

Using early-wave interviewer observations to predict respondent burden and survey nonresponse in later panel survey waves

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Background

■ Objective

- ▶ Examine associations between early panel wave interviewer observations about respondent reluctance and...
 - Later-wave interviewer observations of reluctance
 - Later-wave survey outcome (i.e., refusals)
 - Later-wave respondent burden

Background, cont.

- Interviewer-observation paradata inform our understandings of nonresponse
 - ▶ Interviewer observations about R concerns significantly related to nonresponse propensity (Bates, 2004; Henley and Bates, 2006; Dixon, 2009; Kopp et al., 2013; McBride and Tan, 2014)
 - ▶ Wave 1 observations were related to Wave 2 attrition (Henley and Bates, 2006)
- Little examination of effects across panel waves
- Potential applications to responsive design/interventions

Methods

■ Data Sources

- ▶ Consumer Expenditure Quarterly Interview Survey (CEQ)
(<http://www.bls.gov/cex>)
 - Five-wave panel survey*
 - Collects information on expenditures, income, and demographics for a “consumer unit” (CU)
 - Respondents’ self-reported burden measured in 5th wave
 - Linked records of Wave 1 sample units (4/12 – 9/12) who were eligible to receive the burden question in their final interview (4/13 – 9/13)
 - Includes both interviews and non-interviews (n = 3,529)

- ▶ Contact History Instrument (CHI)
 - Collects information about each contact attempt
 - Includes interviewer observations of sample members’ reluctance (“doorstep concerns”)

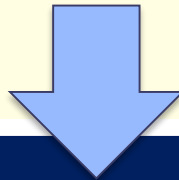
Formation of CHI Doorstep Concerns Themes

CHI

◆ CONCERN / BEHAVIOR / RELUCTANCE

- ◆ Select the categories that describe respondent concerns, behaviors, or reluctance during this contact attempt.
- ◆ Enter all that apply, separate with commas.

- | | |
|--|---|
| <input type="checkbox"/> 1. Not interested / Does not want to be bothered | <input type="checkbox"/> 12. Hostile or threatens FR |
| <input type="checkbox"/> 2. Too busy | <input type="checkbox"/> 13. Other household members tell respondent not to participate |
| <input type="checkbox"/> 3. Interview takes too much time | <input type="checkbox"/> 14. Talk only to specific household member |
| <input type="checkbox"/> 4. Breaks appointments (puts off FR indefinitely) | <input type="checkbox"/> 15. Family issues |
| <input type="checkbox"/> 5. Scheduling difficulties | <input type="checkbox"/> 16. Respondent requests same FR as last time |
| <input type="checkbox"/> 6. Survey is voluntary | <input type="checkbox"/> 17. Gave that information last time |
| <input type="checkbox"/> 7. Privacy concerns | <input type="checkbox"/> 18. Asked too many personal questions last time |
| <input type="checkbox"/> 8. Anti-government concerns | <input type="checkbox"/> 19. Too many interviews |
| <input type="checkbox"/> 9. Does not understand survey / Asks questions about the survey | <input type="checkbox"/> 20. Last interview took too long |
| <input type="checkbox"/> 10. Survey content does not apply (retired, healthy, no crimes to report) | <input type="checkbox"/> 21. Intends to quit survey |
| <input type="checkbox"/> 11. Hang-up / slams door on FR | <input type="checkbox"/> 22. No concerns |
| | <input type="checkbox"/> 23. Other - specify |



Doorstep concern code number used to form theme	Doorstep Concern Theme
6, 7, 8, 9, 10	Survey Content / Privacy
1, 11, 12	Not Interested / Hostile
2, 3, 4, 5	Time
13, 14, 15	Gatekeeper
23	Other



Methods, cont.

■ Doorstep concern theme indicators

- ▶ “1” if concern was observed at least once in wave X
- ▶ “0” if concern was not observed
- ▶ ISSUE: concerns recorded at CU-level, but different respondents within the CU can report in different waves

■ Respondent burden dependent variable

- ▶ Question has four response choices (*not at all, a little, somewhat, very*)
- ▶ Dichotomized for this analysis (“1” = *very*; “0” = all others)

■ Other predictors (Wave 1 data)

- ▶ Change in interviewer
- ▶ Contact attempts (less than 7 vs. 7 or more attempts)
- ▶ Household composition (single vs. multiple-person)
- ▶ Use of records and Information booklet (more than 50% of time, not)
- ▶ Length of interview (minutes)

Methods, cont.

■ Analytic approach

- ▶ Correlations between Wave 1 and Wave 5 doorstep concern themes
- ▶ Compare Single- vs. Multiple-person CUs
 - Sample characteristics
 - Prevalence/distribution of doorstep concerns
- ▶ Examine bivariate associations between Wave 1 individual predictors and Wave 5 outcome measures (refusal, burden)
- ▶ Estimation of effects of Wave 1 predictors on Wave 5 outcome measures
 - Two-staged censored Probit model
 - STATA 13.1, *heckprob* algorithm

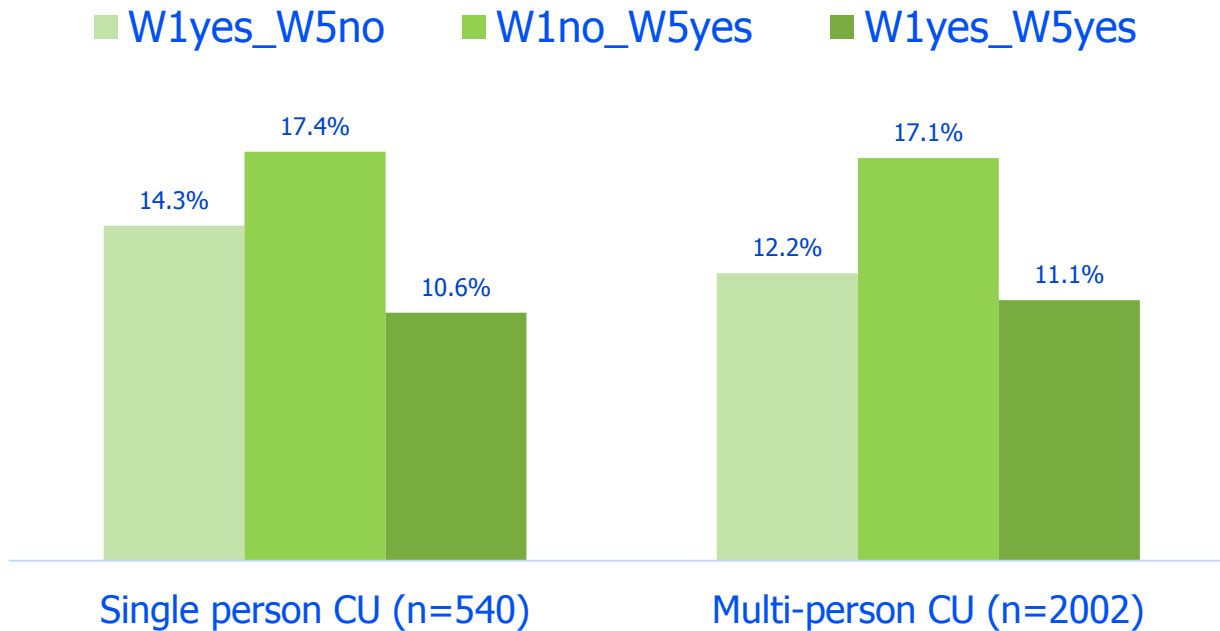
Results

- Tetrachoric correlations of doorstep concern themes in Waves 1 and 5

Doorstep Concern	T. Correlation (1 st – 5 th Interview)
Content/Privacy	0.387
Not interested/Hostile	0.507
Time	0.350
Gatekeeper	0.387
Other	0.317

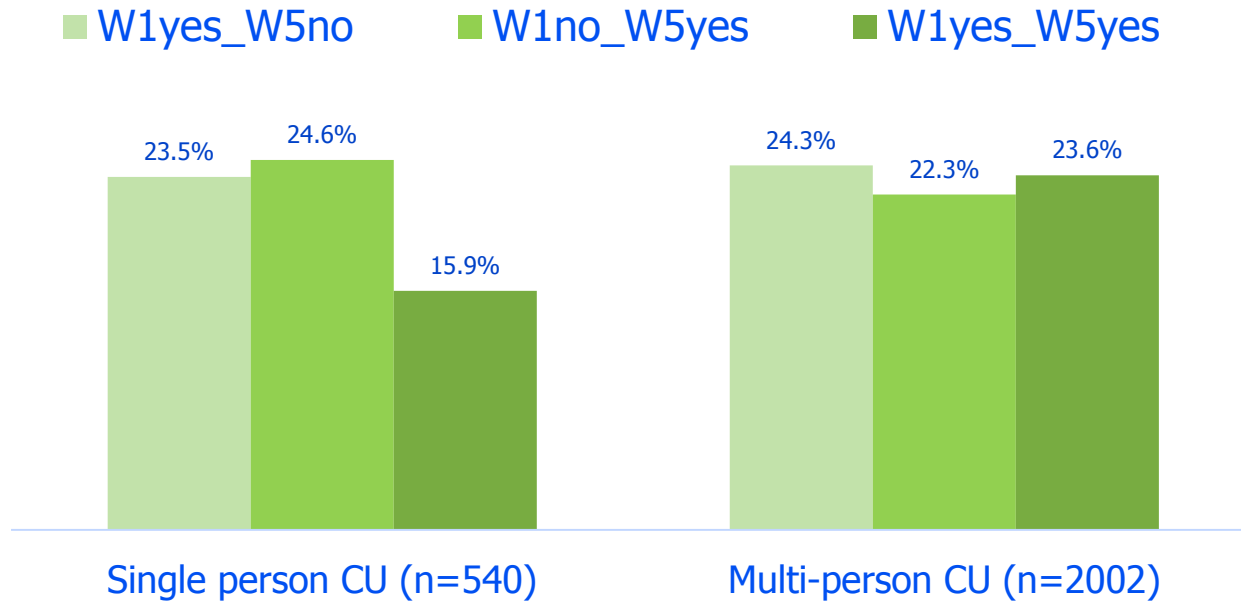
Doorstep Concern Prevalence, Waves 1 and 5: Single vs. Multiple Person Households

Not interested/Hostile



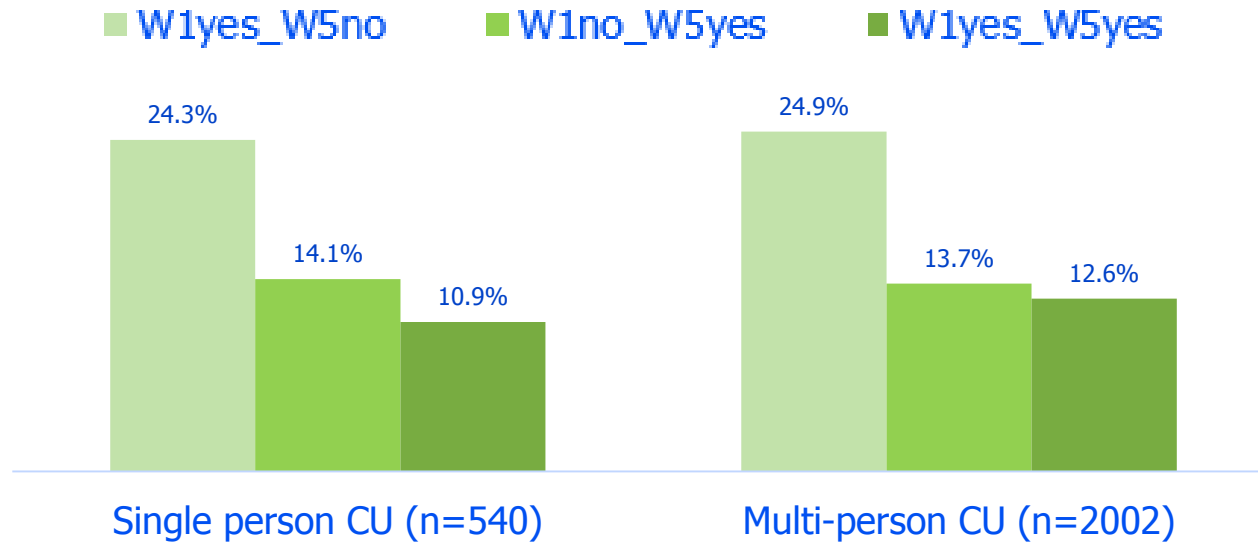
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Time



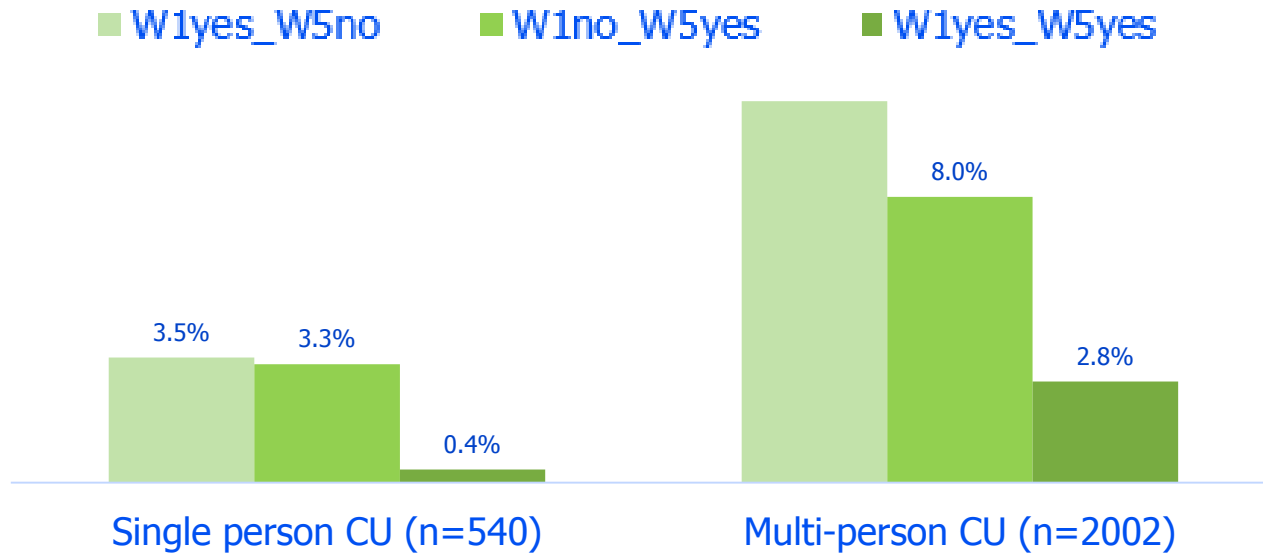
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Survey content/Privacy



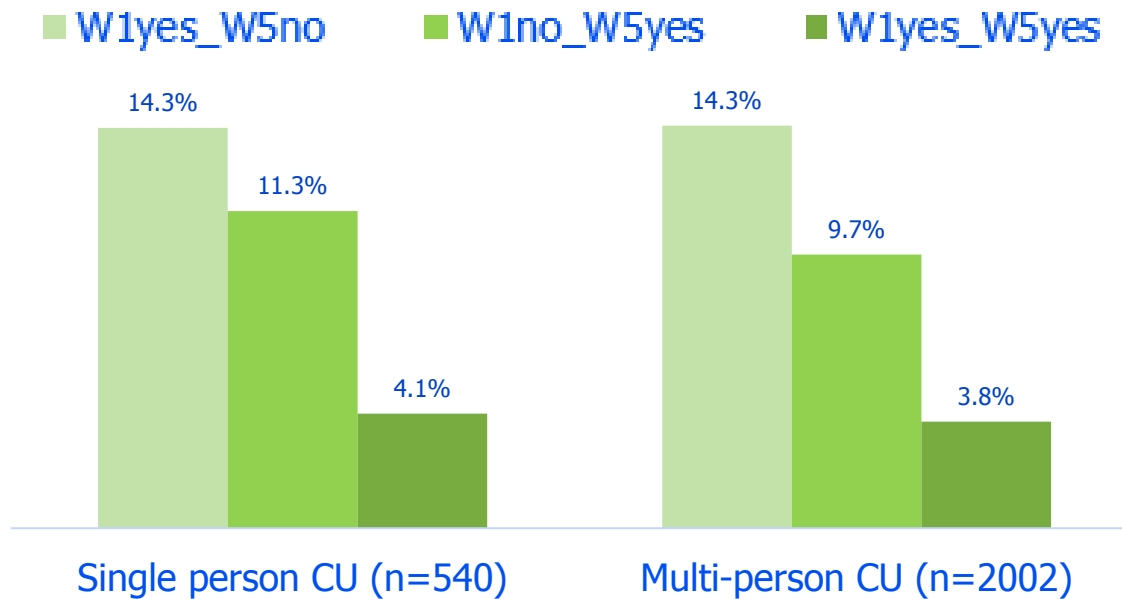
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Gatekeeping

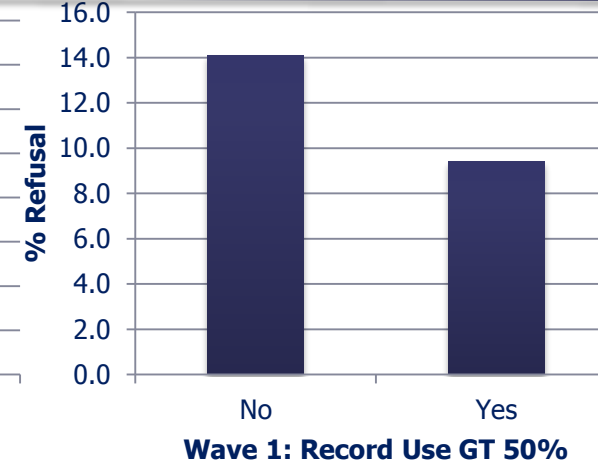
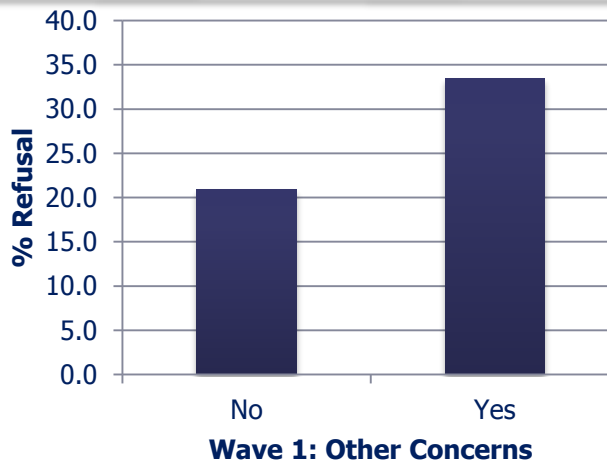
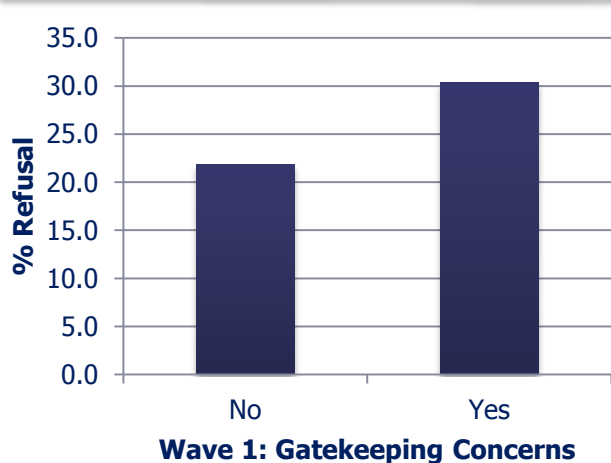
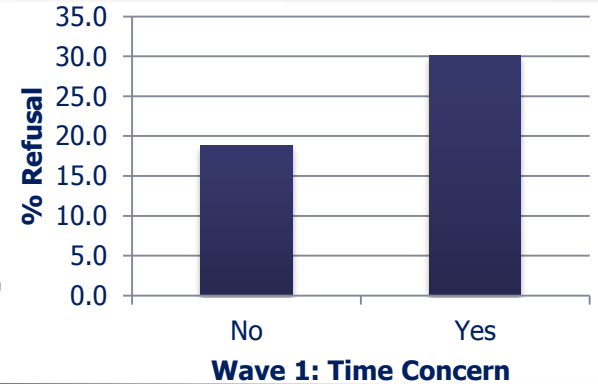
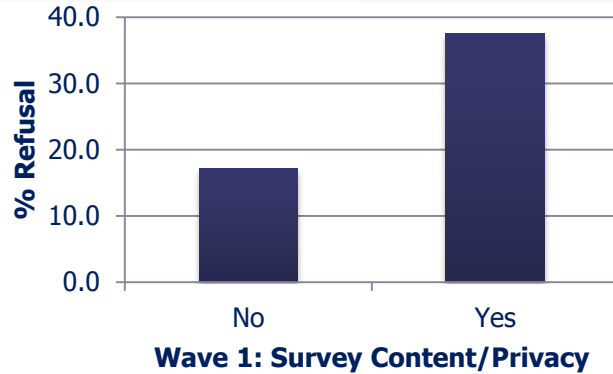
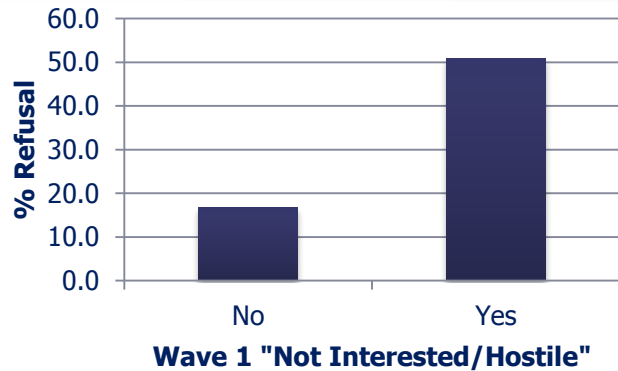
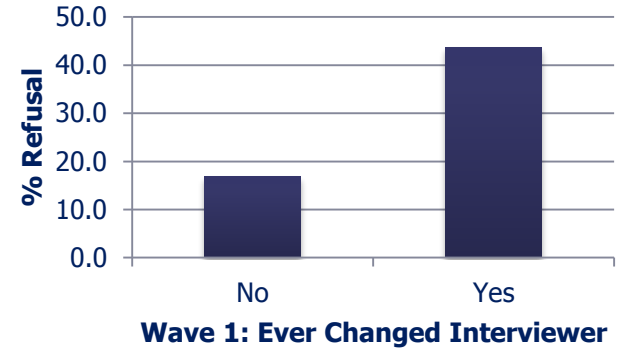
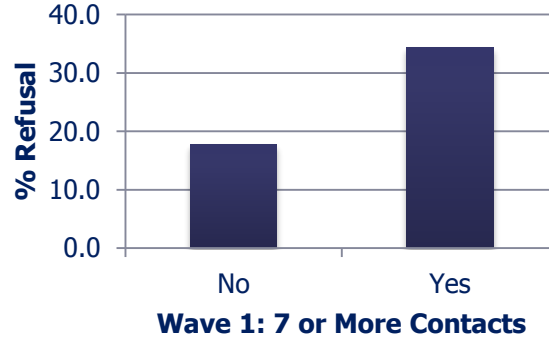
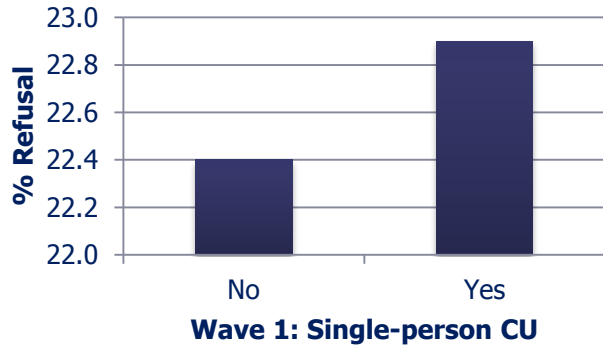


Doorstep Concern Prevalence, Waves 1 and 5: Single vs. Multiple Person Households

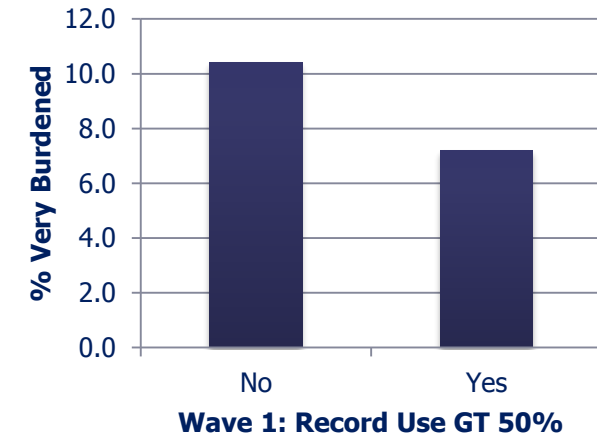
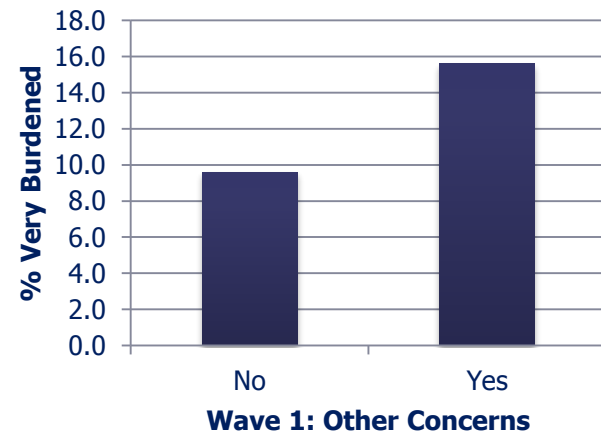
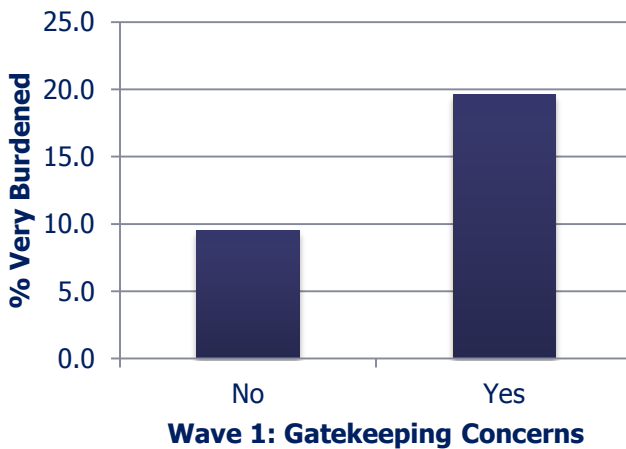
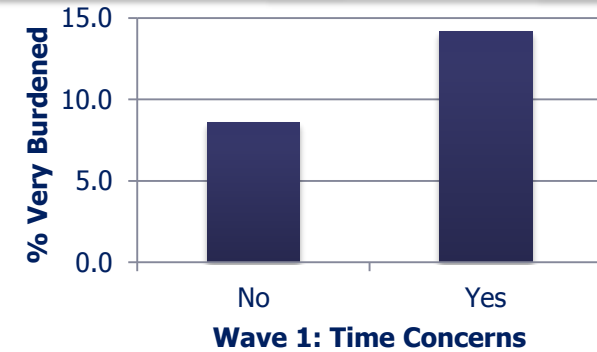
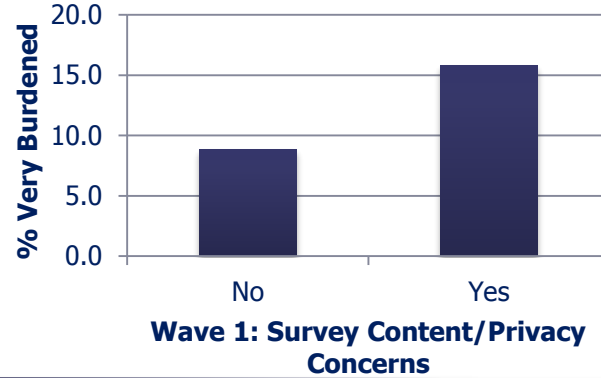
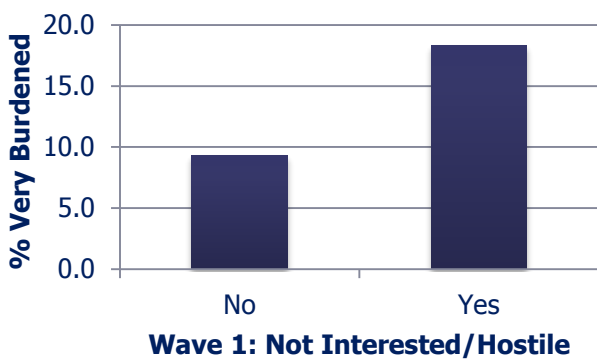
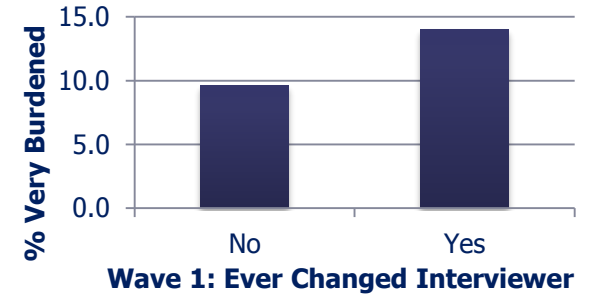
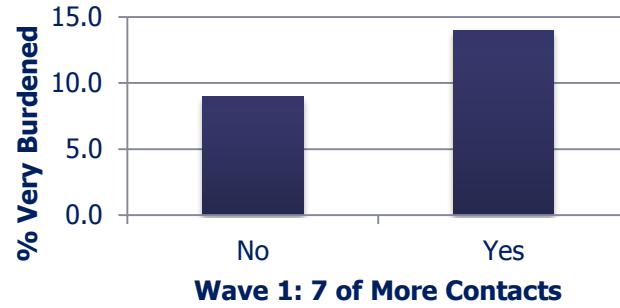
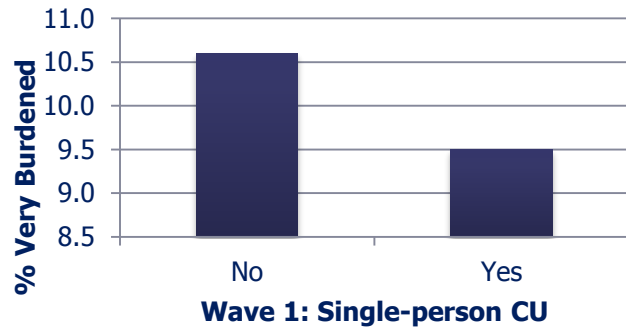
Other Concerns



Results: Wave 5 Refusal



Results: Wave 5 Burden



Results: Probit Model with Sample Selection

Wave 1 Predictors	Stage 1: Respondent in Wave 5		Stage 2: Wave 5 Respondent "Very Burdened"	
	Coefficient	P-value	Coefficient	P-value
Completed Interview	2.99	0.000		
Single-person CU	0.13	0.057	-0.04	0.664
7+ Contacts	-0.77	0.340		
Interviewer change	-0.18	0.039		
Record Use GT 50%			-0.10	0.237
Info Book Use GT 50%			-0.20	0.008
Survey Length			-0.00	0.908
Concern Theme:				
Not Interested/Hostile	-0.21	0.059	0.17	0.200
Survey Content/Privacy	-0.08		0.27	0.004
Time Concerns	-0.14	0.044	0.12	0.142
Gatekeeping Concerns	0.38	0.006	0.27	0.040
Other Concerns	-0.14	0.122	0.13	0.232

Summary

- Doorstep concerns correlated across panel waves
 - ▶ Despite year span and possible changes in R and Intv'r
 - ▶ Refined/segmented analysis may strengthen associations
- Wave 1 interviewer observations of R concerns were significant predictors of Wave 5 response and burden
 - ▶ Not Interested/Hostile – response
 - ▶ Survey Content/Privacy – burden
 - ▶ Time concerns expressed in Wave 1 were associated with Wave 5 (non)response, but not with perceptions of burden
 - ▶ Actual interview duration not associated with burden

Implications, Limitations, & Next Steps

- Paradata are key to understanding and predicting survey outcomes of interest
 - ▶ Changes in interviewer, interviewer observations/R doorstep concerns
 - ▶ Potential input for responsive-design decisions/interventions
- Study limitations
 - ▶ Likely error in measurement of CHI and burden variables
 - ▶ Single dataset, model specifications
- Future work
 - ▶ Examine effects on other substantive CE outcomes
 - ▶ Apply this analytic approach to other surveys where CHI paradata are available



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