AmericasBarometer 2023: Costa Rica

Technical Information

Country	Year	Sample Size	Weighted/Unweighted	Fieldwork dates
Costa Rica	2023	1,527	Self-weighted	July 19th - August 20th, 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 Costa Rica.

2023 AmericasBarometer: Costa Rica

This survey was carried out between July 19th and August 20th 2023, as part of LAPOP's 2023 AmericasBarometer. It is a follow up to LAPOP's AmericasBarometer Costa Rica surveys of 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, and 2021. The 2023 survey fieldwork was carried out by Analitica on behalf of LAPOP. Key funding came from Vanderbilt University, the Inter-American Development Bank, and USAID.

Questionnaire pretesting took place from May 2nd to 4th and from June 27th to 30th 2023 and interviewer training took place from July 11th to July 12th, 2023. Pilot surveys were conducted between July 12th and 14th. A full copy of the 2023 AmericasBarometer Costa Rica 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 1,527 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.

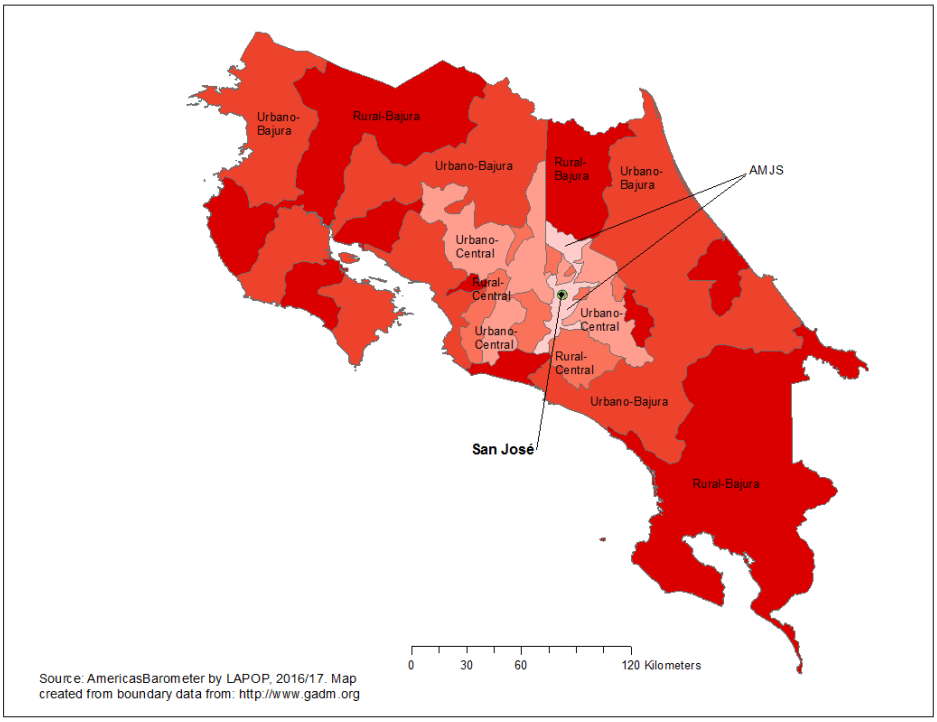
The survey used a complex sample design, including stratification and clustering. The sample was developed by LAPOP, using a multi-stage probability design and was stratified by the 5 major regions of the country: Metropolitan Area of San José, Urban Central, Rural Central, Urban Bajura, and Rural Bajura. The sample is representative at the national level and of the 5 regions as shown in the map below (see Figure 1). Each stratum was further sub-stratified by size of municipality[1]

[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.

and 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 2011 Population Census, adjusted with data from the 2022 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. There were no substitutions of clusters or interviews during fieldwork.

Figure 1: Sample Stratification in Costa Rica



The sample design consists of 30 primary sampling units and 250 final sampling units across all 7 provinces in Costa Rica. The sample achieved includes a total of 962 respondents in urban areas and 565 in rural areas. The estimated margin of error for the survey is ± 2.51. However, we recommend computing the margin of error for each variable considering the design effects. The final sample achieved in the survey is unweighted. Table 1 shows the sample size in each of the regions (primary stratum) and by municipality size.

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

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

Strata	Sample Size by Design	Number of Interviews (Unweighted)
Metropolitan Area of San José	450	457
Urban Central	312	317
Rural Central	240	249
Urban Bajura	186	188
Rural Bajura	312	316
Total	**1,500**	**1,527**
Size of Municipality		
More than 100,000 inhabitants	528	537
Between 25,000 and 100,000 inhabitants	828	845
Less than 25,000	144	145
Total	**1,500**	**1,527**

Weighting of the Costa Rica datasets

The dataset contains a variable called "wt" which is the "country weight" variable. Since in the case of Costa Rica the 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 Costa Rica

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 12 interviews were canceled in Costa Rica in the 2023 AmericasBarometer. The most predominant reasons for canceling an interview were problems with the location and/or duration of the interview. There were 76 incomplete/early termination interviews.

Response Rates in Costa Rica

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:

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

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=Eligible/(Eligible + 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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