Response Burden: What Predicts It and Who is Burdened Out?

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Gaps in the field

"The topic of <u>respondent burden</u> is not a neat, clearly defined topic about which there is an abundance of literature" (Bradburn, 1978: p49)

"<u>Response burden</u> is not a straight forward area to discuss, measure and manage" (Jones, 2012: p1)

Gaps in the field (2)

- Undeveloped conceptualization
- Lack of good measurement
- Equivocal empirical research findings
  - What predicts response burden?

Lack of good measurement

- Characteristics of survey/tasks causing burden
  - Length of interview (Groves et al. 1999; Singer et al., 1999; Hoogendoorn, 2004)
  - Frequency of interview (Hoogendoorn et al., 1998)
- Rs' attitude towards and beliefs about surveys
  - Interest in survey (Sharp et al., 1983; Hoogendoorn, 2004; Fricker et al. 2011; 2012)
  - Importance of interview (Sharp et al., 1983)
- Effects of response burden
  - Willingness to be re-interviewed (Sharp et al., 1983; Fricker et al., 2011; 2012)
  - Feeling of exhaustion (Stocke and Langfeldt; 2004)
- Direct question
  - Feeling of burden (Galesic, 2006; CE)

Undeveloped conceptualization

- Response burden: subjective feelings, perception
  - "… negative feelings such as annoyance, frustration or inconvenience which may be experienced by survey participants" (Frankel, 1980: p1)
  - "[T]he degree to which a survey respondent perceives participation in a survey research project as difficult, time consuming, or emotionally stressful…" (Graf 2008: p740)
- Respondent burden: objective/actual burden
  - "characteristic of research activity" (Corbin 1977: p9)
  - "the length of the interview" (Groves et al. 1991: p251)
  - "the number and size of the respondent's tasks" (Hoogendoorn and Sikkel 1998: p189)

Undeveloped conceptualization (2)

- Bradburn (1978)
  - [burden] "is not to be an objective characteristic of the task, but is the product of an interaction between the nature of the task and the way in which it is perceived by the respondent" (p49)
- Haraldsen (2004)
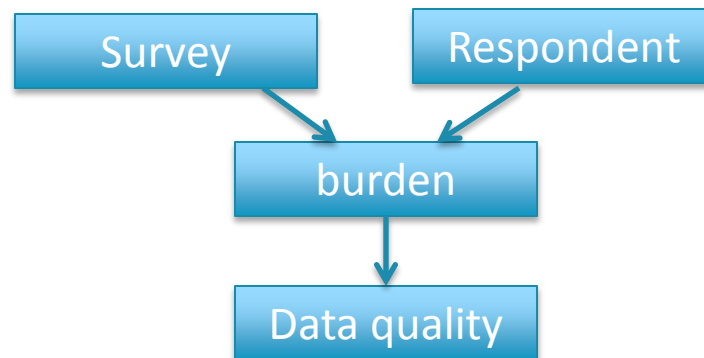
This talk

- Define burden as subjective perception, feelings of burden as perceived by respondents
- Posit a path model
  - Combining objective survey features, respondent characteristics, respondent attitudes
  - Modeling direct and indirect paths leading to burden
 - Investigating difference by mode

Data

- Consumer Expenditure Interview Survey (CE)
  - Longitudinal survey conducted by BLS
    - Providing information on buying habits of American consumers
      - Expenditures, income, consumer characteristics
    - Rotation panel design
- Since 2012, question measuring burden included in 5th interview
  - How burdensome was this survey to you? Very burdensome, somewhat burdensome, a little burdensome, not at all burdensome?
- Pooled cases who completed their 5th interviews between October 2012 and March 2013

Methods

- Structural equation modeling
  - Direct paths leading to burden
  - Indirect paths leading to burden
  - Total effects on burden
- Multiple Group Analysis
  - Compare equivalence by mode of data collection
- Excluded from analyses
  - Cases who didn't provide an answer to burden question, and other questions used in the SEM
  - Cases who were attempted equally by phone and in-person over entire contact history

Structural Model
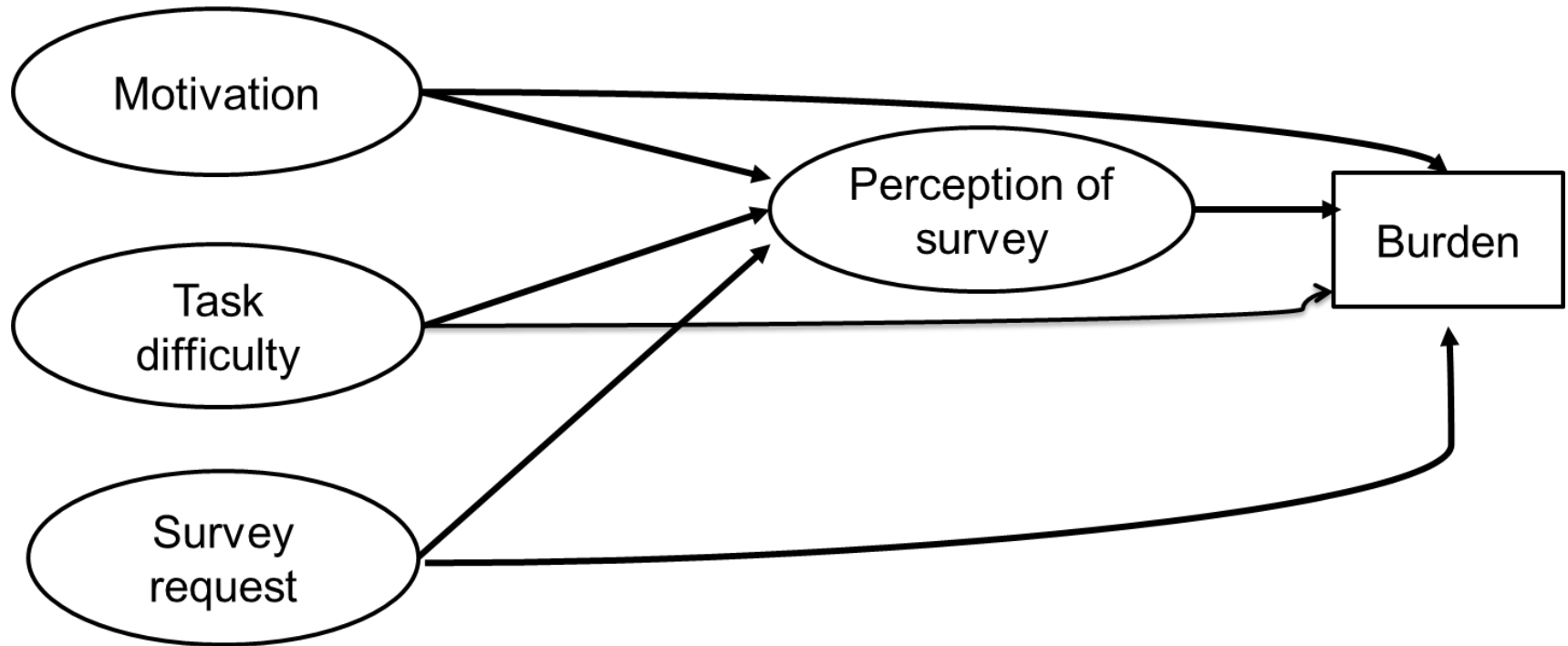
Model fit statistics

Chi-square statistics	x^2 (94)=1874, p<.0001
Standardized RMR (SRMR)	**0.049**
RMSEA Estimate	**0.056**
GFI	**0.962**
Adjusted GFI (AGFI)	**0.944**
Bentler Comparative Fit Index	**0.920**

"How burdensome was this survey to you?"

	Sample Count	Percentage
Very burdensome	645	10.6%
Somewhat burdensome	1,684	27.6%
A little burdensome	1,925	31.6%
Not at all burdensome	1,845	30.3%
Total	6,099	100%

Motivation

		Standardized	Unstandardized		
		Estimates	Estimates	S. E.	p-value
Factor	Indicator				
Low Motivation	Level of Doorstep Concerns	0.340	1.000		
	Survey Sensitive	0.612	2.108	0.097	<0.0001
	No Trust in Survey Organization	0.446	1.413	0.072	<0.0001
	Number of Refusals Expressed	0.168	0.176	0.017	<0.0001

Task difficulty

		Standardized	Unstandardized		
		Estimates	Estimates	S. E.	p-value
Factor	Indicator				
Difficult Recall Task	Number of Children in Household	0.844	1.000		
	Number of Household Members	0.867	0.570	0.018	<0.0001
	Respondent Less Than 65	0.334	0.155	0.007	<0.0001

Survey features

	Standardized	Unstandardized		
	Estimates	Estimates	S. E.	p-value
Factor Indicator				
Challenging Survey Request Length of interviews	0.886	1.000		
Number of Interviews Completed	0.762	1.419	0.042	<0.0001
Using Information Book	0.350	0.707	0.030	<0.0001
Using Records	0.362	0.639	0.027	<0.0001

Perception of survey

	Standardized	Unstandardized		
	Estimates	Estimates	S. E.	p-value
Factor <u>Indicator</u>				
Negative perception of survey — Perception of Number of Interviews	0.639	1.000		
Perception of Length	0.621	0.947	0.025	<0.0001
Perception of Interestingness	0.584	1.814	0.050	<0.0001
Perception of difficulty	0.465	1.171	0.039	<0.0001

Structural Model
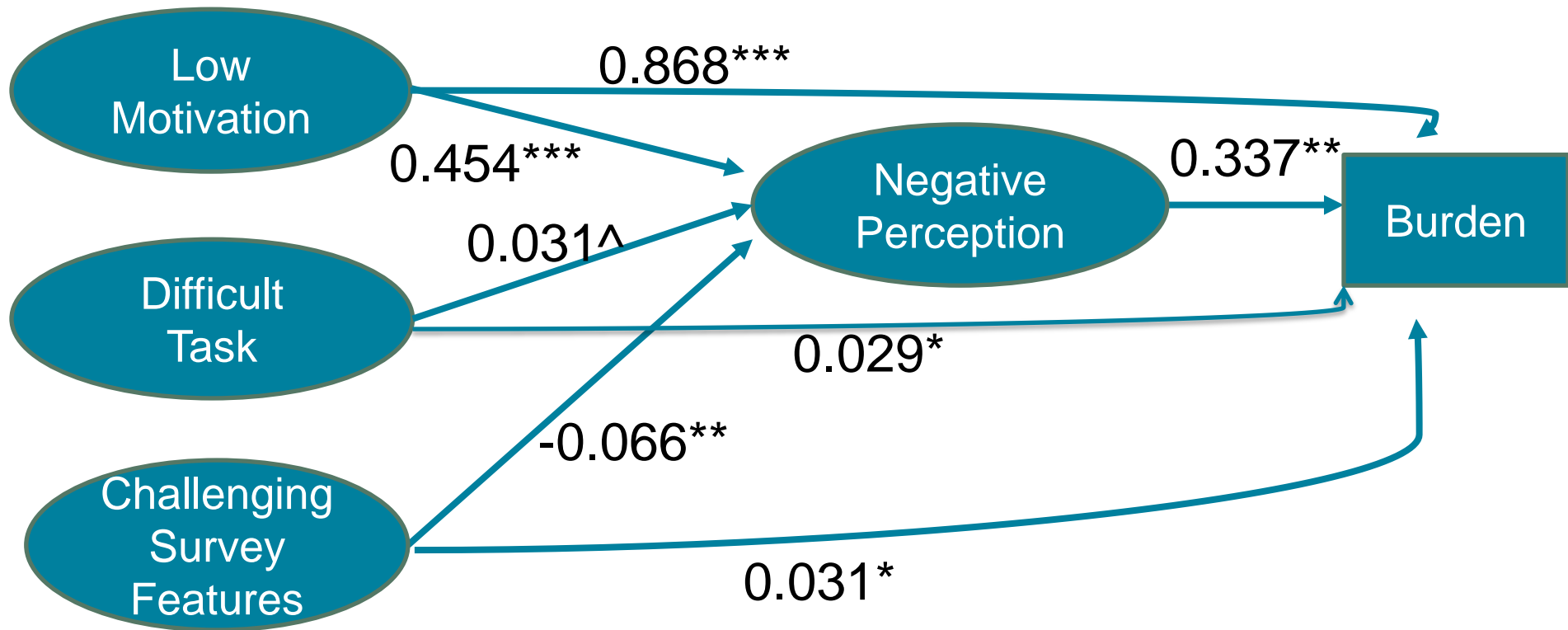
Decomposing total effects

	Total Effects	Direct Effects	Indirect Effects
Low Motivation	0.747***	0.454***	0.292***
Difficult Recall Task	0.040**	0.030**	0.011
Challenging Survey Request	0.009	0.031*	-0.022**
Negative Perception of Survey	0.337***	0.337***	0

Multiple group analysis

- Models are invariant by group?

- Group=Modes of data collection

  — Across all contact attempts across all waves

    - Number of times respondents attempted by phone

    - Number of times respondents attempted in person

  — Divide respondents into

    - "mostly by phone" (n=2515)

      - *Number of attempts by phone>number of attempts in person*

    - "mostly in person" (n=3584)

      - *Number of attempts by phone<number of attempts in person*

MGA results

Models for Comparison	Unconstrained model	Metric Invariance Model	Partial Metric Invariance Model	Structural Invariance Model
Chisq	1913	1999	1918	1924
df	188	199	194	201
RMSEA	0.055	0.055	0.054	0.053
Bentler CFI	0.916	0.912	0.923	0.923
$\Delta\chi^2$		86	5	6
ΔDF		11	6	7
p-value		<0.0001	0.52	0.54

Conclusions

- Factors contributing to burden directly:

  — Low Motivation (+)

  — Difficult Task (+)

  — Challenging Survey Requests (+)

  — Negative Perception of Survey (+)

- Factors contributing to burden indirectly through perception:

  — Low Motivation (+)

  — Challenging Survey Request (-)

- Mode affects measurement, but not structural relation

Discussion

- Total effects of survey features: small and non-significant

- Question evaluation and testing
  - Asking about respondents' perceptions?
    - ✦ Survey length
    - ✦ Interestingness
  - Asking about respondents' feelings of burden?
  - Task-evoked pupillary responses (Yan et al., 2016)?

- Include a direct measure of burden in surveys?
  - Burden negatively affect data quality (Yan et al., 2014)

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Thank you!

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