

Testing Self-Administration of the Consumer Expenditure Diary Survey in a Probability-Based Online Panel

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Outline

- Background – Consumer Expenditure (CE) Diary Survey
- Online Panel Self-Administered Diary (OPSAD) test design
- Data quality analysis – Comparison between OPSAD and CE Online Diary
- Summary and next steps

Consumer Expenditure (CE) Diary Survey

- Collects small frequent expenses using two consecutive one-week diaries
- Respondent enters expenditure data into a paper or online diary form
- Respondent reports on expenditures made by all household members
- Expenditures grouped into four categories:
 - ▶ Food and Drinks For Home Consumption
 - ▶ Meals, Snacks, and Drinks Away from Home
 - ▶ Clothing, Shoes, Jewelry, and Accessories
 - ▶ All Other Products, Services, and Expenses



Online Panel Self-Administered Diary (OPSAD) Test Design

- Conducted on the Ipsos KnowledgePanel®, a probability-based web panel designed to be representative of the U.S.
- Field period: November 2021 – January 2022
- Independent samples drawn for each of the 3 months
- Total starting sample: 12,700 adults representing their households
- Stages:
 - ▶ Initial Household Characteristics Survey (developed based on CE CAPI instrument)
 - ▶ Two-week Consumer Spending Diary
- Incentives:
 - ▶ \$2 cash equivalent for completing Household Characteristics Survey
 - ▶ \$50 cash equivalent for qualifying as a complete for the Spending Diary

Diary Instructional Resources for Respondents

	CE Online Diary	OPSAD
Interviewer to guide respondents on survey concepts, encourage diary keeping, review diaries, and capture missed expenses	✓	✗
<i>In the online diary instrument:</i>		
User Guide pdf	✓	✓
Instructions, FAQs, Definitions, Examples	✓	✓
Video tutorial links	✓	✓
<i>Help Desk (via phone/email):</i>		
Diary access and navigation issues	✓	✓
Survey concepts (e.g., where to report items, level of detail)	✗	✓
<i>Email communications:</i>		
Invitation/Welcome email	✓*	✓
3 reminder emails and a closing email	✗	✓

*if respondent provided email address

Data Quality – Comparison between OPSAD & CE Online Diary



CE Online Diary and OPSAD Comparisons

- Focus on comparisons between CE Online Diary and OPSAD to control for mode effects
 - ▶ Past CE research has found meaningful differences between Paper and Online Diary users
- Data from November 2021 – January 2022
- Diaries with no reported expenditures are excluded
- CE Online Diary: 668 diaries (348 households)
- OPSAD: 5,854 diaries (3,153 households)
- Results shown here are unweighted

Item Nonresponse

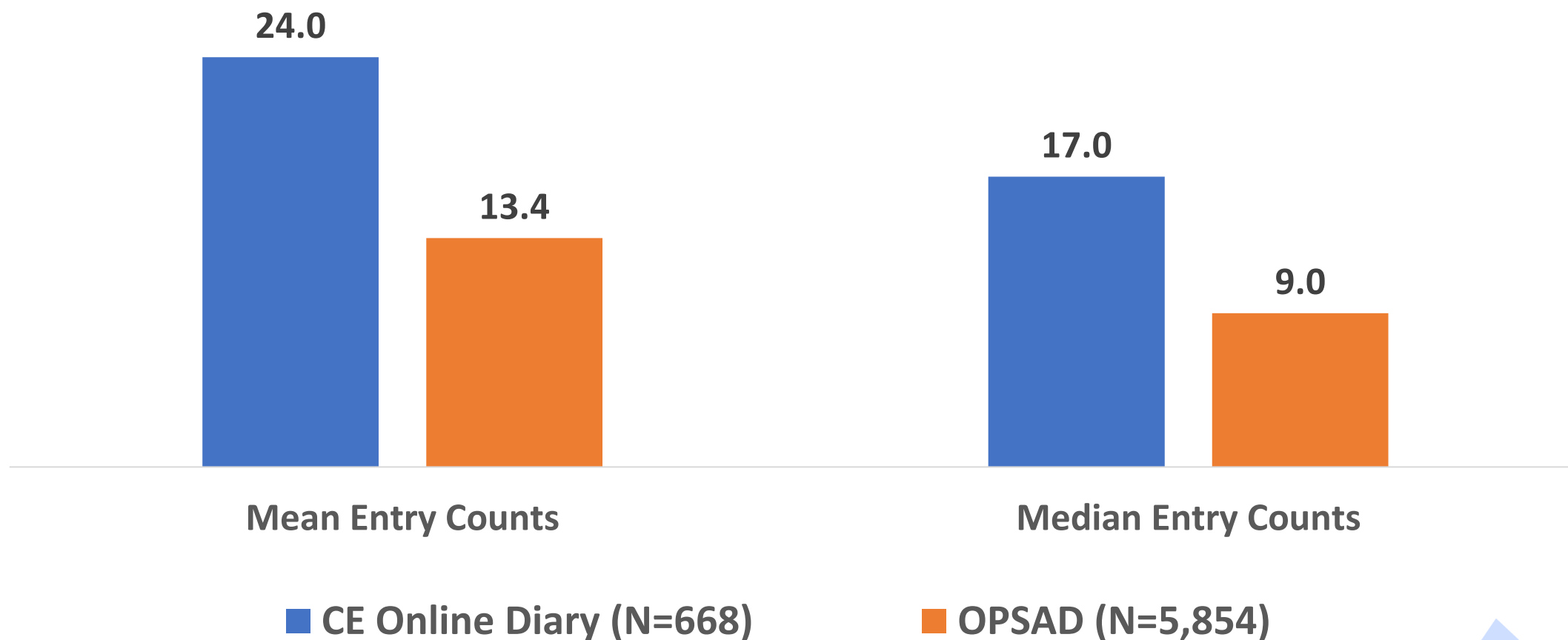
- For each item, respondents were required to provide:
 - ▶ Date of purchase
 - ▶ Business where item was purchased
 - ▶ Expense category (e.g., 'Food and Drinks for Home Consumption')
- But other fields could be left blank:
 - ▶ Cost
 - ▶ Item Description

% of Diary Entries with...	CE Online Diary	OPSAD
Cost field blank	0.3%	1.0%
Item description blank*	0.3%	1.4%
Invalid text in item description field* (e.g., DK/don't know)	0.0%	0.3%
Invalid text in business name field (e.g., DK/don't know)	1.1%	2.6%

**Excludes Meals Away from Home category*

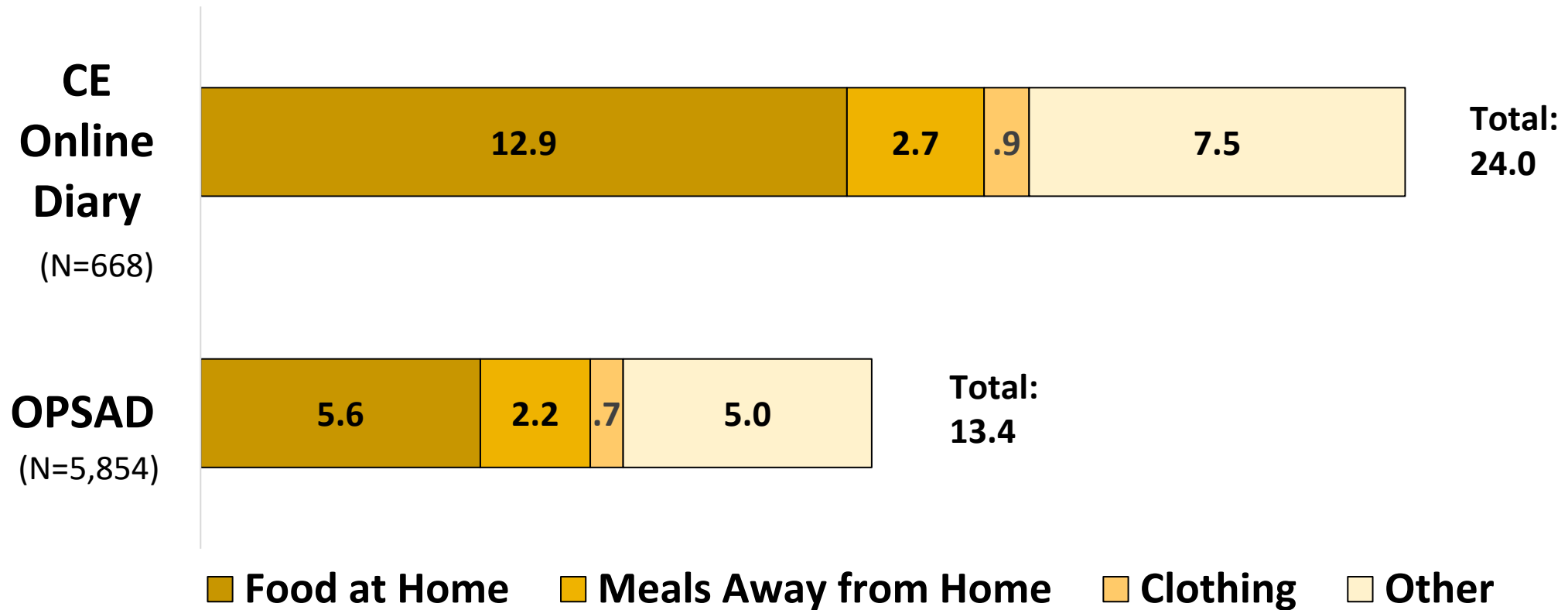
Expenditure Entry Counts

(among diaries with at least one entry)

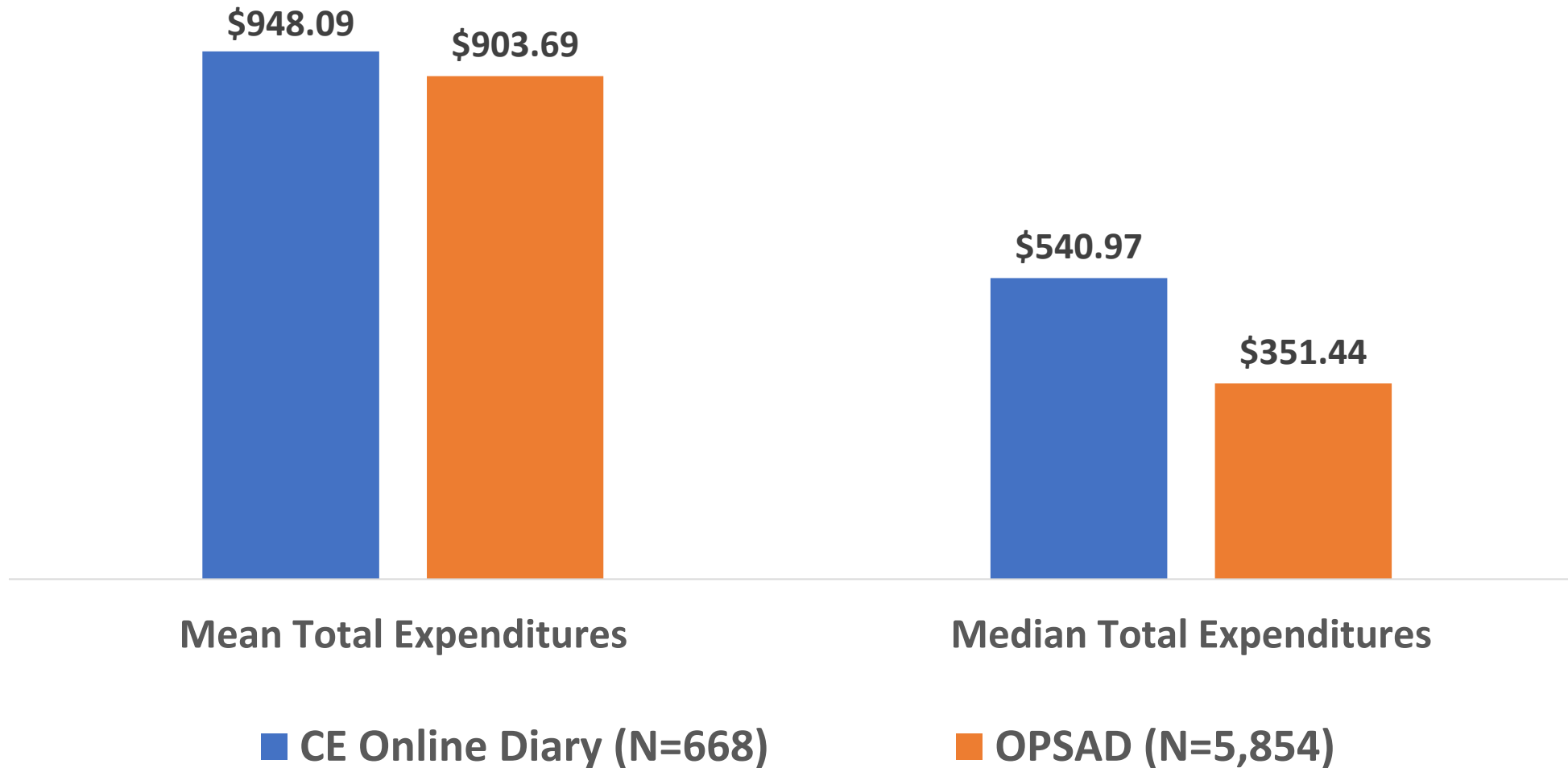


Counts by Section

Average number of weekly diary entries, by expense category:



Total Expenditure Amounts



Adherence to Itemization Instructions

- For all expense categories except Meals Away from Home, respondents are instructed to itemize – enter each item purchased as a separate entry

VALU MART
FALLS CHURCH, VA 23156 - 703.893-8934

267198321 VM WHOLE MILK 3.29
986945631 6-PK SOCKS 7.99
063022838 PAPER TOWELS 11.99
073965782 LAUNDRY DETERGENT 18.99
037121340 SHAMPOO 2.94
037121345 CONDITIONER 2.94
256971531 SZ 3 DIAPERS 41.99

SUBTOTAL 99.30
VA TAX 5.0% 4.97
TOTAL 104.27

SIGN UP FOR A VALUMART CARD
AND SAVE 5% ON EVERY PURCHASE!

Select date of expense:
Thursday, Mar 17

Business:
ValuMart

Select type of expense:
☒ Food and Drinks for Home Consumption
☐ Clothing, Shoes, Jewelry, and Accessories
☐ All Other Products, Services, and Expenses

Describe item or expense:
Whole Milk

Total cost (do not include tax):
\$ 3.29

How was the item packaged?
☒ Fresh ☐ Frozen ☐ Other

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Select date of expense:
Thursday, Mar 17

Business:
ValuMart

Select type of expense:
☒ Clothing, Shoes, Jewelry, and Accessories
☐ Meals, Snacks, and Drinks Away from Home
☐ Food and Drinks for Home Consumption
☐ All Other Products, Services, and Expenses

Describe item or expense:
6 pack socks

Total cost (do not include tax):
\$ 7.99

Was this item for:
☐ Child under 2 ☐ Man 16 & over

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Select date of expense:
Thursday, Mar 17

Business:
ValuMart

Select type of expense:
☒ All Other Products, Services, and Expenses
☐ Meals, Snacks, and Drinks Away from Home
☐ Food and Drinks for Home Consumption
☐ Clothing, Shoes, Jewelry, and Accessories

Describe item or expense:
Paper Towels

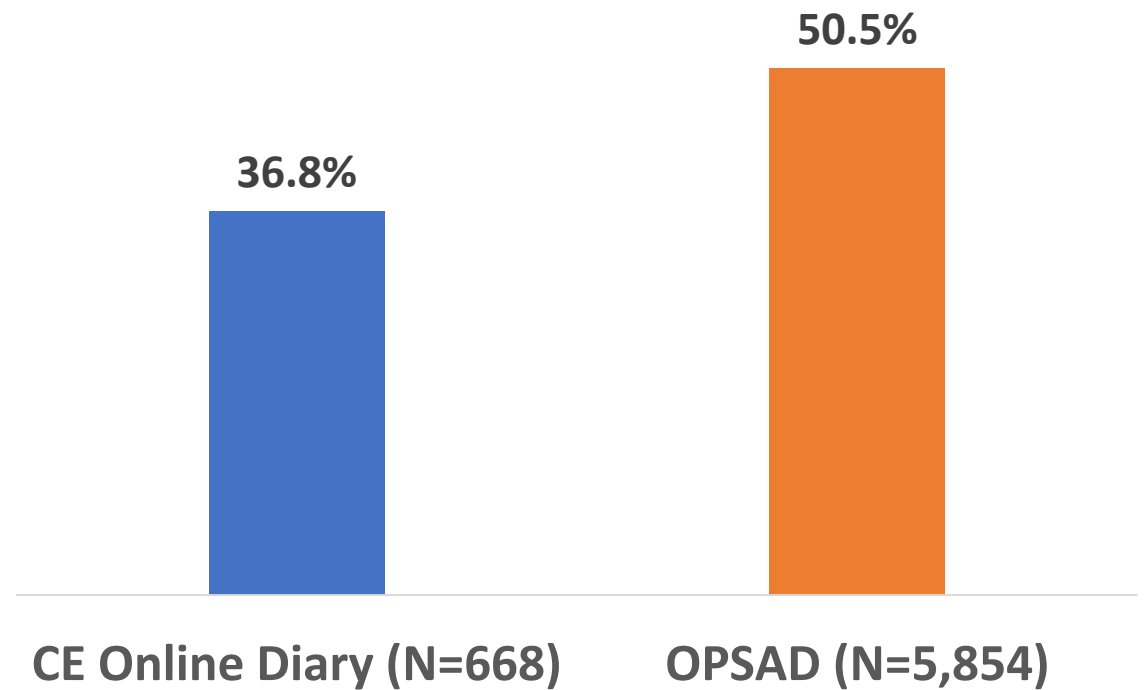
Total cost (do not include tax):
\$ 11.99

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Expenditure Entry Bundling

- Bundling: respondents enter “groceries” or “food” and do not itemize expenses
- Higher rates of bundling expenses in OPSAD

Estimated % of Diaries with Any Bundled Expenses



Drop-Off in Entry Counts

- Respondents may experience fatigue from the reporting process and report fewer expenditure entries over the diary period
- Drop-off measure: Averaged percentage of each household's two-week entries reported in Week 1
- Calculated for households having at least one expenditure in both weeks

	CE Online Diary (n=320)	OPSAD (n=2,701)
Week 1 mean entries	25.7	15.0
Week 2 mean entries	23.5	13.1
Mean entries (Weeks 1 + 2)	49.1	28.0
Avg. % of two-week entries reported in Week 1	52.7%	54.4%

Summary

- Data quality implications of OPSAD test design
 - ▶ Lower entry counts in OPSAD
 - ▶ Higher rates of bundling expenses in OPSAD
 - ▶ Lower average expenditure totals in OPSAD
 - ▶ Higher rates of item nonresponse in cost and item description fields in OPSAD
 - ▶ Similar drop-off in entries across weeks (among households with entries in both weeks)
- Role of interviewer and respondent communications in emphasizing instructions for diary reporting

Next Steps for Research

- Further investigate relationships between data quality measures
- Paradata analysis – How do user device type, time spent, and number of logins relate to data quality measures?
- Comparisons to full CE production sample
- Improvements to the CE online diary instrument and protocols
- Is this a platform that we could leverage for future use?

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