how response rates are estimated, see LAPOP's Methodological Note: "How Does LAPOP Calculate Response Rates?" By Zachary Warner and Gabriel Camargo-Toledo (June 2019). Available at: <https://www.vanderbilt.edu/lapop/methods-005rev.pdf>

Table 2: Response Rates in the 2023 AmericasBarometer Survey by Country

Country	RR1 (%)	RR3 (%)
Argentina	8.8	23.8
Bahamas	27.2	31.4
Belize	34.9	42.0
Bolivia	15.6	22.7
Brazil	28.1	32.5
Chile	39.0	42.0
Colombia	31.7	39.1
Costa Rica	9.2	22.4
Dominican Republic	19.0	48.0
Ecuador	14.5	26.2
El Salvador	7.3	10.6
Grenada	56.0	59.7
Guatemala	39.6	43.1
Haiti*	6.6	10.6
Honduras	23.0	36.3
Jamaica	27.9	35.0
Mexico	19.6	31.1
Nicaragua*	8.9	9.8
Panama	35.0	40.9
Paraguay	28.5	39.0
Peru	13.3	28.6
Suriname	42.0	51.3
Trinidad & Tobago**	--	--
Uruguay	12.7	24.9
LAC REGION	16.1	25.2

* Response rates based on CATI surveys in Haiti and Nicaragua

** Disposition codes not registered in Trinidad and Tobago in 2023

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