Survey Research (1)

Internet Explorer vs Murder Rate

Murders in US

Internet Explorer Market Share

2006 2007 2008 2009 2010 2011

18,000 17,200 16,400 15,600 14,800 14,000

90% 75% 60% 45% 30%
Housekeeping

• Sections this week will be midterm review
• Midterm logistics questions?
Reading Quiz

• What was the core finding of the Rutgers study?
  • A. That a winning football team causes a large, sustained rise in alumni donations
  • B. That a winning football team only causes a short, temporary bump in alumni donations.
  • C. That 20% of female students are sexually assaulted during their time in college
  • D. That 3% of female students are sexually assaulted during their time in college
Reading Quiz

• Which of the following were issues of concern about the validity of the Rutgers study?
  • A. High non-response rate
  • B. John Henry Effect
  • C. Differential attrition
  • D. Endogenous change
  • E. Framing effects
Survey Research

• Surveys are a method of data collection -- a method of measurement.

• Experiments, quasi-experiments, and non-experiments are types of research design.

• Surveys can be used in any of these types of research design
  • Can be used as pre-tests or as post-tests
  • Can measure both independent and dependent variables
Sources of Error in survey research

• Measurement
  • Question design and instrument design
  • Bad question or instrument design leads to poor measurement validity

• Non-response:
  • What if not every person answers every question?
  • What if some people decline to take the survey?

• Inadequate coverage of the population
  • Some groups you just can’t reach

• Random Sampling Error
Item non-response vs. Survey Non-response

- Item non-response: An individual skips a certain question on a survey or refuses to answer it.

- Survey non-response: An individual refuses to participate altogether

- Item non-response is easier to work with.
Non-response (2)

Random Sampling

Whole Population → Our Sample → Respondents, Non-Respondents

Is this process random?
Do the respondents look like the population if non-response is not random?
What can we do about non-response?

• Most of all, make it small
• In person vs. phone vs. mail
• Introductions and endorsements

• Philippines example
  • Non-response is all about getting the appointment set
  • Getting the manager’s name in advance
  • Endorsement of the Management Association of the Philippines
  • University of the Philippines, Los Baños vs USC
What can we do about non-response?

• Can we use observable characteristics to predict who won’t respond?
  • This is easier with item non-response b/c we observe their responses to other questions on the survey.
Dealing with survey non-response

- Survey non-response: We use re-weighting.

- Ex: 100 people in the original sample: 50 men, 50 women.
  - 10 men and 0 women refuse to participate
  - Final sample is 40 men and 50 women.
  - To fix this, we multiply each male response by 1.25
  - Why?

- If multiple factors affect likelihood of response (not just gender), then we can weight on more than one dimension.

- Similar to re-weighting after stratified random sampling
Limits of Re-Weighting

- This only works if we can measure all the factors affecting likelihood of response.
- We can handle multiple causes of non-response, but:
  - We must be able to measure each one in both respondents and non-respondents
  - It's hard to measure anything about non-respondents
Dealing with item non-response

• For item non-response we use multiple imputation
  • Use a respondent’s answers to other questions to guess his/her responses to the questions he/she didn’t answer
  • Use statistics to estimate how uncertain those guesses are.
Coverage and Sampling Error

• Inadequate coverage of the population:
  • Are there subsets of the population we just can’t reach?

• For each of the following type of surveys, who can’t you reach?
  • Phone surveys?
  • Mail surveys?
  • In person or group interviews?

• Random sampling error: We can estimate how big this is.
  • How do we make this smaller?
Which is easier to deal with?

- Survey non-response or item non-response
- A. Survey non-response, because the non-respondents are outside your sample.
- B. Survey non-response, because the respondents who are missing a measure of the independent variable of interest are also missing a measure of the DV.
- C. Item non-response because you have more information about your non-respondents (i.e. their answers to other questions)
- D. Item non-response because you can just omit partially completed surveys.
Checking Understanding

• Let’s imagine I was surveying delegates to the United Nations. My mail-out survey only received an 8% response rate. Which of the above might produce better results?

  • 1. Get an endorsement from the UN.
  • 2. Send the requests on University letterhead
  • 3. Try a phone or in person interview instead
  • 4. All of the above