

Discussion: Proxy Reporting

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Questions that might be addressed

1. Key aspects of proxy reporting that CE should address during redesign
2. Tradeoffs CE will need to balance in dealing with proxy reporting
3. Designs to reduce reliance on proxy reporting
4. Best-practice methods for collecting data from all household members
5. Next research steps for a possible change in CE methods
6. How survey(s) to collect detailed monthly data on comprehensive range of expenditures



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2

Key Aspects of Proxy Reporting

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Key aspects of proxy reporting: Quality of measurement

What do we know about proxy reporting?

- We use proxy reports to centralize burden in the consumer unit and save costs
- The measurement properties of proxy reports vary by topic, reference period, relationship between self and proxy
- When compared to self reports, proxy reports about expenditures appear likely to be of poor quality
 - Underreport number of purchases
 - Underreport amount of purchases
- But self reports are themselves problematic, so compared to an objective criterion, proxy reports are likely to be even poorer than we usually observe them to be



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4

Key aspects of proxy (and self) reporting: The future

- Electronic and automatic payments reduce exposure of consumers to opportunities to observe and encode
- Medium, location, and content of records has changed since original CE design and will continue to change rapidly



Balancing Tradeoffs

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Balancing tradeoffs

- Total survey error provides a traditional framework for thinking about tradeoffs involved in redesign
 - Unit nonresponse
 - Measurement
 - Response error
 - Item nonresponse
 - Interviewer variance
- Costs



Balancing tradeoffs (continued)

- Design alternatives affect unit nonresponse
 - But they also improve measurement – and thereby increase effective sample size
- Proxy reports have more error than self reports
 - But self reports also have error
- Managing tradeoffs in redesign requires assessing the impact of
 - redesign on reducing measurement error
 - reducing measurement error on effective sample size
- What is the impact of
 - The use of proxy reports on measurement error
 - Replacing proxy reports with self reports or records



Designs to Reduce Reliance on Proxy Reporting

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Starting point for redesign

- Information
 - Where is the information the CE wants to collect
 - Where will it be by the time the redesign is complete
- Respondents
 - What are they able to do
 - Principle impact is on measurement error
 - What are they willing to do
 - Principle effects are on unit and item nonresponse



Locating information about expenditures

- Consumer units likely to become increasingly heterogeneous in types of records of expenditures they are exposed to and maintain
 - Organization of records may vary by income and consumption patterns
- Electronic records of transactions
 - Automatic payroll deposits and electronic pay records
 - Web banking
 - Web statements for each credit card and service account
 - Separate websites for telephone, cell, automobile payments



Negotiating records in the interview

- Web branch for mortgage information
- Web bank statement for car payments, utilities
 - Paper utility statement for gas and electric detail
- Paper check register for water, memberships
- E-mail for landline phone
- E-mail for receipts of web purchases
- Website for cell phone



Internal organization of expenditure information

- Detail and standardization of receipts heterogeneous
- Many receipts now provide diary-quality detail about purchases
- Which is of more variable quality – receipts or respondent's transcriptions onto diary



Gift Card Voucher (11/24/2010 7:34:10 AM)
 Cash Tended \$50.00
 Matthew L.
 11/24/2010 07:34 am

Gift Card Increment
 Account XXXXXXXXX17468429
 Approval 22809
 Exp. - None
 Exp. Bal. \$50.00

WELCOME
 6356828
 WILLIAMSON ST BP
 1139 WILLIAMSON ST
 MADISON WI

DATE 11/30/10 17:36
 PUMP # 06
 PRODUCT: BLUE
 GALLONS: 10.475
 PRICE/G: \$ 2.759
 FUEL SALE \$ 28.90

VISA
 XXXXXXXXXXXX2714
 Auth #: 71035C
 Ref: SC807007
 Resp Code: 000
 Stan: 0387350993
 SITE ID: 6356828
 Earn a 5% rebate
 with the BP Visa
 Take application
 and Apply Today

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Server ID: 4
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 22443/1 5 2 5:34:47 PM 11/11/2010

1 Frites 4.00
 1 Stacked Turkey 9.00
 Food Sub-Total 13.00
 SUB TOTAL 13.00
 Sales Tax 0.72
TOTAL 13.72

1 DOPI ESPRESSO D 2.20
 SUBTOTAL 2.20
 TAX 0.17
 AMOUNT PAID 2.37
 CASH 2.37

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 1 South Pinckney St
 Madison, WI 53703

1044 Kelly M
 Tbl 306/1 Cnk 1344 Gst 2
 Nov13'10 09:52AM

Dining In
 2 Two Eggs 14.00
 1 Espresso-Dbl 2.37
 Food Total 14.00
 N/A BevTotal 2.37
 Tax Total 0.90
 10:22AM Total Due 17.27

Reducing burden and facilitating reporting

- Burden of diary has several components
 - Remembering to collect receipts at point of purchase
 - Obtaining information from other household members
 - Transcribing information onto diary form
- Increasing quality of reporting requires strategies for these sources of burden



Reducing burden and facilitating reporting

- Incorporating technology into design
 - Reminders
 - Text and email reminders for all household members
 - Recording
 - Web-based diaries for recording at time of purchase
 - Audio memos
 - Photographs
 - Scanning records and receipts



Segmentation of consumer units

- Segmentation by household composition
 - Proxy reports may achieve acceptable accuracy in husband-wife consumer units
 - Proxy reporting is relevant for consumer units with children over 6 (approximately 30%?)
- Segmentation by likely spending patterns
 - Use information at initial interview to predict spending patterns and tailor reminders
- Segmentation by likely reporting errors
 - Use information at initial interview to predict difficulties in reporting and provide additional support
- Segmentation by technology available in household
 - Begin with technology and record audit



Best Practices in Proxy Studies

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Next Research Steps

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Error in the current design

- Estimates – even rough estimates – of error from
 - Unit nonresponse
 - Item nonresponse
 - Reporting
- Other features of current study
 - Impact of editing
 - Use of records
- Comparison to criterion – Audit study?
- Construct scenarios of possible reductions in reporting error (both variable error and bias) and estimate impact on total error and effective sample size



Field studies

- Technology profiles of consumer units of different compositions and income levels
 - What technology is owned and how is it used in spending and record keeping
- What is bought, where, and how
 - Automatic deposits and payments
 - Debit and loyalty cards
 - Web-based accounts for credit cards and vendors
 - Web purchases
- Records of transactions
 - Receipts and expenditures
 - E-mail and web statements and receipts



Concluding comments

- Using self reports as a criterion to assess proxy reports overstates success of proxy reports
- The literature suggests that the quality of proxy reports about expenditures appears to be poor.
- Ways of spending, records, and information in records have all become more varied since CE originally designed.
- The technologies available for collecting and recording consumer purchases have expanded
- The population's tolerance of burden can be expected to continue to decrease
- Redesign should consider impact on total error as well as cost



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