

# A CARI Analysis of Interviewer and Respondent Behavior Within the Consumer Expenditures (CE) Interview Survey

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# Computer Audio Recorded Interviewing (CARI)

- Recording uses the interviewer's laptop microphone
- Consent obtained from respondent at the start of interview
- Pre-selected items are recorded
  - ▶ Not full interview
- Recording starts when interviewer navigates to screen containing item
  - ▶ Recording stops when interviewer leaves screen



# CARI allows us to investigate more nuanced research questions:

## Traditional research focus:

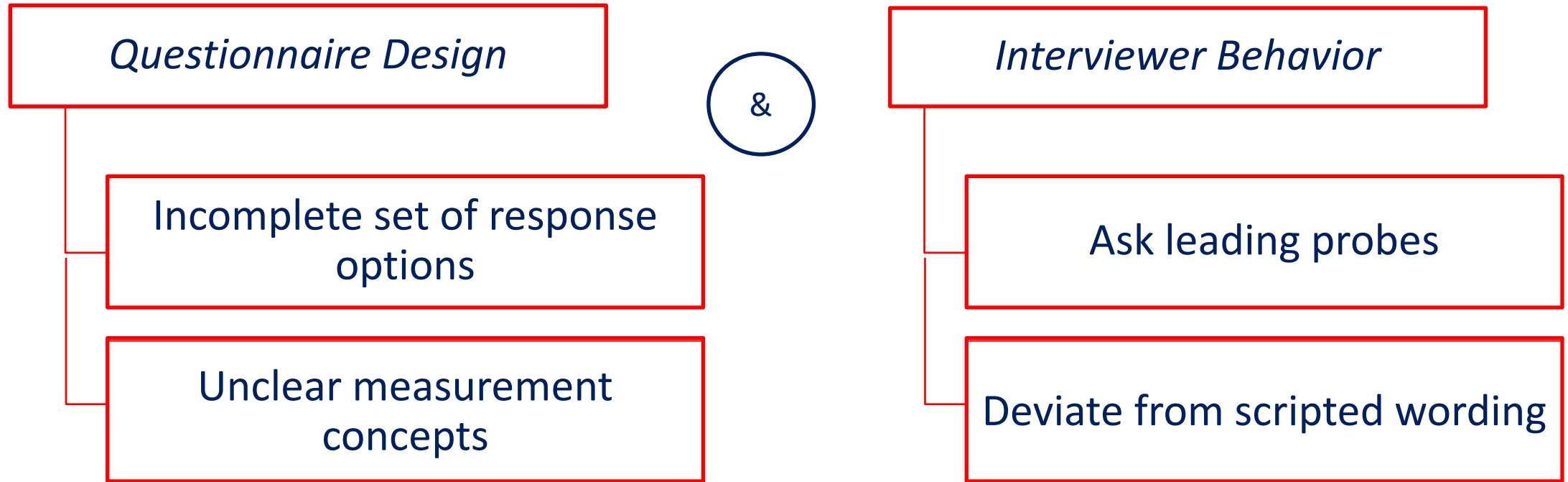
- ▶ Interviewers report difficult parts of the survey
- ▶ Analysts identify unusual response patterns
- ▶ Processing triggers frequent edit flags
- ▶ Data show longer-than-expected question duration

## CARI research focus:

- ▶ Clarity of scripted survey question wording
- ▶ Effect of question wording
- ▶ Effect of question order
- ▶ Effect of interviewer deviations from protocol

# What can we do with CARI?

*SOURCES AND CAUSES OF INTERVIEWER/RESPONDENT MISUNDERSTANDING CAN BE UNCOVERED USING CARI*



# Current Research

- Used CARI to investigate interviewer and respondent behaviors and their effects on data quality
- Research guided by item-specific questions
  - ▶ Health Insurance (HIKIND) → *Are there instances of initial underreporting?*
  - ▶ Private Pension (PRIVPENS) → *Is there evidence of respondent confusion surrounding the reporting of private pension payroll deductions?*
  - ▶ New Vehicles (various items) → *Are interviewers able to work with respondents to derive accurate vehicle purchase data?*

## Health Insurance (*HIKIND*)

- n=270 cases
- November 2022 – March 2023

# Question Wording

**What kind of health insurance or health care coverage does your household have or pay for?**

**INCLUDE** those that pay for only one type of service (nursing home care, vision care, or dental care).

**EXCLUDE** private plans that only provide extra cash while hospitalized.

1. Private health insurance, including employer and healthcare exchange plans
2. Medicare
3. Medicare Supplemental Insurance (Medi-Gap)
4. Medicaid
5. SCHIP
6. Military
7. HIS
8. Single service plan (e.g., dental, vision, long-term care)
9. No coverage of any type



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*Follow-up if 2. Medicare not selected AND Age > 65:*

**Are you covered by Medicare?**

1. Yes
2. No





# Evidence of Underreporting

- 36 cases of confirmed initial underreporting
  - ▶ Respondents who did not report Medicare initially later reported it in the follow-up question

	No. Cases	Percent
Medicare reported at first question	217	80.4%
Medicare reported at second question	36	13.3%
Medicare not reported	17	6.3%

# Causes of Initial Underreporting

- In the subset of cases in which Medicare was not initially reported, the interviewer did not read Medicare as a response item in 17 (47%) of the 36 cases
  - ▶ Largest predictor of initial underreporting

[inaudible]...through my employer.

Alright, so for employers, I gotta find it. Oh, employer.

No one's covered by Medicare?

I am.

Oh, you are.

# Causes of Initial Underreporting

- In 30% of all evaluated cases, the interviewer was not heard reading Medicare as an item in the audio recording
  - ▶ In the majority of these cases, Medicare was still reported by the respondent



# New Vehicle Purchases

- n=64 cases
- July 2022 – September 2022

# Question Wording

**Was a trade-in allowance received? (yes/no)**

**How much?**

**What was the amount paid for the vehicle after trade-in allowance, rebate, and discount? Please include any sales tax in the amount paid.**

**What was the amount of the cash down payment?**

**Was the source of credit a Home Equity Loan? (yes/no)**

**How much was borrowed, excluding any interest?**

# Evidence of Interviewer Assistance

- Are interviewers able to work with respondents to derive accurate responses to the series of questions about vehicle purchase?

	Interviewer Calculated Amount	
	Yes	No
<b>Respondent answered on own</b>	0	4
<b>Respondent did not answer on own</b>	10	1
<i>Total</i>	<i>10</i>	<i>5</i>

# Evidence of Interviewer Assistance

- Are interviewers able to work with respondents to derive accurate responses to the series of questions about vehicle purchase?
  - ▶ Short answer: It depends...!

	Interviewer Calculated Amount	
	Yes	No
<b>Respondent answered on own</b>	0	4
<b>Respondent did not answer on own</b>	10	1
<i>Total</i>	<i>10</i>	<i>5</i>

# Interviewer Assistance: An Example



Alright. Hold one second. I can do this. How much was borrowed excluding interest?

Uh. I have no idea.

OK. So we know that it was at least \$35,831. It was more than that actually, but you don't know how much more. Alright. Was the \$18,000...it would usually have been applied to the purchase price.

Yes.

Um...alright. Just give me one second here. So the \$18,000 is actually probably part of the car right now. Alright.



## Private Pensions (*PRIVPENS*)

- n=266 cases
- January 2023 – April 2023

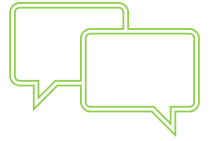
# Question wording

**Was there any money deducted from your pay for - private pension fund?**

1. Yes
2. No



# Effects of Interviewer Comprehension



Major Change	No. Cases	Percent
Yes	57	26%
No	160	74%
Total	217	100%

Do they take out anything for pension or retirement for you [name?]

Request for clarification	No. Cases	Percent
Yes	43	28%
No	108	72%
Total (codeable cases)	151	100%

Respondents expressed uncertainty about whether to report

- 401(k) plans
- 457(b) plans
- other retirement plans

Interviewer clarification	No. Cases	Percent
Accurate	23	53%
Inaccurate	13	30%
Uncodeable	7	16%
Total (cases with request)	43	100%

...Other than 401(k), this is not 401(k), this is a private pension that the, I guess the Sheriff's department would have for all its officers, or whatever...

# Conclusions

- CARI offers insight into the interviewer-respondent interaction and questionnaire design
- Can illuminate potential sources of error
  - ▶ E.g., CARI shows that questions aren't always read verbatim
    - Meaning of key concepts may be changed (private pension, Medicare coverage)
- CARI highlights role of interviewer in improving data quality
  - ▶ CARI shows that interviewers coach the respondents to decrease respondent burden and increase data quality (new vehicle purchases, private pension)
- This research demonstrates the need for interviewer to be thoroughly trained on the concepts
  - ▶ Showcards can help with this

# Thank you!

For questions, contact

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