Module 5: Sampling

**Lesson 3: Nonresponse and Survey Quality**

**Estimated Time**: 5 hours

**Concepts:** nonresponse bias; weighting; total survey quality; measurement error; coverage error;

**Lesson Description**: This lesson considers elements of survey quality, error, and bias resulting from how a survey is conducted and designed. It also introduces students to survey analysis in R for the first time.

**Instructor Preparation**: Read over ACS materials, set up Slido poll, read over 2011 CES documentation.

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| **Materials and Resources** | **Learning Goals** |
| 1. Slides    1. [08-Nonresponse-slides](https://github.com/UofT-DSI/sampling/blob/main/lectures/08-Nonresponse-slides.pptx)    2. [09-Estimation and survey quality-slides](https://github.com/UofT-DSI/sampling/blob/main/lectures/09-Estimation%20and%20survey%20quality-slides.pptx) 2. American Community Survey Documentation    1. [American Community Survey Design and Methodology (January 2014), Chapter 11: Weighting and Estimation](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_ch11_2014.pdf)    2. [An Overview of Addressing Nonresponse Bias in the American Community Survey During the COVID-19 Pandemic Using Administrative Data](https://www.census.gov/newsroom/blogs/random-samplings/2021/11/nonresponse-acs-covid-administrative-data.html) | * Identify causes of and remedies for nonresponse * Assess survey quality through total survey error |

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| **Time** | **Lesson Content** | **Instructor Notes** |
| 15 minutes  45 minutes  60 minutes | **08-Nonresponse**  **Introduction**   1. Review previous day’s material   **Lesson**   1. [08-Nonresponse-slides](https://github.com/UofT-DSI/sampling/blob/main/lectures/08-Nonresponse-slides.pptx)   **Activity / Discussion**   1. Have students identify and summarize methods for dealing with nonresponse in the American Community Survey. Consider response rates, nonresponse bias, and weighting methods.    1. [American Community Survey Design and Methodology (January 2014), Chapter 11: Weighting and Estimation](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_ch11_2014.pdf)    2. [An Overview of Addressing Nonresponse Bias in the American Community Survey During the COVID-19 Pandemic Using Administrative Data](https://www.census.gov/newsroom/blogs/random-samplings/2021/11/nonresponse-acs-covid-administrative-data.html) | Ask students to name and describe sampling strategies discussed in [Lesson 2](../lectures/02-Populations,%20censuses,%20surveys,%20and%20observational%20data-slides.pptx).              Discuss usual methodology first, then COVID-19 adjustments. Optional: Give half of the class the usual methodology documentation and give the other half the COVID-19 overview. Ask for short summaries of each. |
| 30 minutes | **09-Estimation and Survey Quality**  **Lesson**   1. [09-Estimation and survey quality-slides](https://github.com/UofT-DSI/sampling/blob/main/lectures/09-Estimation%20and%20survey%20quality-slides.pptx) |  |