

**SUPPORTING STATEMENT FOR
THE CONSUMER EXPENDITURE SURVEYS**

OMB CONTROL NO. 1220-0050

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection methods to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

The Consumer Expenditure (CE) Survey is a nationwide household survey conducted by the U.S. Bureau of Labor Statistics to find out how households in the United States spend their money. The CE Survey consists of two sub-surveys: an Interview Survey, and a two-week Diary Survey. The Interview Survey collects detailed information on large expenditures such as property, automobiles, and major appliances; as well as on recurring expenditures such as rent, utilities, and insurance premiums. By contrast, the Diary Survey collects detailed information on small, frequently purchased items such as food and apparel. The data from the two surveys are then combined to provide a complete picture of consumer expenditures in the United States.

The data for both surveys are collected from a representative sample of households across the United States. Both surveys have the same sample design, which is a two-stage sample design. In the first stage, a representative sample of counties from across the United States is selected for the survey. Then in the second stage, a representative sample of households from those counties is selected for the survey. This two-stage sample design generates a sample of households in which every geographic area, every demographic group, and every wealth level is well-represented. The rest of this section describes the two sampling processes in more detail.

Sampling Geographic Areas

In the first stage of sampling, all 3,144 counties or county equivalents in the United States are partitioned into 1,492 small geographic clusters called “primary sampling units” (PSUs). These are the “core-based statistical areas” (CBSAs) defined by the Office of Management and Budget (OMB).¹ They range in size from 1 county to 29 counties, with the average size being 2 counties.²

¹ Non-CBSA PSUs are also defined. The Office of Management and Budget partitions “urban” counties into CBSAs, but it does not partition “rural” counties into CBSAs. BLS staff in the CE program creates clusters of “rural” (technically “non-CBSA”) counties, which are designed to be similar in size to OMB’s CBSAs.

² The average size of a PSU in the United States is 2 counties, but the average size of a PSU in the Interview Survey/Diary Survey sample is 5 counties. The difference is because the Interview Survey/Diary Surveys select PSUs with probability proportional to their size, which means larger PSUs are more likely to be selected than smaller PSUs.

Then the PSUs are partitioned into three size classes (S, N, R), and a representative sample of 91 PSUs is randomly selected for the Interview and Diary Surveys. The same 91 PSUs are used in both surveys.

| PSU “size class” | Number of PSUs in the U.S. | Number of PSUs in the sample | Description |
|---------------------|----------------------------------|------------------------------------|---|
| S | 23 | 23 | Large Core Based Statistical Areas. These are CBSAs with over 2.8 million people, plus Anchorage and Honolulu. They are self-representing PSUs (S PSUs). |
| N | 904 | 52 | Small Core Based Statistical Areas. These are CBSAs with under 2.8 million people. They are non-self-representing PSUs (N PSUs). |
| R | 565 | 16 | Non-Core Based Statistical Areas. These are small clusters of “rural” counties that are created by BLS staff. They are non-self-representing PSUs (R PSUs). |
| Total | 1,492 | 91 | |

All 91 PSUs are used by the Interview and Diary Surveys. However, only the 75 (=23+52) CBSA PSUs are used by the Consumer Price Index (CPI). The CPI is one of CE’s major customers, and it uses CE’s data for its expenditure weights. The CPI is an urban survey, not a national survey, which is why it uses only the 75 CBSA PSUs.

A New Sample of PSUs in 2025

A new sample of PSUs was recently drawn for the Interview and Diary Surveys based on the 2020 census. The old sample was based on the 2010 census, and the new sample is based on the 2020 census. CE’s sample is updated every ten years to make sure it accurately reflects the latest geographic shifts in the American population. The CE program started using the new sample of PSUs in 2025, and will continue using it for the ten-year period 2025-2034.

BLS selected its new sample of 91 PSUs from a stratified sample design in which all 23 self-representing PSUs (the S PSUs) were selected for the survey with certainty, and all non-self-representing PSUs (the N and R PSUs) were stratified into 68 (=52+16) strata using four variables to stratify them: income, education, computer ownership, and urbanicity. Then one PSU was randomly selected from each of the N and R strata with probability proportional to its population.

Overall, the new sample design’s basic framework remains unchanged from that of the old sample design. It still consists of the 23 largest CBSAs in the United States; plus a random sample of 52 smaller CBSAs to represent the rest of the CBSA parts of the country; plus a random sample of 16 non-CBSA areas to represent the non-CBSA parts of the country.

However, there are two key differences between the old and new sample designs. One difference is the addition of geographic clustering to the sample design. Geographic clustering was added to facilitate data collection. Small PSUs in the sample (under 200,000 people) are required to be geographically close to large PSUs in the sample (over 200,000 people), so that when data collectors get sick or go on vacation, those from a nearby PSU can easily fill in for them.

The other difference is the longer phase-in/phase-out (PIPO) time period. PSUs are normally phased-in and phased-out in a one-step process over a one-year period. This time, however, they will be phased-in and phased-out in a two-step process over multiple years. This two-step process is designed to alleviate financial and hiring difficulties that were recently encountered.

Step 1 occurred in 2025 and 18 old PSUs were dropped from the sample, and 8 new PSUs were added to the sample. This will temporarily decrease the number of PSUs in the sample to 81. In Step 2, 6 old PSUs will be dropped from the sample, and 16 new PSUs will be added to the sample. This will return the number of PSUs in the sample to 91. Between the two steps, 24 old PSUs will be dropped from the sample, and 24 new PSUs will be added to the sample. So, in its entirety, once the sample design is fully implemented, there will continue to be 91 PSUs in the sample.

Step 2 was originally scheduled to be implemented in 2026; however, due to unforeseen financial and hiring difficulties, it was postponed. That means the 2026 sample will remain at Step 1, and the PSUs will remain the same as in the 2025 sample. A decision on whether to move forward with step 2 will be made after funds and staffing are reassessed in 2026. The first table below shows the number of PSUs in the sample if Step 1 is held constant and Step 2 is not implemented until a later date. The second table shows the number of PSUs in the sample if a decision is made to implement step 2 in 2027.

| Number of PSUs Being Dropped from the Old Sample Design and Added to the New Sample Design | | 2025 | 2026-2028 |
|--|--|------|-----------|
| Starting number of PSUs | | 91 | 81 |
| Number of old PSUs dropped | | -18 | -0 |
| Number of new PSUs added | | +8 | +0 |
| Ending number of PSUs | | 81 | 81 |

| Number of PSUs Being Dropped from the Old Sample Design and Added to the New Sample Design | | | | | |
|--|------|------|------|------|---------|
| | 2025 | 2026 | 2027 | 2028 | Overall |
| Starting number of PSUs | 91 | 81 | 91 | 91 | 91 |
| Number of old PSUs dropped | -18 | -0 | -6 | -0 | -24 |

| | | | | | |
|--------------------------|----|----|-----|----|-----|
| Number of new PSUs added | +8 | +0 | +16 | +0 | +24 |
| Ending number of PSUs | 81 | 81 | 91 | 91 | 91 |

Sampling Households Within PSUs

After selecting a sample of PSUs, a sample of households is selected in those PSUs. Households (or more technically “addresses”) are selected from the Census Bureau’s Master Address File (MAF), which is a list of all residential addresses in the United States. It is updated twice per year with information from the U.S. Postal Service.³

For sampling, the addresses on the MAF are partitioned into two smaller lists of addresses called the Unit frame, and the Group Quarters (GQ) frame. The Unit frame is the larger of the two frames. It has 99% of the MAF’s residential addresses. The GQ frame is the smaller of the two frames. It has the remaining 1% of its addresses. The Unit frame is updated twice per year, and the GQ frame is updated once every three years. Addresses for both surveys are selected from both frames.

Within each PSU a “systematic sample” of addresses is selected for both surveys from both frames. Systematic sampling is where the list of addresses is sorted, and then every k-th address on the list is systematically selected for the sample. The number “k” is called the “sampling interval.” The first address in the sample is randomly selected from the first k addresses on the list. Then, after that, every k-th address down the list is systematically selected. For example, if the first address selected is the 7-th address on the list, then the sample will consist of addresses 7, 7+k, 7+2k, 7+3k, and so on.

For the Unit frame, the addresses are sorted first by PSU; then by their State Federal Information and Processing Standards (FIPS) code; then by their County FIPS code; then by a CE stratification variable described below; and then by their Census Tract code, Census Block code, Street name, Street number, and MAFID code.

For the Unit frame, the CE stratification variable is created from other variables that are correlated with household expenditures. The purpose of the variable is to ensure that households of every wealth level are well-represented in the sample. Table 1 below shows how the households are sorted. It has codes ranging from 10 to 99 with the lower codes being for low-wealth households, and the higher codes being for high-wealth households. This sorting or “stratification” variable is created from the number of occupants in each household, their housing tenure (owner/renter), and the market value of their home (for owners) or the rental value of their apartment or home (for renters). These variables are correlated with expenditures. Households with more people tend to spend more than those with fewer people; homeowners tend to spend

³ Technically, the sample is selected from the *civilian non-institutional* portion of the MAF. That is CE’s target population. It includes people living in houses, condominiums, and apartments, as well as people living in group quarters, such as college dormitories and boarding houses. However, it excludes the non-civilian and institutional portions of the population, such as military personnel living on base, nursing home residents, and prison inmates.

more than renters; and people living in high-price housing units tend to spend more than people living in low-price housing units.

Table 1. CE Unit Frame Stratification Code Values

| Renter/Owner Quartile | Number of Occupants | | | | |
|----------------------------------|---------------------|-----------|--------|-----------|------------|
| | 1 person | 2 persons | Vacant | 3 persons | 4+ persons |
| Renters 1 st Quartile | 10 | 11 | 12 | 13 | 14 |
| Renters 2 nd Quartile | 25 | 24 | 23 | 22 | 21 |
| Renters 3 rd Quartile | 30 | 31 | 32 | 33 | 34 |
| Renters 4 th Quartile | 45 | 44 | 43 | 42 | 41 |
| Owners 1 st Quartile | 50 | 51 | 52 | 53 | 54 |
| Owners 2 nd Quartile | 65 | 64 | 63 | 62 | 61 |
| Owners 3 rd Quartile | 70 | 71 | 72 | 73 | 74 |
| Owners 4 th Quartile | 85 | 84 | 83 | 82 | 81 |
| Other | | | 99 | | |

All the renters are at one end of the stratification, and all the owners are at the other end of the stratification. The renters and owners are further subdivided into quartiles based on monthly rental and property values to ensure that households of every wealth level are well represented in the survey. Vacant housing units are put in the middle column for the number of household occupants because although they were vacant at the time of the decennial census, when CE's field representatives visit them, most of them will be occupied, and they could be in any of the four non-zero categories. Therefore, the middle column is their "expected" location.

For the GQ frame, the addresses are sorted first by PSU; then by their State FIPS code; then by their County FIPS code; then by their Census Tract code; then by CHPCT (the percent of people in the tract living in college housing), and Census Block code.⁴

The Unit and GQ frames use different sorting variables, but they use the same sampling interval, "k."

For more information on the sample design in general, please see the paper by Susan King on "Selecting a Sample of Households for the Consumer Expenditure Survey" (Attachment S); or the paper by Danielle Neiman et. al., "Review of the 2010 Sample Redesign of the Consumer Expenditure Survey" (Attachment T). For more information on the geographic portion of CE's sample design, please see the memorandum from Adam Safir to Jennifer Epps on "CE sample redesign PSU Memo for Census.," July 21, 2023 (Attachment U).

Consumer Units

A consumer unit (CU) is the unit from which the CE seeks to collect its detailed expenditure information. A CU is basically the same as a "household," so the terms are often used interchangeably. However, there is a technical difference between them. A household is a group

⁴ CHPCT is used because people living in college housing units are different than the rest of the people in the GQ frame, so using it as a stratification variable helps produce a more representative sample.

of people who live together in a housing unit. They are usually related by blood, marriage, adoption, or some other legal arrangement, but the key point is that they live together. By contrast, a CU is a group of people who live together, *and* who pool their incomes to make joint expenditure decisions. Thus, the difference between households and CUs is the financial relationship between the people who live together. The people in a CU are financially interdependent on each other, while the financial relationship of the people in a household is not taken into consideration. Approximately 99 percent of all occupied housing units have one CU, which is why the terms “CUs” and “households” are often used interchangeably.⁵

There are approximately 135 million CUs in the United States. The following table shows the estimated number of CUs in the 81 strata in CE’s 2026 sample.⁶ The stratum code is a 4-character variable where the first character is the stratum’s size class (S/N/R). The second character is the stratum’s region of the country (1=Northeast, 2=Midwest, 3=South, 4=West). The third character is the stratum’s division of the country (1=New England, 2=Middle Atlantic, 3=East North Central, etc.). And the fourth character is a unique identifier of the strata within their size/region/division classes.

Estimated Number of CUs in CE’s 81 Strata

| Stratum Code | Estimated Number of CUs in the Stratum | | |
|--------------|--|------|-----------|
| S11A | 2,012,737 | S37A | 3,110,724 |
| S12A | 8,203,256 | S37B | 2,900,904 |
| S12B | 2,543,623 | S48A | 1,973,718 |
| S23A | 3,917,636 | S48B | 1,207,171 |
| S23B | 1,788,888 | S49A | 5,376,795 |
| S24A | 1,503,051 | S49B | 1,934,281 |
| S24B | 1,148,695 | S49C | 1,873,524 |
| S35A | 2,600,690 | S49D | 1,636,850 |
| S35B | 2,500,156 | S49E | 1,343,541 |
| S35C | 2,480,395 | S49F | 592,702 |
| S35D | 1,293,296 | S49G | 220,019 |
| S35E | 1,158,575 | N11B | 1,660,062 |
| | | N11C | 1,653,386 |
| | | N11E | 561,549 |
| | | N12C | 1,987,224 |
| | | N12D | 1,362,127 |
| | | N12E | 925,025 |
| | | N12F | 1,072,781 |
| | | N12H | 1,133,614 |
| | | N23C | 1,790,423 |
| | | N23D | 1,866,204 |
| | | N23F | 1,374,551 |
| | | N23I | 2,711,006 |
| | | N23J | 1,172,495 |
| | | N23K | 1,882,500 |
| | | N23L | 1,174,544 |
| | | N24D | 2,033,312 |
| | | N24E | 1,014,026 |
| | | N24F | 2,226,429 |
| | | N35F | 2,311,095 |

⁵ In addition to groups of related people, a person living alone, or a group of unrelated people sharing a housing unit, is also considered to be a household. Unrelated people who share a housing unit are considered to be separate CUs if they are responsible for paying their own expenses in at least two of these three categories: food, shelter, and all other expenses. Likewise, college students living away from home are considered to be separate CUs from their parents if they are responsible for paying their own expenses in at least two of these three categories.

⁶ The number of CUs comes from combining information about the total number of housing units in the Census Bureau’s sampling frames (the MAF) with observations made by CE’s field representatives about the number of CUs living in those housing units. CE’s observations in the field show the average number of CUs per occupied housing unit is approximately 1.015. For every 1,000 occupied housing units there are approximately 1,015 CUs. The number of CUs per stratum shown in the table below comes from allocating the nationwide total of 135 million CUs by the number of people living in each stratum according to the 2020 census.

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| | |
|--------------|--------------------|
| N35G | 1,886,609 |
| N35H | 1,372,937 |
| N35I | 2,188,172 |
| N35L | 1,734,422 |
| N35N | 1,067,285 |
| N35P | 1,169,124 |
| N35Q | 3,112,020 |
| N35S | 560,416 |
| N36A | 1,579,995 |
| N36B | 1,809,475 |
| N36C | 1,229,066 |
| N36E | 2,232,359 |
| N37C | 1,750,496 |
| N37D | 2,171,520 |
| N37F | 936,578 |
| N37G | 938,766 |
| N37H | 1,473,230 |
| N37I | 1,042,312 |
| N37J | 1,171,770 |
| N48C | 1,860,080 |
| N48D | 1,073,282 |
| N48E | 1,445,767 |
| N48F | 2,066,728 |
| N49H | 1,842,096 |
| N49I | 1,664,017 |
| N49J | 1,512,464 |
| N49K | 1,032,925 |
| N49L | 2,523,186 |
| R11A | 269,129 |
| R12G | 309,451 |
| R23B | 1,221,851 |
| R24B | 1,316,071 |
| R35A | 640,398 |
| R35B | 640,398 |
| R36G | 1,008,011 |
| R37A | 541,933 |
| R37B | 541,933 |
| R48H | 521,616 |
| R49A | 308,535 |
| Total | 135,000,000 |

Again, these are the estimated number of CUs in the 81 strata in CE's 2026 sample. If the BLS decides to implement phase 2 of the sample redesign in 2027 or 2028, then the sample size and number of CUs allocated per stratum will change.

Sample Size and Response Rates

The table below shows the expected annual sample sizes and response rates for the Interview and Diary Surveys for 2026-2028 and reflects what samples would be if the BLS decides to continue postponing Phase 2 of the sample design.

| Category | Quarterly Interview Survey | | | Diary Survey | | |
|---|----------------------------|--------|--------|--------------|--------|--------|
| | 2026 | 2027 | 2028 | 2026 | 2027 | 2028 |
| Total Sample Size (addresses) | 50,000 | 50,000 | 50,000 | 16,700 | 16,700 | 16,700 |
| Type B and C Noninterviews (vacant, demolished, etc.) | | | | | | |
| Number | 7,500 | 7,500 | 7,500 | 2,500 | 2,500 | 2,500 |
| Percent of Total Sample | 15 | 15 | 15 | 15 | 15 | 15 |
| Eligible Units (occupied housing units) | | | | | | |
| Number | 42,500 | 42,500 | 42,500 | 14,200 | 14,200 | 14,200 |
| Percent of Total Sample | 85 | 85 | 85 | 85 | 85 | 85 |
| Type A Noninterviews | | | | | | |
| Number | 25,500 | 25,500 | 25,500 | 8,500 | 8,500 | 8,500 |
| Percent of Eligible Units | 60 | 60 | 60 | 60 | 60 | 60 |
| Completed Interviews | | | | | | |
| Number | 17,000 | 17,000 | 17,000 | 5,700 | 5,700 | 5,700 |
| Percent of Eligible Units (Response Rate) | 40 | 40 | 40 | 40 | 40 | 40 |

Each year the Interview Survey's sample will have approximately 50,000 addresses. Of those addresses, 85% are expected to be occupied housing units, and the other 15% are expected to be "Type B/C" noninterviews, which are addresses that are not occupied housing units (i.e., nonexistent, nonresidential, vacant, demolished, etc.). Of the occupied housing units, 40% are expected to complete an interview, and the other 60% are expected to be "Type A" noninterviews, which are occupied housing units that do not participate in the survey. This is expected to yield approximately 17,000 completed interviews per year.

Similarly, each year the Diary Survey's sample will have approximately 16,700 addresses. Of those addresses, 85% are expected to be occupied housing units, and the other 15% are expected to be "Type B/C" noninterviews. Of the occupied housing units, 40% are expected to complete their diaries, and the other 60% are expected to be "Type A" noninterviews. This is expected to yield approximately 11,400 ($= 5,700 \times 2$) weekly diaries per year.

Nonresponse Bias

In 2022 CE staff completed a nonresponse bias study to determine whether the Interview Survey and Diary Surveys' nonrespondents were "missing completely at random" (MCAR), and whether their missing-ness generated any bias in the published expenditure estimates over the ten-year

period 2010-2019. The study was undertaken in response to an OMB directive, and it concluded that the nonrespondents were not MCAR, and the amount of bias they generated was small.

The MCAR part of the study had four sub-studies. They found different demographic groups had different response rates; respondents had different demographic characteristics than the American population as a whole; respondents' demographic characteristics changed over time; and a mathematical model predicting response rates had parameters on many of its demographic variables that were statistically significant. All four sub-studies indicated that CE's nonrespondents were not MCAR. The most significant finding within the four sub-studies was that high-income households had lower response rates than low-income households, which is a concern because the CE surveys focus on expenditures, and income is correlated with expenditures.

The bias part of the study also had four sub-studies. They examined four different nonresponse weighting adjustment procedures to get an idea of the range of possible values that the "correct" nonresponse-adjusted expenditure estimates might have. All four procedures increased the Interview Survey's expenditure estimates by about one percent from its base-weighted (i.e., unadjusted) values, and all four procedures decreased the Diary Survey's expenditure estimates by about one percent from its base-weighted values. Thus, in both surveys CE's expenditure estimates would have been biased by about one percent if the nonresponse weighting adjustment procedure had been ignored. The consistency of all four sub-studies suggests that the results are robust.

Overall, the nonresponse bias study showed that CE's nonresponse weighting adjustment procedure is working well. The nonrespondents are not MCAR, but the amount of bias they generate is small, and the nonresponse weighting adjustment procedure is doing a good job compensating for the bias. The study provided a counterexample to the commonly held belief that if a survey's data are not missing completely at random, then its estimates are subject to nonresponse bias.

For more information on the calculation of response rates, see the memorandum from Sharon Krieger to David Swanson on "2024 Response Rates for the Interview and Diary Surveys" (Attachment V). For more information on the nonresponse bias studies, see "A Nonresponse Bias Study of the Consumer Expenditure Survey for the Ten-Year Period 2010-2019" (Attachment W).

2. Describe the procedures for the collection of information including:

- **Statistical methodology for stratification and sample selection;**
- **Estimation procedure;**
- **Degree of accuracy needed for the purpose described in the justification;**
- **Unusual problems requiring specialized sampling procedures; and**

- **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

Field representatives (FRs) from the U.S. Census Bureau, under contract with BLS, collect data from CE's sample households both in-person and by telephone. Historically, the preference has been to collect data in-person, but during the COVID pandemic interviewing by telephone became the primary way of collecting data. The reason was to safeguard the health of CE's field representatives and the people in the sample households, and to prevent the spread of the COVID virus. In 2021 approximately 30% of the Interview Survey's interviews were conducted in-person and 70% were conducted by telephone; and for the Diary Survey approximately 60% of the interviews were conducted in-person and 40% were conducted by telephone. This practice will continue for the foreseeable future. See Attachment H - Diary Survey Advance Letter Procedures and Diary Email Template for additional information on modifications resulting from COVID.

FRs visit or phone each household in the Interview Survey's sample every 3 months for 4 consecutive quarters to collect information on the expenditures the households made during the previous 3 months. After participating in the survey for 4 quarters, the household is dropped from the survey and replaced by another household. The households in the Interview Survey are on a rotating schedule with approximately one-fourth of the households in the sample being new to the survey each quarter.

Prior to the first visit, the sample households are sent an advance letter informing them that they were selected for the survey and asking them for their cooperation. For subsequent visits in the Interview Survey, the households are sent an advance letter reminding them that it has been 3 months since they last participated in the survey and asking them for their cooperation again. Field representatives enter the household's responses into a laptop computer.

For the Diary Survey, field representatives visit or telephone each household in the sample two times to collect information on the expenditures they make during a 2-week period.

On the first visit in the Diary Survey, the field representatives introduce themselves, explain the survey, and help the households choose between filling out the diaries on paper or online. Households choosing to fill out the diaries on paper are given two weekly diary forms, one for each week of the survey period, while households choosing to fill out the diaries online are given an electronic link to the diary and an Online Diary User Guide. Households are asked to record all the expenditures they make over the 2-week survey period. For the households choosing to fill out the diaries on paper, the field representatives make a second visit to pick up the completed diaries and thank them for participating in the survey. All the households are dropped from the survey after their 2-week period and replaced by other households.

After completing the second week of the Diary Survey and the fourth quarter of the Interview Survey, the households are sent a Thank You letter and a certificate of appreciation for their participation in the survey.

During the COVID pandemic, procedures were modified to allow field representatives to contact households by telephone in lieu of personal visits. Whichever way the households are initially contacted, the field representatives give them three options for filling out the diaries: mailing them a diary form that allows them to fill it out by hand; emailing them a link to a diary form that allows them to fill it out online; or calling them on the telephone and having them report their expenditures verbally.

Estimation

The primary statistic calculated by the CE survey is the average annual expenditure per consumer unit. It is a weighted average whose calculation follows well-established statistical principles. The final weight for each sample CU is the product of its base weight (which is the inverse of the CU's probability of selection); a nonresponse adjustment factor (to account for noninterviews); and a calibration adjustment factor (to post-stratify the weights to account for population undercoverage). A typical base weight for a CU in the Interview Survey is approximately 10,000, which means it represents 10,000 CUs in the population – itself plus 9,999 other CUs that were not selected for the survey. A typical final weight is approximately 30,000, which means it represents 30,000 CUs in the population – itself plus 29,999 other CUs that were not selected for the survey and/or did not participate in the survey.

For additional information on CE's sample design and estimation methodology, please see "Chapter 16, Consumer Expenditures and Income" in the *BLS Handbook of Methods* (Attachment X); see the memorandum from Adam Safir to Jennifer Epps on "CE sample redesign PSU Memo for Census.," July 21, 2023 (Attachment U); and Lauren Vermeer and Sharon Krieger's memo on "Response Rate Computations for the Consumer Expenditure Survey" (Attachment Y).

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

Keeping the Interview and Diary Survey's response rates as high as possible requires special efforts, particularly from the Census Bureau's field staff. The field staff are trained in a variety of techniques designed to persuade people to participate in the survey, such as "refusal conversion" techniques which are designed to change the minds of people who are hesitant to participate in the survey. If someone continues to refuse to participate in the survey, the field office sends a letter trying to persuade them to participate in the survey, and a senior interviewer or supervisory field representative is assigned to the case for more refusal conversion efforts. Of course, refusal conversion efforts take time and cost money, so regional office staff try to decide which cases to work on and how much effort to put into them based on cost-effectiveness considerations.

Special computer processing techniques are also used in the Interview Survey to reduce respondent burden, which in turn helps keep response rates up. For example, some data collected

in one interview are carried forward to subsequent interviews, such as data on household members and their personal characteristics, along with data on their properties, mortgages, vehicles, and insurance policies. Minimizing respondent burden, including reducing interview length, is important in the effort to keep response rates up.

When field staff still cannot convert noninterviews to interviews, the estimation process has a noninterview adjustment to account for them. As mentioned above, every CU in the sample has a base weight equal to the number of CUs in the population it represents. In this process the respondent CUs weights are increased to account for the nonrespondent CUs. The total sample of CUs (both respondents and nonrespondents) is partitioned into 192 subsets based on their region, CU size, income, and number of contact attempts.⁷ Then within each subset, the base weights of the respondents are increased by multiplying them by a factor. The factor is equal to the sum of the base weights for all CUs (both respondents and nonrespondents) divided by the sum of the base weights from just the respondent CUs. This makes the final weights of the respondents add up to the total number of CUs in the population.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

CE plans to perform the following test in the production sample:

DICE Bridge Test 2027

The Census Bureau is in the process of implementing a new system to develop, manage, administer, and process its surveys called “Data Ingest and Collection for the Enterprise (DICE).” Some of the key components of DICE include a new system for managing survey cases, a new system for capturing survey requirements, and new programs for Computer Assisted Personal Interviews (CAPI) and Computer Assisted Self-Administered Interviews (CASI). The Consumer Expenditure Surveys are currently scheduled to be implemented into DICE in 2027, with portions of DICE, such as its case management platform transitioning sooner. Although the CE requirements will not change and the Census Bureau intends to meet all BLS requirements with the new system, there is risk associated with implementing a new system – specifically, risks associated with diminished data quality and increased respondent burden. The risk to data quality may result in the need for a break in CE’s time-series which will impact end data users. The risk of increased respondent burden may lead to increased breakoffs and lower overall survey response impacting either the resulting sample size and variances (if we do

⁷ There are 4 regions of the country, 4 CU size classes, 3 income classes, and 4 contact attempt classes, making $192 = 4 \times 4 \times 3 \times 4$ subsets into which the sample is partitioned. For nonrespondents the number of people in the CU is obtained from data collected in previous interviews or from talking to their neighbors. For all CUs (both respondents and nonrespondents) their income is estimated from a publicly available database from the IRS which has the average household income by zipcode. In the nonresponse adjustment process every CU is assumed to have its zipcode’s average income value.

not supplement our sample), or costs if additional effort is required to obtain a minimum sample size. In order to provide a way to mitigate or account for these risks to the survey, the BLS will conduct a bridge test of the DICE systems, focusing on the CAPI instruments using half of its production sample from January 2027-June 2027 for the Diary survey and April 2027-September 2027 for the Interview Survey. The objectives of the test will be to (1) identify any insurmountable problems that would prevent the CE surveys from transitioning to DICE with the given schedule, (2) identify any needed changes to training, protocols, or instruments that were not identified prior to fielding, and (3) perform analysis on a selection of metrics and variables that can be attributable to the DICE transition and document findings so that end-users can be informed of the mode effects.

A nonsubstantive change request will be submitted for the DICE test, if needed.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

The sample design is a joint effort between BLS and the Census Bureau, with the two bureaus focusing on different aspects of the sample design. BLS focuses on the PSUs, and the Census Bureau focuses on the households. For more information on the sample design or the data collection effort, you may contact the following individuals.

| | | |
|------------------|-----------------------------|----------------|
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| Data Collection: | Laura Erhard (BLS) | (202) 691-6900 |
| | Jennifer Epps (Census) | (301) 763-5342 |