

Assessing Nonresponse Bias in the Consumer Price Index Surveys

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Abstract

The Consumer Price Index (CPI) estimates the change in prices over time of the goods and services U.S. consumers buy for day-to-day living. Prior to the COVID-19 pandemic, the outlet and quote repricing response rates for the CPI's Commodities and Services (C&S) Survey were about 90 percent and 80 percent, respectively, and the unit repricing response rate for the CPI Housing Survey were about 70 percent. As brick-and-mortar stores shut their doors and the U.S. adopted social distancing to reduce the risk of spreading COVID-19 in 2020, the response rates for both surveys steadily declined. In December 2023, the outlet and quote repricing response rates for the C&S Survey were still only 80 percent and 70 percent, respectively, and the unit response rate for the Housing Survey was about 68 percent. To meet the Office of Management and Budget (OMB) standards and guidelines for statistical surveys regarding response rates, research was conducted using a three-phase approach to assess the effect of nonresponse bias on the C&S and Housing Indexes from January 2018 – December 2023. In the first phase of the study, sampling unit characteristics contributing to nonresponse at sample initiation were identified using Random Forest for the C&S Survey, and nonresponse adjustment cells were created using decision trees. In the second phase of the study, sampling unit characteristics contributing to nonresponse at repricing were investigated using Random Forests, Random Survival Forests, and Generalized Linear Mixed Model Trees for the Housing Survey. In the final phase of the study, counterfactual indexes were calculated to determine whether the level of nonresponse error in the price change estimates was significant by imputing price relatives for nonresponding units using models developed based on the results of the previous two phases.

KEYWORDS: Nonresponse Bias, Random Forest, Decision Trees, Random Survival Forest, Generalized Linear Mixed Model Trees

1. Introduction

The Office of Management and Budget (2006) published a set of “Standards and Guidelines for Statistical Surveys” which mandates that any federal survey with an establishment response rate below 80 percent or an item response rate below 70 percent (Guideline 3.2.10) conduct an analysis of nonresponse bias. Within the analysis, the agency must determine which sampling unit characteristics contribute to nonresponse and then estimate the degree of nonresponse error in its published data. Prior to the COVID-19 pandemic, the outlet and quote repricing response rates for the CPI's Commodities and Services (C&S) Survey were about 90 percent and 80 percent, respectively, and the unit repricing response rate for the CPI Housing Survey was continuously above 70 percent. As brick-and-mortar stores shut their doors, and the U.S. adopted social distancing to reduce the risk of spreading COVID-19 in 2020, the response rates for both surveys steadily declined. In December 2023, the outlet and quote repricing response rates for the C&S Survey were still only 80 percent and 70 percent, respectively, and the unit response rate for the Housing Survey was about 68 percent.

To meet the requirements outlined by OMB for statistical surveys regarding response rates, the Bureau of Labor Statistics (BLS) launched a Nonresponse Bias (NRB) study in January 2025. The study consisted of three phases. The first phase of the study identified sampling unit characteristics that contribute to nonresponse at initiation in the C&S Survey. The second phase of the study investigated which sampling

unit characteristics contribute to repricing nonresponse in the Housing Survey. In the third phase of the study, counterfactual indexes were calculated using models based on the results of the previous two phases of the study to determine the level of nonresponse error in the CPI-U one-month and twelve-month price changes.

This paper discusses the results of the three individual phases of the CPI NRB Study. Section 2 (Sampling and Index Estimation in CPI) provides brief overviews of the CPI sample design for its C&S and Housing Surveys and index estimation process. Sections 3 (Sampling Unit Characteristics that Contribute to Nonresponse in the C&S Survey) and 4 (Sampling Unit Characteristics that Contribute to Nonresponse in the Housing Survey) describe the methodology and results of the first two phases of the study. Section 5 (Estimating Nonresponse Bias in the CPI) discusses the results of the third phase of the study which assessed the level of bias in the CPI-U's one-month and twelve-month price changes due to survey nonresponse.

2. Sampling and Index Estimation in CPI

2.1 Geographic Area Sample

The CPI is calculated from a sample of price quotes and housing units, which are the ultimate outcome of several interrelated probability samples. First, the BLS selects a sample of geographic areas, which are the primary sampling units (PSUs) for the CPI (U.S. Bureau of Labor Statistics, 2026). The BLS traditionally updates its CPI area sample once every ten years. The area definitions for the PSUs are currently based on the 2013 Office of Management and Budget's (OMB) Core Based Statistical Areas (CBSAs). The BLS first classifies each PSU into one of the nine Census divisions and by its size. A PSU with a population greater than 2.5 million is a self-representing PSU, while a PSU with population less than 2.5 million is a non-self-representing PSU. Self-representing PSUs consist of only metropolitan CBSAs, and non-self-representing PSUs can be either metropolitan or micropolitan CBSAs.

After each PSU is mapped to its Census division and identified as a self-representing or non-self-representing area, the BLS stratifies the PSUs in each division-class size into strata of similar PSUs. Self-representing PSUs are placed in a stratum by themselves; non-self-representing PSUs are stratified based on geographic variables correlated with price change and expenditure level. A program selects one PSU per stratum using controlled selection to ensure that the selected PSUs are well-distributed across states and to maximize the number of old PSUs selected in the new area sample. Currently, the area sample for the CPI has 21 self-representing areas, two non-self-representing PSUs selected with certainty (i.e., Honolulu, HI and Anchorage, AK), and 52 non-self-representing PSUs selected with probability that make up the CPI's 32 index areas.

2.2 Commodities and Services Sample

Within each sampled PSU, the BLS selects a sample of outlets where consumers shop using the data collected via the Consumer Expenditure (CE) Survey. The CE Survey consists of two surveys: the Interview Survey and the Diary Survey. The U.S. Bureau of the Census conducts both the Diary and Interview surveys for the BLS. The Quarterly Interview Survey collects data on large recurring expenditures such as rent and utilities, and the Diary Survey collects data on small, frequently purchased items such as food and clothing. Together the data from the two surveys cover the complete range of consumers' expenditures. The reported outlets form the frame of outlets that the BLS uses to select its sample for the CPI. The BLS selects its sample of outlets from the frame independently for each PSU and narrowly defined item category known as a rotation category using a systematic probability proportional to size (PPS) sample design, where each outlet's measure of size (MOS) is its reported average daily expenditure in the item category.

The outlet sample is then merged to an independent sample of entry level items (ELIs) that consumers buy. Specifically, the BLS selects a systematic PPS sample of ELIs for each PSU from the expenditure data

collected by the CE survey, which is aggregated by item stratum and region. An ELI's MOS is its expenditure total for the region divided by the region's total expenditure value for the item stratum. The CPI outlet sample and ELI sample is updated each year for 25 percent of the item strata in each PSU.

Finally, BLS data collectors visit the sampled outlets and select individual items for each sampled ELI to be priced each month (or every other month) through a multistage probability sampling technique known as disaggregation. The selection of a single unique item is referred to as a price quote.

2.3 Housing Sample

For the CPI housing sample, BLS partitions the CPI Index PSUs into neighborhoods called segments which are made up of one (in most cases) or more U.S. Census block groups. Using probability proportional to size sampling, the BLS selects a sample of segments in each Index PSU where a segment's measure of size is its total rent (i.e., the total rent of the renters in the segment plus the estimated owners' equivalent rents). To calculate the total rent of a segment, the U.S. Census Bureau provides the BLS with the number of renters and owners by block group and the median rents of the block groups. The total rent of a block group is equal to the median rent multiplied by the number of renters and total owners' equivalent rent is estimated as the median rent multiplied by the number of owners. About five renter-occupied housing units are selected within each sampled segment on average to provide rent data for both the Rent (SEHA01) and Owners' Equivalent Rent (SEHC01) Indexes of the CPI.

Once a data collector successfully initiates a housing unit into the survey, BLS collects rent data on that unit twice a year for the next six years. Namely, there are six housing panels that provide rent data for the CPI. Housing units from Panel 1 provide rent data in January and July each year; then housing units from Panel 2 provide data in February and August each year, and so on as illustrated in Figure 1. When a housing unit is on panel, the BLS takes the sixth root of its six-month rent change to use in updating the Rent and Owners' Equivalent Rent Indexes.

The BLS continuously updates its housing sample by replacing one-sixth of its housing units every year using the latest available data from the U.S. Census Bureau's American Community Survey (ACS).

Figure 1. Pricing Schedule for Housing Units by Panel

Panel	1	2	3	4	5	6
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

2.4 Index Estimation

Each month, the BLS calculates price relatives for all monthly and on-cycle bi-monthly elementary indexes for the CPI. An elementary index is an item stratum and index area combination. There are 243 basic item strata and 32 index areas in the CPI. Thus, the CPI consists of 7,776 elementary indexes (243×32).

Most elementary indexes use an expenditure-share-weighted geometric average $PRX_{t,t-1}^G$ for price relative calculation; other elementary indexes use the Laspeyres formula average $PRX_{t,t-1}^L$ (Bureau of Labor Statistics, 2025). The formulas for $PRX_{t,t-1}^G$ and $PRX_{t,t-1}^L$ are as follows for each index area a and item stratum i combination:

$$PRX_{t,t-1}^G = \prod_{j \in a,i} \left(\frac{P_{j,t}}{P_{j,t-1}} \right)^{\frac{W_{j,b}}{\sum_{k \in a,i} W_{k,b}}} \quad (1)$$

$$PRX_{t,t-1}^L = \frac{\sum_{j \in a,i} \left(\frac{W_{j,b}}{P_{j,b}} \right) P_{j,t}}{\sum_{j \in a,i} \left(\frac{W_{j,b}}{P_{j,b}} \right) P_{j,t-1}} \quad (2)$$

Where:

$P_{j,t}$ = the price of the j th observed item in month t for area-item combination a, i ;

$P_{j,t-1}$ = the price of the j th observed item in month $t - 1$ for area-item combination a, i ;

$P_{j,b}$ = item j 's price in base period b ; and

$W_{j,b}$ = item j 's weight in base period b .

The base period for most items is currently December 2024 but can differ by item. The base period is the midpoint of the collection periods when the U.S. Census Bureau compiled the expenditure data for the CE Survey, which the BLS uses to calculate item basic weights in the CPI. BLS updates an item's basic weight when it rotates the item's sample.

An elementary index value for area a and item stratum i is calculated by multiplying the previous month's index ($IX_{a,i,t-1}$) by the price relative for area a and item stratum i in month t ($PRX_{a,i,t}$):

$$IX_{a,i,t} = IX_{a,i,t-1} \times PRX_{a,i,t} \quad (3)$$

The reference base month of an index is different from the base period of an item. A reference base month of an index is the period when an index begins and is equal to 100. For example, the index for area a and item stratum i in its base month where $t = 0$ is 100:

$$IX_{a,i,t=0} = 100 \quad (4)$$

The reference base month of most indexes is between 1982 and 1984.

The CPI item structure has four levels of classification. That is, the CPI's 243 elementary indexes feed into 70 expenditure classes (ECs); the 70 ECs make up eight major groups (MGs); and the eight major groups make up the entire CPI. To calculate the aggregated indexes, the elementary indexes are multiplied by an aggregation weight derived from tabulated CE data; the product is called a cost weight ($CW_{a,i,t}$). These cost weights are then aggregated to calculate the indexes for the three levels above the elementary index level. For example, equation five gives the formula to calculate an index for a basic item i for the U.S. City Average at time t :

$$IX_{U.S. \text{ City Average}, i, t} = IX_{U.S. \text{ City Average}, i, t-1} \times \frac{\sum_{a \in U.S. \text{ City Average}, i} CW_{a, i, t}}{\sum_{a \in U.S. \text{ City Average}, i} CW_{a, i, t-1}} \quad (5)$$

Where:

$IX_{All \text{ U.S.}, i, t}$ = Aggregate Index for All U.S. Cities for item i at time t ;

$IX_{All \text{ U.S.}, i, t-1}$ = Aggregate Index for All U.S. Cities for item i at time $t - 1$

$CW_{a, i, t}$ = Cost weight CW for area a for item stratum i at time t ; and

$CW_{a, i, t-1}$ = Cost weight CW for area a for item stratum i at time $t - 1$.

BLS also publishes indexes for special aggregates of the CPI. Special aggregates are index series which measure inflation for groups of basic items that are not grouped by expenditure class or major group [such as the Food at Home Index series (SAF1)] or are aggregate index series that exclude certain items [such as the All Items less Food and Energy Index (SA0L1E)].

3. Data and Sampling Unit Characteristics that Contribute to Nonresponse in the C&S Survey

3.1 Sample Frames for C&S Survey

The first phase of the CPI NRB Study analyzed nonresponse at initiation for the C&S Survey. The analysis looked at the outlet nonresponse rates of the ten C&S samples initiated from February 2018 – August 2023. The outlet responses for the item strata that BLS currently estimates from alternative data were not included in the analysis¹. Table 1 below provides the outlet initiation nonresponse rates of the ten samples in the analysis. BLS excludes outlets that were unavailable, out-of-business, located outside of the PSU, and out-of-scope at initiation from the CPI response rate. The overall unweighted nonresponse rate of the ten samples was 26.53 percent.

Table 1. Outlet Initiation Response Rates for C&S Samples FEB2018 – AUG2023

Sample	Initiation Period	11 - Available/ Response	18 - Awaiting Central Office Clearance	19 - Temp. Unavailable	21 - Refusal	23 – Out-of-Season	Total	Response Rate	Nonresponse Rate
FEB2018	201802-201807	3,131	97	526	102	0	3,856	81.20%	18.80%
AUG2018	201808-201901	2,901	79	563	81	1	3,625	80.03%	19.97%
FEB2019	201902-201907	3,251	94	593	95	1	4,034	80.59%	19.41%
AUG2019	201908-202001	3,168	108	676	82	1	4,035	78.51%	21.49%
FEB2020	202002-202101	4,058	119	1,932	45	3	6,157	65.91%	34.09%
FEB2021	202102-202107	4,607	171	1,929	40	2	6,749	68.26%	31.74%
AUG2021	202108-202201	3,655	97	873	19	3	4,647	78.65%	21.35%
FEB2022	202202-202207	3,220	165	1,060	63	1	4,509	71.41%	28.59%
FEB2023	202302-202307	3,294	291	956	55	2	4,598	71.64%	28.36%
AUG2023	202308-202401	2,715	267	1,019	58	7	4,066	66.77%	33.23%
ALL		34,000	1,415	10,127	640	21	46,276	73.47%	26.53%

¹ Indexes calculated from alternative data are: New Vehicles, Leased Vehicles, Gasoline, and Physicians' Services.

3.2 Variables of Interest for C&S Survey

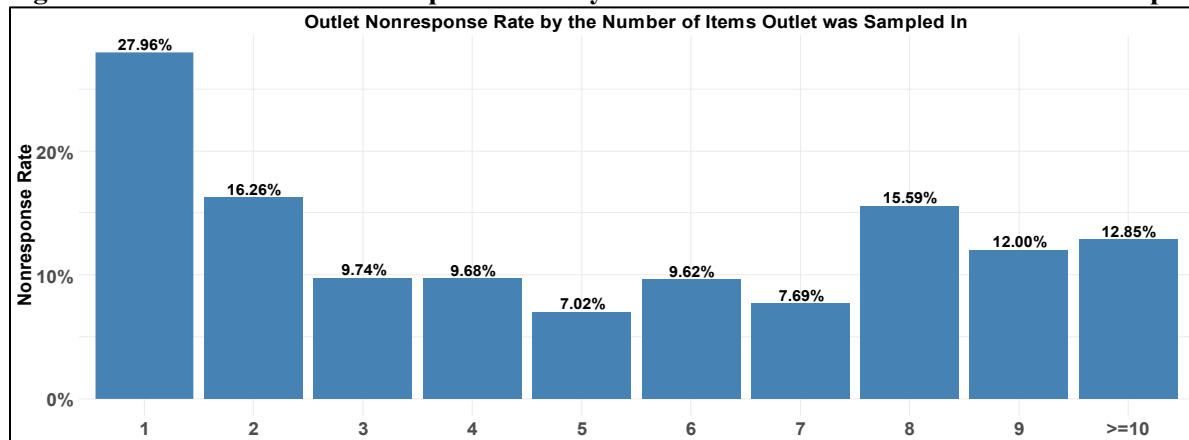
The first step of the NRB study was to identify variables available for respondents and nonrespondents to determine whether nonresponding outlets at initiation are missing at random. Not missing at random means there might be systematic differences between the missing and observed values, but the differences can be explained by other observed variables (Bhaskaran 2014). One common method of determining whether the data are missing at random is to examine differences between respondents and nonrespondents on variables that are available for both groups (Chopova et al., 2008).

Eleven sampling unit characteristics were evaluated to see if they contribute to nonresponse at initiation. The sampling unit characteristics assessed included: outlets sampled in more than one item stratum, number of quotes requested from an outlet, BLS regional office, state, retail channel, seasonal items requested, difficulty level of initiating quotes requested, difficulty level of pricing quotes requested, employment level, average daily expenditures of the outlets, and item expenditure class. The selected variables were available for both respondents and nonrespondents in all the samples except for employment level.

Outlets Sampled in More than One Item Stratum

Outlets sampled in more than one item stratum typically have higher expenditures than outlets sampled in only one item stratum. Logically, one would expect a negative correlation to exist between the outlet nonresponse rate and the number of item strata an outlet was sampled in. Figure 2 below provides the outlet initiation nonresponse rate of the C&S samples by the number of item strata the BLS sampled an outlet in. As expected, the outlet nonresponse rate decreases as the number of item strata an outlet was sampled in increases until five item strata. The BLS sampled about 90.09 percent of the outlets from the ten analysis samples in only one item stratum and about 4.92 percent of the outlets in two item strata. For this reason, the number of item strata an outlet was sampled in was divided into two categories for the remainder of the study: outlets sampled in one item stratum and outlets sampled in more than one item stratum.

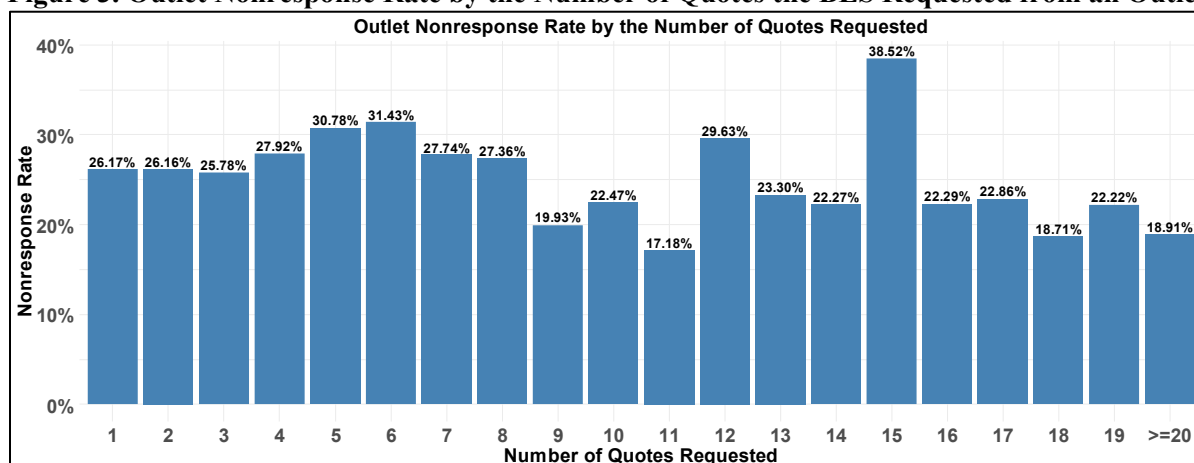
Figure 2. Outlet Initiation Nonresponse Rate by the Number of Item Strata Outlet was Sampled In



Number of Quotes Requested

The number of quotes the BLS requests from an outlet is another indication of an outlet's size. That is, the BLS selects outlets within item categories using PPS sampling where the measure of size of an outlet is its average daily expenditure within the item category. The BLS is likely to select large outlets in multiple item strata and request multiple quotes from those outlets. For that reason, one would expect to see a negative correlation between the number of quotes requested and the outlet nonresponse rate. However, no such relationship was observed during the initial analysis. Figure 3 below illustrates the outlet nonresponse rate by the number of quotes the BLS requested from an outlet at initiation.

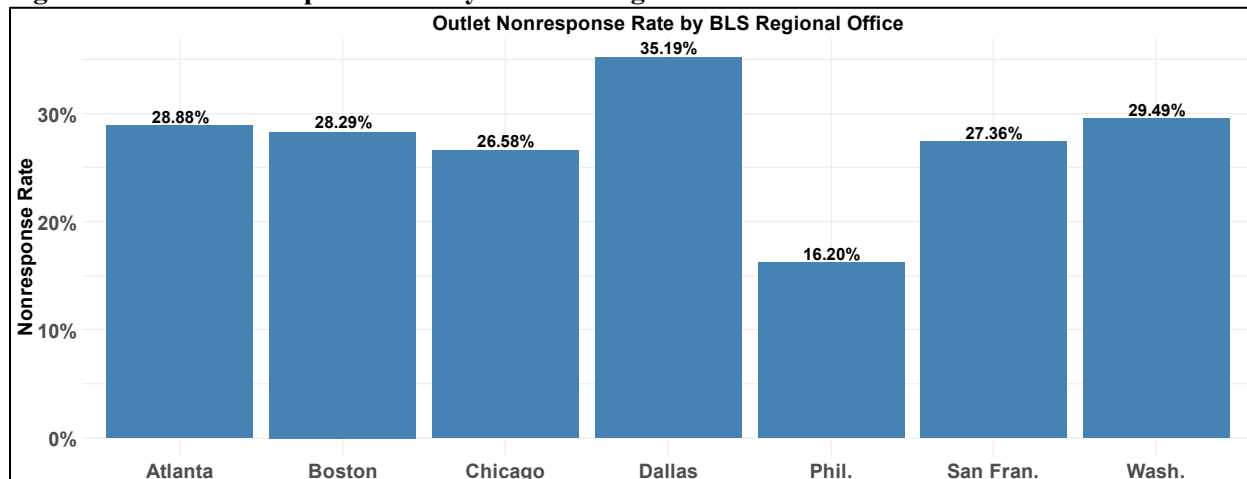
Figure 3. Outlet Nonresponse Rate by the Number of Quotes the BLS Requested from an Outlet



BLS Regional Office

A relationship between the outlet nonresponse rate and BLS regional office was also suspected. Specifically, Washington and Philadelphia have higher concentrations of items that are not directly collected from outlet representatives compared to the other five regional offices. For this reason, Washington and Philadelphia were expected to have lower nonresponse rates than the other five regional offices. Figure 4 depicts the outlet nonresponse rates of the ten analysis samples by BLS regional office. While Philadelphia does have a lower nonresponse rate than the other regional offices, Washington does not.

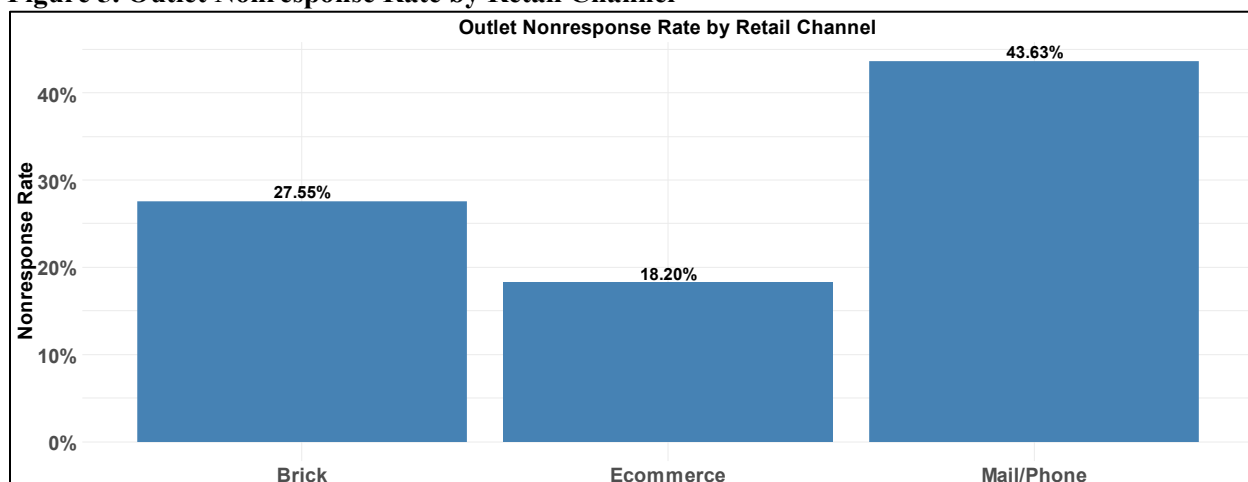
Figure 4. Outlet Nonresponse Rate by the BLS Regional Office



Retail Channel

Retail channel was also proposed as a variable that might contribute to nonresponse at initiation. Retail channel is how an outlet sells its products to its customers. For example, outlets may sell their products via brick-and-mortar stores, e-commerce websites, or mail/telephone ordering. Figure 5 below provides the outlet nonresponse rate of the ten analysis samples by retail channel. From the bar graph below, e-commerce outlets have the lowest nonresponse rate (18.20 percent) followed by brick-and-mortar outlets (27.55 percent) and finally mail/telephone ordering outlets (43.63 percent). Furthermore, about 80.61 percent of the outlets from the samples were brick-and-mortar stores, 16.27 percent were ecommerce, and about 3.12 percent were mail/telephone ordering outlets.

Figure 5. Outlet Nonresponse Rate by Retail Channel

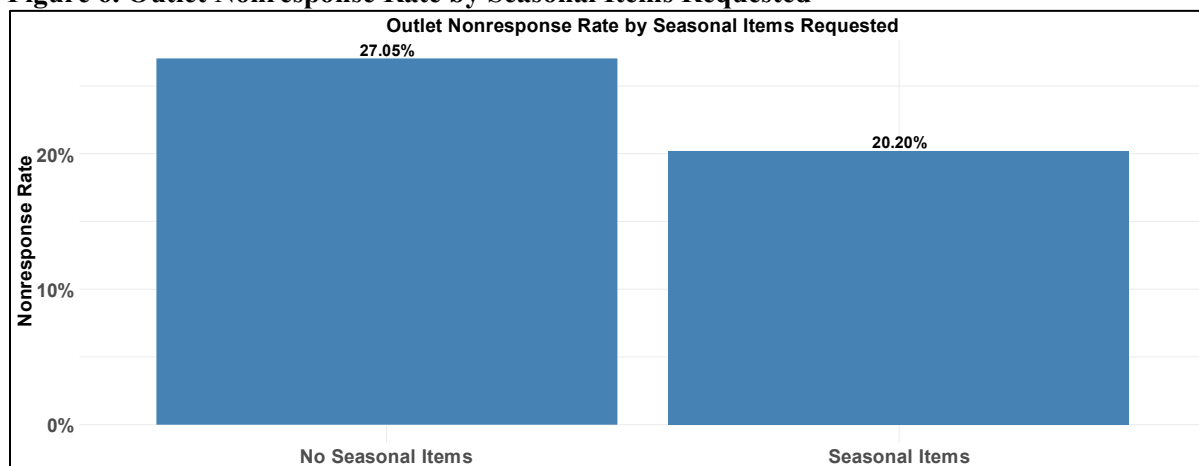


Seasonal Items Requested

An item in the CPI is deemed a seasonal item when the majority of unique items in the item category contain items that are not available year-round. For example, women's footwear would be an example of a seasonal item. BLS assigns seasonal items in CPI to a selling season. For example, most seasonal items are assigned either to the Spring/Summer selling season or the Fall/Winter selling season. For women's footwear, sandals have a Spring/Summer selling season, and boots have a Fall/Winter selling season. Seasonal items are currently limited to apparel and recreation items.

When the BLS samples an outlet for a seasonal item, BLS data collectors initiate two quotes for that item. Thus, the workload doubles for these types of quotes. Since seasonal quotes require more work to initiate, one might expect the nonresponse rate for outlets with seasonal items to be greater than the nonresponse rate of outlets without seasonal items. However, the initial analysis of the ten samples revealed the opposite: the nonresponse rate of outlets with seasonal items (20.20 percent) was less than the nonresponse rate of outlets without seasonal items (27.05 percent). Furthermore, only about 7.64 percent of outlets from the ten analysis samples had seasonal quotes.

Figure 6. Outlet Nonresponse Rate by Seasonal Items Requested

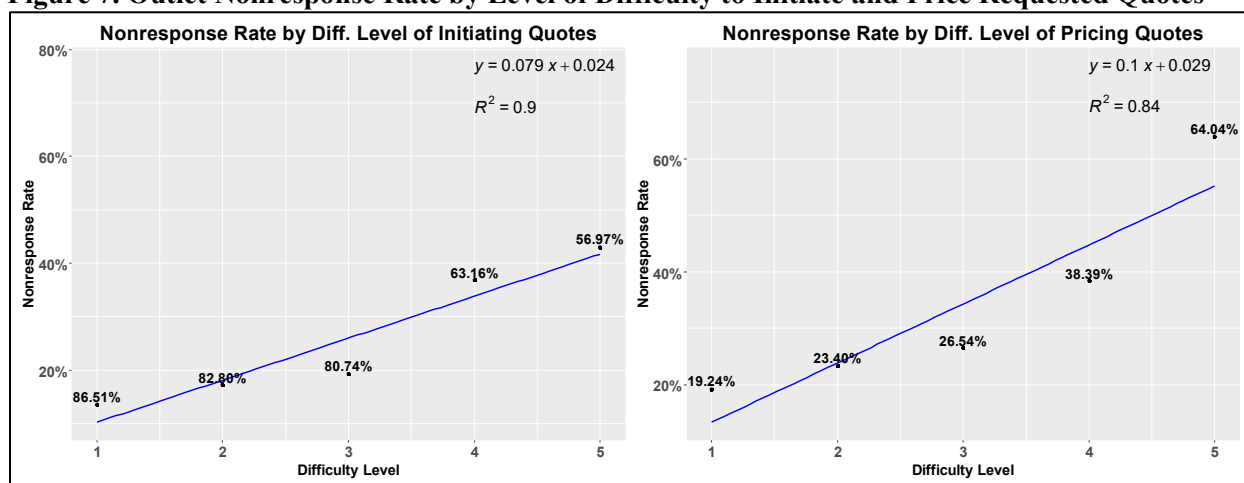


Level of Difficulty to Initiate and Level of Difficulty to Price Requested Quotes

BLS data collectors assign each C&S item a value of one to five on how difficult it is to initiate one of its quotes and another value of one to five on how difficult it is to price one of its quotes, where Level 1 quotes

are the easiest to initiate and price and Level 5 quotes are the hardest to initiate and price. Simple linear regression models were applied to the outlet nonresponse rate of the analysis samples by the level of difficulty to initiate and price a quote (Fig. 7). In the models, the nonresponse rate serves as the dependent variable, and the levels of difficulty for initiating and pricing a quote serve as the independent variables. The models show that strong positive linear relationships exist between both the level of difficulty to initiate and price a quote and the outlet nonresponse rate. Specifically, the difficulty level of initiating a quote and pricing a quote explains about 90 percent and 84 percent of the variance in the nonresponse rate, respectively.

Figure 7. Outlet Nonresponse Rate by Level of Difficulty to Initiate and Price Requested Quotes



Employment Level

The number of individuals an outlet employs can also be an indication of an outlet's size. Outlets with higher sales volumes tend to employ more staff than those with lower sales volumes. Reasonably, one would expect outlets with numerous employees to have lower nonresponse rates than smaller outlets with fewer employees. For this reason, the CPI NRB Study also investigated an outlet's employment level as a possible indicator of nonresponse using the response outcomes from the last four analysis samples (when the employment data became available). Specifically, BLS replaced the Telephone Point-of-Purchase Survey (TPOPS) which it used to construct its C&S establishment sample frame with the Consumer Expenditure (CE) Survey starting with the AUG21 sample. BLS refines the location and address data reported in the CE Survey by comparing the household reported data to establishments in the Quarterly Census of Employment and Wages (QCEW) business registry, which contains employment data.

For the nonresponse analysis, the outlets were assigned to one of five categories, where each category had about 20 percent of the outlets: outlets with 1-28 employees were assigned to the first category, outlets with 29-84 employees were assigned to the second category, outlets with 85-134 employees were assigned to the third category, outlets with 135-241 employees were assigned to the fourth category, and outlets with more than 241 employees were assigned to the fifth category. Figure 8 shows a linear regression model applied to the nonresponse rates of the five employment levels where the employment level is the independent variable and the nonresponse rate is the dependent variable. The linear model shows high explanatory power, with the employment level accounting for 86 percent of the variance in the nonresponse rate.

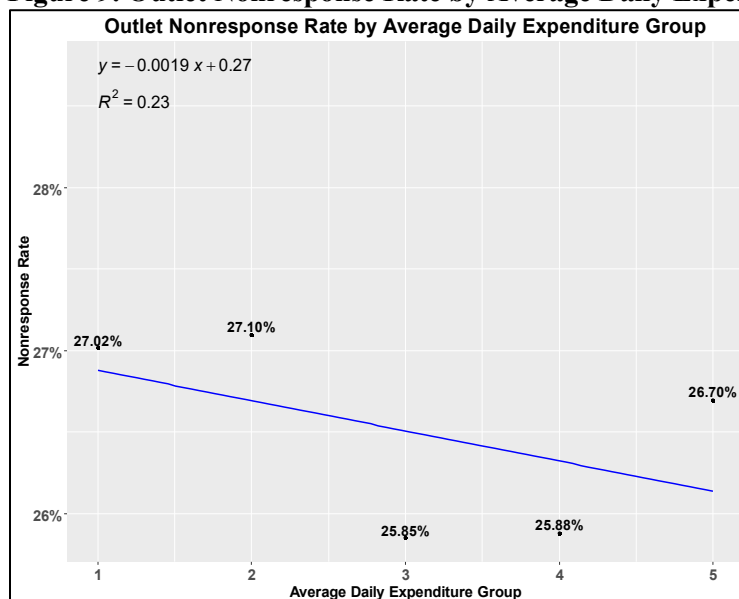
Figure 8. Outlet Nonresponse Rate by Employment Level



Average Daily Expenditure for Outlet in Item Strata

As mentioned in Section 2.2, BLS selects outlets for its C&S Survey from its sample frame independently in each PSU and narrowly defined item category using systematic PPS sampling, where each outlet's measure of size is its reported average daily expenditure in each item category. Therefore, during the initial phase of the CPI NRB Study, a regression analysis was also conducted with the nonresponse rate as the dependent variable and the average daily expenditures as the independent variables. Given that the average daily expenditures vary greatly among item strata, the average daily expenditures of the outlets in each item category were grouped by quintiles. Figure 9 suggests that only a weak linear relationship exists between the two variables, where the average daily expenditures of the outlets only explain about 23 percent of the variance in the nonresponse rate.

Figure 9. Outlet Nonresponse Rate by Average Daily Expenditure Group



Item Expenditure Class

The outlet initiation response rate was also assessed by expenditure class (EC). From Table 2, Public Transportation has the lowest nonresponse rate at 7.2 percent while Medical Professional Services has the highest nonresponse rate at 76.5 percent. Further, the ECs from the Food Major Group have the lowest average nonresponse rate at 15.9 percent and the ECs from the Medical Major Group have the highest nonresponse rate at 44.1 percent.

Table 2. Outlet Initiation Response Rates by Expenditure Class

Expenditure Class	Title	Response Rate	Nonresponse Rate
SEAA	Men's apparel	81.8%	18.2%
SEAB	Boys' apparel	80.4%	19.6%
SEAC	Women's apparel	81.9%	18.1%
SEAD	Girls' apparel	83.6%	16.4%
SEAE	Footwear	75.3%	24.7%
SEAF	Infants' and toddlers' apparel	91.0%	9.0%
SEAG	Jewelry and watches	73.5%	26.5%
SEEA	Educational books and supplies	77.1%	22.9%
SEEB	Tuition, other school fees, and childcare	57.2%	42.8%
SEEC	Postage and delivery services	66.1%	33.9%
SEED	Telephone services	78.0%	22.0%
SEEE	Information technology, hardware and services	79.0%	21.0%
SEFA	Cereals and cereal products	88.0%	12.0%
SEFB	Bakery products	90.2%	9.8%
SEFC	Beef and veal	85.7%	14.3%
SEFD	Pork	85.5%	14.5%
SEFE	Other meats	86.5%	13.5%
SEFF	Poultry	85.6%	14.4%
SEFG	Fish and seafood	87.2%	12.8%
SEFH	Eggs	88.7%	11.3%
SEFJ	Dairy and related products	89.0%	11.0%
SEFK	Fresh fruits	83.8%	16.2%
SEFL	Fresh vegetables	84.1%	15.9%
SEFM	Processed fruits and vegetables	88.0%	12.0%
SEFN	Juices and nonalcoholic drinks	87.9%	12.1%
SEFP	Beverage materials including coffee and tea	87.3%	12.7%
SEFR	Sugar and sweets	88.5%	11.5%
SEFS	Fats and oils	90.4%	9.6%
SEFT	Other foods	88.4%	11.6%
SEFV	Food away from home	60.1%	39.9%
SEFW	Alcoholic beverages at home	80.1%	19.9%
SEFX	Alcoholic beverages away from home	56.5%	43.5%
SEGA	Tobacco and smoking products	62.0%	38.0%
SEGB	Personal care products	89.5%	10.5%

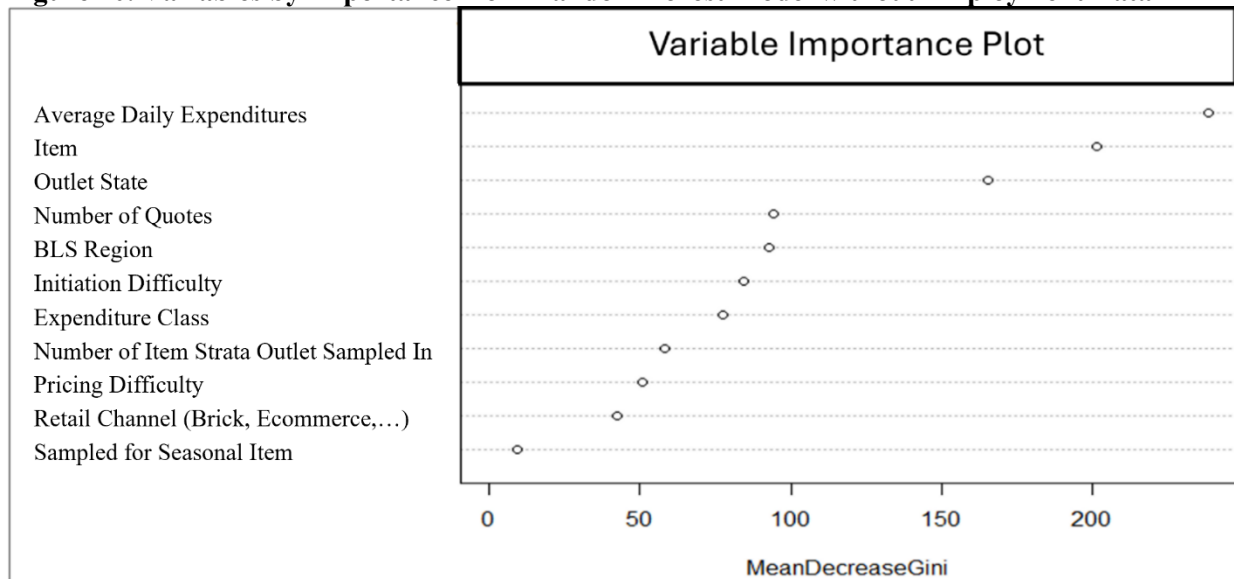
Expenditure Class	Title	Response Rate	Nonresponse Rate
SEGC	Personal care services	56.4%	43.6%
SEGD	Miscellaneous personal services	46.5%	53.5%
SEGE	Miscellaneous personal goods	83.9%	16.1%
SEHB	Lodging away from home	72.3%	27.7%
SEHE	Fuel oil and other fuels	67.0%	33.0%
SEHG	Water and sewer and trash collection services	65.9%	34.1%
SEHH	Window and floor coverings and other linens	79.3%	20.7%
SEHJ	Furniture and bedding	74.7%	25.3%
SEHK	Appliances	89.0%	11.0%
SEHL	Other household equipment and furnishings	84.6%	15.4%
SEHM	Tools, hardware, outdoor equipment and supplies	86.6%	13.4%
SEHN	Housekeeping supplies	90.7%	9.3%
SEHP	Household operations	43.0%	57.0%
SEMC	Professional services	23.5%	76.5%
SEMF	Medicinal drugs	64.5%	35.5%
SEMG	Medical equipment and supplies	79.8%	20.2%
SERA	Video and audio	87.6%	12.4%
SERB	Pets, pet products and services	69.7%	30.3%
SERC	Sporting goods	76.3%	23.7%
SERD	Photography	72.2%	27.8%
SERE	Other recreational goods	84.7%	15.3%
SERF	Other recreation services	64.1%	35.9%
SERG	Recreational reading materials	83.6%	16.4%
SETA	New and used motor vehicles	88.1%	11.9%
SETB	Motor fuel	83.4%	16.6%
SETC	Motor vehicle parts and equipment	72.6%	27.4%
SETD	Motor vehicle maintenance and repair	44.6%	55.4%
SETF	Motor vehicle fees	74.7%	25.3%
SETG	Public transportation	92.8%	7.2%

3.3 Random Forest Analysis of Variables of Interest for C&S Survey

To determine which sampling unit characteristics best predict nonresponse at initiation for the C&S Survey, Random Forest (RF) Modeling was performed in R with the randomForest Package (Breiman et al., 2024). RF Modeling is an ensemble machine learning method that uses bagging to train multiple decision trees independently and then combines their predictions. RF Modeling was applied first to the initiation data for outlets with employment information and then to the initiation data for outlets without employment information. The initial random forest models in both cases provided algorithms with decent accuracy overall but poorly fitted to predict nonresponse. That is, the out-of-bag (OOB) error rates were low (9.22% and 19.38% for outlets with and without employment data, respectively), but the class error rates were high for nonresponse (i.e., 60.82% and 58.54%). To improve the class error rates for nonresponse, the number of features used in the RF were adjusted and tested. Ultimately, three variable models predicted nonresponse the best for both outlets with and without employment information without overfitting the models to the data. The RF models with three variables reduced the nonresponse class error rates for both outlets with

and without LDB employment information to about 15.83% and 29.83%, respectively. For outlets without employment data, the three most important sampling units for predicting nonresponse using the Gini Coefficient were Average Daily Expenditures from the Frame, Item, and Outlet State. Figure 10 below provides the variables by importance from the RF model for outlets without employment data.

Figure 10. Variables by Importance from Random Forest Model without Employment Data

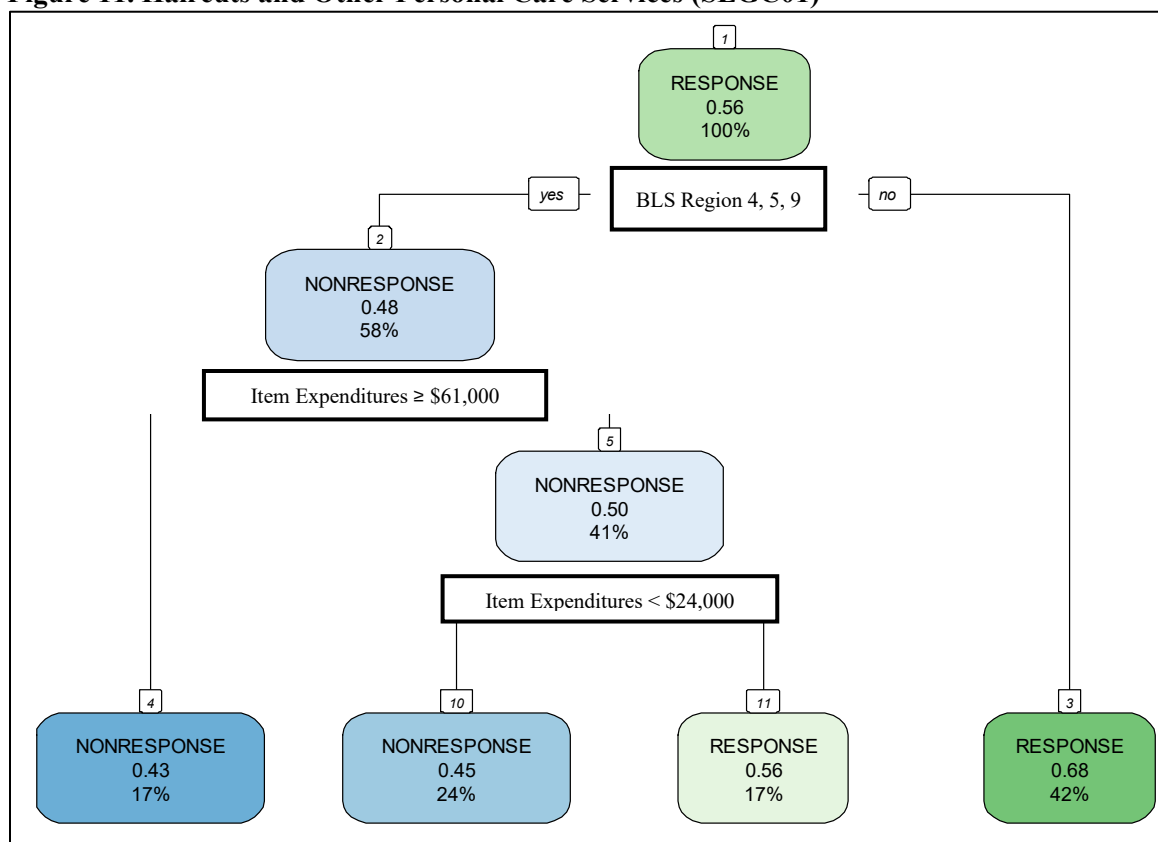


3.4 Decision Trees for C&S Items for Final Phase of CPI NRB Study

While RF models can identify the variables that strongly predict nonresponse, the models are difficult to interpret. Consequently, decision trees were created using R package rpart (from Therneau, Atkinson, and Ripley 2025) to create nonresponse cells for each item stratum for the final phase of the NRB study. Rpart stands for recursive partitioning and works for both regression and classification by performing binary splits on recursive predictors. (Lander 2014). Figure 11 below provides the classification decision tree for Haircuts and Other Personal Care Services (SEGC01) as an example². The root node shows that the overall response rate for the item is 56 percent. The initial split divides the outlets on BLS Region, where the outlets in BLS Regions 4 (Atlanta), 5 (Chicago), and 9 (San Francisco) are sent to Node 2 and outlets in BLS Regions 0 (Washington), 1 (Boston), 3 (Philadelphia), and 6 (Dallas) are sent to Terminal Node 3 (which has a response rate of 68 percent). The outlets in Node 2 are then split on the sum of average daily expenditures adjusted by a weight to represent the outlet's geographic stratum where outlets with adjusted average daily expenditures greater than or equal to \$61,000 are sent to Terminal Node 4 and outlets with adjusted expenditures less than \$61,000 are sent to Node 5. The Terminal Nodes at the bottom of the tree served as nonresponse imputation cells in the final phase of the nonresponse bias study.

² In January 2018, CPI started transitioning to an updated area sample. Consequently, some of the PSUs from the 1998 Geographical Area Sample that were still in pricing for the third phase of the NRB Study did not have their state specified in the analysis samples. For this reason, the decision trees for each item stratum were created using an outlet's average daily expenditures and BLS Region instead of state.

Figure 11. Haircuts and Other Personal Care Services (SEGC01)



When creating the decision trees, each node was required to have a minimum of ten percent of the outlets from the pooled samples for the non-food and non-housing items to prevent over-fitting and mitigate the impact of noise from the training data. The nodes for the food and housing items were allowed to have a minimum of five percent of the outlets from the pooled samples since their sample sizes tended to be larger than the other items. Furthermore, the complexity parameter was set to 0.01 so that a split was not pursued unless it decreased the overall lack of fit by 0.01. The minimum node sample size, however, resulted in 68 percent of the item strata in the study with a zero split tree or an intercept-only model. These item strata had lower outlet nonresponse rates than the other items. Specifically, the average nonresponse rate of the item strata with decision trees with only one node was 18.14 percent while the average nonresponse rate of item strata with multiple nodes was 34.55 percent.

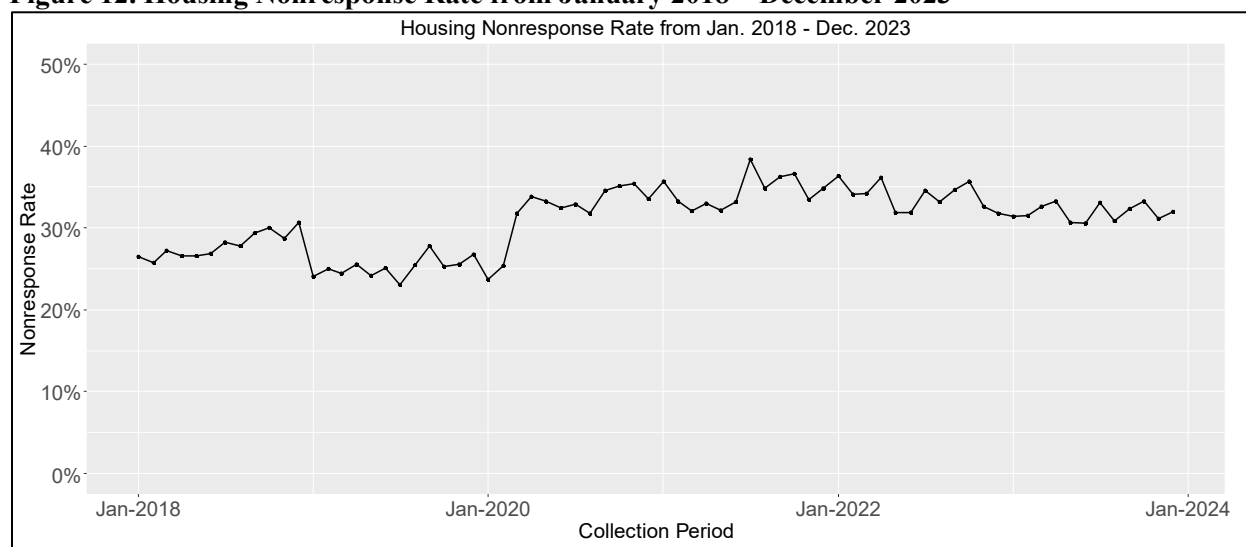
4. Data and Sampling Unit Characteristics that Contribute to Nonresponse in the Housing Survey

4.1 Reference Period of Analysis for Housing Survey

The goal of the second stage of the CPI NRB Study was to identify sampling unit characteristics that contribute to nonresponse in repricing in the CPI's Housing Survey. The NRB study did not look at nonresponse at initiation for the Housing Survey (as it did with the C&S Survey) because the housing unit sample from the selected segments is a quota sample, which uses a non-probability method that relies on the non-random selection of a predetermined number of housing units. Specifically, data collectors try to initiate five renter-occupied housing units on average from each sampled segment. Segments in self-representing areas have at least 50 housing units and segments in non-self-representing areas have at least 30 housing units (U.S. Bureau of Labor Statistics, 2026). The BLS assigns each sampled segment to one of six panels, and data collectors obtain rents from the initiated housing units twice a year. Clustering the housing units into segments reduces the cost of data collection. Furthermore, five housing units provide

enough price change variability for the small sample areas. Initiation response rates should not be calculated, however, for the housing sample because only renter occupied housing units are eligible for the survey. Thus, the total eligible sample size is not known. Repricing response rate, on the other hand, should be calculated for longitudinal surveys unless there is some reason to assume that the responses from the quota sample differ significantly from those excluded from the sample. For this reason, the second phase of the NRB study focused exclusively on repricing to identify the sampling unit characteristics that contribute to nonresponse in the CPI Housing Survey. Figure 12 below provides the housing repricing nonresponse rate from January 2018 – December 2023.

Figure 12. Housing Nonresponse Rate from January 2018 – December 2023



Before the COVID-19 pandemic (from January 2018 – February 2020), the nonresponse rate for the CPI Housing Survey was on average 26.37 percent. Then from March 2020 – December 2023, the rate increased to an average of 33.45 percent. By the end of the reference period in December 2023, the nonresponse rate was still 31.96 percent.

4.2 Variables of Interest for the Housing Survey

Twenty-three sampling unit characteristics were evaluated to determine their contribution to nonresponse at repricing in the Housing Survey. The variables came from the CPI Housing Database, the 2023 American Community Survey (ACS), and the 2021 Quarterly Census of Employment and Wages (QCEW). Table 3 below lists the variables of interest along with a description of the variables. Like the first phase of the NRB study, the selected variables of interest were available for both respondents and nonrespondents.

Table 3. Variables of Interest for Contributing to Nonresponse in the CPI Housing Survey

Variable	Source	Description
BLS Region	Housing DB	BLS Regional Offices
Expected Number of Multi-Unit Structures	Housing DB	Number of multi-unit structures expected to be listed for each segment in a PSU
Expected Number of Owners	Housing DB	Number of expected owner-occupied housing units to be listed for each segment in each PSU
Expected Number of Renters	Housing DB	The number of expected renter-occupied housing units to be listed for each segment in a PSU
Expected Number of Single Unit Structures	Housing DB	The number of single-unit structures expected to be listed for each segment in each PSU

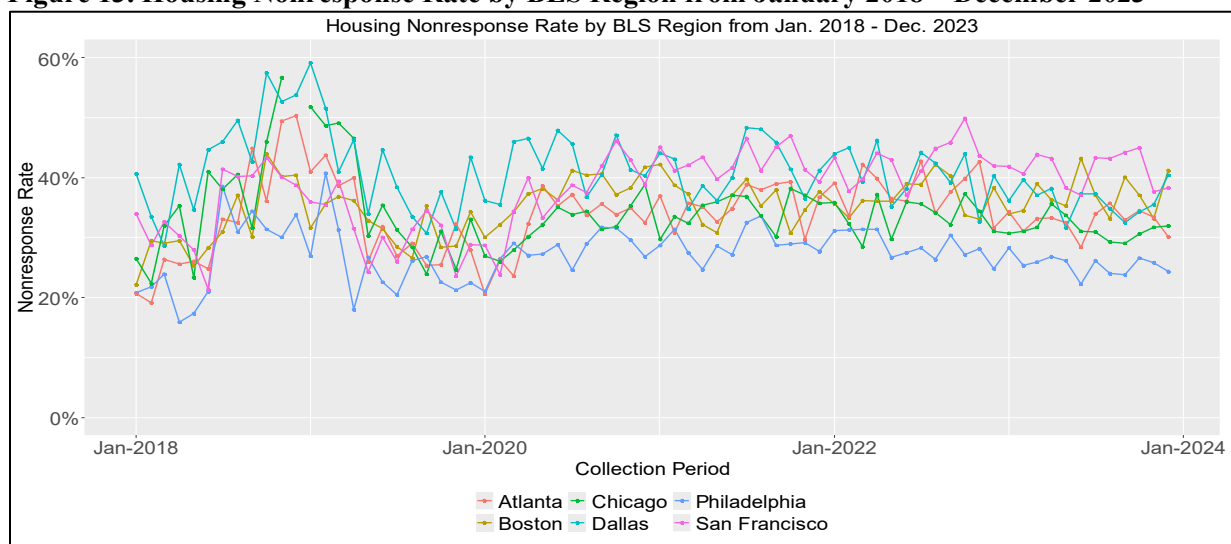
Variable	Source	Description
Household Income	2023 ACS Data	Household income by groups at county level
Length of Tenancy	Housing DB	Number of months from when tenant moved into housing unit
Number of Rooms	Housing DB	Total number of rooms in rented housing unit
Number of Vehicles	2023 ACS Data	Percent of housing units with one, two, three, or no vehicles
Percent Employed	2023 ACS Data	Employment rate at county level
Percent Male and Female	2023 ACS Data	Percent of the population that is male/female at county level
Percent of Families below Poverty Level	2023 ACS Data	Percent of families below poverty level at county level
Percent of Population by age group	2023 ACS Data	Percent of county population by age groups
Percent of Population in Labor Force	2023 ACS Data	Percent of county population in labor force
Percent of Renter Occupied Units	2023 ACS Data	Percent of renter-occupied units at county level
Percent Unemployed	2023 ACS Data	Unemployment rate at county level
Percent Vacant	2023 ACS Data	Percent of vacant housing units at county level
Rent from Last Collection Period used in Price Relative Calculation	Housing DB	Economic rent for Rent Index and pure rent for Owners' Equivalent Rent Index from six months earlier used in price relative calculation
Respondent Type	Housing DB	Description of housing unit respondent
RRWK	Housing DB	Reduced Rent for Work Completed by Tenant
RRSB	Housing DB	Reduced Rent for Subsidy
Type of Housing Structure	Housing DB	Type of housing unit: multi-unit, single detached, mobile home, etc.
Workers by NAICS Industries	QCEW	Percentage of total employees in a PSU by their one-digit NAICS code

Paired t-tests and analysis of variance (ANOVA) were conducted to see if the nonresponse rates were significantly different for any of the factors for the variables listed in Table 3. The nonresponse rates by BLS Region, length of tenancy, reduced rent for subsidies/work, rent, respondent type, and type of housing structure are discussed below.

BLS Region

Figure 13 below provides the housing nonresponse rate by BLS Region from January 2018 – December 2023. From the graph, Philadelphia has the lowest nonresponse rate with an average of 27.17 percent and Dallas has the highest nonresponse rate with an average of 40.91 percent followed closely by San Francisco with a mean of 38.27 percent. Levene's test for homogeneity indicated that the variances of the nonresponse rates across the BLS Regions are not equal (p-value = 0.0444). Consequently, a subsequent Welch's analysis of variance (ANOVA) revealed that the mean nonresponse rates differ significantly by BLS Region (p-value < 0.0001).

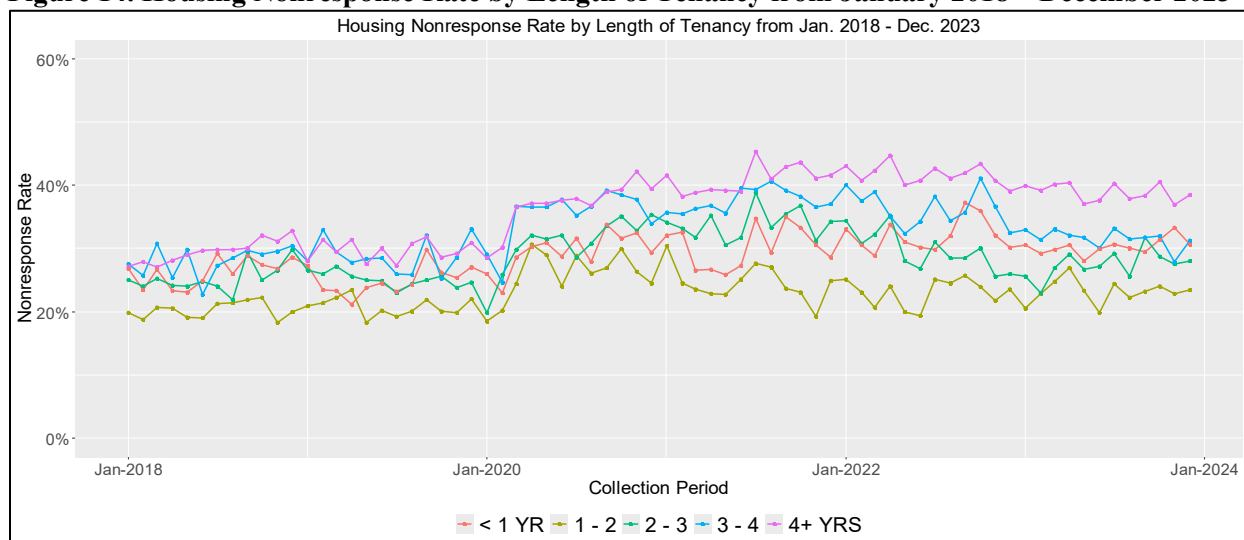
Figure 13. Housing Nonresponse Rate by BLS Region from January 2018 – December 2023



Length of Tenancy

Figure 14 below provides the housing nonresponse rate by length of tenancy from January 2018 – December 2023. From the graph, housing units with tenants that have been renting for 1 – 2 years have the lowest nonresponse rates (with a mean nonresponse rate of 22.94 percent) and housing units with tenants that have been renting for more than 4 years have the highest nonresponse rates (with a mean of 36.28 percent). Levene’s test for homogeneity once again indicated that the variances of the nonresponse rates across the lengths of tenancy are not equal ($p\text{-value} < 0.0001$). Consequently, a subsequent Welch’s ANOVA revealed that the mean nonresponse rates differ significantly by length of tenancy ($p\text{-value} < 0.0001$).

Figure 14. Housing Nonresponse Rate by Length of Tenancy from January 2018 – December 2023



Reduced Rent for Subsidy or Work

Figures 15 and 16 below provide the housing nonresponse rate by reduced rent status for a subsidy and reduced rent status for tenant work, respectively. Housing unit responses with unknown reduced rent status were removed for both graphs. From Figure 15, the nonresponse rate of housing units with reduced rent status for a subsidy is consistently less than the nonresponse rate of housing units without a subsidy. A simple paired t-test was performed on the data. The t-test indicated that the two nonresponse rates are

significantly different ($p\text{-value} < 0.0001$). Furthermore, the mean nonresponse rate of housing units with reduced rent for a subsidy is 24.57 percent and the mean nonresponse rate of housing units without reduced rent for a subsidy is 31.97 percent.

In Figure 16, the nonresponse rate of housing units with reduced rent for work is far more volatile than the nonresponse rate of housing units without reduced rent for work. However, the nonresponse rate of housing units with reduced rent for work tends to be greater than the nonresponse rate of housing units without reduced rent for work. A paired t-test was again applied to the paired data, which indicated that the two nonresponse rates are significantly different ($p\text{-value} < 0.0001$). The mean nonresponse rate of housing units with reduced rent for work is 35.57 percent and the mean nonresponse rate of housing units without reduced rent for a subsidy is 31.47 percent.

Figure 15. Housing Nonresponse Rate by Reduced Rent for Subsidy from Jan. 2018 – Dec. 2023

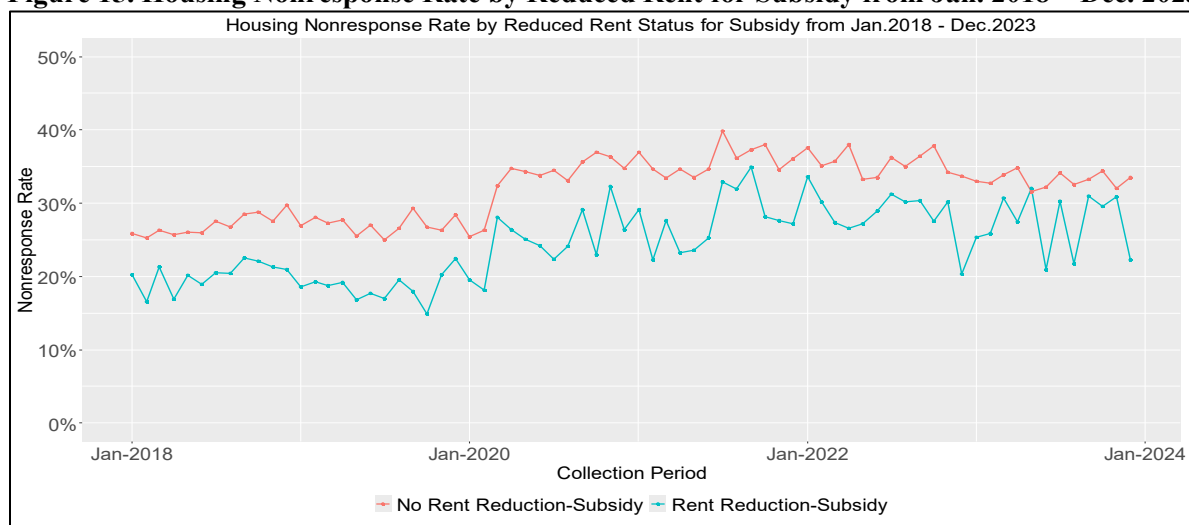
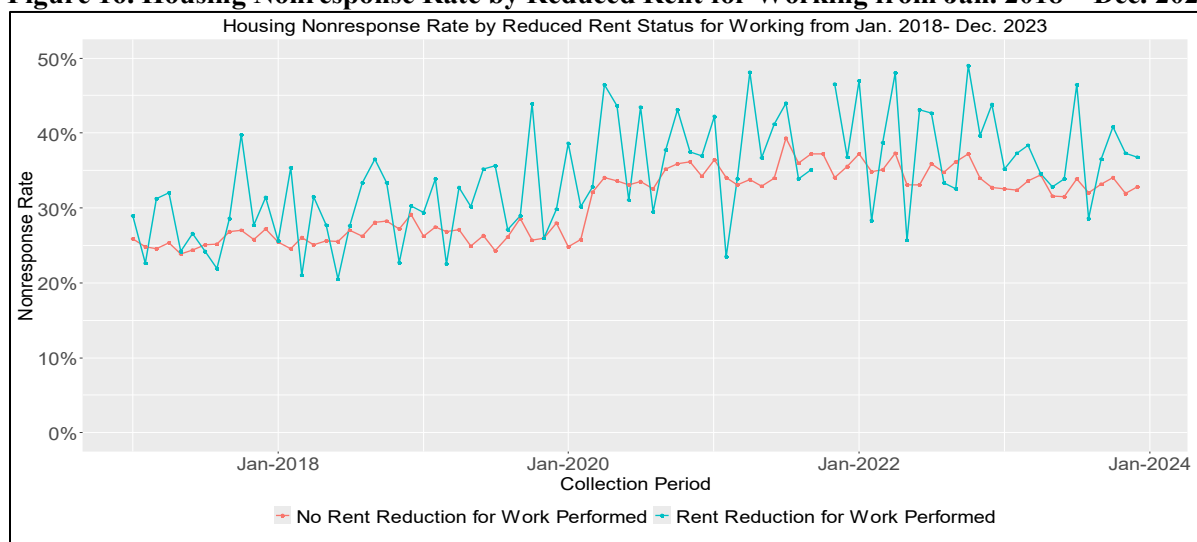


Figure 16. Housing Nonresponse Rate by Reduced Rent for Working from Jan. 2018 – Dec. 2023

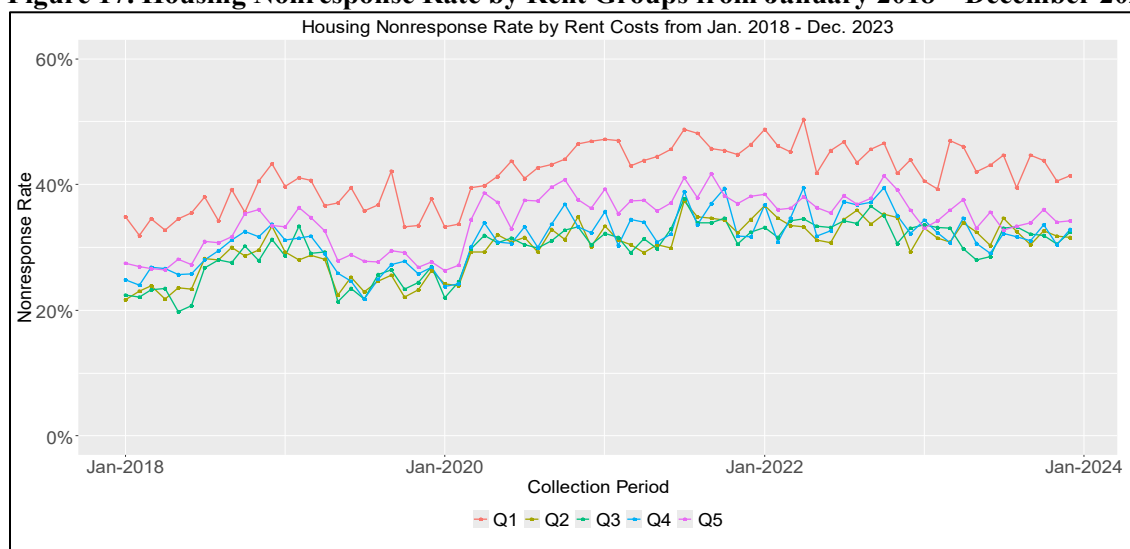


Rent

The cost of rent was also expected to have an influence on nonresponse in the CPI Housing Survey. To explore this idea, the housing units were divided into five groups within an Index PSU each collection

period where the 20 percent of housing units that paid the least in economic rent were assigned to the first group (Q1) and the 20 percent of housing units that paid the most in economic rent were assigned to the fifth group (Q5). From Figure 17, housing units with the bottom 20 percent of rent costs have the highest nonresponse rate (with a mean nonresponse rate of 38.99 percent) followed by the housing units with the top 20 percent of rent costs (with a mean nonresponse rate of 32.56 percent). Levene's test for homogeneity once again indicated that the variances of the nonresponse rates across the groups are not equal (p-value = 0.0039). Welch's ANOVA then indicated that the mean nonresponse rates differ significantly by rent level (p-value < 0.0001).

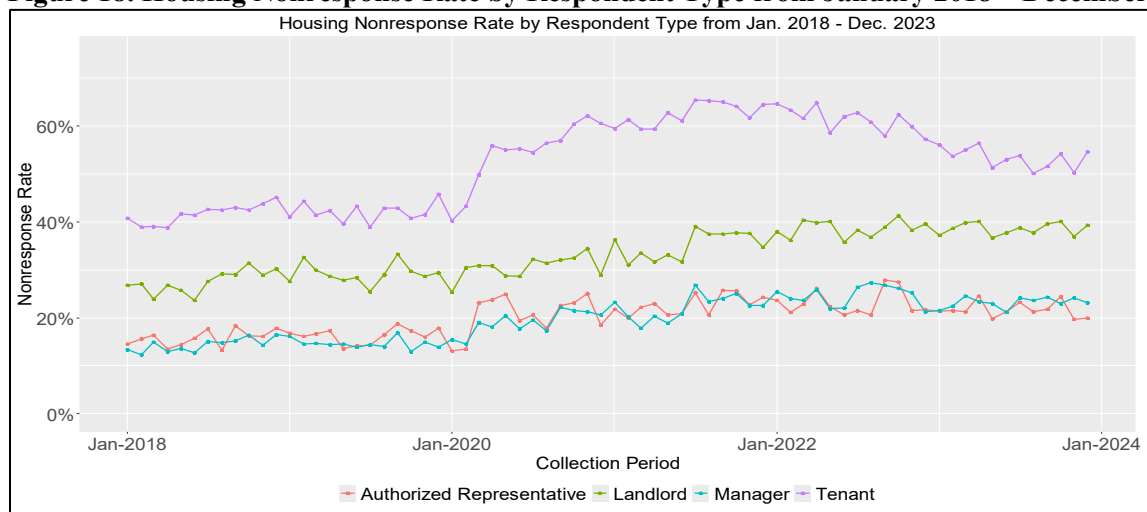
Figure 17. Housing Nonresponse Rate by Rent Groups from January 2018 – December 2023



Respondent Type

Figure 18 below illustrates the housing nonresponse rate from January 2018 – December 2023 by respondent type. The response rate of housing units without a respondent type are excluded from the graph. From Figure 18, tenants have the highest nonresponse rate (with a mean rate of 52.55 percent) and managers and landlords have the lowest nonresponse rates at about 20 percent. The nonresponse rates clearly differ among the respondent types, which was confirmed by Welch's ANOVA (p-value < 0.0001).

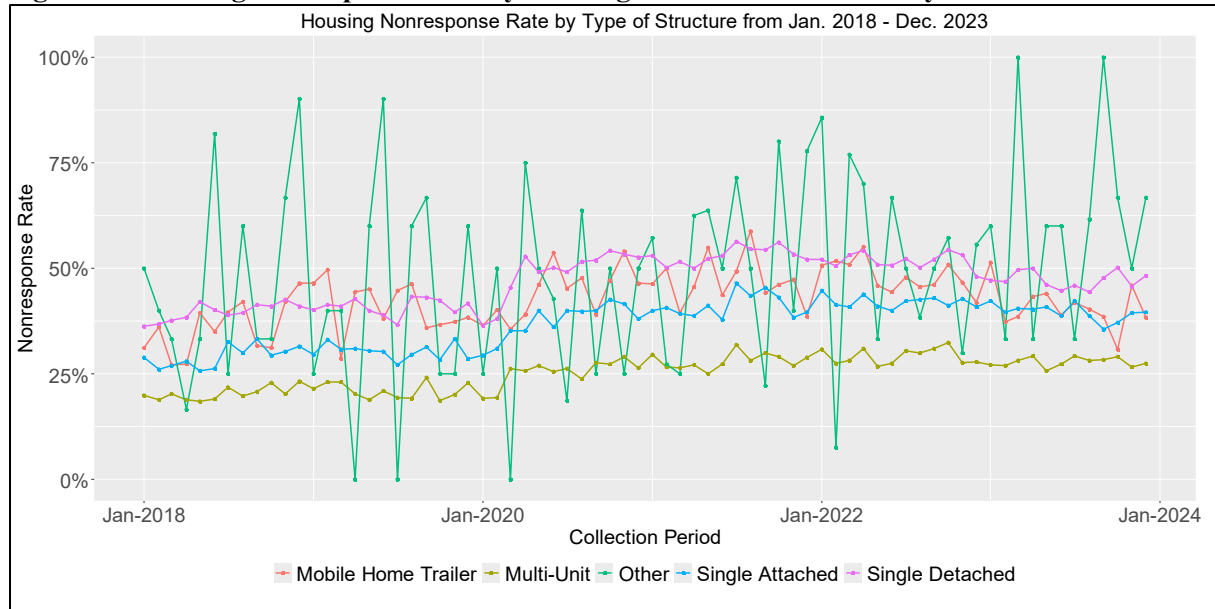
Figure 18. Housing Nonresponse Rate by Respondent Type from January 2018 – December 2023



Type of Housing Structure

The nonresponse housing rate by housing structure was similarly investigated. Figure 19 illustrates the nonresponse rate by housing structure, and once again there are observable differences between nonresponse rates of the five groups. Outside the “other” catchall housing structure, single detached housing units have the highest nonresponse rate with an average of 46.88 percent and multi-unit housing units have the lowest nonresponse rate with an average of 25.30 percent. Levene’s test for homogeneity indicated that the variances of the nonresponse rates across the housing structures are not equal ($p\text{-value} < 0.0001$). Subsequently, Welch’s ANOVA revealed that the mean nonresponse rates differ significantly by housing structure ($p\text{-value} < 0.0001$).

Figure 19. Housing Nonresponse Rate by Housing Structure from January 2018 – December 2023



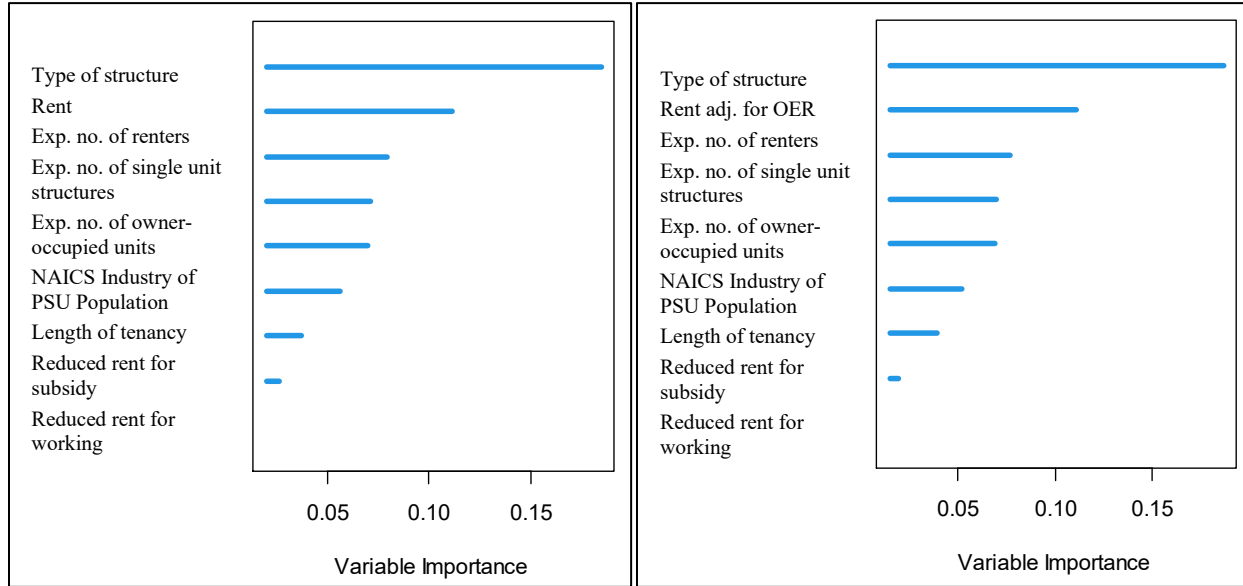
4.3 Random Survival Forest for Variables of Interest for Housing Survey

To determine what housing unit characteristics are the leading predictors of nonresponse at repricing in the housing survey, Random Survival Forests (RSFs) were used. RSFs are designed to work with survival analysis data, which measures the amount of time to an event outcome. To increase the size of analysis sample, housing units that started pricing between January 2017 – April 2025 for the CPI’s Rent Index ($n=49,510$) or Owner’s Equivalent Rent (OER) Index ($n=47,556$) were used in the RSF. Each unit’s survival time in the Housing Survey was defined as the number of months from its first pricing to its last. The data was right censored given that a housing unit could not fail to respond to the survey after April 2025. If a housing unit’s last response was followed by one or more nonresponses, then the Event variable was set equal to 1. If a housing unit always responded, the Event variable was set equal to 0. In this manner, about 31.2 percent of the housing units from the Rent Index and 31.3 percent of the housing units from the OER Index failed to respond after their last response. Both nonresponse rates were similar to the overall average nonresponse rate from January 2017 – April 2025.

The RSF models showed that Type of Housing Structure and Rent are the two leading predictor variables of nonresponse from their variable importance values (Fig. 20). The variable importance values (VIMP) are permutation importance measures. From Ishwaran and Lu (2023), “Permutation importance adopts a prediction-based approach by using prediction error attributable to the variable.” VIMP is the difference in out-of-bag (OOB) prediction error before and after permutation. That is, each tree is grown from a bootstrap sample of the original data, and the remaining data left from the bootstrap sample is used for estimating

prediction performance. Permutation importance permutes or shuffles a variable's OOB data and compares the resulting OOB prediction error to the original OOB prediction error. Thus, a large VIMP value indicates that a variable has strong predictive power in the forest, and a VIMP close to zero indicates the variable contributes nothing to predictive accuracy.

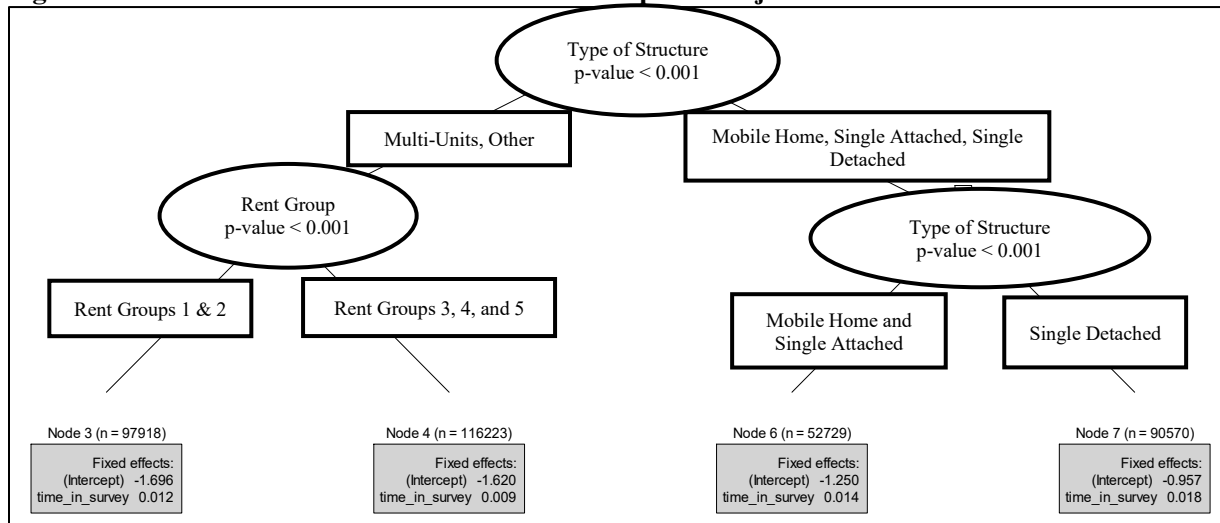
Figure 20. Variable Importance from Random Survival Forest for Rent and OER Index from All Observations



4.4 Random Survival Forest for Variables of Interest for Housing Survey

Just like Random Forest models, the results of Random Survival Forests are also difficult to interpret. For that reason, Generalized Linear Mixed Model (GLMM) trees were used to create nonresponse cells for the Rent and OER indexes for the final phase of the NRB study. The terminal nodes in the bottom row of Figure 21 provide the nonresponse cells for imputation. The first and second NRB cells include multi-unit and other housing structures in rent quintiles 1-2 and 3-5, respectively. The third NRB cell includes mobile homes and single attached housing units. The fourth NRB cell includes single detached housing units only.

Figure 21. GLMM Tree for Rent and OER Nonresponse Adjustment Factors



5. Estimating Nonresponse Bias in the CPI

5.1 Counterfactual Indexes

To estimate the level bias of the sample respondent mean due to survey nonresponse, OMB provided the following formula:

$$B(\bar{y}_R) = \bar{y}_r - \bar{y}_t = \left(\frac{n_{nr}}{n}\right)(\bar{y}_r - \bar{y}_{nr}) \quad (6)$$

where:

$\bar{y}_t$ = mean based on all sample units

$\bar{y}_r$ = mean based only on respondent units

$\bar{y}_{nr}$ = mean based only on nonrespondent units

n = number of units in the sample

n_{nr} = number of nonrespondent units

By the definition of nonresponse, the price relatives of quotes from nonresponding outlets and the price relatives of nonresponding housing units were not available. As a result, counterfactual indexes were calculated in a way that accounted for the missing data to estimate the level of bias of the CPI sample means due to nonresponse. This was done by re-imputing the price relatives of the nonresponding quotes and housing units from January 2018 – December 2023 using the models developed in the first and second phases of the NRB study to create new source pools for the targets. This resulted in 72 one-month percentage changes (PCs) and 60 twelve-month PCs for each index.

5.2 Significance Test

After the counterfactual indexes were calculated, the one-month and twelve-month PCs from the counterfactual indexes were compared to the one-month and twelve-month PCs from production. To see if there were significant differences between the two sets of price changes for the published indexes, Wilcoxon signed-rank tests were conducted. The null hypothesis of the Wilcoxon signed-rank test is that the distribution of the differences is symmetric around zero. If the signed-rank test produced a p-value of less than 0.05 for the one-month or twelve-month PC differences, then the null hypothesis of the signed-rank test for that index was rejected and the index was flagged for risk of nonresponse bias.

While the one-month price changes in the CPI are independent of each other, the twelve-month price changes are not. That is, the annual price changes in the CPI are calculated by comparing the index at time t to the index at time $t - 12$. The index at time t is calculated by multiplying the index from $t - 12$ by the twelve price relatives between t and time $t - 12$. For example:

$$IX_{i,a,t} = IX_{i,a,t-12} \times PRC_{i,a,t-11} \times PRC_{i,a,t-10} \times PRC_{i,a,t-9} \times PRC_{i,a,t-8} \times PRC_{i,a,t-7} \times PRC_{i,a,t-6} \times PRC_{i,a,t-5} \times PRC_{i,a,t-4} \times PRC_{i,a,t-3} \times PRC_{i,a,t-2} \times PRC_{i,a,t-1} \times PRC_{i,a,t} \quad (7)$$

Where:

i = Item

a = Area

t = Time

$IX_{i,a,t}$ = Index value for item i and area a at time t

$PRC_{i,a,t}$ = Price relative calculation for item i and area a at time t

Consequently, the 12-month price changes have a degree of covariance between them. Due to the covariance, the z-scores of the 12-month PCs had to be adjusted. See Appendix A for details.

5.3 Nonresponse Bias in the Published One-Month and Twelve-Month Percentage Changes

The minimum, maximum, mean, and median differences were calculated between the one-month and twelve-month percentage changes from CPI production and the counterfactual indexes for 2,521 published indexes from January 2018 – December 2023 ($PC_{CPI\ Production} - PC_{Counterfactual\ IXs}$). The Wilcoxon signed-rank test was then applied to the differences as six-year series for the one-month PCs and as five-year series for the twelve-month PCs. Furthermore, the differences were investigated at the different aggregation levels of the CPI. Any large differences at the lower levels of aggregation (such as the item stratum level) were expected to decrease at the higher aggregate levels [such as the Major Group (MG) level].

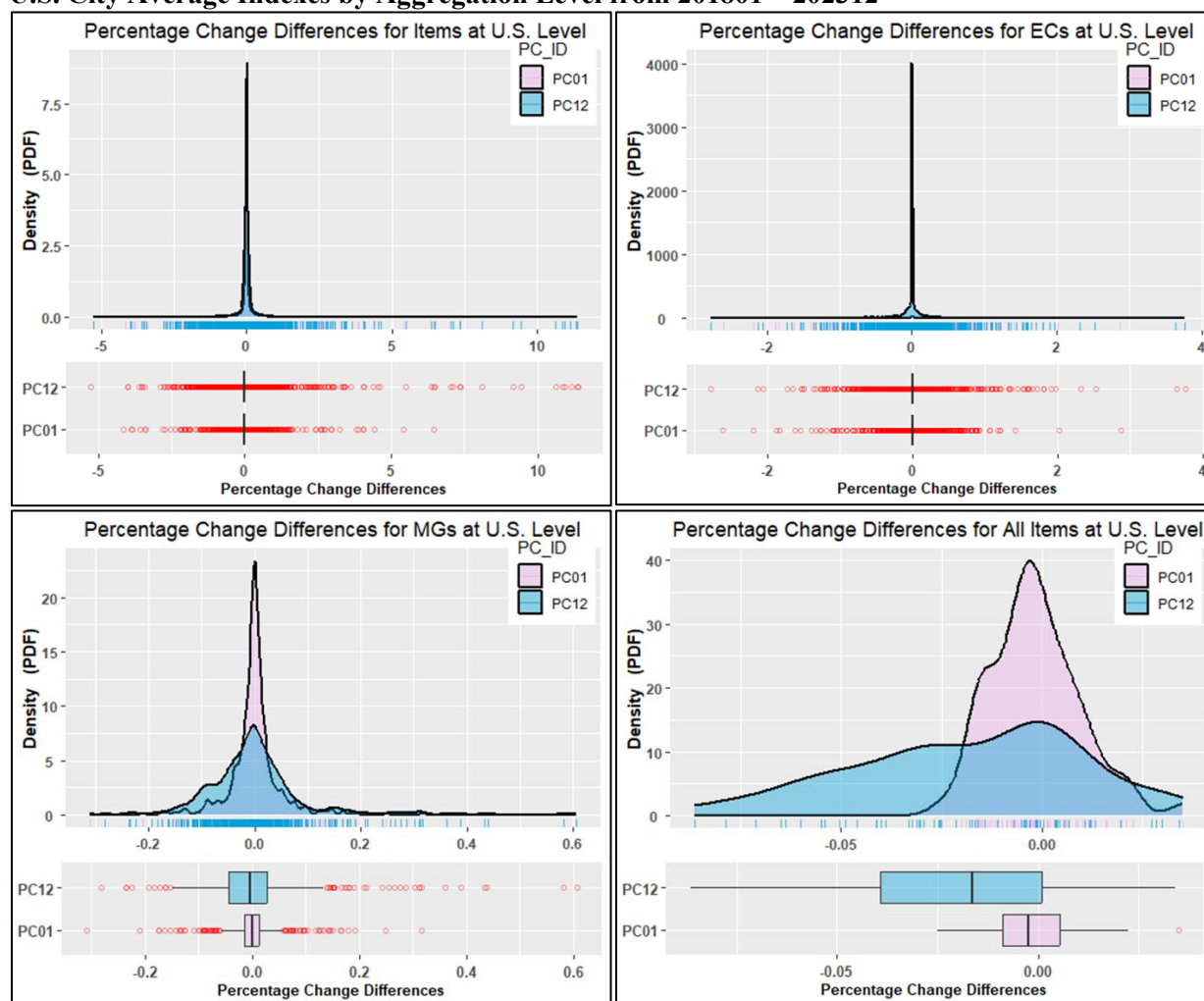
Nonresponse Bias in the One-Month Percentages Changes

Across 181,512 published one-month price changes (2,521 indexes over 72 months) from January 2018 through December 2023, approximately 90 percent of the counterfactual estimates were within 0.10 percentage points of the official CPI one-month changes, and roughly 95 percent were within 0.18 percentage points. As expected, differences decreased as the level of aggregation increased. For instance, at the item-stratum level for the U.S. City Average indexes, 95 percent of the absolute differences were less than 0.31 percentage points. At the expenditure-class level, 95 percent were less than 0.25 percentage points. At the third aggregation level (the MG level), 95 percent of the differences were less than 0.10 percentage points. At the highest aggregation level (All Items), 95 percent of the absolute differences were less than 0.02 percentage points. Table 4 lists the 90th, 95th, and 100th percentiles of these absolute differences between the counterfactual and production one-month price changes. Figure 22 provides density plots and boxplots of the one-month and twelve-month price-change differences for the U.S. City Average indexes across aggregation levels for the reference period.

Table 4. 90th, 95th, and 100th Percentiles of the Absolute Differences between 1M Percentage Changes from CPI Production and Counterfactual Indexes for the U.S. City Average Indexes

Level of Aggregation	Item Class/Aggregation Level	90 th Percentile	95 th Percentile	100 th Percentile
1 st	IS - Item Stratum Level - (Lowest level of aggregation)	0.14	0.31	6.45
2 nd	EC - Expenditure Class	0.12	0.25	2.88
3 rd	MG - Major Group	0.08	0.10	0.32
4 th	AI - All Items - (Highest level of aggregation)	0.02	0.02	0.03

Figure 22. Density Plots and Boxplots of the 1M and 12M Percentage Change Differences for the U.S. City Average Indexes by Aggregation Level from 201801 – 202312

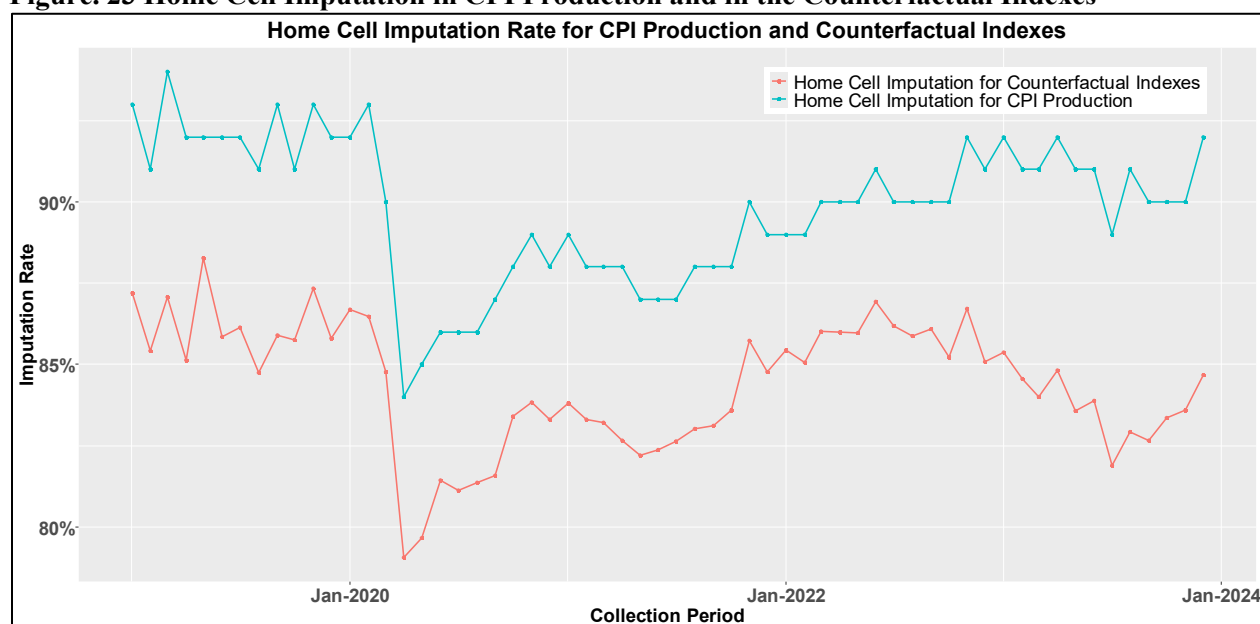


Regarding the level of bias due to survey nonresponse in the one-month price changes of the published indexes, the mean differences between the counterfactual indexes and the production indexes were less than 0.01 percentage points for 90 percent of the indexes and less than 0.02 percentage points for 95 percent of the published indexes. Moreover, all the mean differences were less than a tenth of a percentage point. Repair of Household Items for the U.S. City Average had the largest mean difference at 0.10. See Appendix B for the mean one-month price change differences for the published indexes for the U.S. City Average Index series and the four Census regions. The mean one-month price change differences for the remaining published indexes are available upon request.

While the mean one-month differences were small, there were some large minimum and maximum differences that cannot be overlooked. For example, in September 2020, the one-month percentage change for Recreation (SAR) in Minneapolis-St. Paul-Bloomington, MN-WI (S24A) from the counterfactual indexes was 16.2 percentage points less than the official estimate from the CPI. The large difference occurred because the price relatives of the nonresponding quotes had to be imputed using different cell imputation instead of home cell imputation. Home cell imputation uses the average change in price observed for sampled products or services in the same entry level item (ELI) and same location (Index PSU) as the missing quote's price. In production, CPI imputed the prices of the nonresponding recreation

quotes based on observed price changes for the same recreation ELI in the same PSU (S24A). For the counterfactual indexes, the prices of the nonresponding recreation quotes were imputed from observed price changes of quotes from the West North Central Division (N240). Because the price relatives of nonresponding quotes needed to be estimated from observed price changes from quotes in the same nonresponse adjustment cell, the pool of source quotes was reduced for imputation. This decreased the home cell imputation rate for the counterfactual indexes by about five percentage points and was the reason behind many of the large differences. Figure 23 below shows the home cell imputation rate from CPI production and from the Counterfactual Indexes. Furthermore, the minimum and maximum differences between the one-month price changes from the counterfactual indexes and CPI production for each published index can be found in Appendix B.

Figure. 23 Home Cell Imputation in CPI Production and in the Counterfactual Indexes



To see if significant differences exist between the one-month percentage changes from the counterfactual indexes and CPI production, the Wilcoxon Signed-rank Test was applied. As mentioned earlier, the null hypothesis of the test is that the distribution of the differences is symmetric around zero. In total, 52 of the 2,521 published indexes had p-values less than 0.05 from the signed-rank test, indicating that their differences were not symmetrical around zero and were therefore at risk of nonresponse bias. Table 5 below gives the number and percent of published indexes by item class at risk of survey nonresponse bias. Table 6 lists the 52 published indexes that were flagged for potential nonresponse bias because their one-month percentage changes from the counterfactual indexes and production were found to be significantly different.

Table 5. Number and Percentage of Published Indexes where One-Month PCs from the Counterfactual Indexes Were Found to be Significantly Different from CPI Production

Percent Change	Item Class	Number of Published Indexes Found to be Significantly Different	Total Number of Published Indexes	Percent of Published Indexes that were Found to be Significantly Different
PC01	IS - Item Stratum	5	365	1.37%
PC01	EC - Expenditure Class	24	404	5.94%

Percent Change	Item Class	Number of Published Indexes Found to be Significantly Different	Total Number of Published Indexes	Percent of Published Indexes that were Found to be Significantly Different
PC01	IA - Intermediate Aggregate	4	555	0.72%
PC01	MG - Major Group	5	376	1.33%
PC01	AI - All Items	2	47	4.26%
PC01	SA - Special Aggregate	12	774	1.55%
PC01	All Indexes	52	2,521	2.06%

From Table 6, only Full-Service Meals (SEFV01) and Rent of Primary Residence (SEHA) at the U.S. level had p-values less than 0.05 and were therefore at risk of nonresponse bias. The differences between the one-month percentage changes from the counterfactual indexes and CPI production for those two indexes, however, were all less than a tenth of a percentage point for the reference period. For the All-Items aggregation level, the Wilcoxon signed-rank test indicated that both Washington D.C. (S35A) and Urban Hawaii (S49G) were at risk of nonresponse bias. Rent (SEHA) and Owners' Equivalent Rent (SEHC01) for D.C. and Hawaii contributed largely to the differences seen at their All-Items index level. Furthermore, about 44 percent of the 52 published indexes that were flagged for potential bias due to survey nonresponse were for Rent or Owners' Equivalent Rent items. The significant differences that occurred between the percentage changes from production and the counterfactual indexes for those items appeared to be caused by the high nonresponse rate of single detached homes, which were in their own NRB cell. Specifically, the average nonresponse rate for single detached homes was 46.88 percent for the reference period. On average, about 23 percent of the housing units on panel each month from 201801 – 202312 were single detached homes. According to Table 25032 from the American Community Survey (ACS) from 2024, about 24.5 percent of renter-occupied housing units were single detached homes. While the percent of single detached housing units on panel each month closely resembled the percent from ACS, the poor response rate increased the number of housing units from outside these units' home cells used in imputation. That is, when the number of housing units for imputation is insufficient, cells are collapsed by geography. For this reason, CPI should increase the sample size of its single detached homes in its housing sample.

Table 6. Items where the Wilcoxon Signed-Rank Test Indicated Published One-Month PCs were Significantly Different from Counterfactual Indexes and CPI Production

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFV01	Full-service meals and snacks	IS	72	0.00	0.00	-0.04	0.07	0.0090
0000	U.S. city average	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.09	0.04	0.0119
0120	Middle Atlantic	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.11	0.12	0.0369
0200	Midwest	SEHA	Rent of primary residence	EC	72	-0.02	-0.01	-0.21	0.07	0.0072
0230	East North Central	SEHA	Rent of primary residence	EC	72	-0.02	-0.02	-0.29	0.10	0.022
0240	West North Central	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.11	0.10	0.0475

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0370	West South Central	SEHA	Rent of primary residence	EC	72	-0.02	-0.02	-0.24	0.16	0.0302
S000	Size Class A	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.09	0.06	0.0019
S100	Northeast - Size Class A	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.09	0.13	0.0173
S12A	New York-Newark-Jersey City, NY-NJ-PA	SEHA	Rent of primary residence	EC	72	-0.01	-0.02	-0.12	0.20	0.0155
S200	Midwest - Size Class A	SEHC	Owners' equivalent rent of residences	EC	72	-0.03	-0.01	-0.53	0.27	0.0359
S200	Midwest - Size Class A	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.03	-0.01	-0.54	0.27	0.0396
S23A	Chicago-Naperville-Elgin, IL-IN-WI	SAH	Housing	MG	72	-0.02	-0.02	-0.28	0.18	0.0297
S23A	Chicago-Naperville-Elgin, IL-IN-WI	SAH1	Shelter	IA	72	-0.02	-0.02	-0.37	0.22	0.0145
S23A	Chicago-Naperville-Elgin, IL-IN-WI	SEHA	Rent of primary residence	EC	72	-0.02	-0.04	-0.21	0.27	0.0078
S24B	St. Louis, MO-IL	SAH1	Shelter	IA	72	-0.03	-0.03	-0.29	0.35	0.0468
S24B	St. Louis, MO-IL	SEHA	Rent of primary residence	EC	72	-0.03	-0.03	-0.69	0.53	0.0206
S24B	St. Louis, MO-IL	SEHC	Owners' equivalent rent of residences	EC	72	-0.03	-0.05	-0.39	0.34	0.0194
S24B	St. Louis, MO-IL	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.03	-0.05	-0.39	0.34	0.0194
S300	South - Size Class A	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.10	0.11	0.0248
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SA0	All items	AI	72	-0.01	-0.01	-0.17	0.14	0.0173
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SAH	Housing	MG	72	-0.02	-0.01	-0.36	0.17	0.0163
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SAH1	Shelter	IA	72	-0.02	-0.01	-0.40	0.19	0.0026
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SEHA	Rent of primary residence	EC	72	-0.03	-0.01	-0.24	0.16	<0.0001
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SEHC	Owners' equivalent rent of residences	EC	72	-0.03	-0.01	-0.48	0.22	0.015

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.03	-0.01	-0.48	0.22	0.015
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SAS	Services	SA	72	-0.01	-0.01	-0.24	0.14	0.0109
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SA0L5	All items less medical care	SA	72	-0.01	-0.01	-0.18	0.15	0.0182
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SASL5	Services less medical care services	SA	72	-0.02	-0.01	-0.27	0.15	0.0127
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SA0LE	All items less energy	SA	72	-0.01	-0.01	-0.17	0.14	0.0111
S35A	Washington-Arlington-Alexandria, DC-VA-MD-WV	SA0L1E	All items less food and energy	SA	72	-0.01	-0.01	-0.22	0.17	0.0099
S35B	Miami-Fort Lauderdale-West Palm Beach, FL	SAM	Medical care	MG	72	0.00	0.00	-0.05	0.11	0.0493
S35E	Baltimore-Columbia-Towson, MD	SEHA	Rent of primary residence	EC	72	-0.03	-0.04	-0.28	0.46	0.0015
S37B	Houston-The Woodlands-Sugar Land, TX	SEHA	Rent of primary residence	EC	72	-0.05	-0.07	-0.65	1.08	0.0002
S48B	Denver-Aurora-Lakewood, CO	SEHA	Rent of primary residence	EC	72	-0.03	-0.02	-0.37	0.25	0.0349
S49B	San Francisco-Oakland-Hayward, CA	SAF	Food and beverages	MG	72	0.02	0.00	-0.44	0.43	0.0396
S49B	San Francisco-Oakland-Hayward, CA	SEFV	Food away from home	EC	72	0.04	0.00	-0.96	0.96	0.0232
S49B	San Francisco-Oakland-Hayward, CA	SAC	Commodities	SA	72	0.01	0.00	-0.26	0.22	0.0414
S49B	San Francisco-Oakland-Hayward, CA	SAN	Nondurables	SA	72	0.01	0.01	-0.33	0.27	0.0475
S49D	Seattle-Tacoma-Bellevue, WA	SEHA	Rent of primary residence	EC	72	-0.02	-0.03	-0.39	0.52	0.0125
S49F	Urban Hawaii	SA0	All items	AI	72	-0.02	-0.03	-0.44	0.44	0.0302
S49F	Urban Hawaii	SAH	Housing	MG	72	-0.05	-0.07	-0.91	0.83	0.0288
S49F	Urban Hawaii	SAH1	Shelter	IA	72	-0.06	-0.10	-1.11	0.99	0.0241

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
S49F	Urban Hawaii	SEHA	Rent of primary residence	EC	72	-0.06	-0.09	-1.23	1.36	0.0069
S49F	Urban Hawaii	SEHC	Owners' equivalent rent of residences	EC	72	-0.06	-0.07	-1.11	0.94	0.0431
S49F	Urban Hawaii	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.06	-0.07	-1.11	0.94	0.0431
S49F	Urban Hawaii	SAS	Services	SA	72	-0.04	-0.06	-0.63	0.65	0.0297
S49F	Urban Hawaii	SA0L5	All items less medical care	SA	72	-0.03	-0.03	-0.48	0.47	0.0284
S49F	Urban Hawaii	SASL5	Services less medical care services	SA	72	-0.04	-0.06	-0.69	0.72	0.0297
S49F	Urban Hawaii	SA0LE	All items less energy	SA	72	-0.03	-0.03	-0.48	0.46	0.0297
S49F	Urban Hawaii	SA0L1E	All items less food and energy	SA	72	-0.03	-0.04	-0.58	0.56	0.0284
S49G	Urban Alaska	SEHA	Rent of primary residence	EC	72	-0.04	-0.02	-0.46	0.37	0.0185

The results of the Wilcoxon signed-rank test applied to the one-month percentage changes for the published indexes at the U.S. level and for the four Census regions can be found in Appendix B. The results of the signed rank test for the remaining published indexes are available upon request.

Differences between the Twelve-Month Percentages Changes of the Published Indexes

For 151,260 ($2,521 \times 60$) published twelve-month price changes from 201901 - 202312, about 90 percent from the counterfactual indexes were within three tenths of a percentage point of the price changes from CPI production and about 95 percent of the twelve-month price changes were within five tenths of a percentage point. Similar to the one-month price changes, the differences were noticeably smaller at higher aggregation levels. Specifically, 95 percent of the absolute differences between the twelve-month price changes at the item stratum level for the U.S. City Average Indexes were less than 0.66 percentage points. At the expenditure class level, 95 percent of the absolute differences were less than 0.48 percentage points. At the MG level, 95 percent of the twelve-month percentage changes were less than 0.18. Finally at the All-Items level, 95 percent of the absolute differences were less than 0.07 percentage points. Table 8 below lists the 90th, 95th, and 100th percentiles of the absolute differences between the twelve-month percentage changes from the counterfactual indexes and CPI production for All-U.S. Cities. Figure 22 above provides density plots and boxplots of the twelve-month percentage change differences for the U.S. City Average indexes by aggregation level from January 2018 – December 2023.

Table 8. 90th, 95th, and 100th Percentiles of the Absolute Differences between 12M Percentage Changes from CPI Production and Counterfactual Indexes for the U.S. City Average Indexes

Level of Aggregation	Item Class/Aggregation Level	90 th Percentile	95 th Percentile	100 th Percentile
1 st	IS - Item Stratum Level - (Lowest level of aggregation)	0.33	0.66	11.39

Level of Aggregation	Item Class/Aggregation Level	90 th Percentile	95 th Percentile	100 th Percentile
2 nd	EC - Expenditure Class	0.26	0.48	3.76
3 rd	MG - Major Group	0.14	0.18	0.61
4 th	AI - All Items - (Highest level of aggregation)	0.06	0.07	0.09

Regarding the level of bias due to survey nonresponses in the twelve-month price changes of the published indexes, the mean absolute differences between the price changes from the counterfactual indexes and CPI production were less than 0.13 percentage points for 90 percent of the indexes and less than 0.22 percentage points for 95 percent of the indexes. Moreover, all the mean absolute differences for the published indexes were less than 1.52 percentage points. The U.S. City Average (0000) for Food at Employee Sites and Schools (SEFV03) had the largest mean difference at 1.52 percentage points. The large differences that occurred between the twelve-month price changes for Food at Employee Sites and Schools was due to the end of the pandemic-era universal free lunch program in 2022 (which provided free meals to all students regardless of income). See Appendix C for the mean twelve-month price change differences for each of the published indexes at the U.S. level and the four Census regions. The mean differences for the remaining published indexes are available upon request.

Based on the results of the Wilcoxon signed-rank test, only four of the 2,521 published indexes were found to be at risk of nonresponse bias for their twelve-month percentage changes. Those four indexes included: Tuition, Other School Fees, and Childcare from Philadelphia (S12B) and Miami (S35B), as well as Food at Home and Other Food at Home from San Diego (S49E). Table 9 below provides the results of the Wilcoxon signed-rank test for the published indexes with p-values less than 0.05. The results of the Wilcoxon signed-rank test applied to the 12-month differences for the published indexes at the U.S. level and the four Census regions can be found in Appendix C along with the minimum, maximum, mean, and median differences. The results for the remaining published indexes are available upon request.

Table 9. Published Indexes where Wilcoxon Signed-Rank Test Indicated Published Twelve-Month Percentage Changes were Significantly Different from Nonresponse Adjusted One-Month PCs

Area	Area Title	Item	Item Title	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
S12B	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	SEEB	Tuition, other school fees, and childcare	60	0.00	0.00	-0.02	0.00	0.04414
S35B	Miami-Fort Lauderdale-West Palm Beach, FL	SEEB	Tuition, other school fees, and childcare	60	-0.01	0.00	-0.53	0.00	0.04414
S49E	San Diego-Carlsbad, CA	SAF11	Food at home	60	0.00	0.00	-0.02	0.00	0.04414
S49E	San Diego-Carlsbad, CA	SAF115	Other food at home	60	-0.01	0.00	-0.07	0.00	0.04414

While there are some large differences at the lower aggregation levels of the CPI, all the differences between the one-month and twelve-month percentage changes from the counterfactual indexes and CPI production were minimal for All-Items (SA0) for the U.S. City Average (0000). Specifically, the one-month price changes were all within 0.03 percentage points of each other and the twelve-month price changes were all within a tenth of a percentage point. Further, the Wilcoxon signed-rank test produced p-values of 0.0967 and 0.2052 for the one-month and twelve-month differences, respectively, which indicated that the null hypothesis (that the distribution of the differences is symmetric around zero) should not be rejected. Figures 23 and 24 below illustrate the differences between the one-month and twelve-month percentage changes from the two sets of indexes from January 20018 – December 2023.

Table 10. Results of Wilcoxon Signed-Rank Test for One-Month and Twelve-Month PCs for All Items at U.S. Level from January 2018 – December 2023

Percent Change	Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
PC01	0000	U.S. city average	SA0	All Items	AI	72	0.00	0.00	-0.03	0.03	0.0967
PC12	0000	U.S. city average	SA0	All items	AI	60	-0.02	-0.02	-0.09	0.03	0.2052

Figure 23. One-Month Percentage Changes for All Items for the U.S. City Average from January 2018 – December 2023

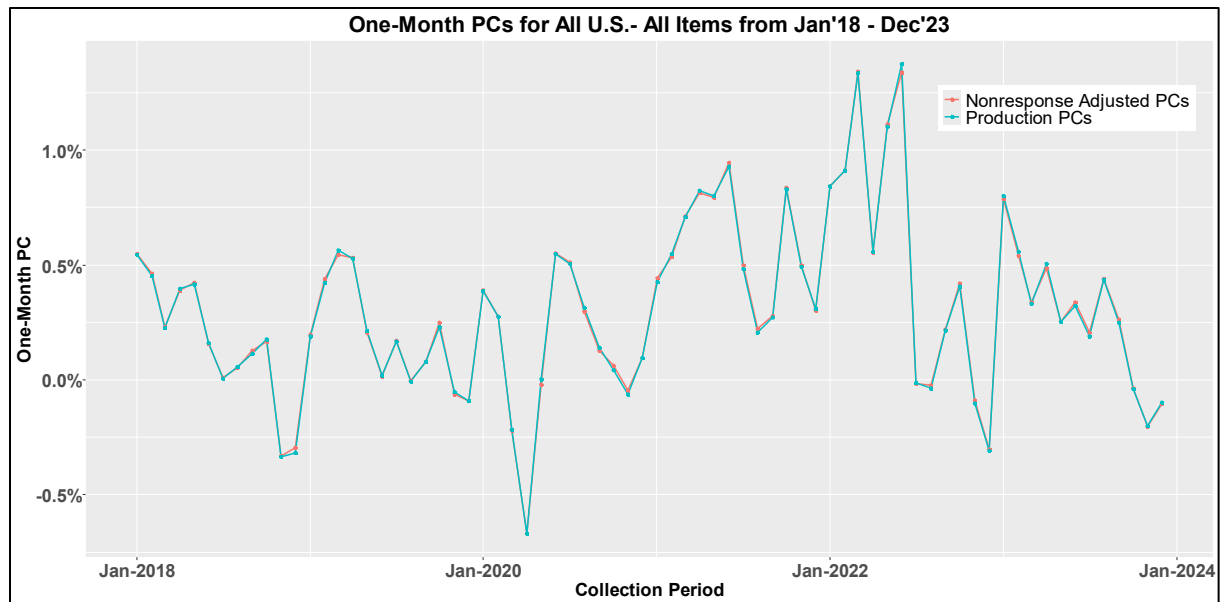
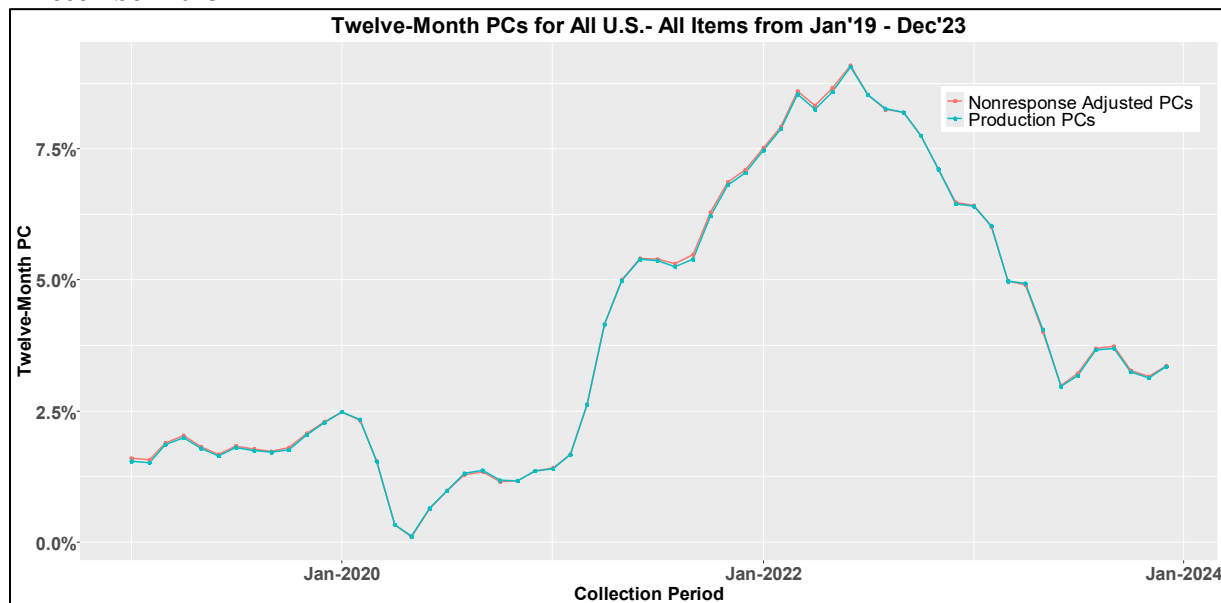


Figure 24. Twelve-Month Percentage Changes for All Items for U.S. City Average from January 2018 – December 2023



6. Conclusion

The Office of Management and Budget (2006) published a set of “Standards and Guidelines for Statistical Surveys,” which mandated that any federal survey with an establishment response rate below 80 percent (Guideline 3.2.9) or an item response rate below 70 percent (Guideline 3.2.10) conduct an analysis of nonresponse bias. Prior to the COVID-19 pandemic, the outlet and quote repricing response rates for the CPI’s C&S Survey were about 90 percent and 80 percent, respectively, and the housing unit repricing response rate for the CPI Housing Survey was continuously above 70 percent. During the pandemic, the response rates for both surveys steadily declined. In December 2023, the outlet and quote repricing response rates for the C&S Survey were still only 80 percent and 70 percent, respectively, and the unit response rate for the Housing Survey was about 68 percent. Consequently, the BLS launched a Nonresponse Bias study in January 2025 to assess the level bias due to survey nonresponse in the CPI.

In total, 2,521 published indexes were evaluated. Of those indexes, the Wilcoxon signed-rank test indicated that 52 had significantly different one-month PCs and four had significantly different 12-month PCs (p -value < 0.05). About 44.23 percent of the 52 published indexes that were flagged for potential nonresponse bias for their one-month PCs were for Rent and Owners’ Equivalent Rent. These differences appeared to be caused by the high nonresponse rate of single detached homes, which was 46.88 percent on average during the reference period. For the U.S. City Average Indexes, only the one-month price change differences for Full-Service Meals (SEFV01) and Rent of Primary Residence (SEHA) produced p -values less than 0.05. None of the twelve-month prices change differences for the U.S. City Average Indexes were found to be significant.

Regarding the level of bias due to survey nonresponses in the one-month price changes, the mean differences between the price changes from the counterfactual indexes and CPI production were less than 0.01 percentage points for 90 percent of the indexes and less than 0.02 percentage points for 95 percent of the published indexes. For the twelve-month price changes, the mean differences were less than 0.13 percentage points for 90 percent of the indexes and less than 0.22 percentage points for 95 percent of the indexes. While the mean one-month and twelve-month price change differences were small, there were some large minimum and maximum differences that could not be overlooked at the lower levels of aggregation. These large differences occurred because the home-cell imputation rate decreased by about five percentage points. Recommendations based on this study include increasing the sample sizes of item at risk of nonresponse bias. Specifically, CPI should increase the sample size of its Full-Service Meals sample and the number of single detached homes in its housing sample.

For the All-Items Index for the U.S. City Average (the highest level of aggregation in the CPI), all the differences between the one-month and twelve-month percentage changes from the counterfactual indexes and CPI production were minimal. Specifically, the one-month price changes were all within 0.03 percentage points of each and the twelve-month price changes were all within a tenth of a percentage point.

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Appendix A. Variances of Inflation Rates with Overlapping Time Periods

Dave Swanson (5/2025)

Problem Statement

Let x_t be a one-month price relative from month t to $t+1$, and let the product of twelve of them, $y_t = x_t x_{t+1} \cdots x_{t+11}$, be a twelve-month price relative from month t to $t+12$. The question is, what is the variance of $\bar{y}_{24} = \frac{1}{24}(y_1 + y_2 + \cdots + y_{24})$? Textbooks say it is $V(\bar{y}_{24}) = \frac{V(y_t)}{24} = \frac{1}{24(24-1)} \sum_{t=1}^{24} (y_t - \bar{y}_{24})^2$. But that assumes the y_t 's are independent of each other, and that is simply not true. The y_t 's have a lot of covariance because they have a lot of overlapping data, and that makes the true variance bigger than the textbook variance. The textbook variance underestimates the true variance. And that underestimation leads to results in hypothesis testing where the level of statistical significance is over-stated.

Here are a few of the twelve-month price relatives, where it is easy to see their significant amount of overlapping data:

$$\begin{aligned} y_1 &= x_1 x_2 x_3 x_4 x_5 x_6 x_7 x_8 x_9 x_{10} x_{11} x_{12} \\ y_2 &= x_2 x_3 x_4 x_5 x_6 x_7 x_8 x_9 x_{10} x_{11} x_{12} x_{13} \\ y_3 &= x_3 x_4 x_5 x_6 x_7 x_8 x_9 x_{10} x_{11} x_{12} x_{13} x_{14} \\ &\quad \dots \text{etc} \dots \end{aligned}$$

The significant amount of overlapping data means the textbook variance estimator, $V(\bar{y}_{24}) = \frac{V(y_t)}{24} = \frac{1}{24(24-1)} \sum_{t=1}^{24} (y_t - \bar{y}_{24})^2$, is too small. The real variance is bigger than that. So, the next question is, how much bigger?

Developing a Tractable Model

One way of getting a better estimate of the variance $V(\bar{y}_{24})$ is by taking the logarithms of the price relatives and turning the problem from a multiplicative problem into an additive problem: $\ln y_t = \ln x_t + \ln x_{t+1} + \cdots + \ln x_{t+11}$. That makes the statistical analysis more tractable. So here is the revised problem:

$$\begin{aligned} y_1 &= x_1 + x_2 + \cdots + x_{12} \\ y_2 &= x_2 + x_3 + \cdots + x_{13} \\ y_3 &= x_3 + x_4 + \cdots + x_{14} \\ &\quad \dots \text{etc} \dots \\ y_{24} &= x_{24} + x_{25} + \cdots + x_{35} \end{aligned}$$

Or more generally, let us assume there are “ n ” x ’s and “ N ” y ’s, where $N > n$:

$$\begin{aligned} y_1 &= x_1 + x_2 + \cdots + x_n \\ y_2 &= x_2 + x_3 + \cdots + x_{n+1} \\ y_3 &= x_3 + x_4 + \cdots + x_{n+2} \\ &\quad \dots \text{etc} \dots \\ y_N &= x_N + x_{N+1} + \cdots + x_{N+(n-1)} \end{aligned}$$

Here is a picture of the situation where $n=5$ and $N=8$:

8 Consecutive 5-Month Price Relatives ($N=8, n=5$)													
Month													
	1	2	3	4	5	6	7	8	9	10	11	12	etc
Y1=	1	2	3	4	5								
Y2=		2	3	4	5	6							
Y3=			3	4	5	6	7						
Y4=				4	5	6	7	8					
Y5=					5	6	7	8	9				
Y6=						6	7	8	9	10			
Y7=							7	8	9	10	11		
Y8=								8	9	10	11	12	

And here is the same picture, but with the x's stacked on top of each other differently.													
					5	6	7	8					
				4	5	6	7	8	9				
			3	4	5	6	7	8	9	10			
		2	3	4	5	6	7	8	9	10	11		
	1	2	3	4	5	6	7	8	9	10	11	12	

The Variance of the Average of the Long-Term Price Relatives, $V(\bar{y}_N)$

The first step in computing the variance of $\bar{y}_N = \frac{y_1 + y_2 + \dots + y_N}{N}$ is writing the sum $y_1 + y_2 + \dots + y_N$ in terms of the x_t 's. Using the trapezoidal picture above, we see the sum is this:

$$\begin{aligned}
 y_1 + y_2 + \dots + y_N &= (x_1 + 2x_2 + 3x_3 + \dots + (n-1)x_{n-1}) + (nx_n + nx_{n+1} + \dots + nx_N) + ((n-1)x_{N+1} + \dots \\
 &\quad + 3x_{N+(n-3)} + 2x_{N+(n-2)} + x_{N+(n-1)})
 \end{aligned}$$

From this equation, it can be shown that if all the x_t 's are iid, with $E(x_t) = \mu$ and $V(x_t) = \sigma^2$, then the mean and variance of $\bar{y}_N$ are the following:

$$\begin{aligned}
 E(\bar{y}_N) &= n\mu \\
 V(\bar{y}_N) &= \frac{\sigma^2}{N^2} \left[Nn^2 - \frac{(n-1)n(n+1)}{3} \right]
 \end{aligned}$$

Here is a derivation of these formulas.

$$\begin{aligned}
 E(\bar{y}_N) &= E\left(\frac{y_1 + y_2 + \dots + y_N}{N}\right) \\
 &= \frac{E(y_1) + E(y_2) + \dots + E(y_N)}{N} \\
 &= \frac{n\mu + n\mu + \dots + n\mu}{N} \\
 &= n\mu
 \end{aligned}$$

$$\begin{aligned}
 V(\bar{y}_N) &= V\left(\frac{y_1 + y_2 + \dots + y_N}{N}\right) \\
 &= \frac{1}{N^2} V(y_1 + y_2 + \dots + y_N) \\
 &= \frac{1}{N^2} V\left((x_1 + 2x_2 + 3x_3 + \dots + (n-1)x_{n-1}) + (nx_n + nx_{n+1} + \dots + nx_N) + ((n-1)x_{N+1} + \dots + 3x_{N+(n-3)} + 2x_{N+(n-2)} + x_{N+(n-1)})\right) \\
 &= \frac{1}{N^2} [(1^2\sigma^2 + 2^2\sigma^2 + 3^2\sigma^2 + \dots + (n-1)^2\sigma^2) + (n^2\sigma^2 + n^2\sigma^2 + \dots + n^2\sigma^2) + ((n-1)^2\sigma^2 + \dots + 3^2\sigma^2 + 2^2\sigma^2 + 1^2\sigma^2)]
 \end{aligned}$$

$$\begin{aligned}
&= \frac{\sigma^2}{N^2} [(1^2 + 2^2 + 3^2 + \dots + (n-1)^2) + (n^2 + n^2 + \dots + n^2) + ((n-1)^2 + \dots + 3^2 + 2^2 + 1^2)] \\
&= \frac{\sigma^2}{N^2} \left[\frac{(n-1)n(2n-1)}{6} + (N - (n-1))n^2 + \frac{(n-1)n(2n-1)}{6} \right] \\
&= \frac{\sigma^2}{N^2} \left[Nn^2 - \frac{(n-1)n(n+1)}{3} \right]
\end{aligned}$$

The Incorrect Textbook Variance Formula

This is the incorrect textbook variance formula:

$$V(\bar{y}_N) = \frac{n\sigma^2}{N}$$

It is incorrect because it assumes the y_t 's are independent of each other, and they are not. Here is a derivation of this incorrect formula.

$$\begin{aligned}
V(\bar{y}_N) &= V\left(\frac{y_1 + y_2 + \dots + y_N}{N}\right) \\
&= \frac{V(y_1) + V(y_2) + \dots + V(y_N)}{N^2} \quad (\text{This step is where independence is incorrectly assumed.}) \\
&= \frac{N \cdot V(y_t)}{N^2} \quad (\text{This step assumes the } y_t \text{'s are identically distributed.}) \\
&= \frac{V(y_t)}{N} \quad (\text{This is the usual textbook formula. It is based on the iid assumptions above.}) \\
&= \frac{V(x_t + x_{t+1} + \dots + x_{t+(n-1)})}{N} \\
&= \frac{V(x_t) + V(x_{t+1}) + \dots + V(x_{t+(n-1)})}{N} \quad (\text{Independence is okay here because the } x_t \text{'s do not overlap.}) \\
&= \frac{\sigma^2 + \sigma^2 + \dots + \sigma^2}{N} \\
&= \frac{n\sigma^2}{N}
\end{aligned}$$

The Impact of Using the Incorrect Textbook Variance Formula

Suppose a z-score is computed using the right variance formula:

$$z_{Right} = \frac{\bar{y}_N - \mu_0}{SD(\bar{y}_N - \mu_0)} = \frac{\bar{y}_N - \mu_0}{\sqrt{V(\bar{y}_N)}} = \frac{\bar{y}_N - \mu_0}{\sqrt{\frac{\sigma^2}{N^2} \left[Nn^2 - \frac{(n-1)n(n+1)}{3} \right]}}$$

And a z-score is computed using the wrong variance formula:

$$z_{Wrong} = \frac{\bar{y}_N - \mu_0}{SD(\bar{y}_N - \mu_0)} = \frac{\bar{y}_N - \mu_0}{\sqrt{V(\bar{y}_N)}} = \frac{\bar{y}_N - \mu_0}{\sqrt{\frac{n\sigma^2}{N}}}$$

Then the ratio of the two z-scores is:

$$Ratio = \frac{z_{Wrong}}{z_{Right}} = \sqrt{n - \frac{(n-1)(n+1)}{3N}} \approx \sqrt{n - \frac{n^2}{3N}} = \sqrt{n \left(1 - \frac{n}{3N}\right)}$$

This means the wrong z-score is too big by a factor of $\sqrt{n - \frac{(n-1)(n+1)}{3N}} \approx \sqrt{n \left(1 - \frac{n}{3N}\right)}$.

When $n=12$ and $N=60$, it is too big by a factor of approximately $\sqrt{12 \left(1 - \frac{12}{3 \cdot 60}\right)} \approx 3.35$. Thus, a textbook z-score of $z=2.00$ should really be $z=0.60$; a textbook z-score of $z=3.00$ should really be $z=0.90$; and a textbook z-score of $z=4.00$ should really be $z=1.19$. In general, when $n=12$ and $N=60$, a textbook z-score needs to be greater than $z=6.57$ to be statistically significant.

Appendix B. Wilcoxon Signed-Rank Test Results for One-Month Percentage Changes for U.S. City Average (0000), the Northeast (0100), Midwest (0200), South (0300), and West (0400)

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SA0	All items	AI	72	-0.00	-0.00	-0.03	0.03	0.0970
0000	U.S. city average	SAF	Food and beverages	MG	72	0.00	0.00	-0.05	0.05	0.7431
0000	U.S. city average	SAF1	Food	IA	72	0.00	0.00	-0.05	0.05	0.5631
0000	U.S. city average	SAF11	Food at home	IA	72	-0.00	-0.00	-0.03	0.03	0.6728
0000	U.S. city average	SAF111	Cereals and bakery products	IA	72	0.00	0.00	0.00	0.00	s.n.t. ³
0000	U.S. city average	SEFA	Cereals and cereal products	EC	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFA01	Flour and prepared flour mixes	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFA02	Breakfast cereal	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFA03	Rice, pasta, cornmeal	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFB	Bakery products	EC	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFB01	Bread	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFB02	Fresh biscuits, rolls, muffins	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFB03	Cakes, cupcakes, and cookies	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFB04	Other bakery products	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SAF112	Meats, poultry, fish, and eggs	IA	72	-0.00	-0.00	-0.10	0.10	0.6013
0000	U.S. city average	SAF1121	Meats, poultry, and fish	IA	72	-0.00	-0.00	-0.11	0.11	0.6052
0000	U.S. city average	SAF11211	Meats	IA	72	-0.00	-0.01	-0.18	0.17	0.5859
0000	U.S. city average	SEFC	Beef and veal	EC	72	-0.00	0.01	-0.39	0.41	0.8984
0000	U.S. city average	SEFC01	Uncooked ground beef	IS	72	-0.01	0.00	-0.58	0.56	0.6013
0000	U.S. city average	SEFC02	Uncooked beef roasts	IS	72	-0.00	-0.00	-1.26	1.49	0.9072
0000	U.S. city average	SEFC03	Uncooked beef steaks	IS	72	0.00	0.00	0.00	0.00	s.n.t.
0000	U.S. city average	SEFC04	Uncooked other beef and veal	IS	72	-0.00	0.01	-1.49	1.48	0.6287
0000	U.S. city average	SEFD	Pork	EC	72	-0.01	-0.01	-0.31	0.33	0.3552

³ Indexes made up of item strata with decision trees that did not have any splits (called single node trees) do not have p-values from the Wilcoxon signed-rank test because all paired values were equal. Indexes where all paired price changes were equal are represented by s.n.t in the tables throughout the appendices.

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFD01	Bacon, breakfast sausage, and related products	IS	72	-0.01	0.00	-0.28	0.28	0.6769
0000	U.S. city average	SEFD02	Ham	IS	72	-0.01	0.02	-1.44	0.98	0.9601
0000	U.S. city average	SEFD03	Pork chops	IS	72	-0.00	0.01	-0.70	0.72	0.9469
0000	U.S. city average	SEFD04	Other pork including roasts, steaks, and ribs	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFE	Other meats	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF	Poultry	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF01	Chicken	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF02	Other uncooked poultry including turkey	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG	Fish and seafood	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG01	Fresh fish and seafood	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG02	Processed fish and seafood	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFH	Eggs	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ	Dairy and related products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ01	Milk	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ02	Cheese and related products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ03	Ice cream and related products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ04	Other dairy and related products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF113	Fruits and vegetables	IA	72	-0.00	-0.00	-0.19	0.15	0.3699
0000	U.S. city average	SAF1131	Fresh fruits and vegetables	IA	72	-0.00	-0.00	-0.24	0.19	0.3790
0000	U.S. city average	SEFK	Fresh fruits	EC	72	-0.00	-0.00	-0.25	0.25	0.3213
0000	U.S. city average	SEFK01	Apples	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFK02	Bananas	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFK03	Citrus fruits	IS	72	-0.00	-0.01	-0.45	1.06	0.2869
0000	U.S. city average	SEFK04	Other fresh fruits	IS	72	-0.01	-0.00	-0.41	0.30	0.6406
0000	U.S. city average	SEFL	Fresh vegetables	EC	72	-0.00	-0.00	-0.24	0.13	0.3494
0000	U.S. city average	SEFL01	Potatoes	IS	72	0.00	0.00	-0.60	0.34	0.5707
0000	U.S. city average	SEFL02	Lettuce	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFL03	Tomatoes	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFL04	Other fresh vegetables	IS	72	-0.01	-0.00	-0.45	0.15	0.6169
0000	U.S. city average	SEFM	Processed fruits and vegetables	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFM01	Canned fruits and vegetables	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFM02	Frozen fruits and vegetables	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFM03	Other processed fruits and vegetables including dried	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF114	Nonalcoholic beverages and beverage materials	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN	Juices and nonalcoholic drinks	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN01	Carbonated drinks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN02	Frozen noncarbonated juices and drinks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN03	Nonfrozen noncarbonated juices and drinks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP	Beverage materials including coffee and tea	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP01	Coffee	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP02	Other beverage materials including tea	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF115	Other food at home	IA	72	-0.00	-0.00	-0.07	0.06	0.9336
0000	U.S. city average	SEFR	Sugar and sweets	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR01	Sugar and sugar substitutes	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR02	Candy and chewing gum	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR03	Other sweets	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS	Fats and oils	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS01	Butter and margarine	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS02	Salad dressing	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS03	Other fats and oils including peanut butter	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT	Other foods	EC	72	-0.00	-0.00	-0.09	0.08	0.9204
0000	U.S. city average	SEFT01	Soups	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT02	Frozen and freeze dried prepared foods	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT03	Snacks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFT04	Spices, seasonings, condiments, sauces	IS	72	-0.00	-0.00	-0.47	0.41	0.9248
0000	U.S. city average	SEFT05	Baby food and formula	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT06	Other miscellaneous foods	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFV	Food away from home	EC	72	0.00	0.00	-0.08	0.13	0.4799
0000	U.S. city average	SEFV01	Full service meals and snacks	IS	72	0.00	0.00	-0.04	0.07	0.0090
0000	U.S. city average	SEFV02	Limited service meals and snacks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFV03	Food at employee sites and schools	IS	72	0.06	0.00	-3.86	6.45	0.6705
0000	U.S. city average	SEFV04	Food from vending machines and mobile vendors	IS	72	-0.04	0.00	-1.46	1.21	0.8940
0000	U.S. city average	SEFV05	Other food away from home	IS	72	0.01	-0.00	-1.41	1.41	0.6850
0000	U.S. city average	SAF116	Alcoholic beverages	IA	72	-0.00	0.00	-0.49	0.41	0.4939
0000	U.S. city average	SEFW	Alcoholic beverages at home	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW01	Beer, ale, and other malt beverages at home	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW02	Distilled spirits at home	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW03	Wine at home	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFX	Alcoholic beverages away from home	EC	72	-0.01	0.00	-1.11	0.92	0.5153
0000	U.S. city average	SAH	Housing	MG	72	-0.00	0.00	-0.05	0.06	0.2345
0000	U.S. city average	SAH1	Shelter	IA	72	-0.01	-0.00	-0.06	0.04	0.1065
0000	U.S. city average	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.09	0.04	0.0119
0000	U.S. city average	SEHB	Lodging away from home	EC	72	-0.04	-0.06	-1.62	0.87	0.5117
0000	U.S. city average	SEHB01	Lodging while at school	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHB02	Other lodging away from home including hotels and motels	IS	72	-0.04	-0.07	-1.86	1.02	0.4974
0000	U.S. city average	SEHC	Owners' equivalent rent of residences	EC	72	-0.00	-0.00	-0.07	0.05	0.3881
0000	U.S. city average	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.00	-0.00	-0.07	0.05	0.3912
0000	U.S. city average	SEHD	Tenants' and household insurance	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAH2	Fuels and utilities	IA	72	0.00	0.00	-0.26	0.27	0.8502
0000	U.S. city average	SAH21	Household energy	IA	72	0.00	0.00	-0.33	0.36	0.9734
0000	U.S. city average	SEHE	Fuel oil and other fuels	EC	72	0.00	-0.01	-0.38	0.42	0.8546

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEHE01	Fuel oil	IS	72	-0.00	-0.00	-0.61	0.48	0.9513
0000	U.S. city average	SEHE02	Propane, kerosene, and firewood	IS	72	0.01	-0.00	-0.44	0.69	0.8069
0000	U.S. city average	SEHF	Energy services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHF01	Electricity	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHF02	Utility (piped) gas service	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHG	Water and sewer and trash collection services	EC	72	-0.00	0.00	-0.01	0.01	0.7427
0000	U.S. city average	SEHG01	Water and sewerage maintenance	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHG02	Garbage and trash collection	IS	72	-0.00	0.00	-0.04	0.04	0.6914
0000	U.S. city average	SAH3	Household furnishings and operations	IA	72	0.00	0.00	-0.22	0.29	0.5556
0000	U.S. city average	SEHH	Window and floor coverings and other linens	EC	72	0.00	0.00	-0.38	0.16	0.1028
0000	U.S. city average	SEHH01	Floor coverings	IS	72	0.01	0.02	-1.42	0.76	0.1264
0000	U.S. city average	SEHH02	Window coverings	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHH03	Other linens	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHJ	Furniture and bedding	EC	72	0.01	0.01	-0.24	0.37	0.7855
0000	U.S. city average	SEHJ01	Bedroom furniture	IS	72	0.02	0.02	-0.67	1.04	0.7515
0000	U.S. city average	SEHJ02	Living room, kitchen, and dining room furniture	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHJ03	Other furniture	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK	Appliances	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK01	Major appliances	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK02	Other appliances	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL	Other household equipment and furnishings	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL01	Clocks, lamps, and decorator items	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL02	Indoor plants and flowers	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL03	Dishes and flatware	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL04	Nonelectric cookware and tableware	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHM	Tools, hardware, outdoor equipment and supplies	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHM01	Tools, hardware and supplies	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEHM02	Outdoor equipment and supplies	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN	Housekeeping supplies	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN01	Household cleaning products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN02	Household paper products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN03	Miscellaneous household products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHP	Household operations	EC	72	0.02	0.01	-1.34	1.42	0.5445
0000	U.S. city average	SEHP01	Domestic services	IS	72	-0.01	-0.00	-4.15	3.88	0.9693
0000	U.S. city average	SEHP02	Gardening and lawncare services	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHP03	Moving, storage, freight expense	IS	72	0.01	-0.01	-1.43	1.43	0.9823
0000	U.S. city average	SEHP04	Repair of household items	IS	72	0.10	0.00	-3.89	4.42	0.9614
0000	U.S. city average	SAA	Apparel	MG	72	-0.00	-0.00	-0.18	0.19	0.9336
0000	U.S. city average	SAA1	Men's and boys' apparel	IA	72	0.00	0.00	-0.74	0.71	0.8808
0000	U.S. city average	SEAA	Men's apparel	EC	72	-0.00	-0.00	-0.37	0.47	0.6932
0000	U.S. city average	SEAA01	Men's suits, sport coats, and outerwear	IS	72	-0.00	0.01	-1.02	0.99	0.9956
0000	U.S. city average	SEAA02	Men's underwear, nightwear, swimwear, and accessories	IS	72	-0.01	0.00	-0.92	0.78	0.8184
0000	U.S. city average	SEAA03	Men's shirts and sweaters	IS	72	-0.00	0.00	-0.64	0.74	0.5799
0000	U.S. city average	SEAA04	Men's pants and shorts	IS	72	-0.01	-0.00	-1.04	1.12	0.8677
0000	U.S. city average	SEAB	Boys' apparel	EC	72	0.02	0.06	-2.61	2.88	0.5045
0000	U.S. city average	SAA2	Women's and girls' apparel	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC	Women's apparel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC01	Women's outerwear	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC02	Women's dresses	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC03	Women's suits and separates	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC04	Women's underwear, nightwear, swimwear, and accessories	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAD	Girls' apparel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAE	Footwear	EC	72	-0.00	0.01	-0.30	0.30	0.9292
0000	U.S. city average	SEAE01	Men's footwear	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEAE02	Boys' and girls' footwear	IS	72	-0.02	0.04	-1.22	1.24	0.9292
0000	U.S. city average	SEAE03	Women's footwear	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAF	Infants' and toddlers' apparel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAG	Jewelry and watches	EC	72	0.00	0.02	-1.01	0.87	0.8069
0000	U.S. city average	SEAG01	Watches	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAG02	Jewelry	IS	72	0.00	0.03	-1.50	1.42	0.7898
0000	U.S. city average	SAT	Transportation	MG	72	-0.00	0.00	-0.04	0.03	0.9469
0000	U.S. city average	SAT1	Private transportation	IA	72	-0.00	0.00	-0.04	0.04	0.9336
0000	U.S. city average	SETA	New and used motor vehicles	EC	72	0.00	0.00	-0.00	0.00	0.8125
0000	U.S. city average	SETA01	New vehicles	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETA02	Used cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETA03	Leased cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETA04	Car and truck rental	IS	72	0.00	0.00	-0.00	0.00	0.8125
0000	U.S. city average	SETB	Motor fuel	EC	72	-0.00	0.00	-0.00	0.00	0.7010
0000	U.S. city average	SETB01	Gasoline (all types)	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETB02	Other motor fuels	IS	72	-0.00	0.00	-0.00	0.00	0.4849
0000	U.S. city average	SETC	Motor vehicle parts and equipment	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETC01	Tires	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETC02	Vehicle accessories other than tires	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETD	Motor vehicle maintenance and repair	EC	72	-0.01	0.00	-0.75	0.63	0.9690
0000	U.S. city average	SETD01	Motor vehicle body work	IS	72	-0.01	-0.00	-1.39	1.27	0.7166
0000	U.S. city average	SETD02	Motor vehicle maintenance and servicing	IS	72	-0.01	-0.00	-0.82	0.87	0.4294
0000	U.S. city average	SETD03	Motor vehicle repair	IS	72	-0.01	0.00	-1.51	1.10	0.9380
0000	U.S. city average	SETF	Motor vehicle insurance	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF01	Motor vehicle fees	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF01	State motor vehicle registration and license fees	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF03	Parking and other fees	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

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0000	U.S. city average	SETG	Public transportation	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG01	Airline fares	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG02	Other intercity transportation	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG03	Intracity transportation	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAM	Medical care	MG	72	-0.00	-0.01	-0.09	0.12	0.3881
0000	U.S. city average	SAM1	Medical care commodities	IA	72	-0.01	-0.03	-0.46	0.62	0.3820
0000	U.S. city average	SEMF	Medicinal drugs	EC	72	-0.01	-0.04	-0.48	0.66	0.3670
0000	U.S. city average	SEMF01	Prescription drugs	IS	72	-0.02	-0.05	-0.64	0.89	0.3670
0000	U.S. city average	SEMF02	Nonprescription drugs	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMG	Medical equipment and supplies	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAM2	Medical care services	IA	72	-0.00	-0.00	-0.01	0.01	0.5745
0000	U.S. city average	SEMC	Professional services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC01	Physicians' services	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SEMC02	Dental services	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC03	Eyeglasses and eye care	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC04	Services by other medical professionals	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD	Hospital and related services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD01	Hospital services	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD02	Nursing homes and adult day services	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD03	Home health care	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEME	Health insurance	EC	72	-0.00	-0.00	-0.07	0.12	0.4132
0000	U.S. city average	SAR	Recreation	MG	72	0.00	0.00	-0.31	0.32	0.7431
0000	U.S. city average	SERA	Video and audio	EC	72	0.00	-0.00	-0.15	0.19	0.8852
0000	U.S. city average	SERA01	Televisions	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA02	Cable, satellite, and live streaming television service	IS	72	0.00	-0.00	-0.22	0.23	0.8372
0000	U.S. city average	SERA03	Other video equipment	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA04	Purchase, subscription, and rental of video	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

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0000	U.S. city average	SERA05	Audio equipment	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA06	Recorded music and music subscriptions	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERB	Pets, pet products and services	EC	72	0.01	0.00	-0.54	0.71	0.5408
0000	U.S. city average	SERB01	Pets and pet products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERB02	Pet services including veterinary	IS	72	0.02	0.00	-1.22	1.57	0.5519
0000	U.S. city average	SERC	Sporting goods	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERC01	Sports vehicles including bicycles	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERC02	Sports equipment	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERD	Photography	EC	72	-0.02	-0.01	-1.28	1.05	0.6446
0000	U.S. city average	SERD01	Photographic equipment and supplies	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERD02	Photographers and photo processing	IS	72	-0.04	-0.03	-2.08	1.58	0.6287
0000	U.S. city average	SERE	Other recreational goods	EC	72	-0.00	0.00	-0.00	0.00	0.8438
0000	U.S. city average	SERE01	Toys	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERE02	Sewing machines, fabric and supplies	IS	72	-0.00	0.00	-0.00	0.00	1.0000
0000	U.S. city average	SERE03	Music instruments and accessories	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERF	Other recreation services	EC	72	0.01	0.01	-1.04	0.66	0.7855
0000	U.S. city average	SERF01	Club membership for shopping clubs, fraternal, or other organizations, or participant sports fees	IS	72	-0.00	-0.00	-2.39	1.79	0.9072
0000	U.S. city average	SERF02	Admissions	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERF03	Fees for lessons or instructions	IS	72	0.06	0.06	-3.39	4.03	0.3610
0000	U.S. city average	SERG	Recreational reading materials	EC	72	0.00	0.00	-0.07	0.12	0.5781
0000	U.S. city average	SERG01	Newspapers and magazines	IS	72	0.01	0.00	-0.11	0.23	0.4956
0000	U.S. city average	SERG02	Recreational books	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAE	Education and communication	MG	72	-0.00	-0.00	-0.04	0.04	0.6973
0000	U.S. city average	SAE1	Education	IA	72	-0.00	-0.00	-0.09	0.07	0.7600
0000	U.S. city average	SEEA	Educational books and supplies	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEB	Tuition, other school fees, and childcare	EC	72	-0.00	-0.00	-0.10	0.07	0.7727
0000	U.S. city average	SEEB01	College tuition and fees	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEEB02	Elementary and high school tuition and fees	IS	72	-0.00	0.00	-0.50	0.40	0.2792
0000	U.S. city average	SEEB03	Day care and preschool	IS	72	-0.01	0.00	-0.35	0.10	0.8415
0000	U.S. city average	SEEB04	Technical and vocational school tuition and fixed fees	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAE2	Communication	IA	72	0.00	-0.00	-0.06	0.07	0.8112
0000	U.S. city average	SEEC	Postage and delivery services	EC	72	-0.00	-0.00	-0.08	0.11	0.7305
0000	U.S. city average	SEEC01	Postage	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEC02	Delivery services	IS	72	0.00	-0.01	-0.64	0.91	0.8372
0000	U.S. city average	SAE21	Information and information processing	IA	72	0.00	-0.00	-0.06	0.07	0.7812
0000	U.S. city average	SEED	Telephone services	EC	72	0.00	-0.00	-0.09	0.14	0.7389
0000	U.S. city average	SEED03	Wireless telephone services	IS	72	0.00	-0.00	-0.12	0.16	0.8329
0000	U.S. city average	SEED04	Residential telephone services	IS	72	0.00	-0.01	-0.70	0.89	0.8459
0000	U.S. city average	SEEE	Information technology, hardware and services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE01	Computers, peripherals, and smart home assistants	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE02	Computer software and accessories	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE03	Internet services and electronic information providers	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE04	Telephone hardware, calculators, and other consumer information items	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAG	Other goods and services	MG	72	0.00	0.00	-0.21	0.15	0.8026
0000	U.S. city average	SEGA	Tobacco and smoking products	EC	72	0.00	-0.00	-1.19	0.62	0.8633
0000	U.S. city average	SEGA01	Cigarettes	IS	72	0.01	-0.01	-1.35	0.68	0.8329
0000	U.S. city average	SEGA02	Tobacco products other than cigarettes	IS	72	-0.00	0.00	-0.82	0.62	0.9823
0000	U.S. city average	SAG1	Personal care	IA	72	-0.00	0.00	-0.13	0.10	0.8984
0000	U.S. city average	SEGB	Personal care products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGB01	Hair, dental, shaving, and miscellaneous personal care products	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGB02	Cosmetics, perfume, bath, nail preparations and implements	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGC	Personal care services	EC	72	0.00	-0.00	-0.32	0.36	0.8896
0000	U.S. city average	SEGC01	Haircuts and other personal care services	IS	72	0.00	-0.00	-0.32	0.36	0.8896
0000	U.S. city average	SEGD	Miscellaneous personal services	EC	72	-0.00	0.00	-0.20	0.21	0.6327

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0000	U.S. city average	SEGD01	Legal services	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGD02	Funeral expenses	IS	72	-0.01	-0.00	-0.32	0.18	0.5482
0000	U.S. city average	SEGD03	Laundry and dry cleaning services	IS	72	-0.00	-0.00	-0.75	0.55	0.1393
0000	U.S. city average	SEGD04	Apparel services other than laundry and dry cleaning	IS	72	-0.01	0.01	-2.04	2.43	0.8896
0000	U.S. city average	SEGD05	Financial services	IS	72	-0.00	0.00	-0.48	0.63	0.9469
0000	U.S. city average	SEGE	Miscellaneous personal goods	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAC	Commodities	SA	72	-0.00	-0.00	-0.03	0.03	0.6932
0000	U.S. city average	SACL11	Commodities less food and beverages	SA	72	-0.00	-0.00	-0.05	0.03	0.8721
0000	U.S. city average	SANL11	Nondurables less food and beverages	SA	72	-0.00	-0.00	-0.10	0.07	0.7473
0000	U.S. city average	SANL113	Nondurables less food, beverages, and apparel	SA	72	-0.00	-0.01	-0.07	0.11	0.3699
0000	U.S. city average	SAD	Durables	SA	72	0.00	0.00	-0.02	0.03	0.8459
0000	U.S. city average	SAS	Services	SA	72	-0.00	-0.00	-0.04	0.06	0.1554
0000	U.S. city average	SAS2RS	Rent of shelter	SA	72	-0.01	-0.00	-0.06	0.04	0.1065
0000	U.S. city average	SAS4	Transportation services	SA	72	-0.00	0.00	-0.14	0.12	0.9690
0000	U.S. city average	SAS367	Other services	SA	72	0.00	-0.00	-0.16	0.19	0.8896
0000	U.S. city average	SA0L1	All items less food	SA	72	-0.00	-0.00	-0.03	0.04	0.0981
0000	U.S. city average	SA0L2	All items less shelter	SA	72	0.00	-0.00	-0.02	0.03	0.9513
0000	U.S. city average	SA0L5	All items less medical care	SA	72	-0.00	-0.00	-0.02	0.04	0.1554
0000	U.S. city average	SACL1	Commodities less food	SA	72	-0.00	-0.00	-0.05	0.03	0.8069
0000	U.S. city average	SANL1	Nondurables less food	SA	72	-0.00	-0.00	-0.09	0.07	0.6327
0000	U.S. city average	SANL13	Nondurables less food and apparel	SA	72	-0.00	-0.00	-0.07	0.10	0.4627
0000	U.S. city average	SAN	Nondurables	SA	72	-0.00	-0.00	-0.05	0.04	0.5745
0000	U.S. city average	SA311	Apparel less footwear	IA	72	0.00	-0.00	-0.26	0.25	0.9028
0000	U.S. city average	SASL2RS	Services less rent of shelter	SA	72	0.00	-0.00	-0.06	0.08	0.7305
0000	U.S. city average	SASL5	Services less medical care services	SA	72	-0.00	-0.00	-0.04	0.07	0.1726
0000	U.S. city average	SA0E	Energy	SA	72	0.00	0.00	-0.17	0.17	0.6769
0000	U.S. city average	SA0LE	All items less energy	SA	72	-0.00	-0.00	-0.03	0.02	0.1522

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SA0L1E	All items less food and energy	SA	72	-0.00	-0.00	-0.03	0.03	0.1442
0000	U.S. city average	SA0L12	All items less food and shelter	SA	72	0.00	-0.00	-0.03	0.04	0.8199
0000	U.S. city average	SA0L12E	All items less food, shelter, and energy	SA	72	0.00	-0.00	-0.03	0.03	0.9823
0000	U.S. city average	SA0L12E4	All items less food, shelter, energy, and used cars and trucks	SA	72	0.00	-0.00	-0.04	0.03	0.9778
0000	U.S. city average	SACL1E	Commodities less food and energy commodities	SA	72	-0.00	-0.00	-0.07	0.04	0.7056
0000	U.S. city average	SACL1E4	Commodities less food, energy, and used cars and trucks	SA	72	-0.00	-0.00	-0.07	0.05	0.7056
0000	U.S. city average	SACE	Energy commodities	SA	72	0.00	-0.00	-0.02	0.02	0.8896
0000	U.S. city average	SASLE	Services less energy services	SA	72	-0.00	-0.00	-0.04	0.04	0.1604
0000	U.S. city average	SAN1D	Domestically produced farm food	SA	72	-0.00	-0.00	-0.04	0.04	0.6728
0000	U.S. city average	SAS24	Utilities and public transportation	SA	72	0.00	-0.00	-0.15	0.16	0.8984
0100	Northeast	SA0	All items	AI	72	-0.00	0.00	-0.06	0.05	0.8459
0100	Northeast	SAF	Food and beverages	MG	72	0.00	-0.00	-0.09	0.12	0.9911
0100	Northeast	SAF1	Food	IA	72	0.00	0.00	-0.10	0.13	0.9160
0100	Northeast	SAF11	Food at home	IA	72	-0.00	0.00	-0.17	0.08	0.8199
0100	Northeast	SAF111	Cereals and bakery products	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF112	Meats, poultry, fish, and eggs	IA	72	-0.00	0.00	-0.26	0.22	0.8156
0100	Northeast	SEFJ	Dairy and related products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF113	Fruits and vegetables	IA	72	-0.01	-0.01	-1.01	0.59	0.6973
0100	Northeast	SAF114	Nonalcoholic beverages and beverage materials	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF115	Other food at home	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEFV	Food away from home	EC	72	0.00	0.00	-0.16	0.31	0.5707
0100	Northeast	SAF116	Alcoholic beverages	IA	72	-0.00	-0.00	-0.19	0.21	0.5975
0100	Northeast	SAH	Housing	MG	72	-0.00	-0.01	-0.12	0.09	0.6526
0100	Northeast	SAH1	Shelter	IA	72	-0.00	-0.00	-0.13	0.07	0.5669
0100	Northeast	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.07	0.07	0.0508
0100	Northeast	SEHC	Owners' equivalent rent of residences	EC	72	-0.00	-0.01	-0.10	0.10	0.5631
0100	Northeast	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.00	-0.01	-0.10	0.10	0.6013
0100	Northeast	SAH2	Fuels and utilities	IA	72	0.00	-0.00	-0.08	0.09	0.9469
0100	Northeast	SAH21	Household energy	IA	72	0.00	-0.00	-0.09	0.10	0.9823
0100	Northeast	SEHF	Energy services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEHF01	Electricity	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEHF02	Utility (piped) gas service	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAH3	Household furnishings and operations	IA	72	0.01	-0.00	-0.27	0.38	0.9734
0100	Northeast	SAA	Apparel	MG	72	-0.00	-0.00	-0.42	0.50	0.6013
0100	Northeast	SAT	Transportation	MG	72	0.00	-0.00	-0.11	0.12	0.9513
0100	Northeast	SAT1	Private transportation	IA	72	0.00	-0.00	-0.12	0.13	0.9646
0100	Northeast	SETA	New and used motor vehicles	EC	72	0.00	0.00	-0.00	0.00	0.8125

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0100	Northeast	SETA01	New vehicles	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0100	Northeast	SETA02	Used cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SETB	Motor fuel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SETB01	Gasoline (all types)	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0100	Northeast	SAM	Medical care	MG	72	-0.00	0.00	-0.45	0.20	0.7431
0100	Northeast	SAM1	Medical care commodities	IA	72	-0.01	0.01	-2.41	1.05	0.7015
0100	Northeast	SAM2	Medical care services	IA	72	-0.00	0.00	-0.06	0.02	0.6973
0100	Northeast	SEMC	Professional services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAR	Recreation	MG	72	0.01	0.00	-1.05	0.86	0.6932
0100	Northeast	SAE	Education and communication	MG	72	0.00	-0.00	-0.14	0.19	0.7347
0100	Northeast	SEEB	Tuition, other school fees, and childcare	EC	72	0.00	0.00	-0.23	0.17	0.3966
0100	Northeast	SAG	Other goods and services	MG	72	-0.00	-0.00	-0.18	0.32	0.8156
0100	Northeast	SAC	Commodities	SA	72	0.00	-0.00	-0.09	0.07	0.9248
0100	Northeast	SACL11	Commodities less food and beverages	SA	72	0.00	-0.00	-0.15	0.08	0.8069
0100	Northeast	SANL11	Nondurables less food and beverages	SA	72	-0.00	-0.00	-0.27	0.13	0.8329
0100	Northeast	SANL113	Nondurables less food, beverages, and apparel	SA	72	-0.00	-0.00	-0.39	0.17	0.7056
0100	Northeast	SAD	Durables	SA	72	0.00	-0.00	-0.07	0.05	0.5975
0100	Northeast	SAS	Services	SA	72	-0.00	-0.00	-0.09	0.07	0.9425
0100	Northeast	SAS2RS	Rent of shelter	SA	72	-0.00	-0.00	-0.13	0.07	0.5669
0100	Northeast	SAS4	Transportation services	SA	72	0.00	-0.00	-0.31	0.33	0.9292
0100	Northeast	SAS367	Other services	SA	72	0.01	0.01	-0.43	0.36	0.2670
0100	Northeast	SA0L1	All items less food	SA	72	-0.00	0.00	-0.07	0.05	0.9601
0100	Northeast	SA0L2	All items less shelter	SA	72	0.00	0.00	-0.06	0.08	0.3523
0100	Northeast	SA0L5	All items less medical care	SA	72	-0.00	0.00	-0.06	0.05	0.9204
0100	Northeast	SACL1	Commodities less food	SA	72	0.00	-0.00	-0.15	0.08	0.7389
0100	Northeast	SANL1	Nondurables less food	SA	72	-0.00	-0.00	-0.26	0.12	0.8589
0100	Northeast	SANL13	Nondurables less food and apparel	SA	72	-0.00	0.00	-0.36	0.15	0.6728
0100	Northeast	SAN	Nondurables	SA	72	-0.00	-0.00	-0.12	0.07	0.8677
0100	Northeast	SASL2RS	Services less rent of shelter	SA	72	0.00	0.00	-0.16	0.15	0.5189
0100	Northeast	SASL5	Services less medical care services	SA	72	-0.00	-0.00	-0.10	0.08	0.9469
0100	Northeast	SA0E	Energy	SA	72	0.00	-0.00	-0.05	0.06	0.9292
0100	Northeast	SA0LE	All items less energy	SA	72	-0.00	0.00	-0.06	0.05	0.8459
0100	Northeast	SA0L1E	All items less food and energy	SA	72	-0.00	0.00	-0.07	0.06	0.9646
0100	Northeast	SACL1E	Commodities less food and energy commodities	SA	72	-0.00	-0.00	-0.18	0.09	0.8546
0100	Northeast	SACE	Energy commodities	SA	72	0.00	0.00	-0.11	0.12	0.9292
0100	Northeast	SASLE	Services less energy services	SA	72	-0.00	-0.00	-0.09	0.07	0.9513
0200	Midwest	SA0	All items	AI	72	-0.00	-0.00	-0.09	0.06	0.2946
0200	Midwest	SAF	Food and beverages	MG	72	0.00	0.00	-0.06	0.10	0.4661
0200	Midwest	SAF1	Food	IA	72	0.00	-0.00	-0.04	0.05	0.8329
0200	Midwest	SAF11	Food at home	IA	72	-0.00	-0.00	-0.02	0.02	0.5987
0200	Midwest	SAF111	Cereals and bakery products	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAF112	Meats, poultry, fish, and eggs	IA	72	-0.00	0.00	-0.11	0.05	0.7949
0200	Midwest	SEFJ	Dairy and related products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0200	Midwest	SAF113	Fruits and vegetables	IA	72	-0.00	0.00	-0.08	0.08	0.6453
0200	Midwest	SAF114	Nonalcoholic beverages and beverage materials	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAF115	Other food at home	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEFV	Food away from home	EC	72	0.00	0.00	-0.08	0.14	0.4559
0200	Midwest	SAF116	Alcoholic beverages	IA	72	-0.00	0.00	-1.06	1.10	0.5783
0200	Midwest	SAH	Housing	MG	72	-0.01	0.00	-0.25	0.12	0.2049
0200	Midwest	SAH1	Shelter	IA	72	-0.01	-0.01	-0.21	0.08	0.1028
0200	Midwest	SEHA	Rent of primary residence	EC	72	-0.02	-0.01	-0.21	0.07	0.0072
0200	Midwest	SEHC	Owners' equivalent rent of residences	EC	72	-0.01	-0.01	-0.26	0.09	0.0829
0200	Midwest	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.01	-0.01	-0.26	0.09	0.0819
0200	Midwest	SAH2	Fuels and utilities	IA	72	0.00	0.00	-0.13	0.17	0.7810
0200	Midwest	SAH21	Household energy	IA	72	0.00	0.00	-0.17	0.22	0.7247
0200	Midwest	SEHF	Energy services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEHF01	Electricity	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEHF02	Utility (piped) gas service	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAH3	Household furnishings and operations	IA	72	0.00	-0.00	-0.35	0.41	0.9823
0200	Midwest	SAA	Apparel	MG	72	0.00	0.01	-0.79	0.71	0.7557
0200	Midwest	SAT	Transportation	MG	72	-0.00	-0.00	-0.04	0.04	0.5945
0200	Midwest	SAT1	Private transportation	IA	72	-0.00	-0.00	-0.04	0.05	0.5987
0200	Midwest	SETA	New and used motor vehicles	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SETA01	New vehicles	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0200	Midwest	SETA02	Used cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SETB	Motor fuel	EC	72	-0.00	0.00	-0.00	0.00	0.7313
0200	Midwest	SETB01	Gasoline (all types)	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0200	Midwest	SAM	Medical care	MG	72	-0.00	0.00	-0.14	0.09	0.9336
0200	Midwest	SAM1	Medical care commodities	IA	72	-0.02	0.01	-0.74	0.46	0.9336
0200	Midwest	SAM2	Medical care services	IA	72	-0.00	0.00	-0.02	0.01	0.9336
0200	Midwest	SEMC	Professional services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAR	Recreation	MG	72	0.01	0.01	-1.05	1.23	0.2368
0200	Midwest	SAE	Education and communication	MG	72	-0.00	0.00	-0.25	0.16	0.5225
0200	Midwest	SEEB	Tuition, other school fees, and childcare	EC	72	-0.01	0.00	-0.62	0.39	0.7942
0200	Midwest	SAG	Other goods and services	MG	72	0.00	0.01	-0.57	0.26	0.5010
0200	Midwest	SAC	Commodities	SA	72	-0.00	0.00	-0.05	0.05	0.9601
0200	Midwest	SACL11	Commodities less food and beverages	SA	72	-0.00	-0.00	-0.08	0.09	0.6973
0200	Midwest	SANL11	Nondurables less food and beverages	SA	72	-0.00	-0.00	-0.15	0.16	0.8808
0200	Midwest	SANL113	Nondurables less food, beverages, and apparel	SA	72	-0.00	0.00	-0.10	0.08	0.8285
0200	Midwest	SAD	Durables	SA	72	-0.00	-0.00	-0.05	0.03	0.8069
0200	Midwest	SAS	Services	SA	72	-0.01	-0.00	-0.15	0.11	0.4326
0200	Midwest	SAS2RS	Rent of shelter	SA	72	-0.01	-0.01	-0.22	0.09	0.1053
0200	Midwest	SAS4	Transportation services	SA	72	-0.00	-0.00	-0.13	0.15	0.6072
0200	Midwest	SAS367	Other services	SA	72	0.01	0.01	-0.55	0.69	0.1969
0200	Midwest	SA0L1	All items less food	SA	72	-0.00	-0.00	-0.10	0.06	0.2794
0200	Midwest	SA0L2	All items less shelter	SA	72	0.00	-0.00	-0.08	0.11	0.9248

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0200	Midwest	SA0L5	All items less medical care	SA	72	-0.00	-0.00	-0.10	0.06	0.4661
0200	Midwest	SACL1	Commodities less food	SA	72	-0.00	-0.00	-0.08	0.08	0.7770
0200	Midwest	SANL1	Nondurables less food	SA	72	-0.00	-0.00	-0.14	0.14	0.9911
0200	Midwest	SANL13	Nondurables less food and apparel	SA	72	-0.00	0.00	-0.17	0.08	0.9823
0200	Midwest	SAN	Nondurables	SA	72	0.00	-0.00	-0.08	0.08	0.8984
0200	Midwest	SASL2RS	Services less rent of shelter	SA	72	0.00	0.00	-0.21	0.26	0.4132
0200	Midwest	SASL5	Services less medical care services	SA	72	-0.01	-0.00	-0.18	0.12	0.4459
0200	Midwest	SA0E	Energy	SA	72	-0.00	0.00	-0.09	0.11	0.6788
0200	Midwest	SA0LE	All items less energy	SA	72	-0.00	-0.00	-0.07	0.06	0.1798
0200	Midwest	SA0L1E	All items less food and energy	SA	72	-0.01	-0.00	-0.08	0.07	0.1708
0200	Midwest	SACL1E	Commodities less food and energy commodities	SA	72	-0.00	-0.00	-0.10	0.10	0.8069
0200	Midwest	SACE	Energy commodities	SA	72	0.00	0.00	-0.00	0.00	0.4148
0200	Midwest	SASLE	Services less energy services	SA	72	-0.01	-0.00	-0.11	0.11	0.2769
0300	South	SA0	All items	AI	72	-0.00	-0.00	-0.07	0.05	0.7941
0300	South	SAF	Food and beverages	MG	72	-0.00	-0.00	-0.14	0.11	0.9292
0300	South	SAF1	Food	IA	72	-0.00	-0.00	-0.14	0.12	0.7812
0300	South	SAF11	Food at home	IA	72	-0.00	-0.00	-0.06	0.06	0.7015
0300	South	SAF111	Cereals and bakery products	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF112	Meats, poultry, fish, and eggs	IA	72	-0.00	-0.00	-0.18	0.24	0.4069
0300	South	SEFJ	Dairy and related products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF113	Fruits and vegetables	IA	72	0.00	0.00	-0.11	0.08	0.5783
0300	South	SAF114	Nonalcoholic beverages and beverage materials	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF115	Other food at home	IA	72	0.00	-0.00	-0.01	0.02	0.4427
0300	South	SEFV	Food away from home	EC	72	0.00	-0.00	-0.24	0.26	0.8940
0300	South	SAF116	Alcoholic beverages	IA	72	-0.01	-0.00	-0.28	0.37	0.5975
0300	South	SAH	Housing	MG	72	-0.00	0.00	-0.15	0.10	0.7898
0300	South	SAH1	Shelter	IA	72	-0.00	0.00	-0.19	0.12	0.8026
0300	South	SEHA	Rent of primary residence	EC	72	0.00	0.01	-0.12	0.12	0.9734
0300	South	SEHC	Owners' equivalent rent of residences	EC	72	-0.00	0.01	-0.20	0.15	0.8372
0300	South	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.00	0.01	-0.20	0.15	0.8156
0300	South	SAH2	Fuels and utilities	IA	72	-0.00	0.00	-0.09	0.07	0.8852
0300	South	SAH21	Household energy	IA	72	-0.00	0.00	-0.11	0.09	0.8940
0300	South	SEHF	Energy services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SEHF01	Electricity	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SEHF02	Utility (piped) gas service	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAH3	Household furnishings and operations	IA	72	0.00	-0.01	-0.53	0.84	0.6091
0300	South	SAA	Apparel	MG	72	-0.00	-0.02	-0.21	0.21	0.7983
0300	South	SAT	Transportation	MG	72	-0.00	-0.00	-0.09	0.05	0.6208
0300	South	SAT1	Private transportation	IA	72	-0.00	-0.00	-0.10	0.05	0.6287
0300	South	SETA	New and used motor vehicles	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SETA01	New vehicles	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0300	South	SETA02	Used cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SETB	Motor fuel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0300	South	SETB01	Gasoline (all types)	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0300	South	SAM	Medical care	MG	72	-0.00	-0.01	-0.21	0.18	0.5594
0300	South	SAM1	Medical care commodities	IA	72	-0.02	-0.03	-0.99	0.90	0.5371
0300	South	SAM2	Medical care services	IA	72	-0.00	-0.00	-0.02	0.02	0.6728
0300	South	SEMC	Professional services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAR	Recreation	MG	72	0.00	0.00	-0.26	0.27	0.8069
0300	South	SAE	Education and communication	MG	72	-0.00	-0.00	-0.09	0.07	0.9601
0300	South	SEEB	Tuition, other school fees, and childcare	EC	72	-0.00	0.00	-0.09	0.09	0.8919
0300	South	SAG	Other goods and services	MG	72	0.00	-0.00	-0.16	0.16	0.9956
0300	South	SAC	Commodities	SA	72	-0.00	0.00	-0.06	0.05	0.8589
0300	South	SACL11	Commodities less food and beverages	SA	72	-0.00	0.00	-0.09	0.07	0.8156
0300	South	SANL11	Nondurables less food and beverages	SA	72	-0.00	0.00	-0.17	0.13	0.8372
0300	South	SANL113	Nondurables less food, beverages, and apparel	SA	72	-0.00	-0.00	-0.17	0.16	0.5975
0300	South	SAD	Durables	SA	72	0.00	0.00	-0.06	0.06	0.8633
0300	South	SAS	Services	SA	72	-0.00	0.00	-0.10	0.08	0.9380
0300	South	SAS2RS	Rent of shelter	SA	72	-0.00	0.00	-0.19	0.13	0.8026
0300	South	SAS4	Transportation services	SA	72	-0.00	0.00	-0.34	0.18	0.8156
0300	South	SAS367	Other services	SA	72	0.00	-0.00	-0.13	0.15	0.6607
0300	South	SA0L1	All items less food	SA	72	-0.00	0.00	-0.08	0.06	0.8677
0300	South	SA0L2	All items less shelter	SA	72	-0.00	-0.00	-0.04	0.07	0.6932
0300	South	SA0L5	All items less medical care	SA	72	-0.00	-0.00	-0.07	0.05	0.8026
0300	South	SACL1	Commodities less food	SA	72	-0.00	-0.00	-0.09	0.07	0.5631
0300	South	SANL1	Nondurables less food	SA	72	-0.00	-0.00	-0.16	0.12	0.6169
0300	South	SANL13	Nondurables less food and apparel	SA	72	-0.00	-0.00	-0.16	0.15	0.4326
0300	South	SAN	Nondurables	SA	72	-0.00	0.00	-0.08	0.06	0.8896
0300	South	SASL2RS	Services less rent of shelter	SA	72	0.00	0.00	-0.08	0.12	0.9380
0300	South	SASL5	Services less medical care services	SA	72	-0.00	0.00	-0.12	0.09	0.9160
0300	South	SA0E	Energy	SA	72	0.00	0.00	-0.38	0.45	0.8764
0300	South	SA0LE	All items less energy	SA	72	-0.00	-0.00	-0.07	0.05	0.7557
0300	South	SA0L1E	All items less food and energy	SA	72	-0.00	0.00	-0.08	0.06	0.7983
0300	South	SACL1E	Commodities less food and energy commodities	SA	72	-0.00	-0.00	-0.11	0.08	0.5745
0300	South	SACE	Energy commodities	SA	72	-0.00	-0.00	-0.02	0.02	0.7139
0300	South	SASLE	Services less energy services	SA	72	-0.00	0.00	-0.11	0.09	0.9823
0400	West	SA0	All items	AI	72	-0.00	-0.00	-0.07	0.05	0.3295
0400	West	SAF	Food and beverages	MG	72	0.00	-0.00	-0.09	0.08	0.8502
0400	West	SAF1	Food	IA	72	0.00	-0.00	-0.09	0.08	0.7983
0400	West	SAF11	Food at home	IA	72	-0.00	-0.00	-0.07	0.05	0.8984
0400	West	SAF111	Cereals and bakery products	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF112	Meats, poultry, fish, and eggs	IA	72	0.00	-0.00	-0.12	0.15	0.3610
0400	West	SEFJ	Dairy and related products	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF113	Fruits and vegetables	IA	72	-0.00	-0.00	-0.15	0.07	0.8459
0400	West	SAF114	Nonalcoholic beverages and beverage materials	IA	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF115	Other food at home	IA	72	-0.00	-0.00	-0.26	0.23	0.9072

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0400	West	SEFV	Food away from home	EC	72	0.00	0.00	-0.17	0.16	0.4326
0400	West	SAF116	Alcoholic beverages	IA	72	-0.00	0.00	-0.90	0.69	0.9412
0400	West	SAH	Housing	MG	72	-0.00	-0.01	-0.12	0.09	0.4593
0400	West	SAH1	Shelter	IA	72	-0.01	-0.01	-0.13	0.11	0.3699
0400	West	SEHA	Rent of primary residence	EC	72	-0.01	-0.01	-0.12	0.10	0.1250
0400	West	SEHC	Owners' equivalent rent of residences	EC	72	-0.00	-0.00	-0.10	0.13	0.8721
0400	West	SEHC01	Owners' equivalent rent of primary residence	IS	72	-0.00	-0.00	-0.10	0.13	0.8502
0400	West	SAH2	Fuels and utilities	IA	72	0.00	0.00	-0.14	0.15	0.5173
0400	West	SAH21	Household energy	IA	72	-0.00	0.00	-0.21	0.21	0.5444
0400	West	SEHF	Energy services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SEHF01	Electricity	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SEHF02	Utility (piped) gas service	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAH3	Household furnishings and operations	IA	72	0.00	-0.00	-0.38	0.53	0.7855
0400	West	SAA	Apparel	MG	72	0.00	0.00	-0.34	0.27	0.7305
0400	West	SAT	Transportation	MG	72	-0.00	0.00	-0.11	0.09	0.8677
0400	West	SAT1	Private transportation	IA	72	-0.00	0.00	-0.12	0.09	0.8721
0400	West	SETA	New and used motor vehicles	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETA01	New vehicles	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0400	West	SETA02	Used cars and trucks	IS	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETB	Motor fuel	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETB01	Gasoline (all types)	IS	72	0.00	0.00	0.00	0.00	<i>alt. data</i>
0400	West	SAM	Medical care	MG	72	0.00	0.00	-0.30	0.37	0.8242
0400	West	SAM1	Medical care commodities	IA	72	0.00	0.00	-1.47	1.74	0.8372
0400	West	SAM2	Medical care services	IA	72	0.00	0.00	-0.05	0.06	0.8199
0400	West	SEMC	Professional services	EC	72	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAR	Recreation	MG	72	-0.01	0.00	-0.49	0.59	0.7515
0400	West	SAE	Education and communication	MG	72	-0.00	-0.00	-0.06	0.04	0.0947
0400	West	SEEB	Tuition, other school fees, and childcare	EC	72	-0.00	0.00	-0.19	0.09	0.8459
0400	West	SAG	Other goods and services	MG	72	-0.00	0.00	-0.90	0.39	0.8764
0400	West	SAC	Commodities	SA	72	0.00	-0.00	-0.08	0.09	0.8764
0400	West	SACL11	Commodities less food and beverages	SA	72	0.00	-0.00	-0.10	0.11	0.8026
0400	West	SANL11	Nondurables less food and beverages	SA	72	0.00	0.00	-0.19	0.21	0.7685
0400	West	SANL113	Nondurables less food, beverages, and apparel	SA	72	0.00	0.00	-0.27	0.26	0.5745
0400	West	SAD	Durables	SA	72	0.00	-0.00	-0.02	0.02	0.7056
0400	West	SAS	Services	SA	72	-0.00	-0.01	-0.11	0.08	0.2646
0400	West	SAS2RS	Rent of shelter	SA	72	-0.01	-0.01	-0.13	0.11	0.3729
0400	West	SAS4	Transportation services	SA	72	-0.00	0.00	-0.33	0.28	0.8984
0400	West	SAS367	Other services	SA	72	-0.01	-0.00	-0.24	0.36	0.6566
0400	West	SA0L1	All items less food	SA	72	-0.00	-0.01	-0.07	0.06	0.3131
0400	West	SA0L2	All items less shelter	SA	72	-0.00	0.00	-0.07	0.06	0.9956
0400	West	SA0L5	All items less medical care	SA	72	-0.00	-0.00	-0.08	0.06	0.2670
0400	West	SACL1	Commodities less food	SA	72	0.00	-0.00	-0.10	0.11	0.9778
0400	West	SANL1	Nondurables less food	SA	72	0.00	-0.00	-0.18	0.20	0.9380

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0400	West	SANL13	Nondurables less food and apparel	SA	72	0.00	0.00	-0.25	0.25	0.6769
0400	West	SAN	Nondurables	SA	72	0.00	-0.00	-0.11	0.13	0.7685
0400	West	SASL2RS	Services less rent of shelter	SA	72	-0.00	-0.00	-0.13	0.16	0.4526
0400	West	SASL5	Services less medical care services	SA	72	-0.00	-0.01	-0.12	0.08	0.2551
0400	West	SA0E	Energy	SA	72	-0.00	0.00	-0.08	0.08	0.7516
0400	West	SA0LE	All items less energy	SA	72	-0.00	-0.00	-0.07	0.05	0.3240
0400	West	SA0L1E	All items less food and energy	SA	72	-0.00	-0.01	-0.07	0.06	0.2972
0400	West	SACL1E	Commodities less food and energy commodities	SA	72	0.00	-0.00	-0.11	0.13	0.9956
0400	West	SACE	Energy commodities	SA	72	-0.00	0.00	-0.02	0.01	0.2964
0400	West	SASLE	Services less energy services	SA	72	-0.00	-0.01	-0.10	0.08	0.2575

Appendix C. Wilcoxon Signed-Rank Test Results for Twelve-Month Percentage Changes for U.S. City Average (0000), the Northeast (0100), Midwest (0200), South (0300), and West (0400)

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SA0	All items	AI	60	-0.02	-0.02	-0.09	0.03	0.2051
0000	U.S. city average	SAF	Food and beverages	MG	60	-0.00	0.01	-0.09	0.06	0.9561
0000	U.S. city average	SAF1	Food	IA	60	0.00	0.00	-0.08	0.07	0.7766
0000	U.S. city average	SAF11	Food at home	IA	60	-0.01	-0.01	-0.05	0.02	0.1974
0000	U.S. city average	SAF111	Cereals and bakery products	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFA	Cereals and cereal products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFA01	Flour and prepared flour mixes	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFA02	Breakfast cereal	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFA03	Rice, pasta, cornmeal	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFB	Bakery products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFB01	Bread	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFB02	Fresh biscuits, rolls, muffins	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFB03	Cakes, cupcakes, and cookies	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFB04	Other bakery products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF112	Meats, poultry, fish, and eggs	IA	60	-0.02	-0.01	-0.14	0.06	0.4492
0000	U.S. city average	SAF1121	Meats, poultry, and fish	IA	60	-0.02	-0.01	-0.15	0.06	0.4572
0000	U.S. city average	SAF11211	Meats	IA	60	-0.03	-0.01	-0.24	0.10	0.4612
0000	U.S. city average	SEFC	Beef and veal	EC	60	-0.03	0.01	-0.51	0.29	0.9421
0000	U.S. city average	SEFC01	Uncooked ground beef	IS	60	-0.07	0.01	-0.84	0.39	0.8950
0000	U.S. city average	SEFC02	Uncooked beef roasts	IS	60	0.01	0.03	-1.29	1.08	0.8465
0000	U.S. city average	SEFC03	Uncooked beef steaks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFC04	Uncooked other beef and veal	IS	60	0.01	0.02	-1.52	1.44	0.8551
0000	U.S. city average	SEFD	Pork	EC	60	-0.07	-0.05	-0.62	0.36	0.4679
0000	U.S. city average	SEFD01	Bacon, breakfast sausage, and related products	IS	60	-0.10	0.02	-0.84	0.30	0.7498
0000	U.S. city average	SEFD02	Ham	IS	60	-0.18	-0.19	-1.73	2.30	0.5452
0000	U.S. city average	SEFD03	Pork chops	IS	60	-0.01	0.01	-0.84	0.97	0.8933

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFD04	Other pork including roasts, steaks, and ribs	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFE	Other meats	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF	Poultry	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF01	Chicken	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFF02	Other uncooked poultry including turkey	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG	Fish and seafood	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG01	Fresh fish and seafood	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFG02	Processed fish and seafood	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFH	Eggs	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ	Dairy and related products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ01	Milk	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ02	Cheese and related products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ03	Ice cream and related products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFJ04	Other dairy and related products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF113	Fruits and vegetables	IA	60	-0.03	-0.02	-0.21	0.09	0.2083
0000	U.S. city average	SAF1131	Fresh fruits and vegetables	IA	60	-0.04	-0.03	-0.27	0.11	0.1906
0000	U.S. city average	SEFK	Fresh fruits	EC	60	-0.04	-0.03	-0.25	0.25	0.2695
0000	U.S. city average	SEFK01	Apples	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFK02	Bananas	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFK03	Citrus fruits	IS	60	-0.01	0.00	-0.95	0.89	0.9526
0000	U.S. city average	SEFK04	Other fresh fruits	IS	60	-0.08	-0.09	-0.49	0.37	0.3364
0000	U.S. city average	SEFL	Fresh vegetables	EC	60	-0.05	-0.02	-0.32	0.12	0.4297
0000	U.S. city average	SEFL01	Potatoes	IS	60	0.05	0.05	-0.56	0.45	0.5221
0000	U.S. city average	SEFL02	Lettuce	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFL03	Tomatoes	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFL04	Other fresh vegetables	IS	60	-0.10	-0.06	-0.50	0.10	0.1832
0000	U.S. city average	SEFM	Processed fruits and vegetables	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFM01	Canned fruits and vegetables	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFM02	Frozen fruits and vegetables	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFM03	Other processed fruits and vegetables including dried	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF114	Nonalcoholic beverages and beverage materials	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN	Juices and nonalcoholic drinks	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN01	Carbonated drinks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN02	Frozen noncarbonated juices and drinks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFN03	Nonfrozen noncarbonated juices and drinks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP	Beverage materials including coffee and tea	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP01	Coffee	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFP02	Other beverage materials including tea	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAF115	Other food at home	IA	60	-0.00	-0.00	-0.08	0.07	0.9526
0000	U.S. city average	SEFR	Sugar and sweets	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR01	Sugar and sugar substitutes	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR02	Candy and chewing gum	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFR03	Other sweets	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS	Fats and oils	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS01	Butter and margarine	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS02	Salad dressing	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFS03	Other fats and oils including peanut butter	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT	Other foods	EC	60	-0.00	-0.00	-0.10	0.09	0.9544
0000	U.S. city average	SEFT01	Soups	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT02	Frozen and freeze dried prepared foods	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT03	Snacks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT04	Spices, seasonings, condiments, sauces	IS	60	-0.02	-0.01	-0.53	0.45	0.9544
0000	U.S. city average	SEFT05	Baby food and formula	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFT06	Other miscellaneous foods	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEFV	Food away from home	EC	60	0.02	0.03	-0.14	0.14	0.4747
0000	U.S. city average	SEFV01	Full service meals and snacks	IS	60	0.03	0.01	-0.04	0.20	0.3636
0000	U.S. city average	SEFV02	Limited service meals and snacks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFV03	Food at employee sites and schools	IS	60	1.52	0.04	-3.98	11.39	0.5704
0000	U.S. city average	SEFV04	Food from vending machines and mobile vendors	IS	60	-0.48	-0.11	-2.45	1.24	0.2821
0000	U.S. city average	SEFV05	Other food away from home	IS	60	-0.06	0.09	-1.37	1.22	0.8293
0000	U.S. city average	SAF116	Alcoholic beverages	IA	60	-0.06	-0.02	-0.53	0.16	0.5207
0000	U.S. city average	SEFW	Alcoholic beverages at home	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW01	Beer, ale, and other malt beverages at home	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW02	Distilled spirits at home	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFW03	Wine at home	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEFX	Alcoholic beverages away from home	EC	60	-0.11	-0.04	-1.22	0.38	0.6114
0000	U.S. city average	SAH	Housing	MG	60	-0.05	-0.04	-0.16	0.06	0.1183
0000	U.S. city average	SAH1	Shelter	IA	60	-0.06	-0.06	-0.22	0.08	0.1258
0000	U.S. city average	SEHA	Rent of primary residence	EC	60	-0.08	-0.05	-0.30	0.06	0.1441
0000	U.S. city average	SEHB	Lodging away from home	EC	60	-0.45	-0.45	-2.12	0.94	0.1521
0000	U.S. city average	SEHB01	Lodging while at school	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHB02	Other lodging away from home including hotels and motels	IS	60	-0.51	-0.49	-2.44	1.06	0.1521
0000	U.S. city average	SEHC	Owners' equivalent rent of residences	EC	60	-0.05	-0.04	-0.17	0.09	0.1789
0000	U.S. city average	SEHC01	Owners' equivalent rent of primary residence	IS	60	-0.05	-0.04	-0.17	0.09	0.1811
0000	U.S. city average	SEHD	Tenants' and household insurance	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAH2	Fuels and utilities	IA	60	0.01	0.00	-0.44	0.54	0.8846
0000	U.S. city average	SAH21	Household energy	IA	60	0.02	0.00	-0.55	0.72	0.8620
0000	U.S. city average	SEHE	Fuel oil and other fuels	EC	60	0.01	0.02	-0.37	0.55	0.9439
0000	U.S. city average	SEHE01	Fuel oil	IS	60	0.03	0.00	-0.58	0.77	0.8345
0000	U.S. city average	SEHE02	Propane, kerosene, and firewood	IS	60	0.03	0.06	-0.50	0.70	0.6410
0000	U.S. city average	SEHF	Energy services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEHF01	Electricity	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHF02	Utility (piped) gas service	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHG	Water and sewer and trash collection services	EC	60	-0.00	0.00	-0.01	0.01	0.4953
0000	U.S. city average	SEHG01	Water and sewerage maintenance	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHG02	Garbage and trash collection	IS	60	-0.01	0.00	-0.04	0.04	0.5293
0000	U.S. city average	SAH3	Household furnishings and operations	IA	60	0.04	0.00	-0.23	0.39	0.7783
0000	U.S. city average	SEHH	Window and floor coverings and other linens	EC	60	0.06	0.08	-0.30	0.26	0.2059
0000	U.S. city average	SEHH01	Floor coverings	IS	60	0.25	0.33	-1.15	1.20	0.2099
0000	U.S. city average	SEHH02	Window coverings	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHH03	Other linens	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHJ	Furniture and bedding	EC	60	0.09	0.10	-0.22	0.37	0.1740
0000	U.S. city average	SEHJ01	Bedroom furniture	IS	60	0.26	0.32	-0.59	0.99	0.1692
0000	U.S. city average	SEHJ02	Living room, kitchen, and dining room furniture	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHJ03	Other furniture	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK	Appliances	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK01	Major appliances	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHK02	Other appliances	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL	Other household equipment and furnishings	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL01	Clocks, lamps, and decorator items	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL02	Indoor plants and flowers	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL03	Dishes and flatware	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHL04	Nonelectric cookware and tableware	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHM	Tools, hardware, outdoor equipment and supplies	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHM01	Tools, hardware and supplies	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHM02	Outdoor equipment and supplies	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN	Housekeeping supplies	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN01	Household cleaning products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEHN02	Household paper products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHN03	Miscellaneous household products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHP	Household operations	EC	60	0.09	-0.09	-1.66	1.81	0.9825
0000	U.S. city average	SEHP01	Domestic services	IS	60	-0.12	-0.48	-5.26	4.63	0.7331
0000	U.S. city average	SEHP02	Gardening and lawncare services	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEHP03	Moving, storage, freight expense	IS	60	-0.11	-0.06	-1.86	2.08	0.5734
0000	U.S. city average	SEHP04	Repair of household items	IS	60	0.86	0.47	-2.66	9.43	0.3499
0000	U.S. city average	SAA	Apparel	MG	60	0.00	-0.01	-0.24	0.24	0.9895
0000	U.S. city average	SAA1	Men's and boys' apparel	IA	60	0.03	-0.04	-0.71	0.82	0.8898
0000	U.S. city average	SEAA	Men's apparel	EC	60	-0.05	-0.03	-0.61	0.40	0.6873
0000	U.S. city average	SEAA01	Men's suits, sport coats, and outerwear	IS	60	-0.02	-0.03	-1.26	1.17	0.8310
0000	U.S. city average	SEAA02	Men's underwear, nightwear, swimwear, and accessories	IS	60	-0.16	-0.02	-1.31	0.48	0.4271
0000	U.S. city average	SEAA03	Men's shirts and sweaters	IS	60	-0.01	0.00	-0.62	0.52	0.7901
0000	U.S. city average	SEAA04	Men's pants and shorts	IS	60	0.03	-0.01	-1.41	1.39	0.9299
0000	U.S. city average	SEAB	Boys' apparel	EC	60	0.38	0.39	-2.78	3.76	0.4692
0000	U.S. city average	SAA2	Women's and girls' apparel	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC	Women's apparel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC01	Women's outerwear	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC02	Women's dresses	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC03	Women's suits and separates	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAC04	Women's underwear, nightwear, swimwear, and accessories	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAD	Girls' apparel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAE	Footwear	EC	60	-0.05	-0.04	-0.40	0.32	0.4388
0000	U.S. city average	SEAE01	Men's footwear	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAE02	Boys' and girls' footwear	IS	60	-0.23	-0.15	-1.74	1.46	0.4598
0000	U.S. city average	SEAE03	Women's footwear	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAF	Infants' and toddlers' apparel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEAG	Jewelry and watches	EC	60	-0.00	0.03	-1.53	1.45	0.9772
0000	U.S. city average	SEAG01	Watches	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEAG02	Jewelry	IS	60	0.00	0.00	-2.41	2.41	0.9667
0000	U.S. city average	SAT	Transportation	MG	60	-0.00	-0.00	-0.07	0.03	0.7800
0000	U.S. city average	SAT1	Private transportation	IA	60	-0.00	-0.00	-0.07	0.03	0.7986
0000	U.S. city average	SETA	New and used motor vehicles	EC	60	-0.00	0.00	-0.00	0.00	0.1319
0000	U.S. city average	SETA01	New vehicles	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETA02	Used cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETA03	Leased cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETA04	Car and truck rental	IS	60	-0.00	0.00	-0.00	0.00	0.1319
0000	U.S. city average	SETB	Motor fuel	EC	60	-0.00	0.00	-0.00	0.00	0.5644
0000	U.S. city average	SETB01	Gasoline (all types)	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SETB02	Other motor fuels	IS	60	-0.00	0.00	-0.00	0.00	0.8828
0000	U.S. city average	SETC	Motor vehicle parts and equipment	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETC01	Tires	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETC02	Vehicle accessories other than tires	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETD	Motor vehicle maintenance and repair	EC	60	-0.06	-0.03	-1.19	0.39	0.7548
0000	U.S. city average	SETD01	Motor vehicle body work	IS	60	-0.12	-0.10	-1.65	1.22	0.2115
0000	U.S. city average	SETD02	Motor vehicle maintenance and servicing	IS	60	-0.05	-0.03	-1.13	0.94	0.8811
0000	U.S. city average	SETD03	Motor vehicle repair	IS	60	-0.05	0.00	-1.83	1.30	0.9246
0000	U.S. city average	SETE	Motor vehicle insurance	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF	Motor vehicle fees	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF01	State motor vehicle registration and license fees	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETF03	Parking and other fees	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG	Public transportation	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG01	Airline fares	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SETG02	Other intercity transportation	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SETG03	Intracity transportation	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAM	Medical care	MG	60	-0.03	-0.04	-0.18	0.10	0.2811
0000	U.S. city average	SAM1	Medical care commodities	IA	60	-0.17	-0.18	-0.92	0.44	0.2647
0000	U.S. city average	SEMF	Medicinal drugs	EC	60	-0.17	-0.19	-0.97	0.46	0.2657
0000	U.S. city average	SEMF01	Prescription drugs	IS	60	-0.23	-0.24	-1.29	0.60	0.2629
0000	U.S. city average	SEMF02	Nonprescription drugs	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMG	Medical equipment and supplies	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAM2	Medical care services	IA	60	-0.00	-0.00	-0.02	0.01	0.3825
0000	U.S. city average	SEMC	Professional services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC01	Physicians' services	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0000	U.S. city average	SEMC02	Dental services	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC03	Eyeglasses and eye care	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMC04	Services by other medical professionals	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD	Hospital and related services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD01	Hospital services	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD02	Nursing homes and adult day services	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEMD03	Home health care	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEME	Health insurance	EC	60	-0.03	-0.02	-0.16	0.09	0.3212
0000	U.S. city average	SAR	Recreation	MG	60	0.08	0.01	-0.24	0.61	0.5235
0000	U.S. city average	SERA	Video and audio	EC	60	0.00	-0.00	-0.16	0.20	0.9754
0000	U.S. city average	SERA01	Televisions	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA02	Cable, satellite, and live streaming television service	IS	60	0.00	-0.01	-0.22	0.27	0.9719
0000	U.S. city average	SERA03	Other video equipment	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA04	Purchase, subscription, and rental of video	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA05	Audio equipment	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERA06	Recorded music and music subscriptions	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERB	Pets, pet products and services	EC	60	0.16	0.10	-0.41	1.34	0.3266

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SERB01	Pets and pet products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERB02	Pet services including veterinary	IS	60	0.35	0.22	-0.85	2.88	0.3255
0000	U.S. city average	SERC	Sporting goods	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERC01	Sports vehicles including bicycles	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERC02	Sports equipment	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERD	Photography	EC	60	-0.21	-0.15	-1.37	1.81	0.4057
0000	U.S. city average	SERD01	Photographic equipment and supplies	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERD02	Photographers and photo processing	IS	60	-0.38	-0.24	-2.30	2.88	0.3754
0000	U.S. city average	SERE	Other recreational goods	EC	60	0.00	0.00	-0.00	0.00	0.1618
0000	U.S. city average	SERE01	Toys	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERE02	Sewing machines, fabric and supplies	IS	60	0.00	0.00	-0.00	0.00	0.1645
0000	U.S. city average	SERE03	Music instruments and accessories	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERF	Other recreation services	EC	60	0.15	0.03	-0.77	1.16	0.5540
0000	U.S. city average	SERF01	Club membership for shopping clubs, fraternal, or other organizations, or participant sports fees	IS	60	0.02	0.07	-2.55	2.31	0.8898
0000	U.S. city average	SERF02	Admissions	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SERF03	Fees for lessons or instructions	IS	60	0.90	0.29	-1.23	7.12	0.2961
0000	U.S. city average	SERG	Recreational reading materials	EC	60	0.02	-0.01	-0.11	0.30	0.9194
0000	U.S. city average	SERG01	Newspapers and magazines	IS	60	0.05	-0.01	-0.19	0.54	0.9789
0000	U.S. city average	SERG02	Recreational books	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAE	Education and communication	MG	60	-0.01	-0.00	-0.11	0.10	0.8638
0000	U.S. city average	SAE1	Education	IA	60	-0.02	-0.00	-0.22	0.06	0.8293
0000	U.S. city average	SEEA	Educational books and supplies	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEB	Tuition, other school fees, and childcare	EC	60	-0.02	-0.00	-0.23	0.06	0.8328
0000	U.S. city average	SEEB01	College tuition and fees	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEB02	Elementary and high school tuition and fees	IS	60	0.00	0.10	-0.67	0.50	0.9246
0000	U.S. city average	SEEB03	Day care and preschool	IS	60	-0.08	-0.01	-0.75	0.31	0.7481
0000	U.S. city average	SEEB04	Technical and vocational school tuition and fixed fees	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SAE2	Communication	IA	60	0.01	0.00	-0.07	0.14	0.7952
0000	U.S. city average	SEEC	Postage and delivery services	EC	60	0.01	0.01	-0.11	0.16	0.4829
0000	U.S. city average	SEEC01	Postage	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEC02	Delivery services	IS	60	0.13	0.10	-0.81	1.21	0.3244
0000	U.S. city average	SAE21	Information and information processing	IA	60	0.01	0.00	-0.07	0.15	0.7986
0000	U.S. city average	SEED	Telephone services	EC	60	0.02	0.00	-0.11	0.30	0.7598
0000	U.S. city average	SEED03	Wireless telephone services	IS	60	0.01	0.02	-0.17	0.17	0.6410
0000	U.S. city average	SEED04	Residential telephone services	IS	60	0.03	0.01	-0.61	1.45	0.9002
0000	U.S. city average	SEEE	Information technology, hardware and services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE01	Computers, peripherals, and smart home assistants	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE02	Computer software and accessories	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE03	Internet services and electronic information providers	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEEE04	Telephone hardware, calculators, and other consumer information items	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAG	Other goods and services	MG	60	0.02	0.02	-0.28	0.27	0.5824
0000	U.S. city average	SEGA	Tobacco and smoking products	EC	60	0.06	-0.02	-1.09	1.54	0.9579
0000	U.S. city average	SEGA01	Cigarettes	IS	60	0.09	-0.01	-1.19	1.67	0.8967
0000	U.S. city average	SEGA02	Tobacco products other than cigarettes	IS	60	-0.13	-0.15	-1.27	0.69	0.3590
0000	U.S. city average	SAG1	Personal care	IA	60	0.01	0.01	-0.14	0.13	0.8396
0000	U.S. city average	SEGB	Personal care products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGB01	Hair, dental, shaving, and miscellaneous personal care products	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGB02	Cosmetics, perfume, bath, nail preparations and implements	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGC	Personal care services	EC	60	0.03	-0.00	-0.36	0.52	0.8362
0000	U.S. city average	SEGC01	Haircuts and other personal care services	IS	60	0.03	-0.00	-0.36	0.52	0.8362
0000	U.S. city average	SEGD	Miscellaneous personal services	EC	60	-0.01	0.00	-0.22	0.16	0.8379
0000	U.S. city average	SEGD01	Legal services	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SEGD02	Funeral expenses	IS	60	-0.07	-0.06	-0.33	0.13	0.2147
0000	U.S. city average	SEGD03	Laundry and dry cleaning services	IS	60	-0.06	-0.00	-0.71	0.35	0.8742

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SEGD04	Apparel services other than laundry and dry cleaning	IS	60	0.34	0.39	-2.78	3.28	0.2139
0000	U.S. city average	SEGD05	Financial services	IS	60	0.01	0.01	-0.45	0.67	0.9702
0000	U.S. city average	SEGE	Miscellaneous personal goods	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0000	U.S. city average	SAC	Commodities	SA	60	-0.00	-0.01	-0.06	0.04	0.7867
0000	U.S. city average	SACL11	Commodities less food and beverages	SA	60	-0.00	-0.01	-0.05	0.05	0.7035
0000	U.S. city average	SANL11	Nondurables less food and beverages	SA	60	-0.01	-0.02	-0.11	0.10	0.5322
0000	U.S. city average	SANL113	Nondurables less food, beverages, and apparel	SA	60	-0.02	-0.03	-0.13	0.10	0.4625
0000	U.S. city average	SAD	Durables	SA	60	0.01	0.01	-0.02	0.03	0.1899
0000	U.S. city average	SAS	Services	SA	60	-0.03	-0.03	-0.14	0.07	0.2075
0000	U.S. city average	SAS2RS	Rent of shelter	SA	60	-0.06	-0.06	-0.22	0.08	0.1258
0000	U.S. city average	SAS4	Transportation services	SA	60	-0.01	-0.00	-0.22	0.09	0.8122
0000	U.S. city average	SAS367	Other services	SA	60	0.04	0.00	-0.19	0.37	0.5975
0000	U.S. city average	SA0L1	All items less food	SA	60	-0.02	-0.02	-0.10	0.04	0.1862
0000	U.S. city average	SA0L2	All items less shelter	SA	60	0.00	0.00	-0.03	0.04	0.5704
0000	U.S. city average	SA0L5	All items less medical care	SA	60	-0.02	-0.02	-0.09	0.04	0.2213
0000	U.S. city average	SACL1	Commodities less food	SA	60	-0.01	-0.01	-0.06	0.05	0.6037
0000	U.S. city average	SANL1	Nondurables less food	SA	60	-0.02	-0.02	-0.13	0.09	0.4414
0000	U.S. city average	SANL13	Nondurables less food and apparel	SA	60	-0.02	-0.03	-0.15	0.10	0.3946
0000	U.S. city average	SAN	Nondurables	SA	60	-0.01	-0.01	-0.10	0.05	0.6300
0000	U.S. city average	SA311	Apparel less footwear	IA	60	0.02	-0.00	-0.29	0.35	0.8173
0000	U.S. city average	SASL2RS	Services less rent of shelter	SA	60	0.01	0.01	-0.04	0.10	0.4532
0000	U.S. city average	SASL5	Services less medical care services	SA	60	-0.03	-0.03	-0.15	0.08	0.2115
0000	U.S. city average	SA0E	Energy	SA	60	0.01	0.00	-0.27	0.35	0.8448
0000	U.S. city average	SA0LE	All items less energy	SA	60	-0.02	-0.02	-0.10	0.05	0.2255
0000	U.S. city average	SA0L1E	All items less food and energy	SA	60	-0.02	-0.02	-0.10	0.05	0.2012
0000	U.S. city average	SA0L12	All items less food and shelter	SA	60	0.00	0.01	-0.04	0.04	0.6098
0000	U.S. city average	SA0L12E	All items less food, shelter, and energy	SA	60	0.00	0.01	-0.05	0.07	0.7548

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0000	U.S. city average	SA0L12E4	All items less food, shelter, energy, and used cars and trucks	SA	60	0.01	0.01	-0.06	0.07	0.7631
0000	U.S. city average	SACL1E	Commodities less food and energy commodities	SA	60	-0.01	-0.01	-0.07	0.05	0.5704
0000	U.S. city average	SACL1E4	Commodities less food, energy, and used cars and trucks	SA	60	-0.01	-0.02	-0.08	0.06	0.5839
0000	U.S. city average	SACE	Energy commodities	SA	60	0.00	0.00	-0.02	0.03	0.8950
0000	U.S. city average	SASLE	Services less energy services	SA	60	-0.03	-0.03	-0.14	0.07	0.2272
0000	U.S. city average	SAN1D	Domestically produced farm food	SA	60	-0.01	-0.01	-0.06	0.02	0.1974
0000	U.S. city average	SAS24	Utilities and public transportation	SA	60	0.01	-0.00	-0.20	0.29	1.0000
0100	Northeast	SA0	All items	AI	60	-0.00	-0.01	-0.10	0.08	0.8482
0100	Northeast	SAF	Food and beverages	MG	60	-0.01	-0.00	-0.16	0.16	0.8500
0100	Northeast	SAF1	Food	IA	60	-0.01	-0.00	-0.16	0.18	0.8655
0100	Northeast	SAF11	Food at home	IA	60	-0.03	0.00	-0.18	0.10	0.5689
0100	Northeast	SAF111	Cereals and bakery products	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF112	Meats, poultry, fish, and eggs	IA	60	-0.01	0.02	-0.44	0.29	0.9281
0100	Northeast	SEFJ	Dairy and related products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF113	Fruits and vegetables	IA	60	-0.15	-0.04	-1.09	0.57	0.2666
0100	Northeast	SAF114	Nonalcoholic beverages and beverage materials	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAF115	Other food at home	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEFV	Food away from home	EC	60	0.03	-0.01	-0.32	0.38	0.8880
0100	Northeast	SAF116	Alcoholic beverages	IA	60	-0.03	-0.00	-0.32	0.18	0.6363
0100	Northeast	SAH	Housing	MG	60	-0.03	-0.02	-0.21	0.12	0.4414
0100	Northeast	SAH1	Shelter	IA	60	-0.05	-0.05	-0.27	0.12	0.2366
0100	Northeast	SEHA	Rent of primary residence	EC	60	-0.07	-0.11	-0.29	0.14	0.2536
0100	Northeast	SEHC	Owners' equivalent rent of residences	EC	60	-0.01	-0.01	-0.19	0.22	0.7986
0100	Northeast	SEHC01	Owners' equivalent rent of primary residence	IS	60	-0.01	-0.01	-0.19	0.22	0.7850
0100	Northeast	SAH2	Fuels and utilities	IA	60	0.00	0.00	-0.08	0.11	0.8413
0100	Northeast	SAH21	Household energy	IA	60	0.00	0.00	-0.09	0.14	0.8569
0100	Northeast	SEHF	Energy services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEHF01	Electricity	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SEHF02	Utility (piped) gas service	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAH3	Household furnishings and operations	IA	60	0.11	0.09	-0.40	0.54	0.2527
0100	Northeast	SAA	Apparel	MG	60	-0.05	-0.07	-0.53	0.47	0.5779
0100	Northeast	SAT	Transportation	MG	60	0.02	0.02	-0.14	0.17	0.3671
0100	Northeast	SAT1	Private transportation	IA	60	0.02	0.02	-0.15	0.18	0.3521
0100	Northeast	SETA	New and used motor vehicles	EC	60	-0.00	0.00	-0.00	0.00	0.1319
0100	Northeast	SETA01	New vehicles	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0100	Northeast	SETA02	Used cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SETB	Motor fuel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SETB01	Gasoline (all types)	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0100	Northeast	SAM	Medical care	MG	60	-0.02	-0.01	-0.32	0.25	0.8620

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0100	Northeast	SAM1	Medical care commodities	IA	60	-0.12	-0.07	-1.73	1.25	0.8431
0100	Northeast	SAM2	Medical care services	IA	60	-0.00	-0.00	-0.05	0.04	0.7986
0100	Northeast	SEMC	Professional services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0100	Northeast	SAR	Recreation	MG	60	0.17	0.15	-0.57	0.98	0.2180
0100	Northeast	SAE	Education and communication	MG	60	0.03	0.05	-0.15	0.20	0.2051
0100	Northeast	SEEB	Tuition, other school fees, and childcare	EC	60	0.01	0.00	-0.29	0.16	0.9509
0100	Northeast	SAG	Other goods and services	MG	60	-0.00	0.00	-0.36	0.22	0.9474
0100	Northeast	SAC	Commodities	SA	60	-0.00	0.01	-0.13	0.10	0.9351
0100	Northeast	SACL11	Commodities less food and beverages	SA	60	0.00	0.00	-0.13	0.20	0.9667
0100	Northeast	SANL11	Nondurables less food and beverages	SA	60	-0.02	-0.03	-0.29	0.31	0.6331
0100	Northeast	SANL113	Nondurables less food, beverages, and apparel	SA	60	-0.01	-0.01	-0.32	0.26	0.8742
0100	Northeast	SAD	Durables	SA	60	0.03	0.04	-0.07	0.14	0.1906
0100	Northeast	SAS	Services	SA	60	-0.01	-0.01	-0.15	0.12	0.8776
0100	Northeast	SAS2RS	Rent of shelter	SA	60	-0.05	-0.05	-0.28	0.12	0.2366
0100	Northeast	SAS4	Transportation services	SA	60	0.04	0.03	-0.43	0.39	0.4259
0100	Northeast	SAS367	Other services	SA	60	0.10	0.07	-0.22	0.47	0.1388
0100	Northeast	SA0L1	All items less food	SA	60	-0.00	-0.01	-0.10	0.11	0.8880
0100	Northeast	SA0L2	All items less shelter	SA	60	0.02	0.02	-0.06	0.14	0.3212
0100	Northeast	SA0L5	All items less medical care	SA	60	-0.00	-0.01	-0.09	0.08	0.9124
0100	Northeast	SACL1	Commodities less food	SA	60	-0.00	0.00	-0.14	0.19	0.9456
0100	Northeast	SANL1	Nondurables less food	SA	60	-0.02	-0.03	-0.28	0.29	0.6129
0100	Northeast	SANL13	Nondurables less food and apparel	SA	60	-0.02	-0.01	-0.29	0.23	0.8517
0100	Northeast	SAN	Nondurables	SA	60	-0.01	-0.01	-0.20	0.12	0.7249
0100	Northeast	SASL2RS	Services less rent of shelter	SA	60	0.05	0.05	-0.08	0.21	0.1423
0100	Northeast	SASL5	Services less medical care services	SA	60	-0.00	-0.01	-0.17	0.13	0.9054
0100	Northeast	SA0E	Energy	SA	60	0.00	0.00	-0.05	0.08	0.8242
0100	Northeast	SA0LE	All items less energy	SA	60	-0.00	-0.01	-0.11	0.08	0.8379
0100	Northeast	SA0L1E	All items less food and energy	SA	60	-0.00	-0.01	-0.11	0.12	0.8880
0100	Northeast	SACL1E	Commodities less food and energy commodities	SA	60	-0.00	0.00	-0.16	0.19	0.9369
0100	Northeast	SACE	Energy commodities	SA	60	0.00	0.01	-0.10	0.18	0.8396
0100	Northeast	SASLE	Services less energy services	SA	60	-0.01	-0.01	-0.16	0.12	0.8776
0200	Midwest	SA0	All items	AI	60	-0.05	-0.04	-0.21	0.06	0.1291
0200	Midwest	SAF	Food and beverages	MG	60	0.00	0.01	-0.11	0.08	0.7682
0200	Midwest	SAF1	Food	IA	60	0.01	0.01	-0.04	0.06	0.3897
0200	Midwest	SAF11	Food at home	IA	60	-0.00	-0.00	-0.04	0.02	0.4284
0200	Midwest	SAF111	Cereals and bakery products	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAF112	Meats, poultry, fish, and eggs	IA	60	-0.01	-0.00	-0.14	0.10	0.6680
0200	Midwest	SEFJ	Dairy and related products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAF113	Fruits and vegetables	IA	60	-0.01	-0.00	-0.08	0.05	0.5719
0200	Midwest	SAF114	Nonalcoholic beverages and beverage materials	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAF115	Other food at home	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEFV	Food away from home	EC	60	0.02	0.02	-0.10	0.16	0.2401
0200	Midwest	SAF116	Alcoholic beverages	IA	60	-0.07	-0.00	-1.35	0.65	0.8482

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0200	Midwest	SAH	Housing	MG	60	-0.15	-0.15	-0.58	0.16	0.0963
0200	Midwest	SAH1	Shelter	IA	60	-0.21	-0.22	-0.52	0.22	0.0834
0200	Midwest	SEHA	Rent of primary residence	EC	60	-0.23	-0.24	-0.62	0.06	0.0574
0200	Midwest	SEHC	Owners' equivalent rent of residences	EC	60	-0.21	-0.23	-0.56	0.28	0.1153
0200	Midwest	SEHC01	Owners' equivalent rent of primary residence	IS	60	-0.21	-0.23	-0.57	0.29	0.1148
0200	Midwest	SAH2	Fuels and utilities	IA	60	-0.00	-0.00	-0.18	0.01	0.8020
0200	Midwest	SAH21	Household energy	IA	60	-0.00	-0.00	-0.23	0.01	0.7265
0200	Midwest	SEHF	Energy services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEHF01	Electricity	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SEHF02	Utility (piped) gas service	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAH3	Household furnishings and operations	IA	60	0.06	0.02	-0.53	0.46	0.5307
0200	Midwest	SAA	Apparel	MG	60	0.04	0.06	-0.68	0.81	0.5734
0200	Midwest	SAT	Transportation	MG	60	0.00	0.00	-0.04	0.03	0.7732
0200	Midwest	SAT1	Private transportation	IA	60	0.00	0.00	-0.04	0.03	0.7732
0200	Midwest	SETA	New and used motor vehicles	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SETA01	New vehicles	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0200	Midwest	SETA02	Used cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SETB	Motor fuel	EC	60	-0.00	-0.00	-0.00	0.00	0.4884
0200	Midwest	SETB01	Gasoline (all types)	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0200	Midwest	SAM	Medical care	MG	60	-0.04	-0.05	-0.19	0.15	0.2582
0200	Midwest	SAM1	Medical care commodities	IA	60	-0.19	-0.22	-0.99	0.75	0.2582
0200	Midwest	SAM2	Medical care services	IA	60	-0.00	-0.01	-0.03	0.01	0.3409
0200	Midwest	SEMC	Professional services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0200	Midwest	SAR	Recreation	MG	60	0.18	0.09	-1.18	1.44	0.2860
0200	Midwest	SAE	Education and communication	MG	60	-0.03	0.04	-0.48	0.21	0.7766
0200	Midwest	SEEB	Tuition, other school fees, and childcare	EC	60	-0.10	0.03	-1.15	0.52	0.8586
0200	Midwest	SAG	Other goods and services	MG	60	0.03	0.02	-0.34	0.65	0.7564
0200	Midwest	SAC	Commodities	SA	60	-0.00	0.00	-0.10	0.07	0.9142
0200	Midwest	SACL11	Commodities less food and beverages	SA	60	-0.00	0.01	-0.13	0.08	0.9299
0200	Midwest	SANL11	Nondurables less food and beverages	SA	60	-0.01	0.01	-0.24	0.16	0.9807
0200	Midwest	SANL113	Nondurables less food, beverages, and apparel	SA	60	-0.02	-0.03	-0.13	0.19	0.4401
0200	Midwest	SAD	Durables	SA	60	0.00	0.00	-0.06	0.05	0.8139
0200	Midwest	SAS	Services	SA	60	-0.09	-0.09	-0.36	0.12	0.1528
0200	Midwest	SAS2RS	Rent of shelter	SA	60	-0.21	-0.22	-0.52	0.22	0.0834
0200	Midwest	SAS4	Transportation services	SA	60	0.00	0.00	-0.11	0.14	0.7699
0200	Midwest	SAS367	Other services	SA	60	0.09	0.07	-0.95	0.92	0.4612
0200	Midwest	SA0L1	All items less food	SA	60	-0.06	-0.05	-0.24	0.06	0.1204
0200	Midwest	SA0L2	All items less shelter	SA	60	0.01	0.01	-0.14	0.16	0.7598
0200	Midwest	SA0L5	All items less medical care	SA	60	-0.05	-0.05	-0.23	0.07	0.1490
0200	Midwest	SACL1	Commodities less food	SA	60	-0.01	0.00	-0.15	0.09	0.8396
0200	Midwest	SANL1	Nondurables less food	SA	60	-0.01	-0.00	-0.23	0.17	0.8020
0200	Midwest	SANL13	Nondurables less food and apparel	SA	60	-0.03	-0.03	-0.18	0.20	0.4208
0200	Midwest	SAN	Nondurables	SA	60	-0.00	0.00	-0.12	0.10	0.9194

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0200	Midwest	SASL2RS	Services less rent of shelter	SA	60	0.04	0.01	-0.32	0.34	0.5854
0200	Midwest	SASL5	Services less medical care services	SA	60	-0.10	-0.11	-0.41	0.14	0.1598
0200	Midwest	SA0E	Energy	SA	60	-0.00	-0.00	-0.12	0.00	0.5854
0200	Midwest	SA0LE	All items less energy	SA	60	-0.06	-0.05	-0.22	0.06	0.0968
0200	Midwest	SA0L1E	All items less food and energy	SA	60	-0.07	-0.06	-0.26	0.07	0.0899
0200	Midwest	SACL1E	Commodities less food and energy commodities	SA	60	-0.01	0.00	-0.18	0.10	0.8448
0200	Midwest	SACE	Energy commodities	SA	60	0.00	0.00	-0.00	0.00	0.6744
0200	Midwest	SASLE	Services less energy services	SA	60	-0.09	-0.10	-0.38	0.13	0.1225
0300	South	SA0	All items	AI	60	-0.00	0.01	-0.15	0.15	0.9054
0300	South	SAF	Food and beverages	MG	60	-0.01	-0.01	-0.11	0.09	0.6129
0300	South	SAF1	Food	IA	60	-0.00	0.00	-0.13	0.09	0.8967
0300	South	SAF11	Food at home	IA	60	-0.01	-0.01	-0.08	0.06	0.3602
0300	South	SAF111	Cereals and bakery products	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF112	Meats, poultry, fish, and eggs	IA	60	-0.05	-0.02	-0.38	0.25	0.3255
0300	South	SEFJ	Dairy and related products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF113	Fruits and vegetables	IA	60	-0.00	0.00	-0.12	0.14	0.9211
0300	South	SAF114	Nonalcoholic beverages and beverage materials	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAF115	Other food at home	IA	60	0.00	-0.00	-0.02	0.02	0.7665
0300	South	SEFV	Food away from home	EC	60	0.01	0.02	-0.24	0.26	0.5107
0300	South	SAF116	Alcoholic beverages	IA	60	-0.07	-0.06	-0.41	0.28	0.3671
0300	South	SAH	Housing	MG	60	0.00	0.04	-0.32	0.37	0.9561
0300	South	SAH1	Shelter	IA	60	0.01	0.05	-0.40	0.43	0.9982
0300	South	SEHA	Rent of primary residence	EC	60	0.02	-0.02	-0.26	0.56	0.9316
0300	South	SEHC	Owners' equivalent rent of residences	EC	60	0.01	0.07	-0.43	0.47	0.9281
0300	South	SEHC01	Owners' equivalent rent of primary residence	IS	60	0.01	0.08	-0.44	0.47	0.9264
0300	South	SAH2	Fuels and utilities	IA	60	0.01	-0.00	-0.02	0.09	0.6712
0300	South	SAH21	Household energy	IA	60	0.01	-0.00	-0.02	0.11	0.9474
0300	South	SEHF	Energy services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SEHF01	Electricity	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SEHF02	Utility (piped) gas service	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SAH3	Household furnishings and operations	IA	60	-0.01	-0.02	-0.87	0.78	0.8190
0300	South	SAA	Apparel	MG	60	-0.03	-0.02	-0.39	0.32	0.7134
0300	South	SAT	Transportation	MG	60	-0.01	-0.00	-0.14	0.03	0.4466
0300	South	SAT1	Private transportation	IA	60	-0.01	-0.00	-0.14	0.03	0.4532
0300	South	SETA	New and used motor vehicles	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SETA01	New vehicles	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0300	South	SETA02	Used cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SETB	Motor fuel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0300	South	SETB01	Gasoline (all types)	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0300	South	SAM	Medical care	MG	60	-0.06	-0.05	-0.29	0.18	0.1989
0300	South	SAM1	Medical care commodities	IA	60	-0.27	-0.24	-1.43	0.80	0.1906
0300	South	SAM2	Medical care services	IA	60	-0.01	-0.00	-0.03	0.02	0.2971
0300	South	SEMC	Professional services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0300	South	SAR	Recreation	MG	60	0.03	0.05	-0.26	0.34	0.4612
0300	South	SAE	Education and communication	MG	60	0.00	-0.01	-0.12	0.12	0.9439
0300	South	SEEB	Tuition, other school fees, and childcare	EC	60	-0.01	-0.01	-0.15	0.17	0.8190
0300	South	SAG	Other goods and services	MG	60	0.03	0.04	-0.18	0.24	0.3695
0300	South	SAC	Commodities	SA	60	-0.01	-0.01	-0.06	0.05	0.2455
0300	South	SACL11	Commodities less food and beverages	SA	60	-0.02	-0.01	-0.09	0.04	0.3012
0300	South	SANL11	Nondurables less food and beverages	SA	60	-0.04	-0.04	-0.17	0.08	0.2393
0300	South	SANL113	Nondurables less food, beverages, and apparel	SA	60	-0.04	-0.04	-0.21	0.11	0.2666
0300	South	SAD	Durables	SA	60	0.01	0.00	-0.06	0.06	0.3487
0300	South	SAS	Services	SA	60	0.00	0.03	-0.21	0.23	0.9965
0300	South	SAS2RS	Rent of shelter	SA	60	0.01	0.05	-0.41	0.43	0.9982
0300	South	SAS4	Transportation services	SA	60	-0.04	-0.01	-0.44	0.18	0.5079
0300	South	SAS367	Other services	SA	60	0.03	0.03	-0.12	0.20	0.3730
0300	South	SA0L1	All items less food	SA	60	-0.00	0.01	-0.17	0.17	0.9054
0300	South	SA0L2	All items less shelter	SA	60	-0.01	-0.01	-0.09	0.09	0.5734
0300	South	SA0L5	All items less medical care	SA	60	0.00	0.01	-0.14	0.16	0.9860
0300	South	SACL1	Commodities less food	SA	60	-0.02	-0.02	-0.09	0.04	0.2410
0300	South	SANL1	Nondurables less food	SA	60	-0.04	-0.04	-0.19	0.07	0.1913
0300	South	SANL13	Nondurables less food and apparel	SA	60	-0.04	-0.05	-0.22	0.11	0.2205
0300	South	SAN	Nondurables	SA	60	-0.02	-0.02	-0.11	0.05	0.2091
0300	South	SASL2RS	Services less rent of shelter	SA	60	-0.00	-0.01	-0.24	0.20	0.8846
0300	South	SASL5	Services less medical care services	SA	60	0.00	0.04	-0.24	0.27	0.9947
0300	South	SA0E	Energy	SA	60	0.03	-0.00	-0.43	0.56	0.9667
0300	South	SA0LE	All items less energy	SA	60	-0.01	0.01	-0.16	0.14	0.8794
0300	South	SA0L1E	All items less food and energy	SA	60	-0.01	0.01	-0.19	0.17	0.8742
0300	South	SACL1E	Commodities less food and energy commodities	SA	60	-0.02	-0.02	-0.10	0.05	0.2280
0300	South	SACE	Energy commodities	SA	60	0.00	0.00	-0.02	0.02	0.9334
0300	South	SASLE	Services less energy services	SA	60	0.00	0.04	-0.23	0.26	0.9947
0400	West	SA0	All items	AI	60	-0.03	-0.02	-0.14	0.09	0.3465
0400	West	SAF	Food and beverages	MG	60	0.01	0.01	-0.12	0.13	0.8105
0400	West	SAF1	Food	IA	60	0.01	0.01	-0.14	0.14	0.7498
0400	West	SAF11	Food at home	IA	60	-0.00	0.01	-0.09	0.08	0.9807
0400	West	SAF111	Cereals and bakery products	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF112	Meats, poultry, fish, and eggs	IA	60	0.01	0.01	-0.10	0.21	0.7749
0400	West	SEFJ	Dairy and related products	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF113	Fruits and vegetables	IA	60	0.00	0.00	-0.14	0.14	0.9316
0400	West	SAF114	Nonalcoholic beverages and beverage materials	IA	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAF115	Other food at home	IA	60	-0.01	0.00	-0.29	0.24	0.9299
0400	West	SEFV	Food away from home	EC	60	0.02	0.00	-0.30	0.30	0.7166
0400	West	SAF116	Alcoholic beverages	IA	60	-0.04	0.01	-0.90	0.54	0.9544
0400	West	SAH	Housing	MG	60	-0.05	-0.04	-0.28	0.19	0.3375
0400	West	SAH1	Shelter	IA	60	-0.07	-0.06	-0.35	0.19	0.2772
0400	West	SEHA	Rent of primary residence	EC	60	-0.11	-0.05	-0.46	0.18	0.3320

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0400	West	SEHC	Owners' equivalent rent of residences	EC	60	-0.05	-0.05	-0.28	0.29	0.3255
0400	West	SEHC01	Owners' equivalent rent of primary residence	IS	60	-0.05	-0.05	-0.28	0.29	0.3255
0400	West	SAH2	Fuels and utilities	IA	60	-0.00	0.00	-0.17	0.16	0.9404
0400	West	SAH21	Household energy	IA	60	-0.00	0.00	-0.25	0.23	0.9246
0400	West	SEHF	Energy services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SEHF01	Electricity	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SEHF02	Utility (piped) gas service	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAH3	Household furnishings and operations	IA	60	0.05	-0.01	-0.26	0.46	0.7199
0400	West	SAA	Apparel	MG	60	0.05	0.06	-0.27	0.40	0.4733
0400	West	SAT	Transportation	MG	60	-0.00	0.00	-0.15	0.07	0.9561
0400	West	SAT1	Private transportation	IA	60	-0.00	0.00	-0.16	0.08	0.9632
0400	West	SETA	New and used motor vehicles	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETA01	New vehicles	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0400	West	SETA02	Used cars and trucks	IS	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETB	Motor fuel	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SETB01	Gasoline (all types)	IS	60	0.00	0.00	0.00	0.00	<i>alt. data</i>
0400	West	SAM	Medical care	MG	60	-0.00	-0.00	-0.34	0.32	0.9089
0400	West	SAM1	Medical care commodities	IA	60	-0.02	-0.00	-1.69	1.48	0.9142
0400	West	SAM2	Medical care services	IA	60	-0.00	0.00	-0.05	0.05	0.9667
0400	West	SEMC	Professional services	EC	60	0.00	0.00	0.00	0.00	<i>s.n.t.</i>
0400	West	SAR	Recreation	MG	60	-0.02	-0.07	-0.61	0.86	0.7800
0400	West	SAE	Education and communication	MG	60	-0.04	-0.03	-0.13	0.04	0.1509
0400	West	SEEB	Tuition, other school fees, and childcare	EC	60	-0.02	-0.02	-0.28	0.11	0.6006
0400	West	SAG	Other goods and services	MG	60	-0.01	-0.04	-1.03	1.03	0.8208
0400	West	SAC	Commodities	SA	60	0.01	0.00	-0.11	0.08	0.5136
0400	West	SACL11	Commodities less food and beverages	SA	60	0.01	0.01	-0.10	0.19	0.6889
0400	West	SANL11	Nondurables less food and beverages	SA	60	0.02	0.01	-0.19	0.38	0.7249
0400	West	SANL113	Nondurables less food, beverages, and apparel	SA	60	0.01	0.00	-0.33	0.43	0.9002
0400	West	SAD	Durables	SA	60	0.00	-0.00	-0.02	0.03	0.8003
0400	West	SAS	Services	SA	60	-0.04	-0.05	-0.23	0.16	0.3012
0400	West	SAS2RS	Rent of shelter	SA	60	-0.07	-0.06	-0.35	0.19	0.2772
0400	West	SAS4	Transportation services	SA	60	-0.00	0.01	-0.49	0.26	0.9386
0400	West	SAS367	Other services	SA	60	-0.03	-0.06	-0.37	0.46	0.6191
0400	West	SA0L1	All items less food	SA	60	-0.03	-0.03	-0.15	0.11	0.2920
0400	West	SA0L2	All items less shelter	SA	60	0.00	-0.00	-0.09	0.08	0.9281
0400	West	SA0L5	All items less medical care	SA	60	-0.03	-0.02	-0.16	0.10	0.3765
0400	West	SACL1	Commodities less food	SA	60	0.01	0.00	-0.08	0.19	0.7699
0400	West	SANL1	Nondurables less food	SA	60	0.02	0.00	-0.16	0.35	0.8156
0400	West	SANL13	Nondurables less food and apparel	SA	60	0.01	0.00	-0.27	0.39	0.9930
0400	West	SAN	Nondurables	SA	60	0.01	0.00	-0.15	0.12	0.5585
0400	West	SASL2RS	Services less rent of shelter	SA	60	-0.01	-0.02	-0.13	0.21	0.6808
0400	West	SASL5	Services less medical care services	SA	60	-0.05	-0.06	-0.26	0.18	0.3095
0400	West	SA0E	Energy	SA	60	-0.00	0.00	-0.11	0.08	0.8880

Area	Area Title	Item	Item Title	Item Class	n	Mean Diff.	Median Diff.	Min. Diff.	Max. Diff.	P-Value
0400	West	SA0LE	All items less energy	SA	60	-0.03	-0.02	-0.15	0.09	0.3364
0400	West	SA0L1E	All items less food and energy	SA	60	-0.03	-0.03	-0.17	0.11	0.2811
0400	West	SACL1E	Commodities less food and energy commodities	SA	60	0.01	0.01	-0.10	0.21	0.7800
0400	West	SACE	Energy commodities	SA	60	-0.00	0.00	-0.03	0.02	0.8448
0400	West	SASLE	Services less energy services	SA	60	-0.05	-0.05	-0.24	0.16	0.2831