

# Defining, Measuring, and Mitigating Respondent Burden

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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

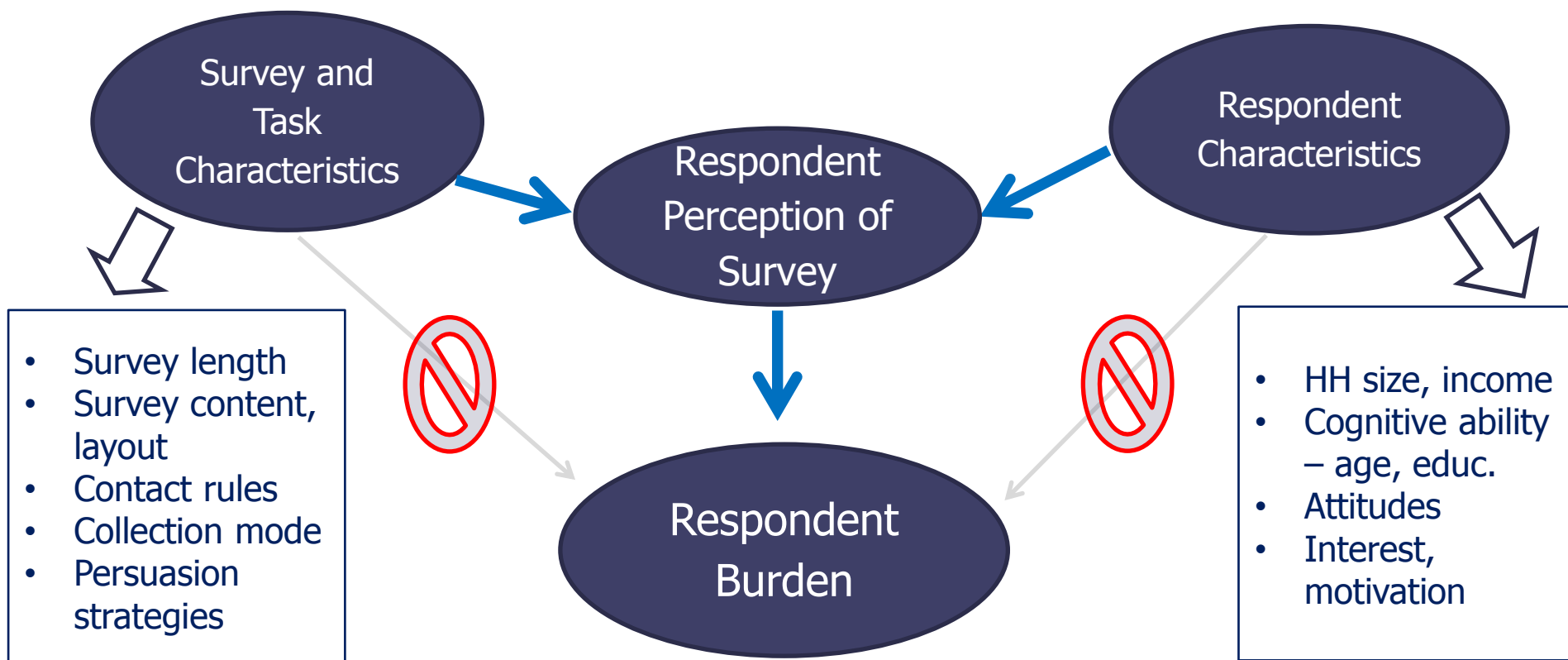
### ▶ Self-reports

- 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



# 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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