

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

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Outline

- How is response burden defined?
- How is response burden measured?
- What are the effects of response burden?
- What causes response burden?
- What can be done to reduce or counteract negative effect of response burden?

Gaps in the field

“The topic of respondent burden is not a neat, clearly defined topic about which there is an abundance of literature” (Bradburn, 1978: p49)

“Response burden is not a straight forward area to discuss, measure and manage” (Jones, 2012: p1)

Gaps in the field

- Undeveloped conceptualization
- Lack of good measurement
- Lack of empirical research on
 - ▶ What predicts response burden
 - ▶ The impact of burden on data quality and statistical estimates

Perceived / Subjective Burden

- "...perceived response burden ... negative feelings such as annoyance, frustration or inconvenience which may be experienced by survey participants" (Frankel, 1980: p1)
- "...respondent burden ... the presumed hardships entailed in being a survey participant" (Sharp and Frankel 1983: p36)
- "...respondent's experience..." (Haraldsen 2004: p398)
- "... perception of time and burden associated with the response task" (Giesen 2012: p1-2)
- "[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)

defined?

Actual/Objective Burden

- “... characteristic of research activity intervening between the survey instrument and response activity which, if increased, will decrease the probability of the respondent providing the full information required...” (Corbin 1977: p9)
- “... respondent can feel burdened whenever the question appears either threatening or difficult...” (Warriner 1991: p256)
- “the length of the interview” (Groves et al. 1991: p251)
- “the number and size of the respondent’s tasks” (Hoogendoorn and Sikkel 1998: p189)

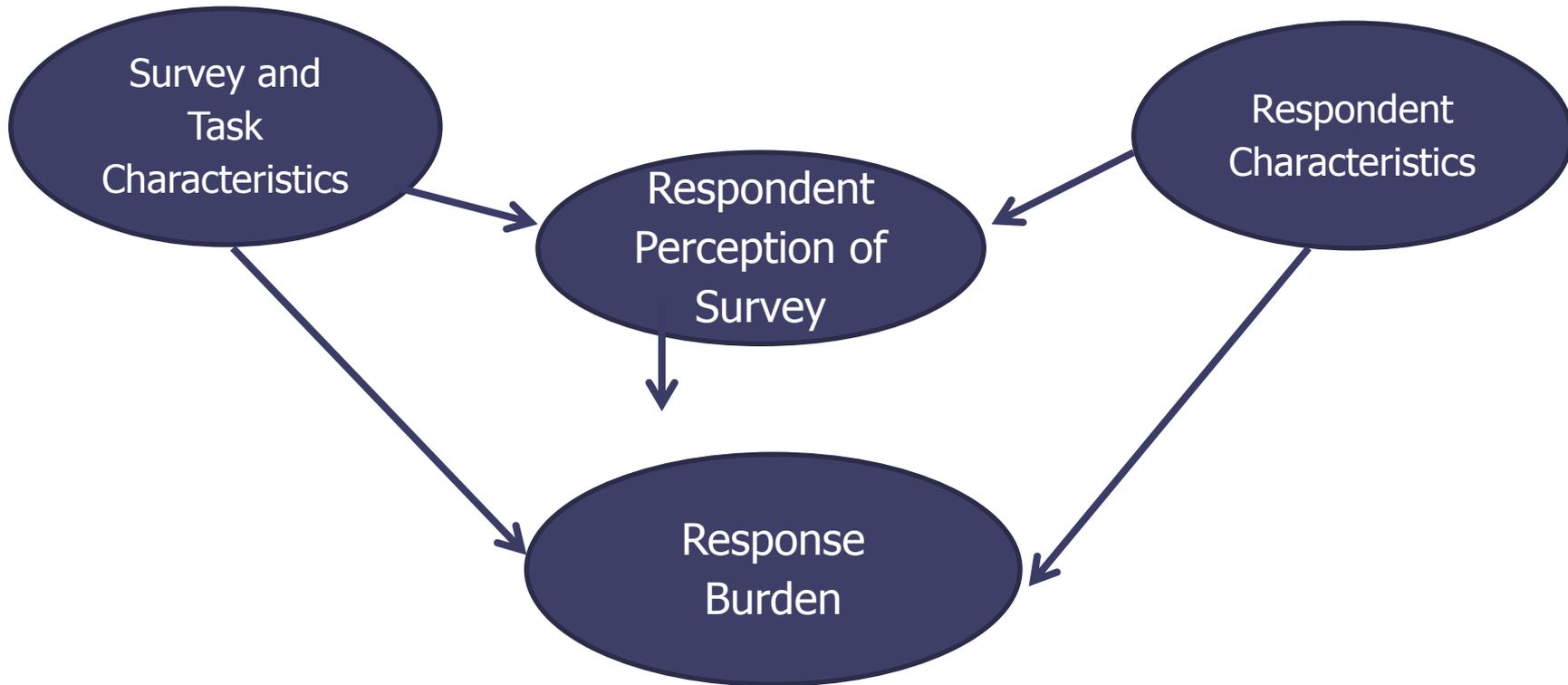
How is response burden measured?

- 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)
 - ▶ Difficulty of response tasks (Filton, 1981)
- Rs' attitude towards and beliefs about surveys
 - ▶ Self-reports
 - Interest in survey (Sharp et al., 1983; Hoogendoorn, 2004; Fricker et al. 2011; 2012)
 - Importance of interview (Sharp et al., 1983)
 - ▶ Interviewer notes
 - Rs' complaint about survey burden (Martin et al., 2011)
- 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)

What are effects of response burden?

- Leading to unit nonresponse (e.g., Groves et al. 1999; Rolstad, Adler, and Rydén 2011)
- Leading to panel attrition (e.g., Martin et al. 2001; Fricker et al. 2011)
- Leading to item nonresponse (e.g., Warriner 1991)
- Leading to break-offs (e.g., Galesic 2006)
- Leading to delayed responses (e.g., Giesen 2012)
- Leading to inaccurate response (e.g., Warriner 1991; Kennedy and Phipps 1995; Haraldsen and Jones , 2007 ; Giesen and Haraldsen, 2012)
- Leading to negative evaluations of surveys (Stocke and Langfeldt; 2004)

What causes burden?



This talk examines...

- Respondent level characters
 - ▶ Cognitive capacity
 - ▶ Motivation
 - ▶ (General) Attitude
 - ▶ Task difficulty
- Survey design characters
- Mediation by perception of survey
- Direct and Indirect paths

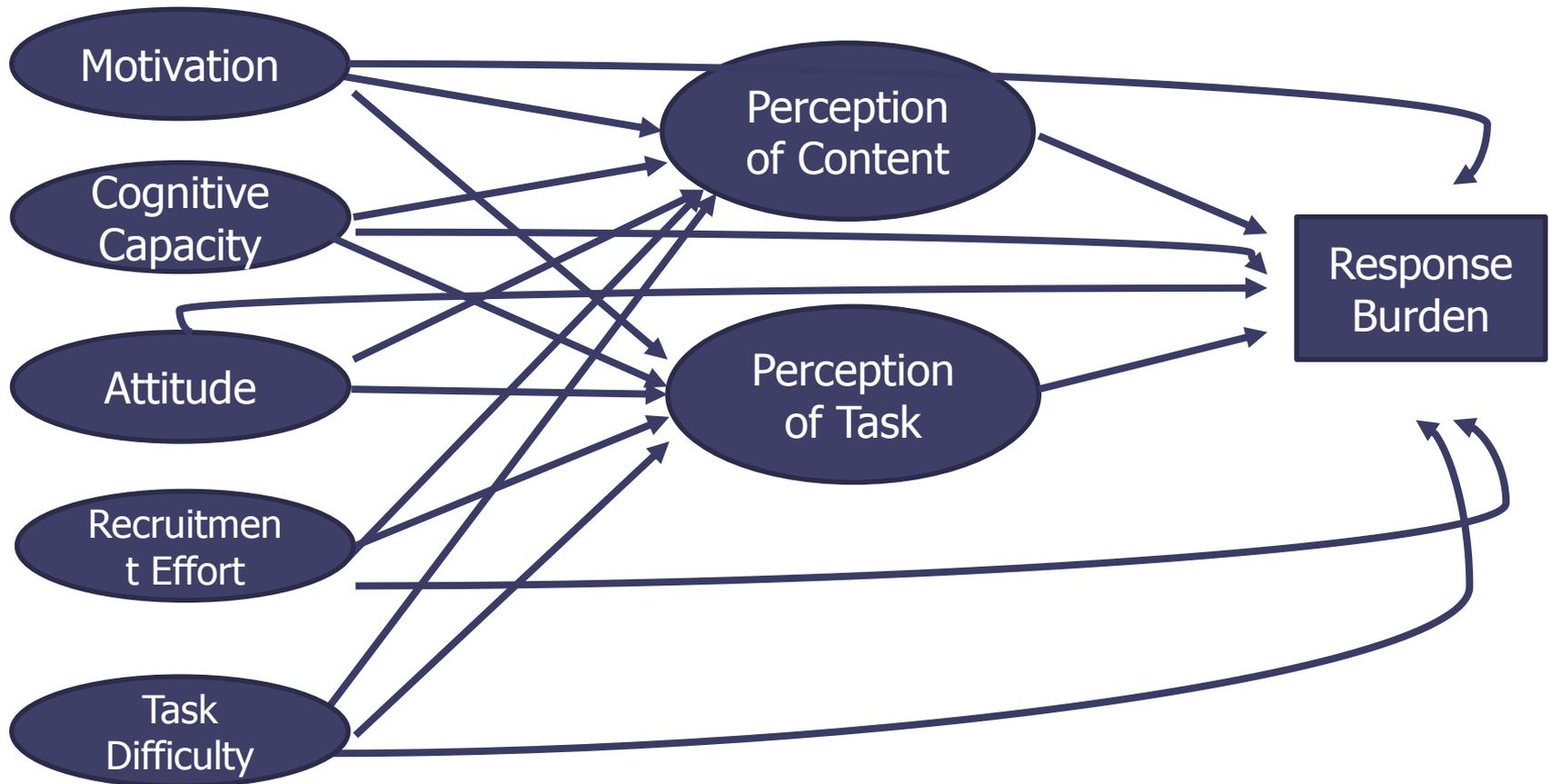
Data

- 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
 - Panel members are interviewed every quarter up to five times
 - In each interview quarter, 5 panels in different stage of panel life
- Pooled cases who completed their 5th interviews between October 2012 and December 2012
 - ▶ A total of 5,143 cases used

Data and method

- Structural equation modeling (SEM)
 - ▶ To incorporate structural models and measurement models
 - ▶ To estimate direct and indirect paths
- PROC CALIS is used to conduct SEM
- ML estimation is used to estimate parameters

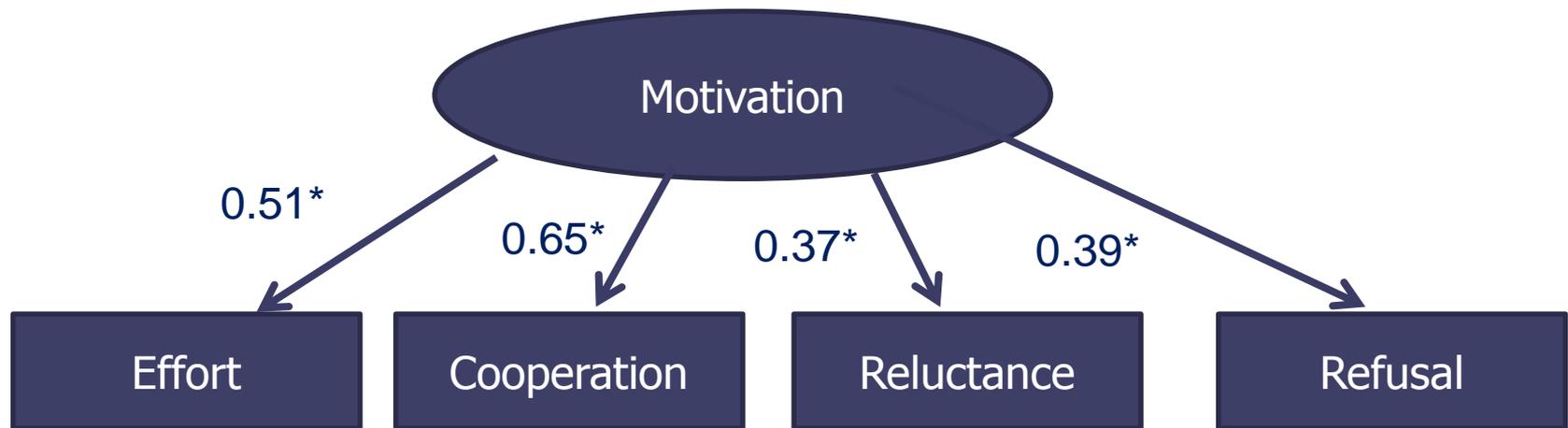
Structural Model



Results: Model fit statistics

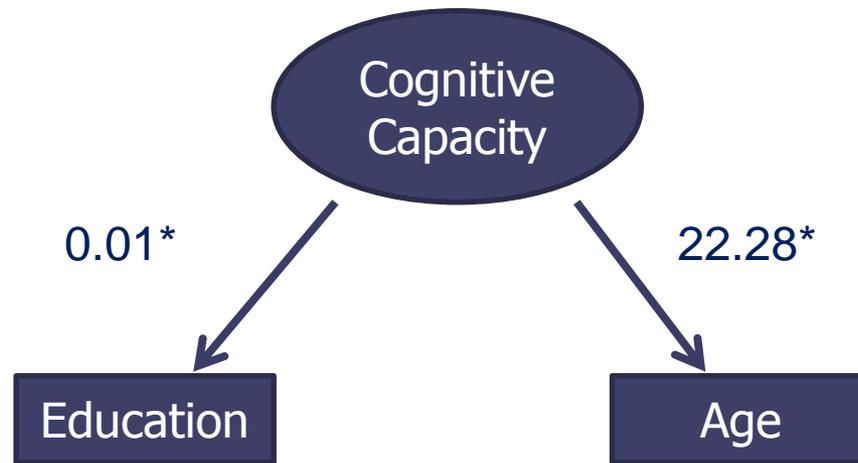
- $\chi^2 (93)=1697, p<.0001$
- Standardized RMSR (SRMSR): 0.0454
- RMSEA Estimate: 0.0579
- Adjusted GFI (AGFI): 0.9379
- Bentler Comparative Fit Index: 0.9004

Measurement Model: Motivation



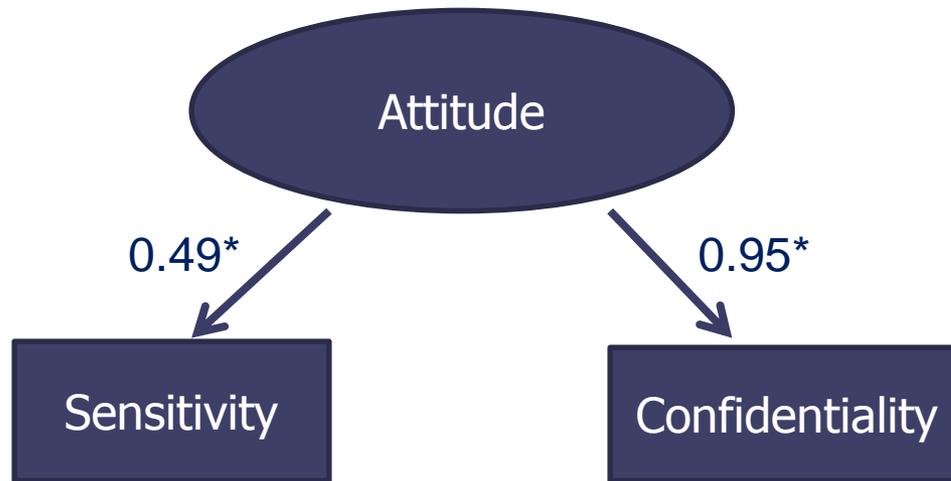
- Interviewer assessment of R's level of effort
 - ▶ A lot of or moderate effort (=1) vs. bare minimum (=0)
- Interviewer assessment of R's level of cooperation
 - ▶ Very cooperative (=1) vs. other(=0)
- Level of reluctance through door step concerns
 - ▶ Easy (=1) vs. busy or reluctant (=0)
- Whether or not R refused at least once to survey
 - ▶ Never refused (=1) vs. refused at least once (=0)

Measurement Model: Cognitive capacity



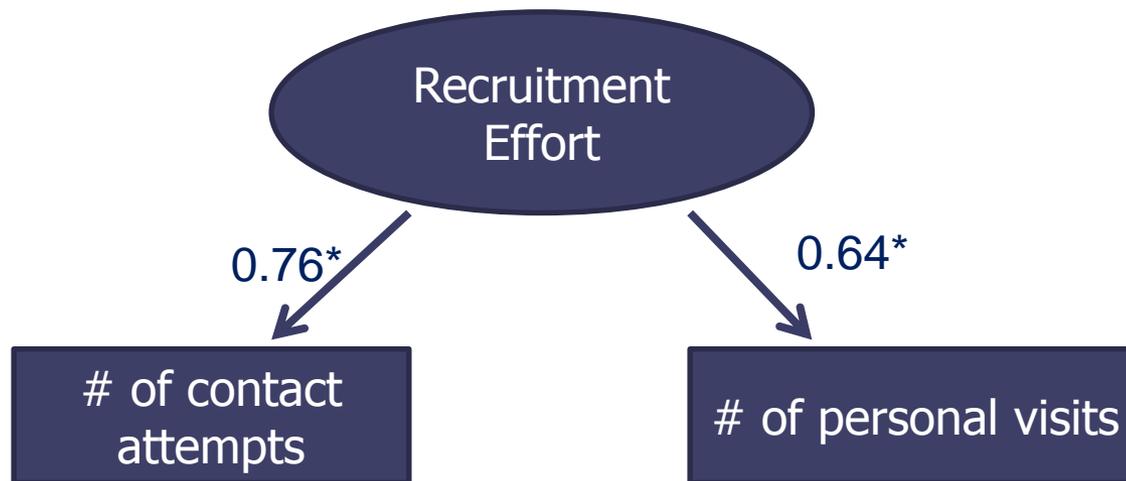
- Age: >60 (=0) vs. ≤ 60 (=1)
- Education: high school or less (=0) vs. some college or more (=1)

Measurement Model: Attitude



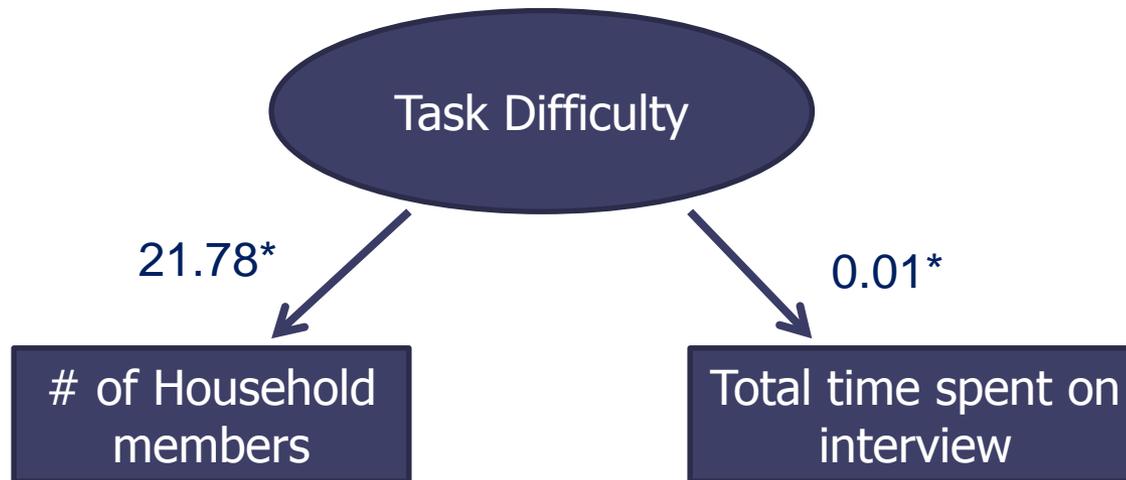
- How sensitive did you feel the questions I asked you today were?
 - ▶ Not sensitive at all (=1) vs. other (=0)
- I trust that the U.S. Census Bureau to safeguard the information that I provided them
 - ▶ Strongly agree or agree (=1) vs. other (=0)

Survey Design Characteristics



- Contact attempts:
 - ▶ Equal to or less than median (=0) vs. more than median (=1)
- Personal visits
 - ▶ Equal to or less than median (=0) vs. more than median (=1)

Measurement Model: Task Difficulty



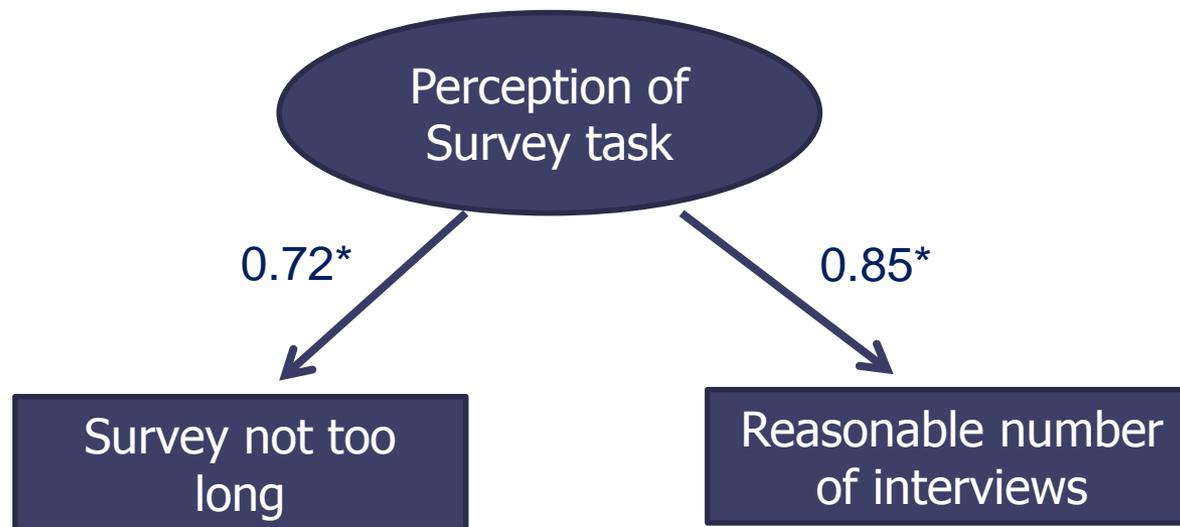
- Size of household
 - ▶ Multiple-person households (=1) vs. single-person households (=0)
- Total time spent
 - ▶ Longer than median (=1) vs. equal to or less than median (=0)

Measurement Model: Perception of Survey



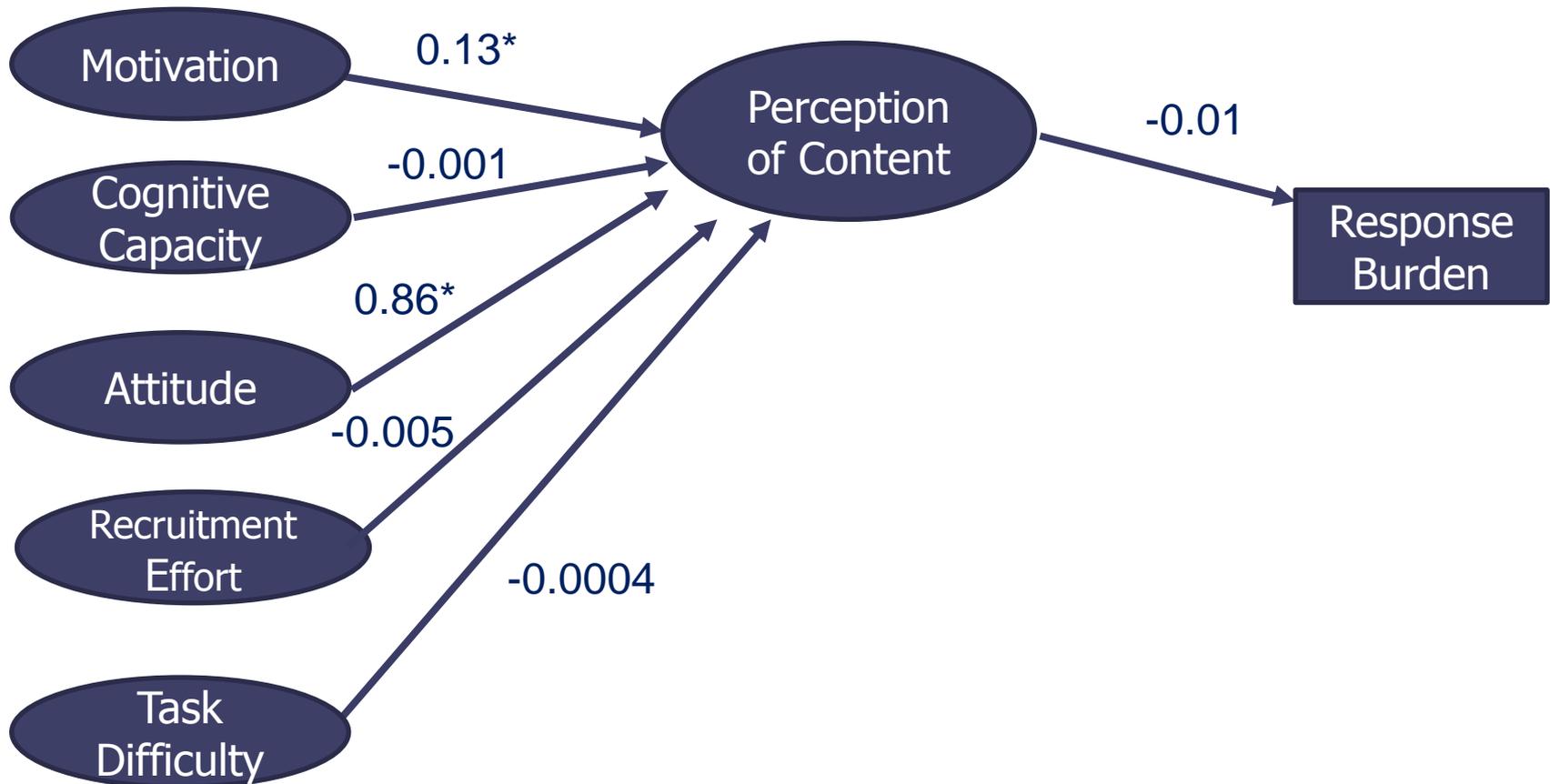
- Perception of survey
 - ▶ Very or somewhat interesting (=1) vs. other (=0)
- Perception of questions
 - ▶ Very easy (=1) vs. other (=0)

Measurement Model: Perception of Survey

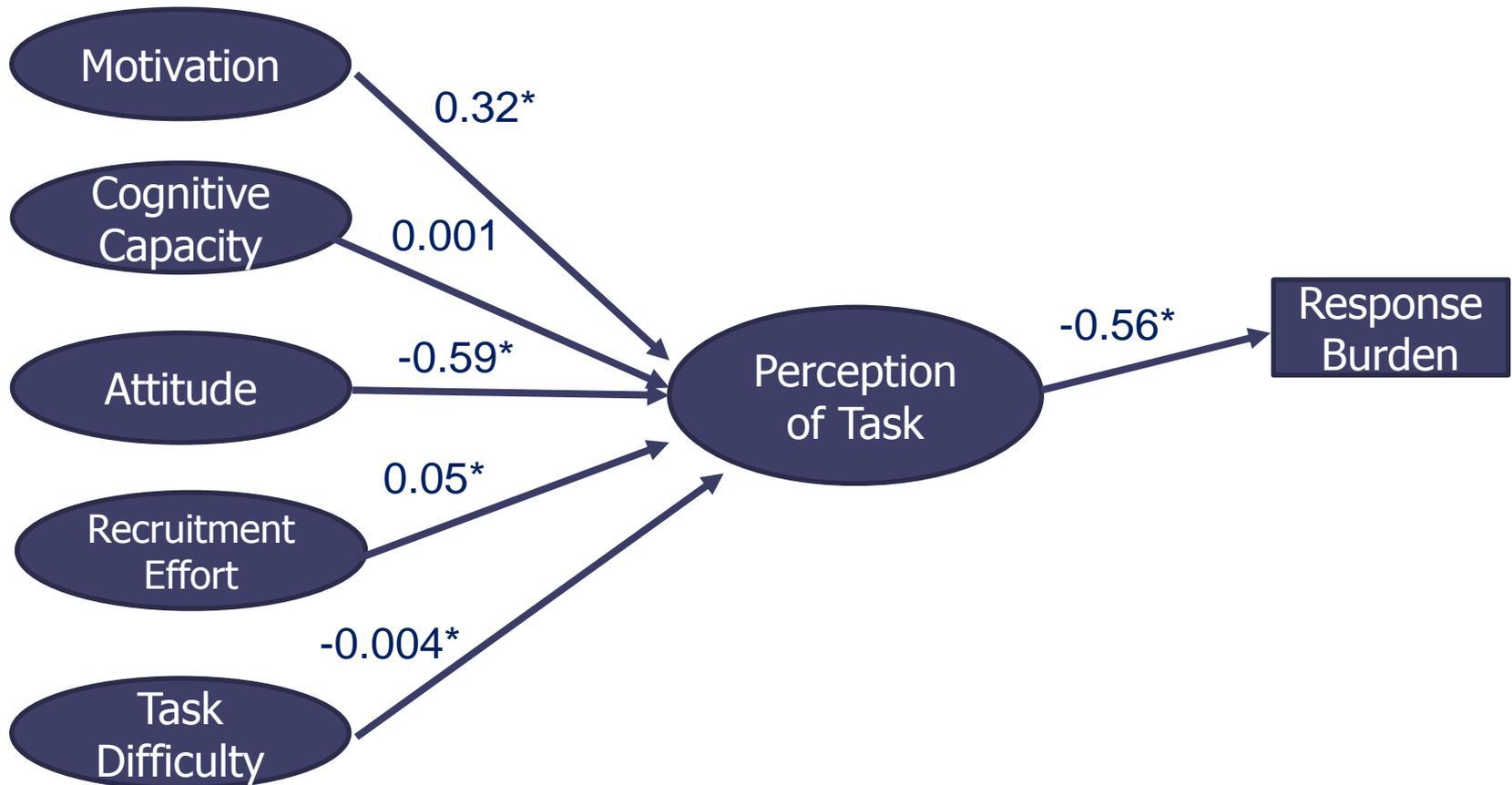


- Perception of length
 - ▶ Survey too short or about right(=1) vs survey too long (=0)
- Perception of survey requests
 - ▶ Reasonable number of interviews (=1) vs. too many interviews (=0)

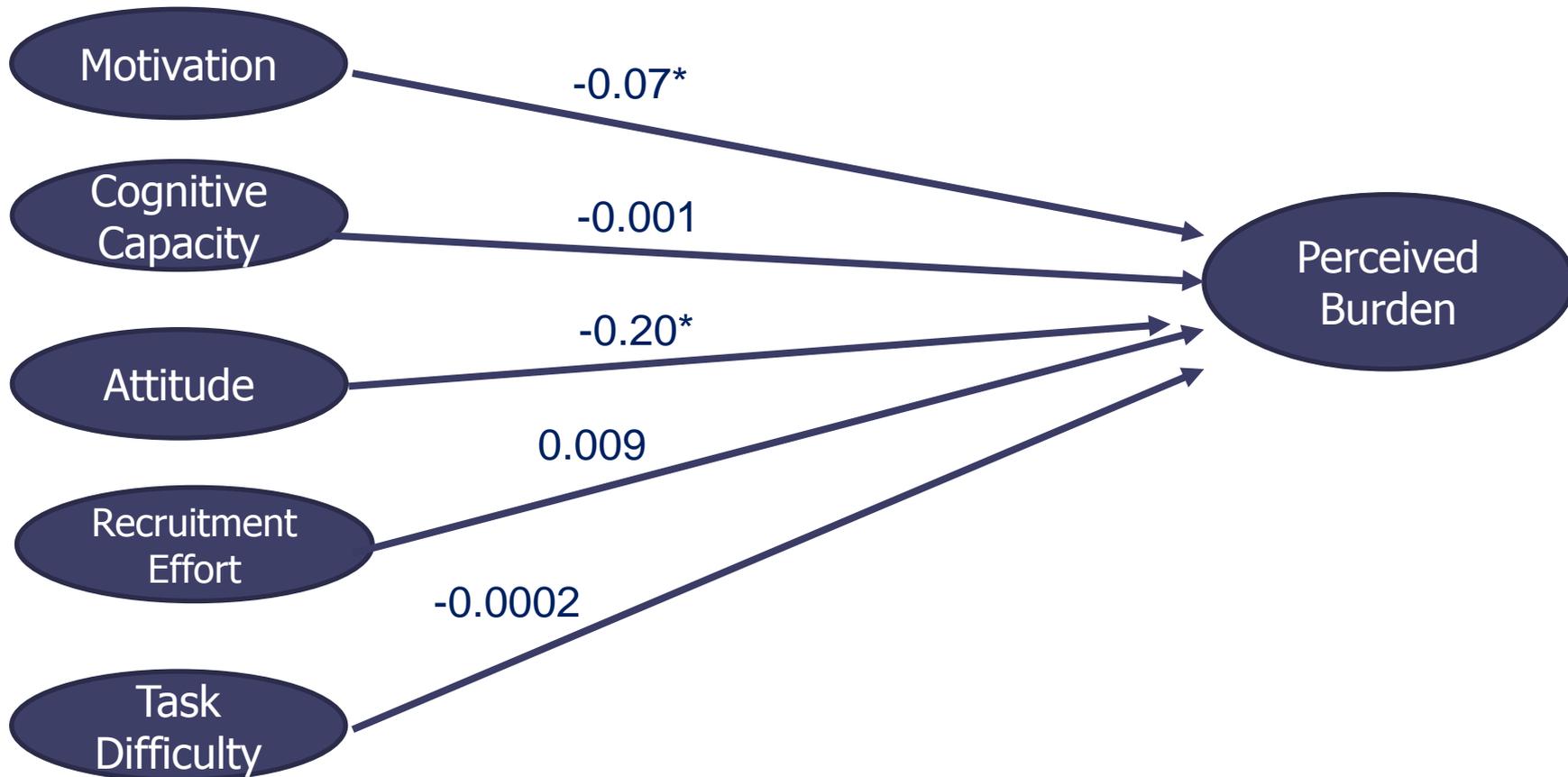
Results: Structural Model (1)



Results: Structural Model (2)



Results: Structural Model (3)



Conclusions

	Total Effects	Direct Effects	Indirect Effects
Motivation	-0.26***	-0.07***	-0.18***
Cognitive Capacity	-0.001*	-0.001#	0
Attitude	0.13***	-0.20***	0.32***
Recruitment Effort	-0.02	0.01	-0.03*
Task Difficulty	0.002**	0	0.002***
Perception of Survey Content	-0.01	-0.01	0
Perception of Survey task	-0.58*	-0.58*	0

#p<.10; *p<0.05; **p<0.01; ***p<0.001;

What causes response burden & who is burdened out?

- Survey and task characteristics have weak impact on response burden
- Respondent motivation and attitudes have strong impact on response burden
 - ▶ Unmotivated respondents
 - ▶ Respondents with positive attitudes
- Perception of survey task has strong impact on response burden
 - ▶ Those who perceived the survey as too long and too many

Limitations and Next Steps

- Model fit is not great
 - ▶ Modifying both measurement and structural models
- Interaction between respondent, survey, and task characteristics not considered
 - ▶ Including interaction terms in the structural models

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