

Would You Like a Receipt With That? Availability of Respondent Records When Collecting Expenditure Information

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Measurement error due to over- or underreporting in surveys designed to capture expenditure information may be attributable to respondent recall difficulty. The use of respondent records may reduce measurement error, but only if such records are available for the items asked about and the information on the record aligns well with the level of detail being asked about in the questions. The US Census Bureau and Bureau of Labor Statistics contracted with RTI International to conduct a feasibility study to investigate the extent to which records were available for consumer purchases, factors affecting record availability, and logistical considerations for obtaining expenditure records.

This research uses data from the Consumer Expenditure (CE) Records Study. The CE Records Study consisted of a non-probability sample of 115 participants. Each participant completed two interviews. In the first interview, participants were asked a subset of the standard Consumer Expenditure Quarterly Interview (CEQ) questions. At the end of the first interview, interviewers asked participants to gather any records (e.g., receipts, bank statements, credit card bills) they could obtain for the expenditures asked about and to bring the records to the second interview, which was scheduled for four to seven days later. In the second interview, interviewers recorded which expenditures the participants had records for and then recorded the pertinent information from the record.

Records were available for only 36% of the expenditures reported in Interview 1. Several factors were associated with the availability of records, including demographic characteristics, the date or frequency of the purchase, and the amount of the expenditure.

In this paper, we describe the factors associated with the availability of expenditure records. Additionally, we report on participants' barriers to providing these records such as discarding receipts after making a purchase, other household members making the purchase, and records only being available online, which participants were unwilling or unable to provide. We conclude with a discussion of the feasibility of using respondent records in studies that collect expenditure information.

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Introduction

A. Nature of Problem

The Consumer Expenditure Quarterly Interview Survey (CEQ) is an in-depth, face-to-face survey, which collects detailed information from recall about goods and services consumed during a three month period. The CEQ asks about a wide variety of possible expenditures, resulting in a relatively long survey (averaging 65 minutes) that is likely very burdensome for respondents. Survey length, respondent burden and a difficult recall task lead to concerns about measurement error caused by misreporting of expenditures. Although the CEQ is currently a recall-based survey, there are existing records (e.g., bills, receipts, account statements) that contain much of the required data. Using these records in conjunction with a recall survey, or even to replace portions of the survey data collection effort has the potential to reduce respondent burden while improving data quality.

The feasibility of incorporating the use of records into CEQ data collection depends primarily on:

1. Availability - records must be available across different types of participants, expenditure categories, and purchase types.
2. Willingness of participants to share the records - respondents and other household members must be willing to provide them to an interviewer.

Record availability and participants' willingness are currently unknown, and would need to be explored before the CEQ can leverage the information contained in respondent records to reduce burden and improve data quality.

B. Background/State of Knowledge

The current CEQ provides some general instructions for respondents to refer to records when answering the survey questions, but allows the respondent to decide whether and when to use records and when to respond exclusively based on recall. Current interviewers report that respondents do not often refer to records when answering the survey, with only about 30% indicating that they did always, almost always or most of the time (Edgar, 2010). There are

several factors found to be related to the use of records in the CEQ, including age, education and household size.

Not much is currently known about the records respondents keep related to their expenses. One small study attempted to explore what records respondents kept and were willing to share. Those results suggested that there was a wide variation in the type and number of records that respondents stored, ranging from a detailed printout of all expenses to a shopping bag full of receipts with no particular system or order (Fricker & Edgar, 2010). Although that study was too small to draw meaningful conclusions, there did appear to be some trends by expenditure category, with respondents having records for regularly occurring expenses (e.g. telephone bills) and large expenses (e.g. furniture) more often than irregular expenses (e.g. clothing) and small expenses (e.g. food).

C. Research Questions

This paper examines data from the CE Records Study to address fundamental research questions concerning the use of records in the CEQ: whether records are available and whether respondents are willing to provide them. This analysis looks at records participants provided and explores participant and purchase characteristics related to availability of records. The feasibility of using records as a source of expenditure data for the CEQ is also discussed.

Methods

A. Participants

The CE Records Study consisted of a non-probability sample of participants who were asked to collect records related to select CEQ expenditure categories. Participants for the CE Records Study were recruited via flyers and online posts in two metropolitan areas: Raleigh-Durham, North Carolina, and Washington, DC⁴. Persons interested in participating called the recruitment coordinator to complete a screening interview that collected demographic information. The screening data were used to select a diverse sample of participants, as shown in Table 1.

⁴ A complete description of study methods, including recruitment, data collection and analysis, can be found in Geisen, Richards & Strohm, 2011.

RTI conducted interviews with a total of 115 participants. Each participant completed two interviews within a four- to seven-day period. All interviews were conducted using computer-assisted personal interviewing (CAPI) in the participants' homes. Participants were compensated \$40 for completing the first interview, and \$60 for completing the second interview.

Table 1. Participant Demographics

Gender			Employment status	
Men	37%		Working	53%
Women	63%		Not working	47%
Age (mean) (standard deviation)	45 years (17.6)		Household size (mean) (standard deviation)	2.37 (1.58)
Marital status			Income	
Married	44%		Less than \$30,000	43%
Not married	57%		\$30,000 - \$60,000	30%
			More than \$60,000	27%
Race/ethnicity				
Non-Hispanic, white	62%		Location	
Other race/ethnicity	38%		NC	83%
			DC-area	17%
Education				
High school or less	27%		Housing tenure	
Associate's degree or some College	29%		Renters	56%
College degree or more	44%		Owners	44%

B. Data Collection – Interview 1

During Interview 1, study participants were administered an abridged version of the CEQ survey covering the nine expenditure categories shown in the table below (Table 2).

Table 2. Sections of CEQ instrument administered during Interview 1

Section 2: Rented Living Quarters or Section 3: Owned Living Quarters	Section 14: Health Insurance
Section 4: Utilities	Section 17: Subscriptions and Memberships
Section 6: Appliances	Section 19: Miscellaneous
Section 8: Household Furnishings	Section 22: Income
Section 9: Clothing	

Procedures used to conduct Interview 1 for the CE Records Study were identical to those used by the U.S. Census Bureau when conducting the CEQ, with the exception of a set of debriefing questions following the CEQ questions. The debriefing focused on perceptions of burden and difficulty; expectations of required accuracy, reactions to the advance letter used, reactions to the interview materials. Following the interview, participants were asked to collect all available records for the expenditures reported for use in Interview 2.

C. Data Collection – Interview 2

Four to seven days after the first interview, participants completed a second interview. The instrument for the second interview carried forward the values of expenditures reported during Interview 1 to allow records to be compared with Interview 1 reports. For each expenditure reported in Interview 1, the interviewer documented whether a record was available. If a record was not available, the FR asked the participant how he or she came up with the answer provided in Interview 1 and the reason(s) why a record was not available (e.g., did not keep it, never received one, and lost it).

When records were available, the interviewer recorded the date of the record, the amount on the record for pertinent expenditures, and any other relevant information available (e.g., description of the item). The survey instrument compared the amount on the receipt entered with the amount reported on Interview 1 to determine if there was a match. A “match” meant that the amount on the record was 90-110% of the amount reported on Interview 1 for expenditures that cost less \$200. For expenditures that cost \$200 or more, it was considered a match if the record amount was 95-105% the amount reported on Interview 1.

If the record did not ‘match’ the amount reported in Interview 1 the interviewer asked participants about why the record did not match (e.g., it was an unusual purchase, someone else in the household purchased the item, participant guessed the amount).

At the end of Interview 2, participants were asked a series of debriefing questions to gather additional insights on the use of records. Additionally, interviewers answered a set of debriefing questions, providing their assessment of the records matching process, the quality of the records, and their perceptions of potential barriers to the use of records.

Results

A. Record Availability

A total of 3,039 expenditures were reported during Interview 1. Expenditures were reported in all nine sections of the questionnaire, though some subsections (e.g. Phone Lines) had a much higher reporting rate than others (e.g. Furniture Repair), as shown in Table 3.

Of those 3,036 reported expenditures, respondents provided records for only 36% of them in Interview 2. The percent of expenditures with records varied by subsection, ranging from none for furniture repair to 59 percent of property tax or mortgage payments.

Table 3. Summary of Record Availability

Interview Section	Participants with at Least One Item in Interview 1	Expenditures with Records in Interview 2
3a. Property Tax	44	59%
3bc. Mortgage/loans	38	59%
4c. Internet Service	78	57%
17. Subscriptions	51	53%
14. Health Insurance	57	44%
22a. Gross Income	82	43%
9ab. Clothing	96	40%
22b. Last Pay	82	40%
4d. Utilities	91	37% *
4a. Phone lines	98	32% *
19. Miscellaneous	89	31%
2. Rent	60	28% *
8a. Home Furnishings	73	25%
6a. Major Appliances	13	24%
6b. Minor Appliances	88	24%
4b. Phone, Other	19	20%
8b. Furniture Repair	3	0%
All Sections	115	36%

*Each month for rent, phone and internet service, or utility report is considered a separate expenditure.

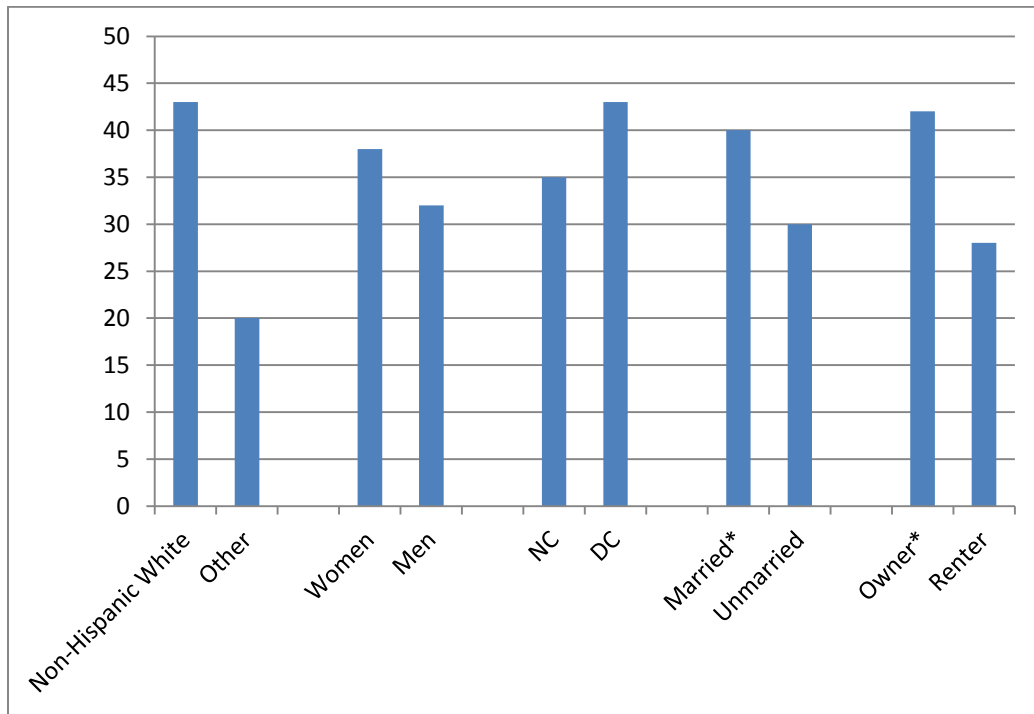
B. Factors related to record availability

There were participant and purchase characteristics found to be associated with availability of records.

Participant Demographics. Several demographic factors were consistently associated with having at least one record. Race/ethnicity, geography, and marital status were correlated with having a record for certain expenditure categories ($p>0.05$) (Figure 1). Non-Hispanic white participants were significantly more likely to have at least one record than participants from other races or ethnicities in seven sections of the CEQ. Overall, non-Hispanic white participants had records for 43% of their expenditures compared to 20% for all other races/ethnicities. Participants from the DC area were significantly more likely to have at least one record than

North Carolina participants in four sections. Overall, DC participants had records for 43% of their expenditures compared to 35% for NC participants. Married participants were more likely to have records than non-married participants in four sections. (However, in the Miscellaneous Section, participants who were not married were more likely to have records.) Overall, married participants had records for 40% of their expenditures compared to 30% for non-married participants.

Figure 1: Overall Availability of Records by Demographics



*p > .05

Purchase Characteristics. Participants were more likely to have records for items that were purchased or consumed on a regular basis. They were also more likely to have records for recent months.

Nine sections of the interview had a higher percentage of records than the overall average. These were: Property Tax, Mortgages/Loans, Internet Services, Utility Services, Clothing, Health Insurance, Subscriptions, and Income. All of these sections with the exception of clothing are items that are generally monthly expenses.

In five sections participants were more likely to have records from a more recent month – either the month of the interview or month prior, depending on the section – compared to two or three months prior to the interview. This finding was seen in these five sections: Rent, Telephone Lines, Utility Services, Home Furnishings and Clothing.

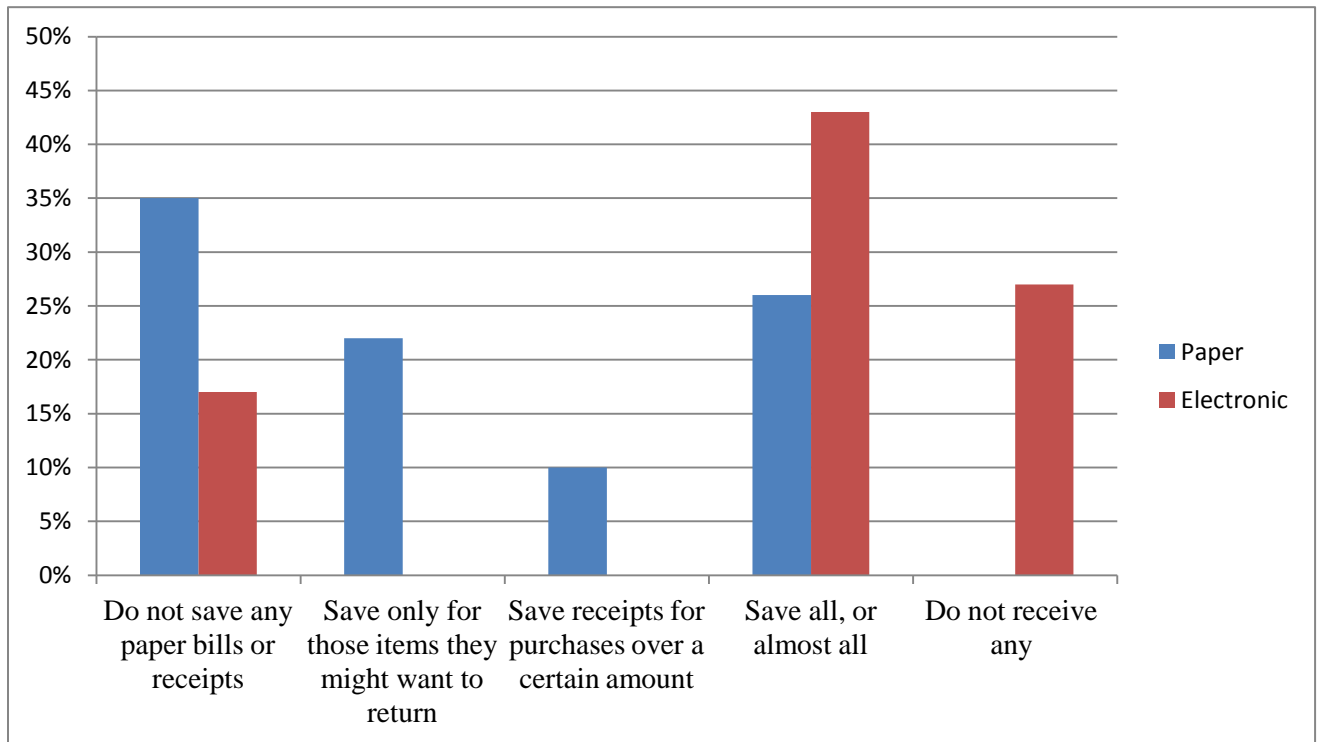
C. Participants Perspectives on the Availability of Records

At the end of Interview 2, participants were asked about the availability of their records. This section details those questions and the responses, which offers insights into how available participants view their records to be.

Record Storage. When asked what they usually do with paper bills and receipts, more than a third (35 percent) said that they do not save any of them, making them completely unavailable for later use (Figure 2). Only 26 percent said that the records would be available because they save all, or almost all, the paper bills or receipts they receive. Of the remaining participants, 22 percent save paper records only for items that they might want to return, and 10 percent said they save receipts for purchases over a certain dollar amount.

Participants handle electronic or email bills or receipts differently than paper records: Of those that receive electronic records, forty-three percent said they leave them in the website or email or save as an electronic copy, making them available for later use, and only 17 percent said they do not save any electronic records (Figure 2). More than a quarter (27 percent) indicated they do not receive electronic records.

Figure 2: What do you usually do with bills and receipts you receive?



D. Interviewer Perspectives on the Availability of Records

In addition to debriefing the participants, interviewers were asked to provide feedback on the records provided and on the process overall. They identified several barriers to providing records, many of which were not identified or articulated by the participants themselves. According to interviewers, many participants were not used to keeping detailed track of their expenditures; do not routinely keep point-of-sale receipts or do not keep other records of where their money comes from or goes. Some study participants had many receipts but they were too disorganized to be useful.

Interviewers noted that some participants who make extensive use of credit cards and online payments think in terms of vendors, and not of expenditure categories. They do not think of separate utility categories when utilities such as telephone, television, and Internet are bundled, and they do not think of separate product categories when paying bills for purchases at

department stores. This led to reporting issues when each expenditure category was asked about separately.

In addition, some participants in multi-adult households did not know the incomes or expenditures of the other adults. They were reluctant to obtain such records for the second interview or were unsuccessful in doing so.

E. Barriers to records usage

For each reported expenditure for which participants did not provide a record, they were asked to explain why the record was not provided. Reasons centered on either the record (e.g. “I didn’t keep the receipt”) or the expenditure report (e.g. “I didn’t really buy that like I thought.”). Table 5 shows the results of participant open-ended explanations coded into categories.

Table 5: Why did participants not provide records for reported expenditures?

Reason	% Of all Reasons
I never received/took the receipt	30.0%
I did not keep the receipt	25.1%
I thought I had this expense, but I actually did not	9.6%
I lost the receipt	8.8%
Someone else purchased the item/received the bill	8.3%
No receipt for such an expense (e.g. bought item from another person)	7.7%
I thought someone in my household had this expense, but they actually did not	5.2%
I accidentally reported expenses that should go under a different category	1.1%
I did not gather the receipt for this interview	1.1%
I accidentally reported expenses that are from a different time period	0.6%
Other	2.5%

A common reason cited by participants for not having a record was that the record was online. To access these online records for this study, participants would have had to log in to their online accounts, search through emails or hard drives and download and print the necessary information. While the records were likely accessible online, participants varied in the level of effort they spent to provide online records.

Discussion

This research examined records participants provided and factors affecting their availability as well as participant willingness to share these records. For the majority (74 percent) of the reported expenditures records simply were not made available.

Understanding the barriers to record availability is essential to identifying ways that respondent records could be incorporated into the CE. Often records simply do not exist; 35 percent of participant report not saving paper records, and 17 percent of participants report not saving electronic records. Additionally participants reported often destroying, losing or not accepting a record at the time of the expense. These records are simply going to be unavailable, unless the CE identifies a way to change respondent behavior and get respondents to keep records they otherwise would not. Finally, a group of participants did not store records in a particular location, which might make it difficult to locate records and therefore they would not be accessible for a study such as the CEQ,

One anticipated barrier that was not supported by evidence from this study was participant unwillingness to share records. Very few participants cited concerns about privacy, security or otherwise indicated they were unwilling to share their records. This finding is encouraging for the CE, if respondents have records available; it seems likely they would be willing to share them with the interviewer.

Another anticipated barrier that was realized was a large discrepancy in record availability by expenditure category. Records were more available for regularly occurring expenses (e.g. taxes, internet services) than for less regularly incurred expenses (e.g. appliances, home furnishings). Although this study could not evaluate the hypothesis, it seems likely that regularly occurring expenses are easier to recall accurately and so the use of records is less valuable than for irregular expenses which may have higher measurement error.

Using records as a supplement to the current CE recall survey seems promising based on the results of this study, if the afore mentioned barriers can be overcome. With less than half of expenditure reports having records available, and an inconsistency across expenditure categories, the use of records as a source of data for the CEQ would rely heavily on efforts to significantly

increase respondent motivation to save and provide them. Additional research into both the types and completeness of information available on receipts and other records, and the ways to increase the number and type of records provided is required to truly evaluate the feasibility of using respondent records in the CEQ.

F. References

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