

Connect South Carolina

2013 Residential Technology Assessment Methodology

Between November 21 and December 23, 2013, Connect South Carolina conducted a random digit dial telephone survey of 1,204 adult heads of households across the state. Phone numbers were chosen randomly, with area codes and telephone prefixes determined by geography per the North America Numbering Plan (NANP), with the last four digits of the telephone numbers randomly selected. Of the 1,204 respondents randomly contacted statewide, Connect South Carolina called 200 on their cellular phones, and 1,004 via landline telephone. Once the respondent agreed to participate, these surveys took approximately ten (10) minutes to complete.

Connect South Carolina made up to four attempts to reach an adult at each working telephone number on different days of the week and at different times of the day to increase the likelihood of contacting a potential respondent. To ensure that the sample was representative of the state's adult population, Connect South Carolina set quotas by age, gender, and county of residence (to ensure that a sufficiently large sample of adult heads of rural households, these households were oversampled), and weighted the results to coincide with the 2012 United States Census Population estimate. Connect South Carolina chose random sampling, with the inclusion of quotas to reduce bias, as the most efficient and cost effective method of identifying a representative sample of respondents.

The response rate (RR3) statewide for the residential survey was 5.7%; the response rate for respondents contacted via landline telephone was 6.4%; and the response rate for respondents contacted via cell phone was 3.2%. Connect South Carolina calculated these response rates using standard definitions and disposition codes for survey outcomes as laid out by the American Association for Public Opinion Research (AAPOR).¹ The incidence rate statewide was 62.2%. The incidence rate for respondents contacted via landline telephone was 60.6% and the incidence rate for respondents contacted via cell phone was 72.6%.

The sample disposition is as follows:

	Total	Landline	Cell
Completes (i)	1,204	1,004	200
Refusal and Breakoffs (r)	5,344	4,512	832
Non-Contact (nc)	9,027	6,487	2,540
Other (o)	241	204	37
Unknown-household (uh)	14,582	11,734	2,848
Unknown-other (uo)	1,741	1,172	569
Category 4 Ineligible Households	32,692	31,722	970
Estimated eligibility rate among cases where eligibility is unknown (e)	0.326	0.278	0.788

Connect South Carolina applied rim weighting to correct for minor variations and to ensure that the sample matches the most recent U.S. Census estimates of the state's adult population by age, gender,

¹ The American Association for Public Opinion Research. 2011. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 7th edition. AAPOR.
http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions2&Template=/CM/ContentDisplay.cfm&ContentID=3156. Retrieved 2/12/2014.

and the urban/rural classification of the respondent's county of residence. For the purpose of setting quotas and weighting, Connect South Carolina defines "rural" respondents as those living in a county that is not a part of a Metropolitan Statistical Area (MSA), as designated by the United States Office of Management and Budget.

Thoroughbred Research Group, located in Louisville, KY, conducted the surveys in English on behalf of Connect South Carolina. Lucidity Research, LLC, provided weighting and research consultation services. Connect South Carolina calculated cross-tabulations using WinCross 11.0, and used SPSS Statistics v. 20 for weighting and regression analyses. Dr. Lori Dickes from Clemson University reviewed the survey instrument, methodology, and a sample of the results.

The unweighted margin of error = $\pm 2.82\%$ at a 95% confidence level. The weighting efficiency (based on age, gender, and county of residence) = 63.29%, and based on the effective sample size of 762, the effective post-weighting margin of error = $\pm 3.55\%$ at a 95% level of confidence for the statewide sample. As with any survey, question wording and the practical challenges of data collection may introduce an element of error or bias that is not reflected in this margin of error.

Applying the above definitions, the following unweighted sample distribution was achieved:

Age	Male	Female	Rural	Non-Rural
18 to 34	75	68	507	697
35 to 44	102	115		
45 to 54	129	135		
55 to 64	121	154		
65+	140	165		

After weighting, the following weighted sample distribution was achieved:

Age	Male	Female	Rural	Non-Rural
18 to 34	186	174	280	924
35 to 44	91	104		
45 to 54	102	114		
55 to 64	91	111		
65+	106	123		

By comparison, based on the quotas set based on 2012 United States Census Population estimate for the state's adult population, the target distribution for age, gender, and county of residence is as follows:

Age	Male	Female	Rural	Non-Rural
18 to 34	181	179	280	924
35 to 44	96	100		
45 to 54	104	111		
55 to 64	95	107		
65+	101	129		

Connect South Carolina conducted this residential survey as part of the State Broadband Initiative (SBI) grant program, funded by the National Telecommunications and Information Administration (NTIA). The SBI grant program was created by the Broadband Data Improvement Act (BDIA), unanimously passed by Congress in 2008 and funded by the American Recovery and Reinvestment Act (ARRA) in 2009.

Definitions

Technology Adoption Definitions

1. Connect South Carolina defines broadband adopters as respondents who answered “yes” when asked “Do you subscribe to the Internet at home?” *and* answered “broadband or high speed Internet service” when asked “Which of the following describe the type of Internet service you have at home?”
2. Computer owners are defined as respondents who answered “yes” when asked “Does your household have a computer?”
3. Mobile broadband users are defined as respondents who met any of the following criteria:
 - a. When asked “At what locations outside of your own home do you use the Internet?” responded “Through a cell phone or handheld device” *or*
 - b. Responded “yes” when asked “On your laptop or tablet computer, do you subscribe to a mobile wireless service that allows you to access the Internet through a cellular network?” *or*
 - c. Responded “yes” when asked “On your cell phone, do you subscribe to a plan that allows you to access the Internet?” *and* reported that they access the Internet via their cell phone when asked “How often, if ever, do you go online using your cell phone?”
 - d. Responded “yes” when asked “Do you ever use your cell phone to access the Internet while you are at home?”
4. Online buyers are defined as respondents who answered “yes” when asked “Which of the following activities do you conduct using the Internet?” and offered the response option of “Purchasing goods or services” and/or answered “yes” when asked “And which of the following activities do you conduct on your cell phone using your mobile broadband service?” and offered the response option of “Purchasing goods or services.”
5. Online sellers are defined as respondents who answered “yes” when asked “Which of the following activities do you conduct using the Internet?” and offered the response option of “Advertising or selling products or services” and/or answered “yes” when asked “And which of the following activities do you conduct on your cell phone using your mobile broadband service?” and offered the response option of “Advertising or selling products or services.”

Demographic Definitions

1. Race and ethnicity are defined as:

- a. "Hispanic" respondents are those who answered "yes" when asked "Are you, yourself, of Hispanic, Latino or Spanish origin or descent?" or identified themselves as Hispanic when asked "Which of the following race (or races) do you consider yourself to be?"
- b. "Black or African American" respondents are those who answered "no" or "No response" when asked "Are you, yourself, of Hispanic, Latino or Spanish origin or descent?" and when asked "Which of the following race (or races) do you consider yourself to be?" responded "Black or African American."
- c. "Other minority" respondents are those who answered "no" or "No response" when asked "Are you, yourself, of Hispanic, Latino or Spanish origin or descent?" and when asked "Which of the following race (or races) do you consider yourself to be?" responded with at least one of the following: Asian or Pacific Islander; American Indian, Eskimo, or Alaska Native; or "Any other race" and did not specify "Hispanic" or "Black or African American" or "White" when asked to specify the other race.

2. "Adults with disabilities" are defined as respondents who answered in the affirmative when asked "Do you have any long-term physical, mental, or emotional conditions that make it difficult to do any of the following tasks: Walking or climbing stairs; Concentrating, remembering or making decisions; Visiting a doctor's office or shopping by yourself; or Dressing or bathing," and/or answered "yes" when asked "Are you blind or have serious difficulty seeing even when wearing glasses?" or "Are you deaf or have serious difficulty hearing?"

3. "Low-Income households" are respondents who answered either "Less than \$15,000" or "\$15,000 to less than \$25,000" when asked "Which of the following categories best describes the total annual household income earned by all wage earners in your household?"

4. Rural Classification: The U.S. Census Bureau uses an urban-rural classification based on Metropolitan Statistical Areas (MSAs), which are designated by the United States Office of Management and Budget to collect, tabulate, and publish federal statistics. Metropolitan statistical areas contain a core urban area with a population of 50,000 or more. Each MSA also includes one or more counties that have a high degree of social and economic interaction with the urban core. When classifying urban, suburban, and rural counties, we follow the Census Bureau definition whereby counties are categorized as "urban" if they contain the core city of an MSA. "Suburban" counties are MSA counties that do not contain a core city, and "rural" counties include all remaining counties that are not part of an MSA.