

Data Spotlight

September 19, 2023

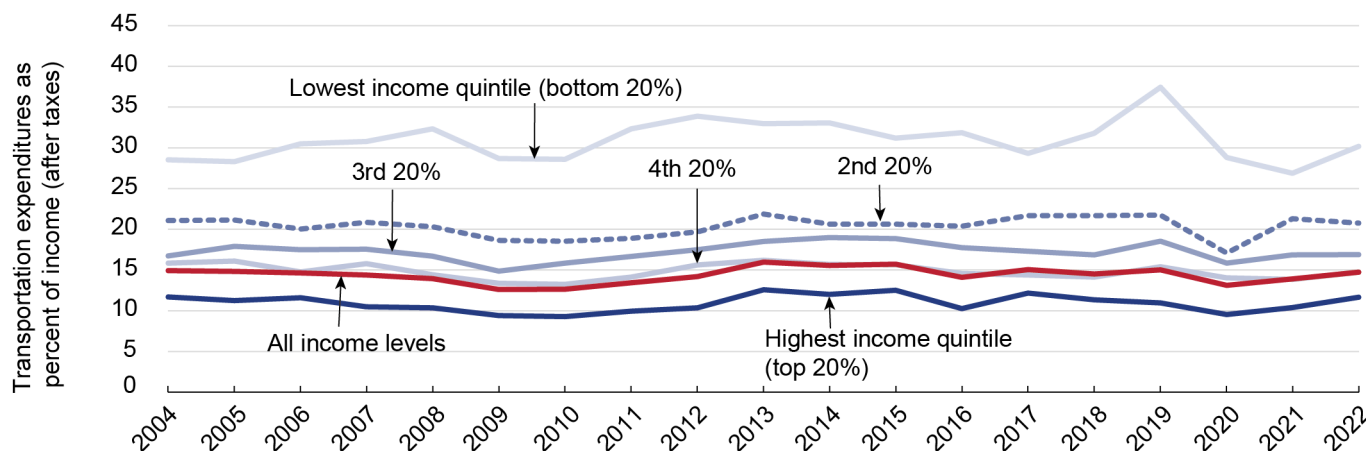
The Household Cost of Transportation: Is it Affordable?

TRANSPORTATION COST BURDEN FALLS THE HARDEST ON LOWEST INCOME FAMILIES; LOWER INCOME HOUSEHOLDS SPENT 30% OF THEIR AFTER-TAX INCOME ON TRANSPORTATION IN 2022.

Transportation cost burden measures the percent of income a household spends on transportation. The cost of transportation, as well as the modes of transportation available and used, impact the total dollars that households spend on transportation. Transportation cost is a measure of transportation affordability. This analysis looks private and public transportation spending as a share of after-tax income, which best represents what a household has available to spend.

In 2022, transportation was the second largest household expenditure behind housing, accounting for 15% of average household spending. The cost burden of transportation fell hardest on households in the lowest fifth by household income. Income quintiles use household income to divide households into five equal groups. The income range for each quintile is specific to the distribution of household income in each year. In 2022, the lowest income household had an annual before-tax income of less than roughly \$25,000.¹ In 2022, the household making less than \$25,000 (the lowest income quintile) spent 30% of their after-tax income on transportation while those in the highest fifth by household income spent 12% (Figure 1).

Figure 1. Percent of After-tax Income Spent on Transportation by Income Quintile, 2004–2022



Source: U.S. Department of Transportation, Bureau of Transportation Statistics calculations from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey, Quintiles of Income Before Taxes table, available at <https://www.bls.gov/cex> as of September 2023.

Note: In 2022, average after-tax income by income quintile: \$16,337 (lowest income quintile), \$39,300 (2nd income quintile), \$63,676 (3rd income quintile), \$99,891 (fourth income quintile), and \$196,794 (highest income quintile).

Data spotlights represent data and statistics from a specific period of time, and do not reflect ongoing data collection. As individual spotlights are static stories, they are not subject to the Bureau of Transportation Statistics (BTS) web standards and may not be updated after their publication date. Please contact BTS to request updated information.

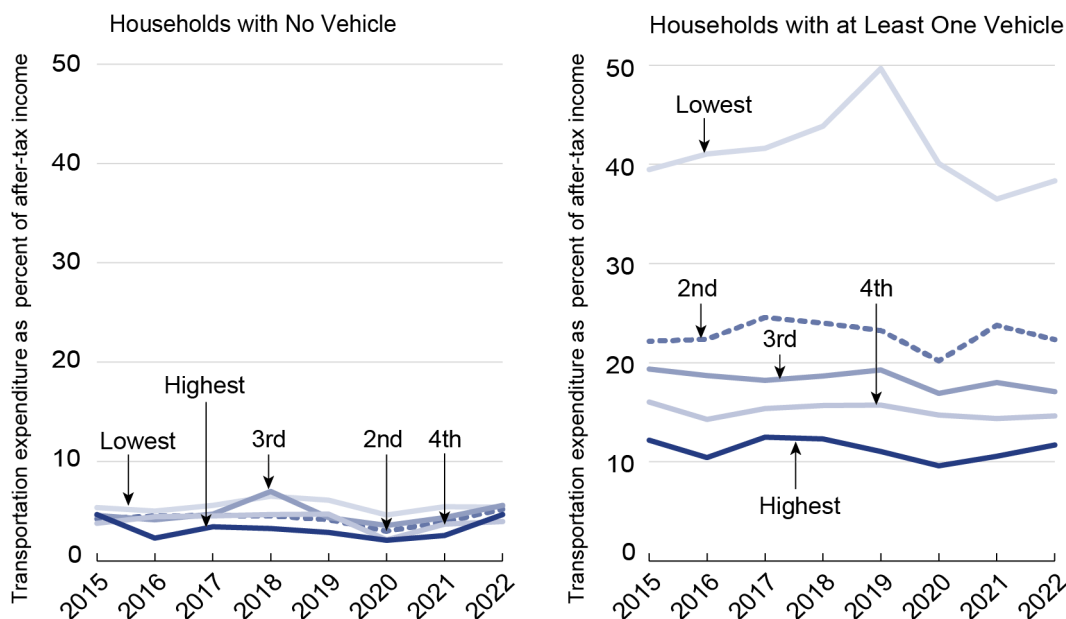
For more information and further breakouts of household spending on transportation, see the Bureau of Transportation Statistics' (BTS) website on transportation cost burden [Spending on Transportation by Income Quintile](#).

HOUSEHOLDS WHO OWN OR LEASE A VEHICLE SPEND MORE OF THEIR INCOME ON TRANSPORTATION AND THAT TREND IS MOST PRONOUNCED FOR LOW-INCOME HOUSEHOLDS.

With lower vehicle ownership, households in the lowest fifth by household income make fewer trips by personal vehicle. In 2022, those households owned the fewest number of vehicles on average (1.0 vehicle per household compared to 2.6 owned by households with an annual before-tax income over roughly \$245,000) and a larger share did not own or lease a vehicle (30% of low-income households did not own or lease a vehicle in 2022 compared to only 3% of households with a before-tax income over roughly \$245,000).

Transportation expenditures for households with at least one vehicle are much higher than for households with no vehicles. In 2022, households with income lower than \$25,000 who owned at least one vehicle spent 38% of their after-tax income on transportation; while households with the same income who did not own or lease a vehicle spent 5% of their after-tax income on transportation (Figure 2). This trend was seen across household income groups.

Figure 2. Percent of After-tax Income Spent on Transportation Expenditure by Households with No Vehicle vs. Households with One or More Vehicles by Income Quintile



Source: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey microdata, available at <https://www.bls.gov/cex> as of September 2023.

Note: No vehicle means households do not own or lease a vehicle.

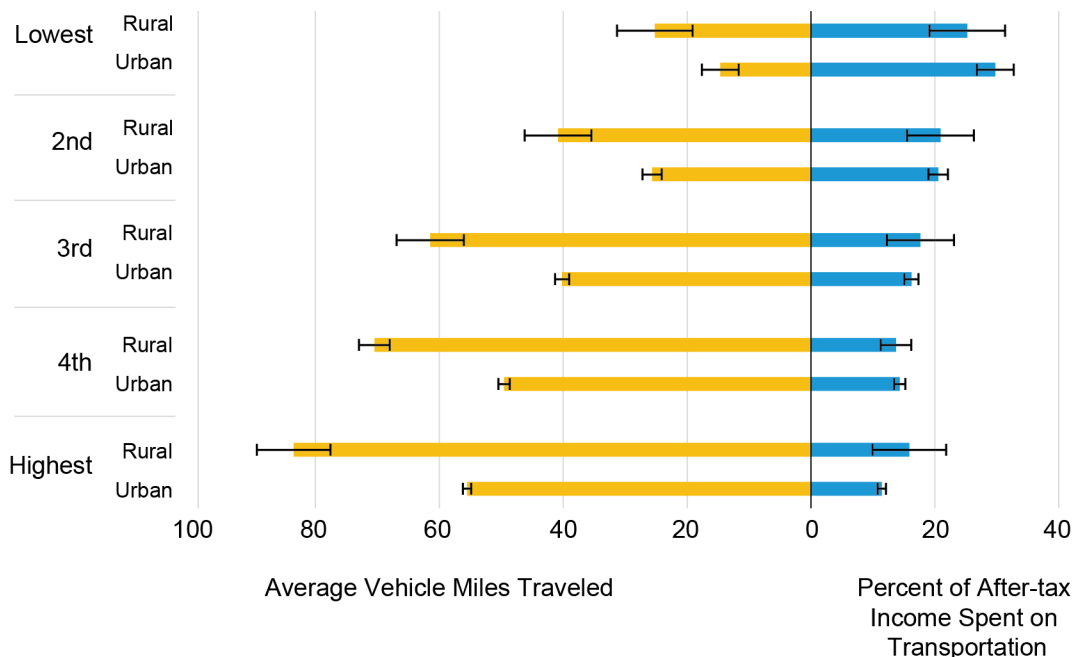
For more information and further breakouts of household spending on transportation and vehicles owned, see the BTS' website on transportation cost burden, [Transportation Spending by Household Income and Vehicles Available](#).

RURAL HOUSEHOLDS SPEND MORE ON TRANSPORTATION DUE TO LONGER DISTANCES TRAVELED BUT THE DIFFERENCE IS NOT STATISTICALLY DIFFERENT FROM URBAN HOUSEHOLDS.

Differences in costs due to density can be seen through spending differences between urban and rural areas. In all groups by household income except for the lowest and the second highest, households in rural areas have a higher transportation cost burden than households in urban areas (Figure 3). This follows from greater daily vehicle and person miles traveled in rural areas than in urban areas, despite nearly identical daily vehicle

and person trips. In other words, rural households spend more due to the longer distances traveled. The differences in the share of after-tax income spent on transportation, are not statistically significant in any of the household income groups but the average vehicle miles traveled is statistically different between rural and urban households for all income groups, which implies the longer distances traveled do not translate into statistically significant larger transportation costs.

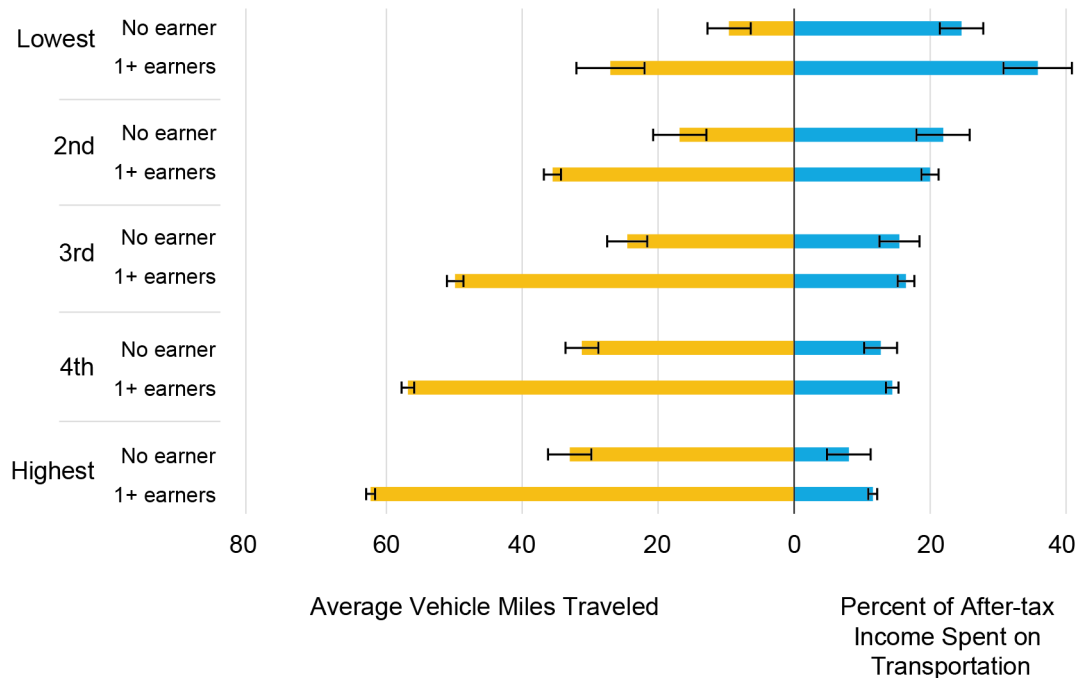
Figure 3. Percent of After-tax Income Spent on Transportation (2022) and Average Daily Vehicle Miles Traveled (2017) by Urban vs. Rural



Source: Spending on transportation: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey microdata, available at <https://www.bls.gov/cex>; Daily travel: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from National Household Travel Survey 2017, available at <https://nhts.ornl.gov/downloads>
 Note: Average daily travel is by household. Percent of income spent on transportation is by consumer unit.
 See <https://data.bts.gov/stories/s/bpj8-8amm> for household consumer unit definitions.

In the lowest income group, households with an earner² spent 36% of their after-tax income on transportation, whereas households with no earner spent a statistically significant, smaller share (25% of their after-tax income) on transportation. This is due to making fewer trips and traveling fewer miles per day than households with an earner. This trend is seen in all household income groups except for the second lowest group, but it is only statistically significant in the lowest and highest income groups.

Figure 4. Percent of After-tax Income Spent on Transportation (2021) and Average Daily Vehicle Miles Traveled (2017) by Households with Earners



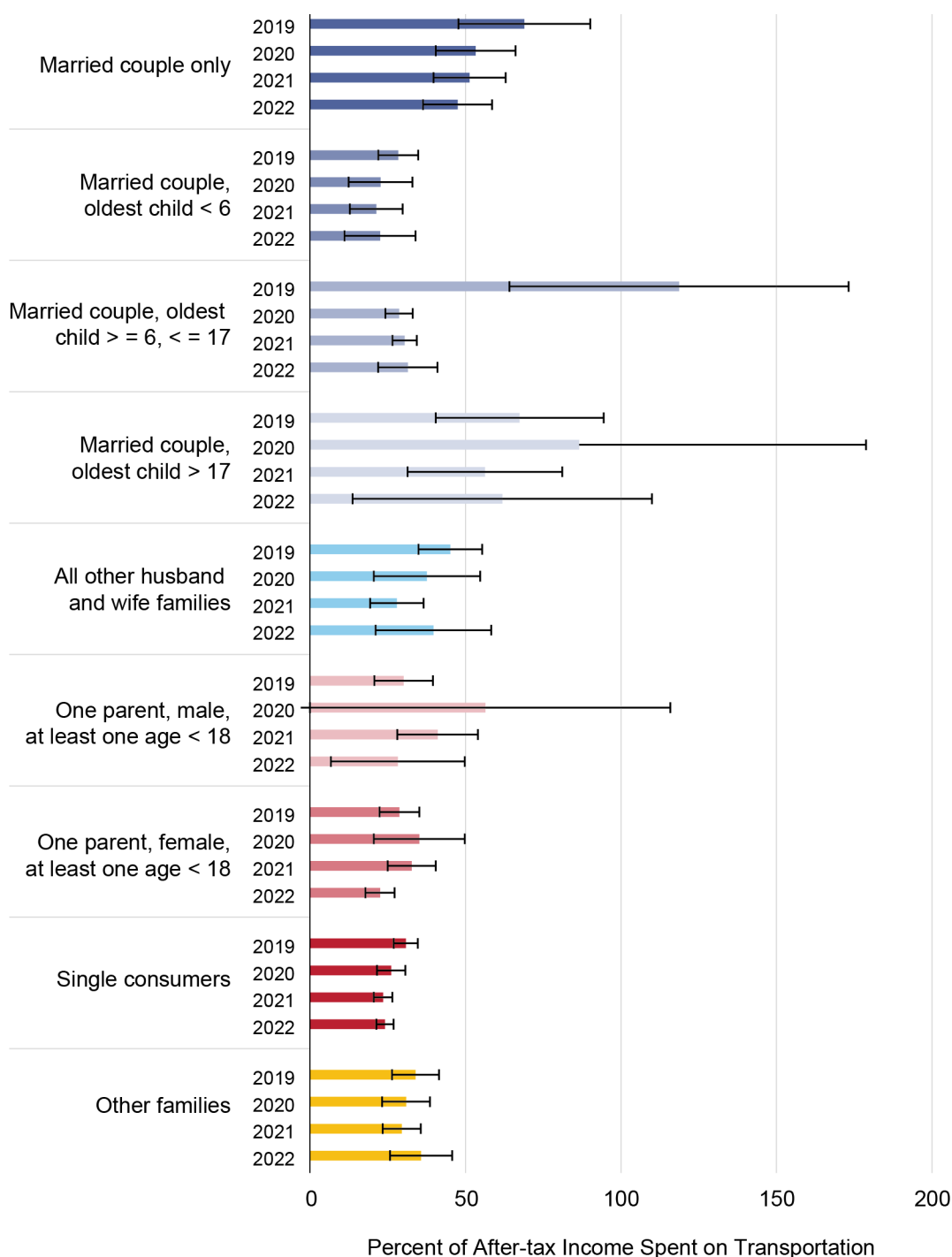
Source: Spending on transportation: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey microdata, available at <https://www.bls.gov/cex>; Daily travel: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from National Household Travel Survey 2017, available at <https://nhts.ornl.gov/downloads>. Note: Average daily travel is by household. Percent of income spent on transportation is by consumer unit. See <https://data.bts.gov/stories/s/bpj8-8amm> for household consumer unit definitions.

See [Percent of Income Spent on Transportation](#) for daily travel and percent of income spent on transportation for additional household types.

MANY HOUSEHOLD TYPES EXPERIENCED A DECREASE IN THEIR TRANSPORTATION COST BURDEN FROM 2019 TO 2022; THE LARGEST DROP WAS FOR MARRIED FAMILIES IN THE LOWEST HOUSEHOLD INCOME GROUP WITH THEIR OLDEST CHILD BETWEEN THE AGES OF 6 AND 17.

When looking at the data by family type, within the lowest household income group, single person households and married couple households with a child between 6 and 17 years old saw a statistically significant decrease in their after-tax transportation burden from 2019 to 2022 (Figure 5). Married couples with children between 6 and 17 years old saw the greatest drop in that time period falling 87 +/- 34 percentage points.

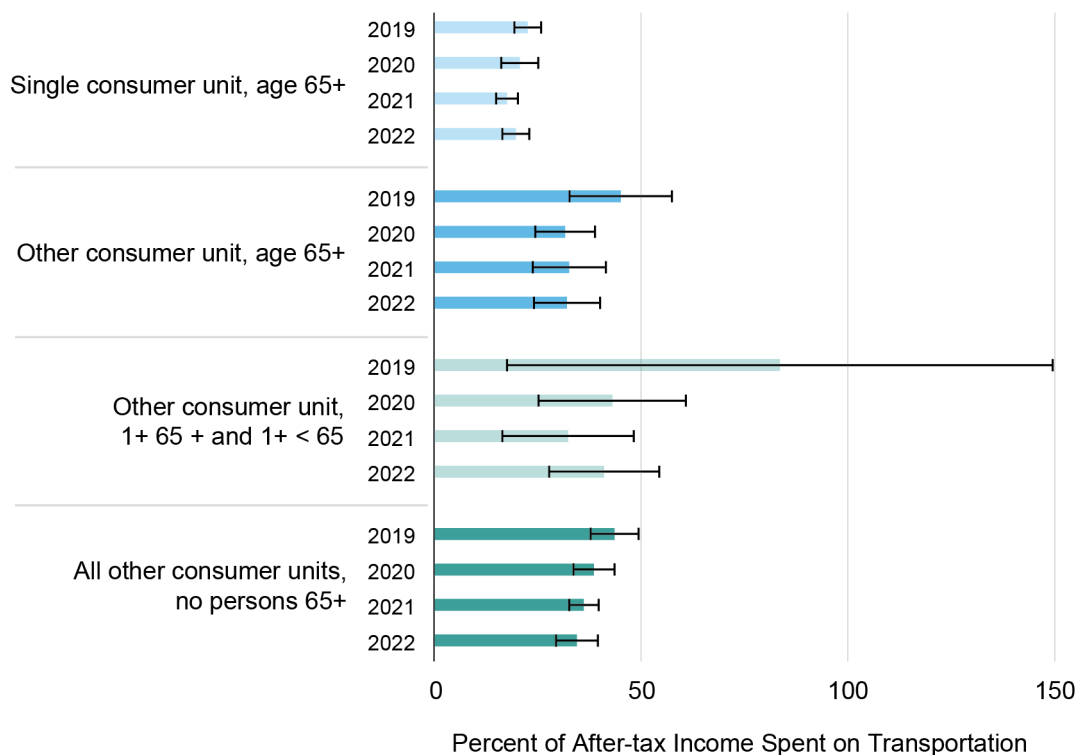
Figure 5. Share of Income Spent on Transportation in Past Four Years by Family Type in the Lowest Income Quintile



Source: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey microdata, available at www.bls.gov/cex as of September 2023.

Households headed by a person retired from work have lower transportation cost burdens than households headed by a working person. In all but the second lowest income group, single person households, where the head of household is 65 or older, experienced statistically significant lower after-tax transportation cost burden and traveled less per day compared to other types of households that do not include a person 65 or older. In the lowest income group, only households with no persons 65 years and over experienced a statistically significant change in their after-tax transportation cost burden from 2019 to 2022 (9 percentage point decline) (Figure 6).

Figure 6. Share of Income Spent on Transportation in Past Four Years by Households with 65+ in the Lowest Income Quintile



Source: Calculations by U.S. Department of Transportation, Bureau of Transportation Statistics from U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey microdata, available at www.bls.gov/cex as of September 2023.

For more information on the composition of household income groups by select characteristics, percent of income spent on transportation and average daily travel categories by select characteristics, and change in share of income spent on transportation by select characteristics, see the Bureau of Transportation Statistic's website on transportation cost burden page, [Transportation Expenditures by Selected Household Characteristics and Income Quintile](#).

¹Less than \$25,807.

²BLS defines an earner in their Consumer Expenditure Survey, as a consumer unit, 14 years or older, who reported having worked at least 1 week during the 12 months prior to the interview date.