December 2012 Political Survey

Methodology Report

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The Pew Research Center

1615 L Street, NW  
Suite 700  
Washington, DC 20036

Prepared by:

Abt SRBI

Dean Williams

Courtney Kennedy

Chintan Turakhia

275 Seventh Avenue, Suite 2700,

New York, New York 10001

(212) 779‑7700

[www.srbi.com](http://www.srbi.com)

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**I. SUMMARY**

The December Political Survey, fielded for the Pew Research Center for the People & the Press by Abt SRBI, obtained telephone interviews with a representative sample of 1,503 adults living in the United States (900 respondents were interviewed on a landline telephone and 603 were interviewed on a cell phone). Interviewing was conducted from December 5th to 9th, 2012 in English and Spanish. Samples were drawn from both the landline and cell phone RDD frames. Persons with residential landlines were not screened out of the cell phone sample. Both the landline and cell phone samples were provided by Survey Sampling International. The combined sample is weighted to match demographic parameters from the Current Population Survey and telephone status parameters from the National Health Interview Survey. The weighting procedure also accounts for the fact that respondents with both a landline and cell phone had a greater probability of selection. The margin of sampling error for weighted estimates based on the full sample is ±2.96 percentage points.

**II. SAMPLE DESIGN**

The target population for the study is non-institutionalized persons age 18 and over, living in the US. Samples were drawn from both the landline and cellular random digit dial (RDD) frames to represent people with access to either a landline or cell phone. Both samples were provided by Survey Sampling International, LLC according to Abt SRBI specifications.

Numbers for the landline sample were drawn with equal probabilities from active blocks (area code + exchange + two-digit block number) that contained one or more residential directory listings. The cellular sample was drawn through a systematic sampling from 1000-blocks dedicated to cellular service according to the Telcordia database.

**III. QUESTIONNAIRE DEVELOPMENT AND TESTING**

The questionnaire was developed by the Pew Research Center in consultation with Abt SRBI. In order to improve the quality of the data, the questionnaire was pretested with a small number of respondents using landline RDD telephone numbers. The pretest interviews were conducted using experienced interviewers who could best judge the quality of the answers given and the degree to which respondents understood the questions. Some final changes were made to the questionnaire based on the monitored pretest interviews.

**IV. CALLING PROTOCOL**

Landline numbers were called as many as 7 times, and cell phone numbers were called as many as 7 times. Refusal conversion was attempted on soft refusal cases in the landline sample only. Interviews were conducted from December 5 to December 9, 2012. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each number received at least one daytime call. The sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample.

For the landline sample, interviewers asked to speak with either the youngest male or youngest female at home right now. For the cell sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cell sample respondents were offered a post-paid cash incentive of $5 for their participation.

**V. WEIGHTING**

Three weights were created for this survey. The specification for each weight follows the Pew People-Press Weighting Summary (Christian and Best 2012). The design of the full sample weight recommended for analysis is described first. Descriptions of the other two weights are provided at the end of this section.

***First Stage Weighting***

The first stage of weighting corrected for different probabilities of selection associated with the number of adults in the household and the respondent’s telephone usage (landline only, cell phone only or has both kinds of phones). This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample.

This first-stage weight for the ith case can be expressed as:

Where SLL = size of the landline sample

SCP = size of the cell phone sample

ADi = Number of adults in the household

R = Estimated ratio of the land line sample frame to the cell phone sample frame

***Second Stage Weighting***

The second stage of weighting balances sample demographics to estimated population parameters. The sample is balanced to match national population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The Hispanic origin was broken out based on nativity: U.S born and non-U.S. born. The white, non-Hispanic subgroup is also balanced on age, education and region. The basic weighting parameters came from a special analysis of the Census Bureau’s 2011 Annual Social and Economic Supplement (ASEC) that included all households in the United States. The population density parameter was derived from Census 2010 data. The cell phone usage parameter came from an analysis of the July-December 2011 National Health Interview Survey.[[1]](#footnote-1)

The second stage weighting uses an iterative technique that simultaneously balances the distributions of all weighting parameters. Weights were trimmed at the 5th and 95th percentiles to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population. In the survey dataset, this full sample weight is labeled *weight*. Table 1 compares weighted and unweighted sample distributions to population parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 1. Weighted and Unweighted Estimates Along with Benchmarks** | | | |
|  | **Benchmark** | **Weighted** | **Unweighted** |
|  |  |  |  |
| 18-24 | 12.8% | 12.2% | 7.1% |
| 25-34 | 18.0% | 17.0% | 10.2% |
| 35-44 | 17.2% | 16.8% | 13.9% |
| 45-54 | 19.0% | 19.1% | 18.3% |
| 55-64 | 16.0% | 16.6% | 21.4% |
| 65+ | 17.0% | 17.5% | 26.9% |
|  |  |  |  |
| Less Than High School | 13.3% | 10.3% | 5.8% |
| High School Graduate | 30.4% | 30.7% | 24.7% |
| Some College | 28.5% | 29.1% | 28.2% |
| College Graduate | 27.8% | 29.3% | 40.6% |
|  |  |  |  |
| Northeast | 18.3% | 18.9% | 18.8% |
| Midwest | 21.7% | 21.8% | 22.2% |
| South | 36.8% | 37.0% | 36.3% |
| West | 23.2% | 22.3% | 22.8% |
|  |  |  |  |
| White Non-Hispanic | 67.8% | 67.7% | 73.5% |
| Black Non-Hispanic | 11.5% | 11.9% | 9.6% |
| Hispanic, Native Born | 6.6% | 6.8% | 5.4% |
| Hispanic, Foreign Born | 7.4% | 5.7% | 3.1% |
| Other, Non-Hispanic | 6.6% | 6.9% | 7.1% |
|  |  |  |  |
| 1 Lowest | 19.9% | 19.5% | 22.8% |
| 2 | 20.0% | 20.1% | 19.6% |
| 3 | 20.1% | 20.7% | 21.3% |
| 4 | 20.0% | 20.1% | 19.2% |
| 5 Highest | 20.0% | 19.7% | 17.2% |
|  |  |  |  |
| Landline Only | 7.0% | 6.2% | 6.9% |
| Dual: Few/Some Cell | 39.0% | 39.7% | 52.2% |
| Dual: Cell Mostly | 18.8% | 19.3% | 19.4% |
| Cell Phone Only | 35.2% | 33.7% | 20.0% |

***Design of LLWEIGHT***

This weight was computed for respondents in the landline sample only using the same procedures as above except there is no adjustment for frame overlap because only one sampling frame is used. Also, a phone use parameter is *not* included in the second stage weighting.

***Design of COWEIGHT***

This weight is computed for landline sample and cell phone only respondents using the same procedures as above except there is no adjustment for frame overlap because people in the cell phone frame who have landline phones are not included. The phone use parameter is included in the second stage weighting.

**VI. DESIGN EFFECT AND MARGIN OF ERROR**

Weighting and survey design features that depart from simple random sampling tend to result in an increase in the variance of survey estimates. This increase, known as the design effect or *deff*, should be incorporated into the margin of error, standard errors, and tests of statistical significance. The overall design effect for a survey is commonly approximated as the 1 plus the squared coefficient of variation of the weights. For this survey, the margin of error (half-width of the 95% confidence interval) incorporating the design effect for full-sample estimates at 50% is ± 2.96 percentage points. Estimates based on subgroups will have larger margins of error. It is important to remember that random sampling error is only one possible source of error in a survey estimate. Other sources, such as question wording and reporting inaccuracy, may contribute additional error.

**VII. DISPOSITIONS**

Table 2 reports the disposition of all sampled telephone numbers dialed for the survey. Abt SRBI calculates four component rates: Response rate, Cooperation rate, Refusal rate and Contact rate:[[2]](#footnote-2)

* Response rate – the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample.
* Cooperation rate – the proportion of all cases interviewed of all eligible units ever contacted.
* Refusal rate – the proportion of all cases in which a housing unit or respondent refuses to do an interview
* Contact rate – measures the proportion of all cases in which some responsible member of a housing unit was reached by the survey

The response rate for the landline sample ranged from 8.5 to 12.7%. The response rate for the cellular sample ranged from 8.9 to 10.3%.

**Table 2. Sample Dispositions**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Landline** | **Cell** |
| **Interview (Category 1)** |  |  |  |
| Complete | 1.000 | 900 | 603 |
| Partial | 1.200 | 60 | 72 |
|  |  |  |  |
| **Eligible, non-interview (Category 2)** |  |  |  |
| Refusal and breakoff | 2.100 | 195 | 117 |
| Refusal | 2.110 | 3134 | 3580 |
| Respondent never available | 2.210 | 125 | 58 |
| Answering machine household-no message left | 2.221 | 1891 | 3735 |
| Physically or mentally unable/incompetent | 2.320 | 249 | 112 |
| Household-level language problem | 2.331 | 104 | 130 |
|  |  |  |  |
| **Unknown eligibility, non-interview (Category 3)** |  |  |  |
| Always busy | 3.120 | 135 | 164 |
| No answer | 3.130 | 2653 | 674 |
| Call blocking | 3.150 | 7 | 26 |
| Technical phone problems | 3.160 | 4 | 4 |
| No screener completed | 3.210 | 1090 | 1017 |
|  |  |  |  |
| **Not eligible (Category 4)** |  |  |  |
| Fax/data line | 4.200 | 969 | 36 |
| Non-working/disconnect | 4.300 | 19508 | 5034 |
| Temporarily out of service | 4.330 | 408 | 224 |
| Cell phone | 4.420 | 21 | 8 |
| Business, government office, other organizations | 4.510 | 1502 | 504 |
| Other | 4.900 | 11 | 0 |
|  |  |  |  |
| **Total phone numbers used** |  | 32966 | 16444 |
|  |  |  |  |
| Completes and Screen-Outs (1.0/1.1) | I | 900 | 949 |
| Partial Interviews (1.2) | P | 60 | 72 |
| Refusal and break off (2.1) | R | 3329 | 3697 |
| Non Contact (2.2) | NC | 2016 | 3793 |
| Other (2.3) | O | 353 | 242 |
|  |  |  |  |
| Unknown household (3.1) | UH | 2799 | 868 |
| Unknown other (3.2, 3.9) | UO | 1090 | 1017 |
|  |  |  |  |
| Not Eligible (4.0) | NE | 22419 | 5806 |
|  |  |  |  |
| **e = Estimated proportion of cases of unknown eligibility that are eligible.** | (I+P+R+NC+O)/((I+P+R+NC+O)+NE) | 0.229 | 0.601 |
|  |  |  |  |
|  |  |  |  |
| **Response Rate 1** | I/(I+P) + (R+NC+O) + (UH+UO) | 0.085 | 0.089 |
| **Response Rate 2** | (I+P)/(I+P) + (R+NC+O) + (UH+UO) | 0.091 | 0.096 |
| **Response Rate 3** | I/((I+P) + (R+NC+O) + e(UH+UO) ) | 0.119 | 0.096 |
| **Response Rate 4** | (I+P)/((I+P) + (R+NC+O) + e(UH+UO) ) | 0.127 | 0.103 |
|  |  |  |  |
| **Cooperation Rate 1** | I/(I+P)+R+O) | 0.194 | 0.191 |
| **Cooperation Rate 2** | (I+P)/((I+P)+R+O)) | 0.207 | 0.206 |
| **Cooperation Rate 3** | I/((I+P)+R)) | 0.210 | 0.201 |
| **Cooperation Rate 4** | (I+P)/((I+P)+R)) | 0.224 | 0.216 |
|  |  |  |  |
| **Refusal Rate 1** | R/((I+P)+(R+NC+O) + UH + UO)) | 0.316 | 0.348 |
| **Refusal Rate 2** | R/((I+P)+(R+NC+O) + e(UH + UO)) | 0.441 | 0.374 |
| **Refusal Rate 3** | R/((I+P)+(R+NC+O)) | 0.500 | 0.422 |
|  |  |  |  |
| **Contact Rate 1** | (I+P)+R+O / (I+P)+R+O+NC+ (UH + UO) | 0.440 | 0.466 |
| **Contact Rate 2** | (I+P)+R+O / (I+P)+R+O+NC + e(UH+UO) | 0.615 | 0.502 |
| **Contact Rate 3** | (I+P)+R+O / (I+P)+R+O+NC | 0.697 | 0.567 |

1. Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July-December, 2011. National Center for Health Statistics. June 2011. [↑](#footnote-ref-1)
2. Abt SRBI’s disposition codes and reporting are consistent with the American Association for Public Opinion Research standards. [↑](#footnote-ref-2)