

Survey Research

Cyrus Mohammadian, PhD

Chapman University
mohammadian@chapman.edu

March 12, 2018

Overview

- 1 Housekeeping
- 2 Overview of Survey Research
- 3 Sources of Error
- 4 Survey Design
- 5 Steps to a Survey Study

Bullet Points

- Have lit review ready for next class (1st draft or outline).
- Sorry, not all hwk is graded! Will return next class!
- Attendance and homework 2 grades to be posted by end of week

- Surveys are a method of data collection and a method of measurement
- Surveys can be used in experiments and observational studies
- Experiments: used for pre-tests and post-tests
- Observational: used to measure dependent and independent variables

Sources of Error

- Measurement error
- Non-response bias
- Experiments: used for pre-tests and post-tests
- Sampling and random error

Measurement Error

- Problems with operationalization of concepts
- Poor question design
- Bad proxy design
- Indices poorly constructed

Non-response Bias

- Item non-response: skipping a certain question (easier to address)
- Survey non-response: skipping entire survey
- What can be done about survey non-response?
 - Change method of reaching out (phone vs mail vs internet)
 - Weight sample
- What about item non-response
 - Multiple imputation
 - Use respondent's answers to other questions to predict their response to skipped question

Sampling and Random Error

- Are we missing part of the population?
- Does our sample frame affect our representativeness? Phone vs mail vs in person vs online
- Bad proxy design
- Random sampling error can never be eliminated but can be estimated

Sampling and Random Error

- Don't reinvent the wheel
 - Used already established and validated measures when possible
 - Designing questions is not an easy task, better to follow in foot steps of previously well-reviewed work
- When writing questions use clear and simple wording
- Keep the questions relatively short
- Avoid requiring memory intensive or complex thinking to complete questions

Proxy Measures and Indices

- **Index:** a composite measure based on average or aggregate score on two or more dimensions/measures/questions
- This composite measure gives the researcher data about a research participant's view on a certain belief, attitude, or experience.
- **Proxy:** A proxy measure or variable is a variable that is not in itself directly relevant, but that serves in place of an unobservable or immeasurable variable.
- Proxy example: per capita GDP used as a proxy measure for standard of living, infant mortality rate and illiteracy rates are both used as proxies for economic development, years of education and/or GPA as a proxy for cognitive ability, etc.

Steps to a Survey Study

Applies to both observational and experimental

- 1 Identify sample
- 2 If experiment, random assign b/w control and treatment
- 3 Create questions for DV and IV (observational) and for IV and treatment (experimental)
- 4 Run pilot of survey (mini survey)
- 5 Based on results of pilot, make any necessary tweaks to question and/or sampling method
- 6 Roll out actual survey
- 7 Obtain data and choose statistical method of analysis
- 8 Run statistical analysis
- 9 Confirm or reject hypotheses