

Panel Costs

Brad Edwards
Committee on National Statistics/National Institute on Aging
Workshop on Developing a Methodological Research Program on Panel Studies
June 6, 2017
Washington, DC

Unique Cost Considerations for Panels

- Longitudinal studies add a layer of complexity, a form of comparative surveys that measures change over time at individual sample unit level
- From fixed cost perspective, at least in development phase, longitudinal surveys at the costlier end of continuum of survey types:
 - \$ One-off → Repeated Cross-Sections → Panel \$\$
- For variable costs, this relationship holds in round 1 (respondents perceive greater burden), but when averaged over rounds, relationship flips:
 - \$ Panel → Repeated Cross-Sections → One-Off \$\$

Panel Cost Patterns over Time

- Costs decrease with experience for all survey types, but greatest for panel designs
- Data collection costs decrease in panels as sample becomes smaller through attrition, and once respondents make an initial decision to cooperate, most continue
- Other panel costs – design and IT labor – decrease over the first 3-4 rounds

Other Unique Panel Costs

- Design, programming, data dissemination costs inherent in the relationship of one round to another
 - Simplest case: minimal relationship
 - Most complex: recall bounding, continuous timelines, extensive dependent interviewing
- Data collection costs related to tracking/locating respondents between rounds, and maintaining cooperation through light contacts between rounds
- Increased “branding” and engagement mechanisms

Industry Metrics Related to Variable Costs

- STANDARD: Response rates per round
- STANDARD: Incentives per sample unit/complete
- STANDARD: Interviewer hours per complete (for face-to-face and telephone)
- DERIVABLE: Completes/1st and 2nd stage clusters (for face-to-face)
- STANDARD: Break off rate (for web)
- STANDARD: Number of interviews by mode by round (for mixed mode)

Some Cost Metrics We Need for Panels

- Cost curves for data collection over the rounds
 - Contact attempts, successful attempts per sample unit by round, etc.
- Propensity of a complete on next contact, based on models of previous waves and similar surveys
- Cost of next contact based on propensity and travel costs (including geography, travel routes)
- Cost curves for design, IT, data dissemination costs
- Per interview costs averaged over the rounds
- For mixed mode: proportion of fixed and variable costs by mode, proportion of total costs by mode by year.
- A global measure of longitudinal complexity

Some Cost Metrics We Can Share?

- Total project costs divided by years in funding vehicle; sample size; total number of interviews; number of rounds; design type
- *For fixed costs*, months from inception to launch; number of variables; months from end of data collection to public data release
- *For variable costs*,
 - Metrics from paradata on contact attempts, successes
 - Incentive protocol and payouts
 - For incentives, response rate and level of effort effects, total cost/sample unit
 - For web and mail, impact of reminders over time

Research on Cost Implications/Tradeoffs for Various Methods and Modes

- TSE perspective (e.g., nonresponse error vs. measurement error)
- Responsive design and phase capacity
- Respondent burden/perceived burden – length of interview, periodicity, number of rounds – relationship to response rates and data collection effort
- Effects of engagement, saliency, gamification on retention and costs
- Quality costs
- ROI

Triple Constraint



The Downside of Increasing Efficiency

- Questions can acquire a “pedigree”
- For surveys repeated over time, and “successful” surveys, strong bias against change
- For panel surveys, question change often viewed as threatening
- Hidden cost of successful panel surveys: need to reinvent themselves periodically (every 10-15 years?)