Defining, Measuring, and Mitigating Respondent Burden

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Workshop on Respondent Burden in the American Community Survey
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Possible Impacts of Burden

- **Effects on data quality**
  - Unit nonresponse (e.g., Groves et al. 1999; Rolstad, Adler, and Rydén 2011)
  - Panel attrition (e.g., Martin et al. 2001; Fricker et al. 2011)
  - Delayed responses (e.g., Giesen 2012)
  - Item nonresponse (e.g., Warriner 1991; Fricker and Dixon, 2014)
  - Break-offs (e.g., Galesic 2006)
  - Satisficing/Inaccurate reporting (e.g., Krosnick, 1999; Peytchev, 2005)

- **Increased costs** (e.g., Slud and Erdman, 2013)

- **Sustainability of surveys**
  - Negative evaluations of surveys (e.g., Stocke and Langfeldt, 2004)
Defining and Measuring Respondent Burden:

Objective approaches (aka “actual” burden)

- “... estimated total time and financial resources expended by the survey respondent to generate, maintain, retain, and provide survey data...” (OMB Standards and Guidelines, 2006: p34)
- “the interview duration” (Groves et al., 1991: p251)
- “the number and size of the respondent’s tasks” (Hoogendoorn and Sikkel, 1998: p189)

Common metrics

- Length of interview (Groves et al., 1999; Singer et al., 1999; Hoogendoorn, 2004)
- Number of survey requests (Hoogendoorn et al., 1998)
- Number of surveys completed (McCarthy et al., 2006)
- Number of known contact attempts (Griffin, 2013)
Defining and Measuring Respondent Burden (2):

- Norman Bradburn (1978)
  - Identified four key factors: survey length; survey frequency; respondent effort; respondent stress
  - Underscores multidimensional nature of burden
  - Emphasized interaction between the nature of the task and how it is perceived by respondents

- Subjective approaches (aka perceived burden)
  - “… negative feelings such as annoyance, frustration or inconvenience which may be experienced by survey participants” (Frankel, 1980: p1)
  - “… degree to which a survey respondent perceives participation in a survey research project as difficult, time consuming, or emotionally stressful…” (Graf, 2008: p740)
Defining and Measuring Respondent Burden (3):

Metrics of perceived burden

- Self-reports
  - Respondent perceptions of survey characteristics (Sharp et al., 1983; Hoogendoorn, 2004; Fricker et al., 2011; 2012)
  - Attitudes about the importance of the survey, government, etc. (Sharp et al., 1983)
  - Negative feelings (e.g., annoyance, frustration or inconvenience) (Frankel, 1980)
  - Perceptions of time associated with the response task (Giesen, 2012)

- Interviewer notes
  - Respondents’ complaints about survey burden (Martin et al., 2011)
Conceptual Model of Burden

Survey and Task Characteristics
- Survey length
- Survey content, layout
- Contact rules
- Collection mode
- Persuasion strategies

Respondent Perception of Survey

Respondent Characteristics
- HH size, income
- Cognitive ability – age, educ.
- Attitudes
- Interest, motivation

Respondent Burden
BLS Applications

Consumer Expenditure Interview Survey (CEQ)

- Longitudinal survey conducted by BLS
  - Provides information on buying habits of American consumers
    - Expenditures, income, consumer characteristics
  - Rotation panel design
    - Panel members are interviewed every quarter up to four times

- Challenges:
  - length/detail + perceived invasiveness → respondent burden
  - Impacts on data quality

- CE Redesign:
  - Objective – verifiable reduction in measurement error
  - Interest in evaluating impact on respondent burden
BLS Burden Research: Methods

Focus has been on understanding respondents’ subjective experiences

- Identify key dimensions/components of burden
  - Perceptions of survey length
  - Perceptions about the frequency of call attempts, survey requests
  - Perceived difficulty/sensitivity of content
  - Attitudes/beliefs about privacy/confidentiality, Census Bureau, usefulness of data

- Develop questions to assess those dimensions
- Administer to respondents after their final interview
Examples of Items Used to Assess Burden

**Perceived Burden**
- How burdensome was this survey to you? (Not at all – Very)

**Perceived Length**
- Do you feel that the length of today’s interview was too long, too short, or about right?

**Perceived Effort, Interest, Sensitivity**
- How difficult or easy was it for you to answer the questions in this survey?
- How interesting was this survey?
- How sensitive did you feel the questions I asked today were?

**Perceived Frequency**
- ... number of calls you received - too many or a reasonable number?
- ... number of interviews - too many or a reasonable number?

**Additional items tested**
- Willingness to: participate again; extend the interview 15 min.
- Perceptions of confidentiality; usefulness of survey; time well spent, etc.
BLS Burden Research: Methods (2)

- Evaluated performance of these burden items
  - Small- and large-scale analyses
    - Cognitive and psychometric testing (e.g., IRT analyses)
    - Field experiment
    - 2012 – 2014 CE Production Survey
  - Develop multivariate models of burden
  - Explored methods to produce summary burden score

- Examined associations with key survey outcomes
  - Item nonresponse; expenditure levels; patterns of participation; etc.
  - Relationship of respondent concerns captured in CHI (by interviewer) and Rs’ self-reported burden

- Exploratory research into design features that impact burden dimensions
BLS Burden Research: Select Empirical Results

- Support for a multidimensional concept of burden
- Support for importance of subjective component
  - Including direct R perceptions/assessments improves burden models
  - Burden is largely determined by Rs’ perceptions of survey features
  - Structural model is invariant to the survey’s mode of administration
- Burden impacts data quality
  - More likely to be intermittent reporter, require refusal conversion
  - Higher incidence of DK/REF; lower expenditure means (unweighted)
  - BUT – limited impact on weighted expenditure estimates and regression coefficients
- Other findings relevant to ACS
  - Spit-questionnaire field test (lower burden, higher data quality)
  - R concerns (CHI) weakly related to Rs’ self-reported burden (.05 - .28)
Components of Respondent Burden in the ACS

- Concerns about sensitive/difficult questions and perceptions of “harassment” (multiple contact attempts)
- ACS Content Review
  - Identify candidate items for removal
  - Burden (“Costs”) defined by several inputs:
    - Survey of ACS interviewers (their perceptions of items that are difficult/sensitive for R) – most weight
    - Response time per question
    - Imputation rates per question
    - Complaints received
  - Compare benefits (legal requirements, uses) against “costs”
Components of Respondent Burden in the ACS (2)

- **ACS Call Rules Research** (Slud and Erdman. 2013; Griffin, 2013; Griffin et al., 2015)
  - Reduce contact burden (“harassment”) and survey costs
  - Several burden metrics:
    - Call attempts per case
    - Contacts with sample household
    - Contact attempts + reluctance expressed (CHI-based)
  - Implemented burden-based call rules
  - Measured cost, burden, and quality trade-offs
Thoughts on ACS Approach to Burden

- Approach is systematic, multi-pronged, transparent, and outcome-oriented
  - Likely to be productive – targets CATI calls and length
  - Is “fit for use” – is responsive to concerns
  - Impact on Rs’ experience is an open question

- Hybrid approach (objective + subjective) likely will lead to additional insights, more targeted interventions

- Possible extensions/research
  - Explore use of expert and/or R ratings of items
  - Quality of interviewer observations/ratings
  - Continued exploration of paradata
Issues to Bear in Mind for This Workshop

- Perceptions of length are affected by many factors, not length alone.
- Perceived length is a driver of burden, but not the only one.
  - Interaction of R characteristics with survey features is key.
- What are likely impacts of intervention/design change on burden dimensions?
  - How will those design changes be evaluated? Metrics?
- What “burden problem” are we trying to solve?
  - Individual vs. aggregate?
  - (Few) vocal complaints vs. entire sample?
“...it is because of their [survey researchers’] day-to-day concern for the potential burden that they place on respondents that there is little self-conscious research on the issue. It’s so much a part of everyday practice, that it is not seen as a topic in need of research”

- Norman Bradburn (1978), p 35
Contact Information

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