Using Online Probability Panels for Questionnaire Design and Evaluation Research

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Outline

1. Overview of Probability Panels
2. NCHS' Needs and Research Plans
3. Challenges using Probability and other Panels

Probability Panels

What are probability panels?

- Groups of panelists who agree to participate in surveys, mainly online
- In comparison to opt-in panels
  - Probability panels are actively recruited
  - Members can be assigned a non-zero probability of selection
- Panelists are recruited through a variety of modes and are sampled from a representative frame
  - NCHS has used providers that sample via phone and address frames

- Very few companies (not only in the US, but around the world) run probability panels
- These companies spend a lot of resources managing the panel, so they tend:
  - To have restrictions on how often panelists can be surveyed
  - To have strict limits on survey length and burden
  - To require the use of their own survey software/platform
  - To charge a lot more than non-probability panels

NCHS’ Research Agenda

NCHS' Goals

- NCHS' Division of Research and Methodology became interested in how online panels could be used to supplement the agency's work
  1. Estimation using online panels
  2. Questionnaire/survey evaluation using online panels

Estimation Using Web Panels

- Lead by our Collaborating Center for Statistical Research and Survey Design—NCHS' sampling and statistical research and methodology branch.
- Overall interest is to better understand the utility of estimates from web panels
  - Pie-in-the-sky idea: that web panel data could supplement a heath survey, such as NHIS, and allow us to decrease survey length/burden
- Research will investigate various estimation methods and imputation techniques to see "how close" web panel comes to NHIS or NHANES.

Questionnaire and Survey Evaluation

- Our interest is developing and improving methods that supplement cognitive interviewing studies.
- NCHS' cognitive interviewing studies focus on uncovering the interpretations of questions (as opposed to just determining whether or a question is "good" or "bad").
  - Outcome of cognitive evaluation is a set of patterns or interpretation/judgement that respondents use to answer each item.
  - Given sample, we cannot extrapolate the distribution of these patterns to the wider population.
- Basically then, we hope to use web panels to extrapolate to the population and to examine sub-groups' interpretations

So why a recruited panel?

- "Fit for purpose"
  - Both of NCHS' two goals—estimation and extrapolation of interpretation to the population—require a good sample.
  - There are techniques that could use non-statistical samples, but we determined that by beginning our research with the sample most likely to lead to success.
- CIPSEA/Public Health Service Act Issues
  - By contracting directly with panel providers, we have more control over the data and the associated metadata.

Challenges Using Probability Panels…

Major Challenges Using Probability Web Panels

1. Cost
2. Scheduling
3. Sample Size
4. Representativeness

Major Challenges Using Probability Web Panels

1. Cost
   - Simply put: recruited panels are way more expensive than opt-in
   - Costs due to more active management, recruitment costs, software usage, and “consultant fees”
2. Scheduling
3. Sample Size
4. Representativeness

Major Challenges Using Probability Web Panels

1. Cost
2. Scheduling
   - The biggest issues vis-à-vis time are related to contracting.
     - Only three providers, so single-source may be an option.
   - Within CDC, we also have an extensive contract clearance system for privacy and confidentiality issues.
   - Technological compliance may delay the schedule as well…
3. Sample Size
4. Representativeness

Major Challenges Using Probability Web Panels

1. Cost
2. Scheduling
3. Sample Size
   - Because of cost of maintaining panel, recruited panels are often smaller than opt-in ones.
   - Often limitations on panelist burden can also reduce potential n.
   - Some sub-groups may be limited
4. Representativeness

Major Challenges Using Probability Web Panels

1. Cost
2. Scheduling
3. Sample Size
4. Representativeness
   - Just because they are statistically sampled, they are not necessarily “great.”
   - Panel composition may lead to biases, weights can lead to greater variance…

In Conclusion…

- NCHS uses recruited web panels as they provide a better fit for our activities than do opt-in panels.
- Their statistically-sampled nature mean that probabilities of selection can be assigned to respondents.
- We have had very good experiences working with panel providers.
- Recruited panels are much more expensive than opt-in, and in the final tally, have a pretty low response rate (which calls into question their representative nature).

CCQDER
Collaborating Center for Question Design and Evaluation Research

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