Revising the CE Surveys to Collect Outlets

Office of Survey Methods Research
CE Survey Methods Symposium
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Background: Inputs to the CPI

- CE Surveys: identify what is in the market basket and how expenses should be weighted
- Telephone Point-of-Purchase Survey: build a frame of businesses where consumers shop



Considerations of Adding Point-of-Purchase Questions to CE

- Fact: Increase in number of questions asked
- How would that affect the survey experience?
 - ► Will answering these questions be effortful?
 - ► Will these questions change the 'survey context'?
- How will the quality and characteristics of the point-of-purchase data be affected?
 - ► Will the CE survey yield enough data?
 - ► Will the CE survey yield high quality data?



Challenges of Integrating Two Surveys

- Different definitions of item categories
- Different reference periods
- Different sample sizes
- Different modes
- Different materials and aids



Research Overview

- Step 1: Exploratory lab studies to evaluate feasibility (any show-stoppers?) and feedback on perceived burden for Diary and Interview
- Step 2: Limited implementation in production to evaluate data quality and objective burden
- Step 3 (ongoing): Exploratory online studies to try new questions to collect more data



Step 1a: Feasibility in CE Diary

- n = 60 participants in the lab
- Simulated data entry from receipts
- Computer task
- Three group comparison:
 - ► Group 1: "item-based" data entry
 - ► Group 2: "transaction-based" data entry
 - ► Group 3: control, no outlet entry

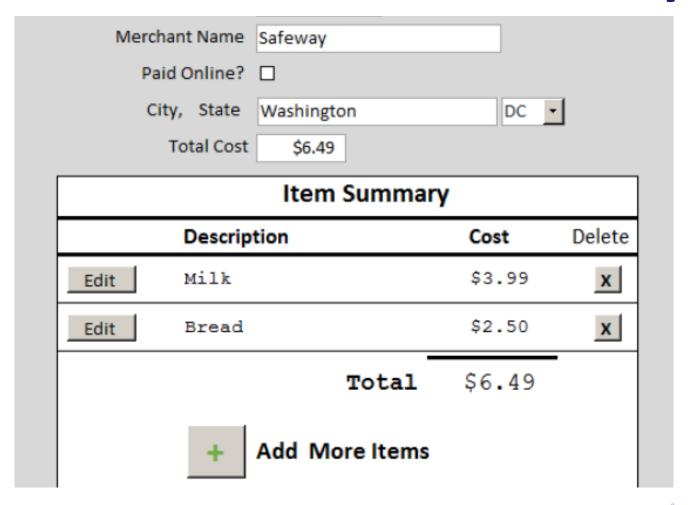


Item-Based Data Entry

Description Milk						
Item Cost \$3.99						
Food and Drink Away	From Home Food and Drink for Home Consumption					
Clothes, Shoes, Jewelry, and Accessories All Other Products/Services						
Packaging Free	Canned					
☐ Purchased for someone outside the household Paid Online?						
Merchant Name	Safeway					
City, State	Washington DC •					



Transaction-Based Data Entry





Step 1a: Feasibility in CE Diary

- Analysis focused on comprehension of data requirements, time taken to enter data, participant feedback about ease of use and preference
- No significant differences between groups though trend towards preference for transaction-based diary



Step 1b: Feasibility in CE Interview

- n = 642 participants online
- Participants "purchased" items as part of a fictional narrative and then answered CE interview questions to recall those items
- Three group comparison:
 - ► Group 1: "item-based" outlet as follow-up prompt
 - ► Group 2: "transaction-based" prompts
 - ► Group 3: control, no prompts for outlets



Item-Based Recall

Did you buy any sofas? If not, continue on to the next page Description of the Month of the Expense Amount (\$) Expense Merchant Name 1st Item living room sofa 390 July Sofas R Us 2nd Item 3rd Item 4th Item 5th Item 6th item 7th item



Transaction-Based Recall

You mention	ed that you shopped at Sofas	R Us.		
la .	get there? Are you reminded item purchased from somew			
	Description of the Expense	Amount (\$)	Month of the Expense	Merchant Name
1st Item				Sofas R Us
2nd Item				Sofas R Us
3rd Item				Sofas R Us
4th Item				Sofas R Us
tr 5th Item				Sofas R Us
eth item				Sofas R Us
7th item				Sofas R Us



Step 1b: Feasibility in CE Interview

- Analysis focused on number of items reported, price reporting error, duplicate reporting, and participant feedback about ease of use and preference
- No significant differences between groups on number of items or price accuracy
- Participant ratings of the transaction-based group showed higher burden and behavior showed more duplicate reporting



Conclusions on Feasibility

- Addition of point-of-purchase questions likely to have no major effect on data quality or perceived respondent burden
- Optimal format varies by survey
 - ▶ Diary: Transaction-driven format lends itself to a transaction-based diary
 - Interview: Long reference period with recall from long-term memory lends itself to an item-based interview with follow-up prompts



Step 2: Adding Questions to CE Interview

- A handful of point-of-purchase questions were added to interviews
 - ▶ 2016 Quarter 3, 4th wave interviews
 - New questions spanned across 5 interview sections



Step 2: Adding Questions to CE Interview

- Audit trails were used to gauge how much time it takes to collect point-of-purchase data
 - Store name: 19 seconds
 - ► Purchase mode: 7 seconds
 - Location: 15 seconds
 - Respondent confusion leads to more interviewer probing (e.g., point-of-purchase for gasoline)
- Expenditure data were used to assess impact on CE data quality
 - Don't knows and Refusals not changed
 - Possible data quality check for re-mapping expenses



Conclusions from Implementation

- Addition of point-of-purchase questions leads to a non-negligible amount of time added to the interview (approximately 40 seconds per item category)
- Interviewers reported that collecting point-ofpurchase information is a natural extension
- Evidence of possible improvement of CE data quality through re-mapping
- The interview may not yield enough outlet data for CPI



New Design - Interview

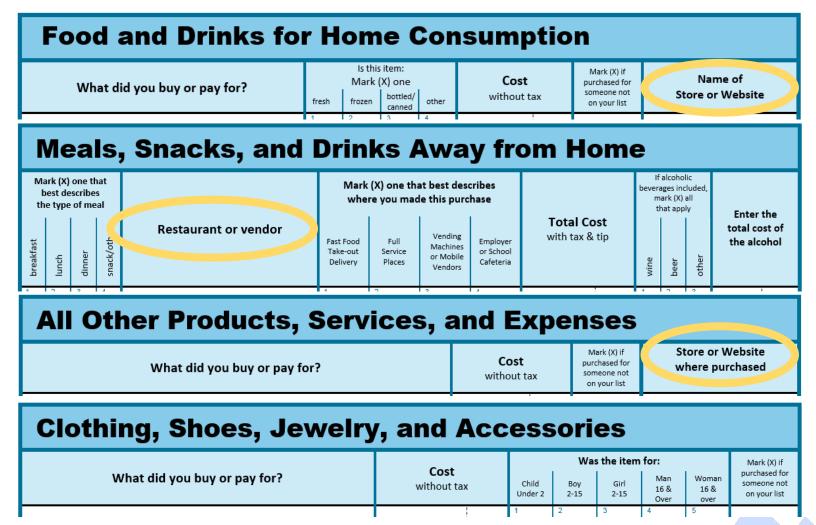
"What is the name of the business that provided the service contract, maintenance, or repair?"

"Was this paid for online, in person, or by mail or telephone?"

In what city is (business name) located? In what state is (business name) located?



New Design - Diary





Future Challenges

- Educating interviewers about the reasons for the questionnaire changes
- Monitoring the impact of collecting point-ofpurchase in the Diary
 - ▶ Burden unknown, difficult to measure
 - ► New tech developments: Receipts?
- Incorporating the new point-of-purchase data into review processes to improve data quality



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