VANDERBILT UNIVERSITY

AmericasBarometer, 2012

Technical Information

Country	Year	Sample Size	Weighted/Unweighted	Fieldwork dates
Costa Rica	2012	1,498	Unweighted	January 28th to February 29th

LAPOP AmericasBarometer 2012 round of surveys

In its effort to collect the highest quality data possible, the Latin American Public Opinion Project (LAPOP) decided to adopt a new sample design for the AmericasBarometer 2012 round of surveys. The two main reasons for this decision were: (1) updating the sample designs to reflect the population changes as revealed by recent census information, and (2) standardizing the sample sizes at the level of the municipality in order to both reduce the variance and provide an initial basis for using multi-level analysis drawing on municipal data. This change in the sample design makes the sample representative by municipality size[1] for all countries, to enable the use of the municipality as a unit of analysis for multilevel statistical analysis.

1. Prior LAPOP surveys were based on the 2000 round of national census data. Since new censuses have been carried out in many countries in Latin America and the Caribbean over the last few years, the samples were updated in order to take into account population shifts, so that sample designs are based on the most current population distributions available (by sex and age and also across geographical units within each country). Unfortunately, not all nations in our sample had updated census data available at the time LAPOP designed the 2012 AmericasBarometer. We plan to integrate new census information for future rounds as they become available.

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[1] The new sample design included three different strata of municipalities classified according to their size. Municipalities were grouped in sizes appropriate for the country. One common grouping was (1) Municipalities with less than 25,000 inhabitants, (2) Municipalities with between 25,000 and 100,000 inhabitants, (3) Municipalities with more than 100,000 inhabitants.

2. With the objective of making it possible to perform subnational multi-level analyses and therefore assess the impact of both contextual and individual level characteristics at the subnational level, LAPOP adopted a new strategy for designing survey samples that allocate a somewhat larger number of cases to smaller municipalities within each country. Recent studies have demonstrated the importance of considering both the effects of municipal as well as regional characteristics on citizens' attitudes and behaviors; however, multilevel analyses are only feasible if a reasonable number of interviews are carried out in each municipality, and if those interviews are reasonably well distributed throughout each municipality. Prior LAPOP samples were PPS[2] adjusted to the municipal level, but this meant that some municipalities had a very small number of interviews, while others were quite large. A single large municipality, e.g., the capital of the country, could have drawn a very larger number of interviews. For the 2012 round, we continued to use PPS in the selection of the municipalities themselves, but established a target minimum sample size for each municipality of 12 respondents for larger countries and 24 respondents in smaller countries, in both cases divided into clusters of six respondents each. The clusters were distributed in direct proportion to the urban/rural breakdown of a given municipality[3]. Thus, by increasing the number of interviews per municipality in the smallest municipalities, LAPOP seeks to facilitate investigating subnational patterns using multilevel modeling techniques. For the larger municipalities, we also retained the PPS approach, but would often subdivide the large cities into districts (or equivalent units) whenever possible so that a large city might have 4 or even 6 PSUs. Our rationale there was to treat the district as a unit for the purposes of calculating the intra-class correlations (rho statistic). The largest gains from this new sample design will come in subsequent rounds of surveys, as aggregated data across time will provide users with larger municipal sample sizes. The 2012 round established the basis for collecting useful data at the municipal level that can be merged with future round of surveys using the same sample design.

   Simulations were carried out using the 2010 data set in order to determine the impact of revising the sample designs. Those simulations demonstrated the efficacy of the new design proposal, but required some modification for the largest countries in the sample. At the same time, the 2012 round sample design continue to utilize the very same strata as in prior years in order to maintain the reporting continuity of prior studies.

The remaining pages of this technical note describe the sample design of the Costa Rican AmericasBarometer 2012 survey.

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[2] Probability Proportional to Size
[3] It should be noted that in some countries particular circumstances forced some deviation from this norm of 12 and 24 respondents per municipality. Users of the database should examine the variable PSU included in the UNWEIGHTED dataset to find sample sizes per municipality (or subunits of municipalities when the population size of the municipality was very large).

Costa Rica 2012 AmericasBarometer Round

This survey was carried out between January 28th and February 29th, as part of the LAPOP AmericasBarometer 2012 wave of surveys. It is a follow-up of the national surveys of 2004, 2006, 2008, and 2010 carried out by the LAPOP. The 2012 survey was conducted by Vanderbilt University with the field work being carried out by Borge y Asociados. The 2012 AmericasBarometer received generous support from many sources, including USAID, UNDP, IADB, Vanderbilt U., Princeton U., Université Laval, U. of Notre Dame, among others.

The project used a national probability sample design of voting-age adults, with a total N of 1,498 people. It involved face-to-face interviews conducted in Spanish. The survey used a complex sample design, taking into account stratification and clustering. The sample consists of three strata representing the three main geographical regions: Metropolitan Area of San José, Rest of the Central Valley and Areas beyond the Central Valley. Each stratum was further sub-stratified by size of municipality[4] and by urban and rural areas within municipalities. Respondents were selected in clusters of 6 interviews in urban areas and rural areas.

The sample consists of 50 primary sampling units (cantons) and 194 final sampling units including all 7 provinces in Costa Rica. A total of 948 respondents were surveyed in urban areas and 550 in rural areas. The estimated margin of error for the survey is ± 2.8.

Table 1 shows the unweighted sample size in each of the three regions (strata).

Table 1: Sample sizes by Strata in the 2012 AmericasBarometer Survey in Costa Rica

Strata	Unweighted Sample Size
Metropolitan Area of San José	449
Rest of the Central Valley	549
Central Valley Peripheral Areas	500
Total	**1,498**

Quotas for gender and age were adopted since multiple recalls in a national sample such as this are impractical from a cost standpoint. Our experience shows that even three recalls leave the sample with a notable gender imbalance (more women than men). Rather than have to include post-hoc weights to adjust for this sample error, we resolve the problem in the field via quotas.

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[4] The new sample design included three different strata of municipalities classified according to their size. Municipalities were grouped in sizes as follow: (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.

Weighting of the Costa Rica datasets

The AmericasBarometer samples of Costa Rica are self-weighted. 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. The variable "WEIGHT1500" should be activated to produce representative national results. When using this dataset for cross-country comparisons, in order to give each country in the study an identical weight in the pooled sample, LAPOP reweights each country data set in the merged files so that each country has an N of 1,500. In SPSS this is done via the "weight" command.

The complete report and questionnaire can be found at The Political Culture of Democracy in Haiti and in the Americas, 2012: Towards Equality of Opportunity, written by Ronald Alfaro. Readers can access the publication through a link on the LAPOP website: www.AmericasBarometer.org.