

# Characteristics of Nonresponders in the Consumer Expenditure Quarterly Interview Survey

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The Consumer Expenditure Quarterly Interview Survey collects data from selected consumer units (CUs) across the United States. Participating CUs are interviewed five times, and their responses from the second through fifth interviews provide data that are used in publications. Some CUs complete interviews 2 through 5; other CUs complete some, but not all, of these interviews; and some CUs do not complete any interviews. These CUs are called complete responders, intermittent responders, and nonresponders, respectively.

A study describing differences in demographic characteristics between complete and intermittent responders, and estimating the effect of nonresponses from intermittent responders on published consumer expenditure estimates, appeared in a previous U.S. Bureau of Labor Statistics (BLS) publication. (See “Characteristics of Complete and Intermittent Responders in the Consumer Expenditure Quarterly Interview Survey” by Sally E. Reyes-Morales, *Consumer Expenditure Survey Anthology*, 2003, Report 967, Sept. 2003.) This article presents results of a study of the characteristics of nonresponder CUs, who were excluded from the aforementioned study.

## Background and definitions

The U.S. Census Bureau conducts the Consumer Expenditure Survey for BLS

to find out how Americans spend their money. Census Bureau field representatives collect data from a random sample of CUs chosen through systematic sampling of residential addresses across the United States. This sample is representative of the total U.S. civilian population not living in institutions.

The Consumer Expenditure Quarterly Interview Survey is a rotating panel survey. CUs are interviewed once per quarter for five consecutive quarters. After the fifth quarter, CUs leave the sample and are replaced by new CUs selected as before through systematic sampling of residential addresses.

In the initial interview, field representatives ask respondents to report all expenditures they made during the previous month. This interview is used only for “bounding” purposes—that is, to make sure the expenditures reported in the second through fifth interviews reflect the correct periods. In the second through fifth interviews, field representatives collect data for the 3 months prior to the interview. Only the expenditure data collected in the second through fifth interviews are used to compute official consumer expenditure estimates. Because data collected in each quarter are treated independently, annual estimates do not depend on CUs participating for all five quarters.

Terms used in this document are de-

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defined below:

**Household.** The people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a room, or a group of rooms occupied (or intended to be occupied) as separate living quarters.

**Consumer unit (CU).** Members of a household related by blood, marriage, adoption, or some other legal arrangement; a single person living alone or sharing a household with others but who is financially independent; or two or more persons living together who share responsibility for at least two of the three major types of expenses: Food, housing, and other expenses. Students living in university housing are also included in the sample as separate consumer units.

**Respondent.** Ideally an adult household member who is familiar with all of the expenditures that his/her CU makes. An eligible respondent is any household member who is age 16 or older and who can answer questions on household and consumer unit composition accurately.

**INSTAT.** Interview status (ranges from 01 to 19):

01 = Interview

**Type A noninterview:**

02 = No one home  
03 = Temporarily absent  
04 = Refused  
05 = Other Type A noninterview

**Type B noninterview:**

06 = Vacant (for rent)  
07 = Vacant (for sale)  
08 = Vacant (other)  
09 = Occupied by person whose usual residence is elsewhere  
10 = Under construction (not ready)  
11 = Other Type B noninterview

**Type C noninterview:**

12 = Demolished  
13 = House or mobile home moved  
14 = Converted to nonresidential use  
15 = Merged  
16 = Condemned  
17 = Located on military base  
18 = CU moved  
19 = Other Type C noninterview

**Interview.** Completed by an eligible CU

(INSTAT = 01).

**Type A noninterview.** Occurs when an address is within the scope of the survey and eligible for interview, but an interview is not obtained (INSTAT = 02 through 05).

**Type B noninterview.** Occurs when an address is within the scope of the survey but is not eligible for interview (INSTAT = 06 through 11).

**Type C noninterview.** Occurs when an address is out of the scope of the survey or is permanently ineligible for the survey sample (INSTAT = 12 through 19).

**Record.** Contains all the information relevant to each interview or noninterview. Each CU could have as many as five records.

**Nonresponder CUs.** CUs who did not complete interviews 2 through 5.

**Eligible CUs.** Nonresponder CUs assigned a Type A noninterview code in at least one of the last four records.

**Ineligible CUs.** Nonresponder CUs who had no Type A noninterview code in the last four records.

**In-range CUs.** CUs who were scheduled to participate in all five interviews between January 1997 and December 2000.

**Out-of-range CUs.** All CUs who were not in range.

### Consumer units studied

Characteristics of nonresponder CUs are the focus of this study. Data were drawn from the universe of Consumer Expenditure Quarterly Interview Survey responder and nonresponder CUs (1997 through 2000) using the following criteria:

- Only in-range CUs were used, in order to track their history throughout the survey.

- Only nonresponder CUs were used in the study.

A summary of the 4 years of data appears in table 1. Because CUs could participate in the survey for five quarters, they could have as many as five records. Of the total number of CU records in the sample during the period of analysis, 71.5 percent (147,513 records) were in range; 28.5 percent were out of range. Of the in-range records, however, 76.1 percent were provided by complete and intermittent responders, who were excluded from the study.

Nonresponder CUs' records made up 17.1 percent of all records and 23.9 percent of in-range records (corresponding to 27.5 percent of in-range CUs). Nonresponder CUs were separated into those who were eligible and those who were ineligible for interview (table 2). Eligible nonresponder CUs were those assigned a Type A noninterview code for at least one of the last four interviews (interviews 2 through 5)—that is, those nonresponders who were eligible for interview during a particular survey quarter but did not participate in the survey for that period. Conversely, the nonresponder CUs categorized as ineligible were those CUs coded as Type B noninterviews (ineligible for interview because the residence was vacant, occupied by temporary residents, or under construction) or Type C noninterviews (out of the scope of the survey because the residence was demolished, abandoned, or converted to nonresidential use) for each of the last four interviews.

Most nonresponder CUs (62.2 percent) were categorized as ineligible for interview. The remaining 37.8 percent were eligible for interview at some point during the last four quarters of the survey but did not complete interviews. Accordingly, ineligible nonresponder CUs made up a larger percentage (53.1 percent) of records than did eligible nonresponder CUs (46.9 percent).

Although nonresponder CUs did not complete any of the last four interviews, some of them completed the first (bounding) interview. Nonresponder

CUs who completed the first interview accounted for 21.7 percent of all CUs in the study (9.1 percent of eligible CUs and 12.6 percent of ineligible CUs).

Of the ineligible nonresponder CUs, 74.8 percent were coded as Type B or Type C noninterview at the initial interview. This shows that most ineligible nonresponder CUs were true nonresponders, as defined for the survey: they were ineligible for interview and did not contribute to the survey's response rate. The remaining 25.1 percent can be divided into those that completed the first interview (20.3 percent) and those for whom the first interview resulted in a Type A noninterview (4.8 percent).

### Reasons for dropping out of the survey

Reasons for which CUs dropped out of the survey can be identified by the interview code of the first noninterview.

Table 3 shows that, among eligible nonresponder CUs, refusal was the most common reason for nonparticipation, accounting for 81.2 percent of nonresponder CUs who completed the first interview and 79.0 percent of those who did not complete the first interview. (Four out of five instances of nonparticipation in the survey were due to the refusal of the CU respondent.) The second most common reason was an "Other Type A noninterview," accounting for 15.4 percent of those who did and 13.0 percent of those who did not complete the first interview. Because the rankings of the reasons for nonparticipation and their respective percentages were similar for both categories, completion or noncompletion of the first interview seems to have factored little in a CU dropping out of the survey.

Ineligible nonresponders can be partitioned into three distinct groups. (See table 4.) The first group comprises CUs who participated in the first interview but became ineligible for subsequent interviews. In this group there are more CUs coded Type B noninterview (57.8 percent) than Type C noninterview (42.1 percent).

CUs who were coded as a Type A

noninterview for the first interview and became ineligible for subsequent interviews constitute the second group. For these CUs, the leading reason for not participating in the survey (61.7 percent of the responses) was refusal; the other reasons were combined into "Other Type A noninterview" (38.3 percent).

The last group of ineligible CUs included those who did not complete any of the five interviews and for which none of the noninterviews were coded as Type A. For these CUs, the bounding interview was coded as a Type B noninterview (ineligible; 63.0 percent) or as a Type C noninterview (out of scope; 37.0 percent).

There were no conversions to Type A noninterview in any of the four subsequent interviews for any of the three groups of ineligible CUs.

### Household and respondent characteristics

The demographic characteristics of the nonresponders at the household and CU levels are summarized in tables 5, 6, and 7. Household tenure, race, and mean family size cannot be obtained for ineligible CUs, but degree of urbanization (urban or rural) and CUs per household (one or multiple) are presented in table 5 from all five interviews for eligible and ineligible CUs. Percentages of rural CUs and multiple-CU households are larger for ineligible CUs than for eligible CUs (37.7 percent and 3.4 percent compared with 18.4 percent and 2.0 percent, respectively). The relatively high percentage of rural households in the ineligible column may suggest a problem with the rural sampling frame (the list of all addresses in the target population from which the sample is selected.) The sampling frame may be more accurate in urban areas; the rural sampling frame may contain addresses that are out of the scope of this survey.

Comparative statistics about the demographic characteristics of the nonresponder CUs at the household and consumer-unit levels are given in tables 6 and 7.

Table 6 presents the race, sex, mari-

tal status, age range, and education of respondents from eligible and ineligible CUs who completed the first interview. Respondents from eligible nonresponder CUs who completed the first interview tended to be White (78.9 percent) women (59.1 percent) who were married (43.1 percent), were 65 or older (16.8 percent), and had at most a high school diploma (28.8 percent). Respondents from ineligible nonresponder CUs who completed the first interview were mostly White (80.6 percent) women (53.9 percent) who had never married (41.9 percent), were under 25 years old (24.1 percent), and had at most some college or an associate degree (36.6 percent).

Both eligible and ineligible nonresponder CUs had high percentages of white female respondents. Eligible CUs had a higher percentage of married respondents than of any other category, while ineligible CUs had a higher percentage of those who never married than of any other category. Eligible CUs had a higher percentage of respondents aged 65 and older, and ineligible CUs a higher percentage of respondents under age 25. Eligible CUs had a larger percentage of respondents whose highest educational level was high school, whereas ineligible CUs had a larger percentage of respondents with some college or associate degree.

Table 7 gives summary statistics about characteristics of eligible nonresponder CUs who had Type A noninterviews. Eligible CUs are separated into two groups, those who completed the first interview and those who did not. Mean family size was slightly greater (2.4) for CUs who completed the first interview than for those who did not (2.2). Percentages of urban CUs and one-CU households differed little between CUs who completed the first interview and those who did not—78.2 percent and 97.5 percent compared with 81.9 percent and 98.6 percent, respectively.

There appears to be a relationship between household tenure and race and whether an eligible nonresponder CU completed the first interview. The percentage of homeowners was higher among those who completed the

first interview than among those who did not complete the first interview. Similarly, the percentages of Blacks or African Americans; American Indians, Aleuts, or Eskimos; and Asians or Pacific Islanders were higher among those who completed the first interview than among those who did not.

### Conclusion

The study presented in this article, based on Consumer Expenditure Quarterly Interview Survey data collected from 1997 to 2000, led to the following conclusions:

- Most nonresponder CUs were in-

eligible CUs, or true nonresponder CUs, as defined for the survey.

- Most nonresponder CUs were urban, one-CU households (although a high percentage of ineligible CUs in rural areas may suggest a problem with the rural sampling frame).
- The most common reason for the nonparticipation of eligible nonresponder CUs was refusal.
- Most respondents from nonresponder CUs who completed the

first interview were White women with high school diplomas or with some college or an associate degree. (From this group, eligible CU respondents were mostly married and older, whereas ineligible CU respondents were mostly younger and had never married.)

- Eligible nonresponder CUs who completed the first interview were more likely to be homeowners and to include a smaller percentage of Whites than were those who did not complete the first interview. ■

Table 1. Summary data from the Consumer Expenditure Quarterly Interview Survey, 1997-2000

Type of consumer unit (CU)	Number of records	Percent of records	Percent of in-range records	Number of in-range CUs	Percent of in-range CUs
Total .....	206,339	100.0	—	—	—
In range <sup>1</sup> .....	147,513	71.5	100.0	34,286	100.0
Complete and intermittent responders .....	112,318	54.4	76.1	24,860	72.5
Nonresponders .....	35,195	17.1	23.9	9,426	27.5
Out of range .....	58,826	28.5	—	—	—

<sup>1</sup> In-range CUs were those scheduled to participate in all five interviews between January 1997 and December 2000.  
NOTE: Dash indicates inapplicability.

Table 2. In-range<sup>1</sup> nonresponder consumer units (CUs) in the Consumer Expenditure Quarterly Interview Survey, 1997-2000

Type	All CUs	Percent of all CUs	Percent of CUs by category	All records	Percent of all records	Type A records	Percent of Type A records
Total .....	9,426	100.0	—	35,195	100.0	11,868	100.0
Eligible CUs <sup>2</sup> .....	3,567	37.8	100.0	16,516	46.9	11,868	100.0
Completed first interview .....	858	9.1	24.1	4,119	11.7	2,827	23.8
Did not complete first interview ..	2,709	28.7	75.9	12,397	35.2	9,041	76.2
Ineligible CUs .....	5,859	62.2	100.0	18,679	53.1	0	.0
Completed first interview .....	1,192	12.6	20.3	3,593	10.2	0	.0
First interview was Type A .....	282	3.0	4.8	794	2.3	0	.0
First interview was Type B/C .....	4,385	46.5	74.8	14,292	40.6	0	.0

<sup>1</sup> In-range CUs were those scheduled to participate in all five interviews between January 1997 and December 2000.

<sup>2</sup> Eligible CUs were assigned a Type A noninterview code in at least one of the last four records; ineligible CUs had no Type A noninterview code in the last four records.

NOTE: Dash indicates inapplicability.

**Table 3. Reasons for which eligible<sup>1</sup> nonresponder consumer units (CUs) dropped out of the Consumer Expenditure Quarterly Interview Survey, 1997-2000**

(Percent of CUs)

Reason	Completed first interview	Did not complete first interview
Refusal .....	81.2	79.0
Other Type A noninterview .....	15.4	13.0
(temporary absences, noncontacts, and other)		
Type B noninterview .....	3.3	8.0
(residence was vacant, occupied by a person whose usual residence was elsewhere, or under construction)		
Type C noninterview .....	.1	.0
(residence was demolished, moved, converted to nonresidential use, merged, condemned, or on a military base, or CU moved)		
Total .....	100.0	100.0

<sup>1</sup> Eligible CUs were assigned a Type A noninterview code in at least one of the last four records.

**Table 4. Reasons for which ineligible<sup>1</sup> nonresponder consumer units (CUs) dropped out of the Consumer Expenditure Quarterly Interview Survey, 1997-2000**

(Percent of CUs)

Reason	Completed first interview	Type A first interview	Type B/C first interview
Refusal .....	0.0	61.7	0.0
Other Type A noninterview .....	.0	38.3	.0
(temporary absences, noncontacts, and other)			
Type B noninterview .....	57.8	.0	63.0
(residence was vacant, occupied by a person whose usual residence was elsewhere, or under construction)			
Type C noninterview .....	42.1	.0	37.0
(residence was demolished, moved, converted to nonresidential use, merged, condemned, or on a military base, or CU moved)			
No records .....	.1	.0	.0
Total .....	100.0	100.0	100.0

<sup>1</sup> Ineligible CUs had no Type A noninterview code in the last four records.

**Table 5. Household characteristics of nonresponder consumer units (CUs) in the Consumer Expenditure Quarterly Interview Survey, 1997-2000**

(Percent of records in each category)

Characteristic	Eligible <sup>1</sup> CUs	Ineligible CUs
Degree of urbanization:		
Urban .....	81.6	62.3
Rural .....	18.4	37.7
Total .....	100.0	100.0
CUs per household:		
One .....	98.0	96.6
Multiple .....	2.0	3.4
Total .....	100.0	100.0

<sup>1</sup> Eligible CUs were assigned a Type A noninterview code in at least one of the last four records; ineligible CUs had no Type A noninterview code in the last four records.

Table 6. **Characteristics of respondents<sup>1</sup> from nonresponder consumer units (CUs) who completed the first interview for the Consumer Expenditure Quarterly Interview Survey, 1997-2000**

(Percent)

Characteristic	Eligible <sup>2</sup> CUs	Ineligible CUs
<b>Race:</b>		
White .....	78.9	80.6
Black .....	12.3	10.9
American Indian, Aleut, Eskimo .....	1.5	1.8
Asian or Pacific Islander .....	5.5	3.8
Other .....	.4	1.3
No information .....	1.5	1.6
<b>Sex:</b>		
Male .....	40.9	45.9
Female .....	59.1	53.9
No information .....	.0	.2
<b>Marital status:</b>		
Married .....	43.1	27.3
Widowed .....	12.3	9.9
Divorced .....	15.1	17.1
Separated .....	3.0	3.7
Never married .....	25.6	41.9
No information .....	.8	.2
<b>Age range:</b>		
24 or younger .....	9.4	24.1
25 to 34 .....	16.6	17.3
35 to 44 .....	13.9	13.9
45 to 54 .....	14.5	11.2
55 to 64 .....	11.5	6.5
65 and older .....	16.8	9.8
No information .....	17.3	17.3
<b>Highest level of education:</b>		
Never attended or no high school diploma .....	14.3	14.3
High school diploma .....	28.8	24.0
Some college or associate degree .....	27.7	36.6
Bachelor's degree .....	17.7	12.8
Master's, professional school, or doctoral degree .....	6.7	6.4
No information .....	4.8	5.9

<sup>1</sup> For 125 eligible and 127 ineligible CUs, the respondent was not identified; as a result, those CUs were excluded from the calculations.

<sup>2</sup> Eligible CUs were assigned a Type A noninterview code in at least one of the last four records; ineligible CUs had no Type A noninterview code in the last four records.

NOTE: Percentages do not all add to 100 due to rounding.

Table 7. **Household characteristics of eligible<sup>1</sup> nonresponder CUs in the Consumer Expenditure Quarterly Interview Survey, 1997-2000**

Characteristic <sup>2</sup>	Completed first interview	Did not complete first interview
Mean family size .....	2.4	2.2
Other characteristic (Percent of households)		
<b>Degree of urbanization:</b>		
Urban .....	78.2	81.9
Rural .....	21.8	18.1
<b>CUs per household:</b>		
One .....	97.5	98.6
Multiple .....	2.5	1.4
<b>Household tenure:</b>		
Homeowner .....	81.0	69.0
Renter or other .....	19.0	31.0
<b>Household race:</b>		
White .....	81.8	87.1
Black .....	11.7	8.7
American Indian, Aleut, Eskimo .....	1.1	.7
Asian or Pacific Islander .....	5.4	3.6

<sup>1</sup> Eligible CUs were assigned a Type A noninterview code in at least one of the last four records.

<sup>2</sup> Data are from all Type A noninterview records.

NOTE: Percentages do not all add to 100 due to rounding.