



STATE OF HAWAI'I • DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM

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# Consumer Spending Analysis and the Cost of Living in Honolulu: 1986-2022

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Department of Business, Economic  
Development & Tourism  
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## **I. Introduction**

The U.S. Bureau of Labor Statistics (BLS) collaborates with the U.S. Census Bureau (USCB) to track the expenditures, income, and demographic characteristics of consumers annually in the United States. The data in its Consumer Expenditure Survey (CES) are based on an Interview Survey used to track major and/or recurring item spending and a Diary Survey used to track more minor or frequently purchased items (U.S. Bureau of Labor Statistics, 2022).

BLS efforts in this area date back to its first nationwide expenditure survey, conducted in 1888-1891, when the nation consisted of thirty-eight states. Current Consumer Expenditure Surveys include geographic data for twenty-two Metropolitan Statistical Areas (MSAs) with sufficiently dense populations.

Over time the BLS has changed the areas and spending categories it surveys. Because the areas surveyed tend to be centered around one large city, the MSAs are identified by the names of those cities, with Dallas-Fort Worth and Minneapolis-St. Paul being the exceptions. In 1972-1973 there were twenty-eight MSAs, Honolulu among them. Eight MSAs are no longer surveyed, with Phoenix and Tampa the newest components of the current list.

Honolulu ranks as the second smallest MSA, after Anchorage. It should be noted that comparable Honolulu data exist for the years between 1986-87 and 1994-95, 1996-97 and 2004-05, and 2015-16 and 2021-22. This report aims to analyze the most recent data and what it indicates about how consumer expenditures and spending patterns in Honolulu have evolved.

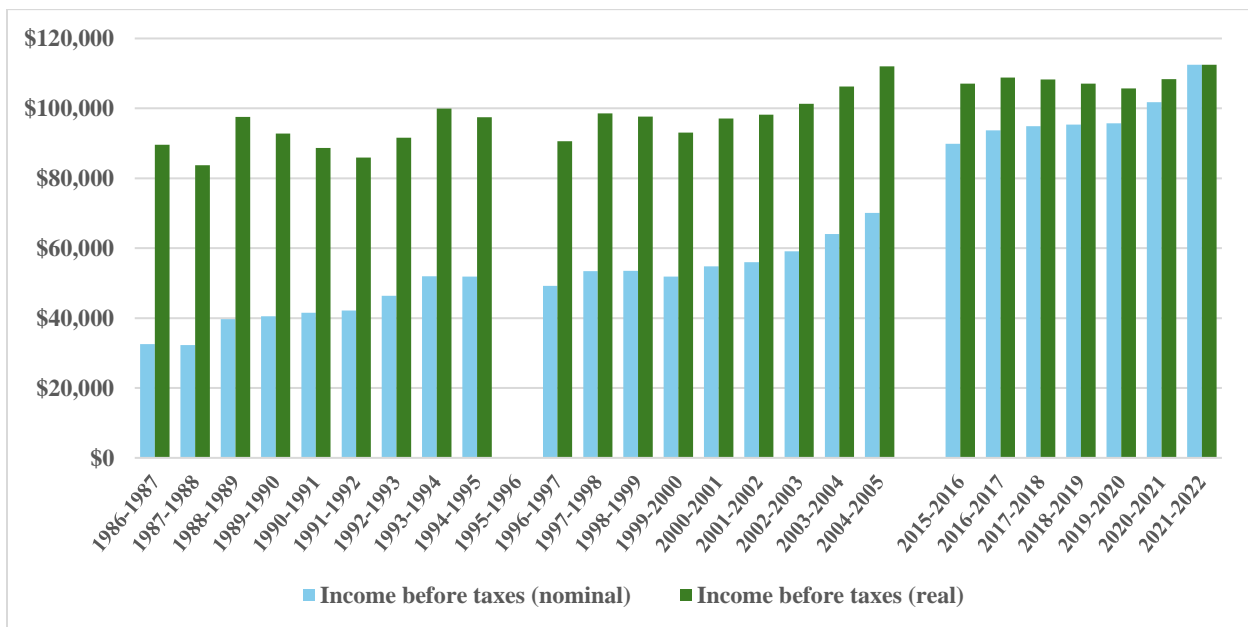
As background, Honolulu is one of the eight components of the Western MSA, which is the second largest of the four regional MSAs and contains 30.5 million consumer units. The other urban areas in the Western MSA are Los Angeles, San Francisco, San Diego, Seattle, Phoenix, Denver, and Anchorage. Honolulu data can be compared with that from with these MSAs, and with those in the three other MSAs (Northeastern, comprised of New York, Philadelphia, and Boston; Southern, comprised of Washington D.C., Baltimore, Atlanta, Miami, Dallas-Fort Worth, Houston, and Tampa; Midwestern, comprised of Chicago, Detroit, Minneapolis-St. Paul, and St. Louis), and national data (U.S. Bureau of Labor Statistics, 2023).

## II. Honolulu Consumer Spending

Expenditure levels are related to income levels. The following figure shows income per consumer unit before taxes during the years for which Honolulu data exist. Note that the CES defines a consumer unit as including “families, single persons living alone or sharing a household with others but who are financially independent, or two or more persons living together who share expenses. The terms household or consumer unit are used interchangeably for convenience.”<sup>1</sup>

In nominal terms income increased by 245 percent, or an average of 3.6 percent annually, growing from \$32,575 in 1986-1987 to \$112,440 in 2021-2022. Adjusted by the Honolulu Consumer Price Index and measured in 2022 dollars, it increased by 25 percent, or by 0.7 percent on average annually. (The 2004 BLS adjustment of its methodology for estimating consumer income complicates comparisons of data before and after that year, but those after 2015 are unaffected.)

**Figure 1. Honolulu Average Annual Income before Taxes, 1986-1987 through 2021-2022**

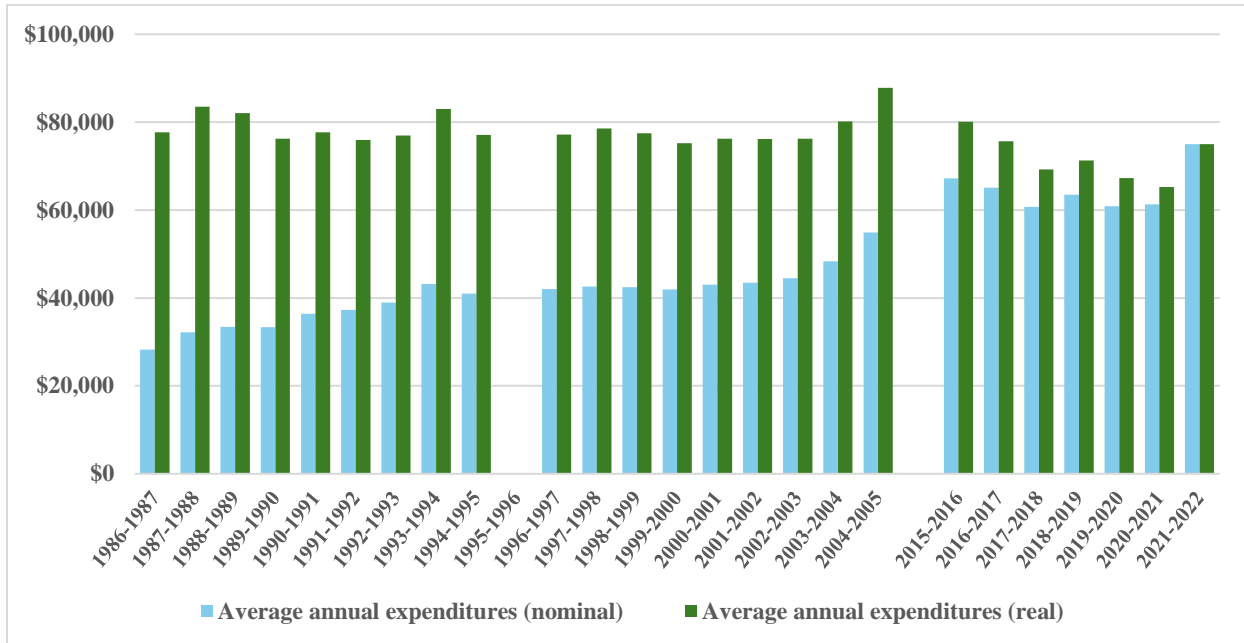


Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

<sup>1</sup> U.S. Bureau of Labor Statistics. 19 Oct. 2023, [Consumer Expenditures for the Honolulu Metropolitan Area — 2021–22 : Western Information Office : U.S. Bureau of Labor Statistics \(bls.gov\)](#).

Expenditure data differs from income data significantly, however. Over the same period, annual expenditures per consumer unit expanded by 165 percent or 2.8 percent on average annually in nominal terms, increasing from \$28,239 in 1986-1987 to \$74,965 in 2021-2022. In real terms, deflated by the Honolulu Consumer Price Index and measured in 2022 dollars, annual expenditure levels decreased by 3 percent, or by 0.1 percent on average annually.

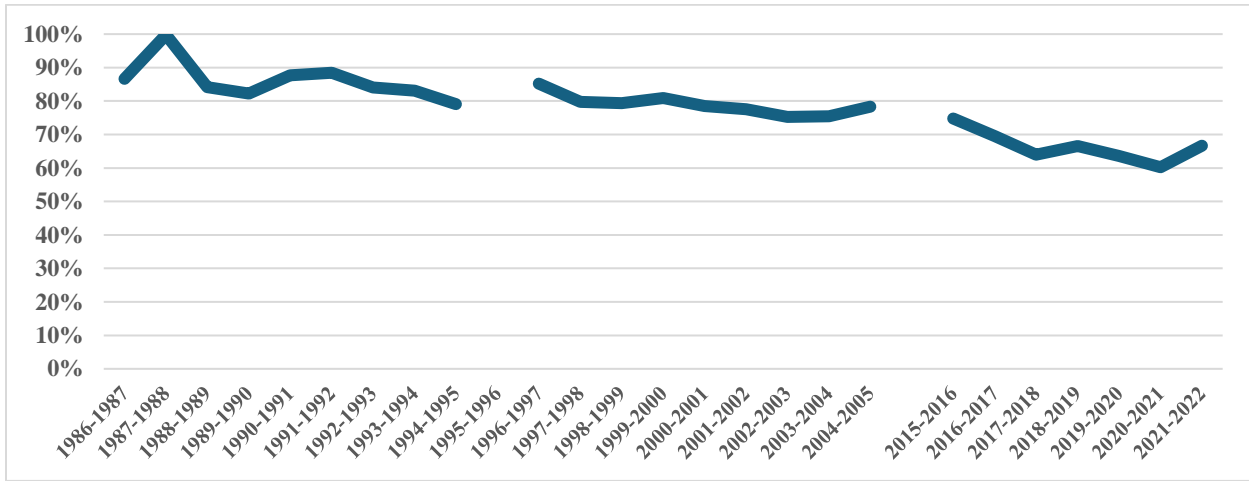
**Figure 2. Honolulu Average Annual Expenditures, 1986-1987 through 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

Expenditures have increased at a slower rate than have incomes. This can be seen in Figure 3, which shows the percentage of pretax income expended annually. (While the expenditure and income values change when adjusted for inflation, the percentage calculations do not.) In 1986-1987, 86.7 percent of consumer pretax income went to expenditures, but by 2021-2022 the level had declined to 66.7 percent.

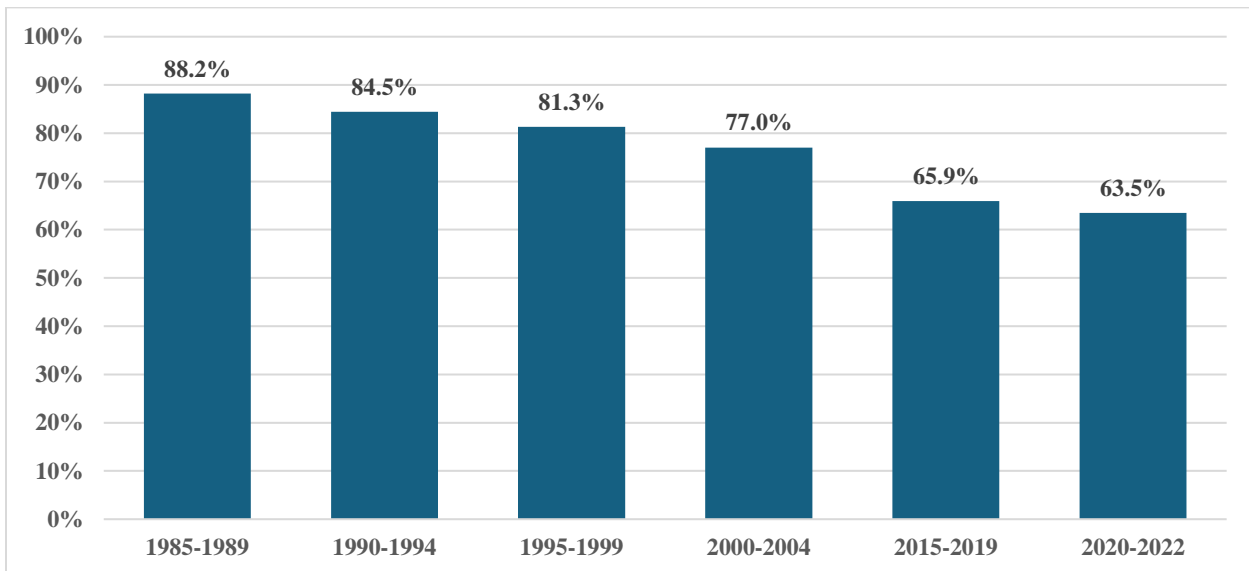
**Figure 3. Share of Pretax Income Spent on Consumer Expenditures, 1986-1987 through 2021-2022**



Source: U.S. Bureau of Labor Statistics (bls.gov)  
 \*Gaps reflect unavailable data for 1995-1996, 2005-2015 periods

A second way to illustrate the clear and pronounced decline in pretax income spent on expenditures uses five-year periods, adjusted based on the availability of annual data.

**Figure 4. Average Share of Pretax Income Spent on Consumer Expenditures by 5-year period, 1986-1987 through 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

The BLS collects expenditure data in over a dozen broad categories, breaking some of them down in quite specific detail. The largest three categories are housing, food, and transportation.

The 2001-2002 survey showed the three accounting for 64.1 percent of Honolulu consumer expenditures; by 2021-2022 their combined total had increased to 67.8 percent, the second highest level in the U.S., trailing only Miami.

In the twenty years separating the 2001-2002 and 2021-2022 data sets, nominal income increased by 101 percent or 3.6 percent on average annually. Adjusted for inflation, growth was a mere 15 percent, or 0.7 percent on average annually. Expenditure growth was smaller: 72 percent or 2.8 percent on average annually in nominal terms, which in real terms represented a decline of 2 percent or 0.1 percent on average annually.

Average spending on housing and food, the two largest sources of expenditures, had real growth of 5 percent and 2 percent, respectively. Increases in real spending on rented housing (16 percent) and healthcare (14 percent) stand out.

There were considerable declines in spending as well, some of which can be attributed to the impacts of the Covid-19 pandemic. The sharp declines in spending on public transportation and entertainment illustrate this. Decreased spending on alcoholic beverages and tobacco products suggest behavioral changes which can be attributed to shifting lifestyle choices. Spending on life and other personal insurance (-61 percent, adjusted for inflation) were offset by a 28 percent increase in spending on pensions and Social Security.



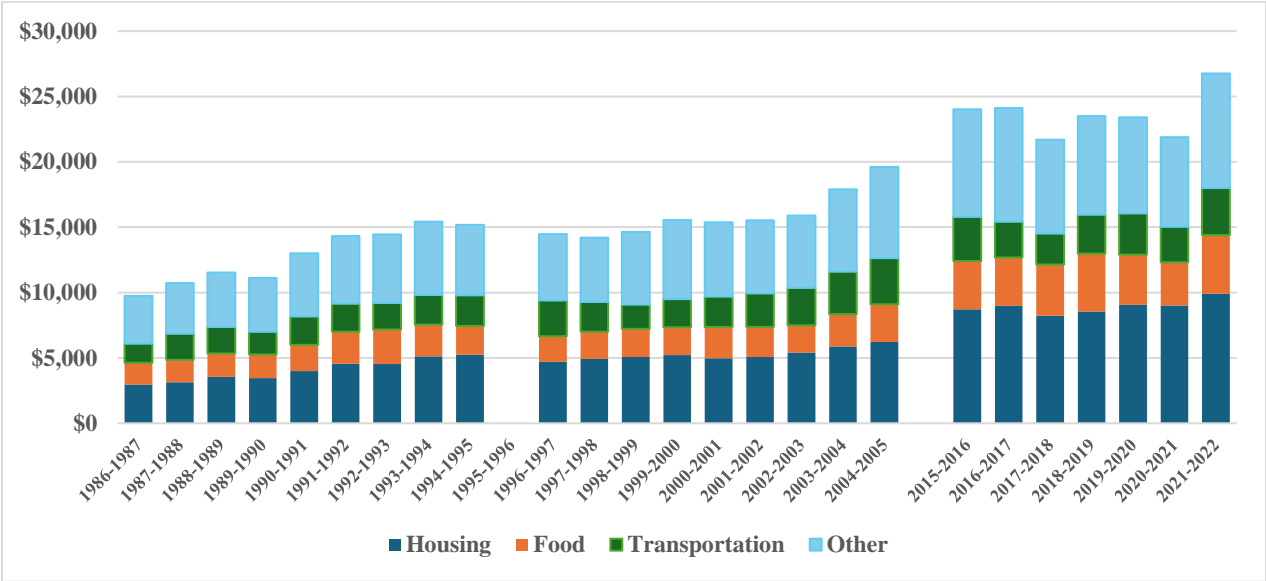
**Table 1. Average Annual Household Income Before Taxes and Expenditures by Category, 2001-2002 versus 2021-2022**

	2001-2002 (nominal \$)	2001-2002 (real, 2022\$)	2021-22	Change vs 2001-02 (nominal \$)	Change vs 2001-02 (real, 2022\$)
<b>Income before taxes</b>	<b>\$56,000</b>	<b>\$98,171</b>	<b>\$112,440</b>	<b>101%</b>	<b>15%</b>
<b>Average annual expenditures</b>	<b>\$43,458</b>	<b>\$76,184</b>	<b>\$74,965</b>	<b>72%</b>	<b>-2%</b>
Food	\$6,418	\$12,737	\$12,941	102%	2%
Food at home	\$3,879	\$7,409	\$7,795	101%	5%
Cereals and bakery products	\$542	\$1,076	\$1,072	98%	0%
Meats, poultry, fish, and eggs	\$1,182	\$2,346	\$1,731	46%	-26%
Dairy products	\$336	\$661	\$590	76%	-11%
Fruits and vegetables	\$750	\$1,488	\$1,703	127%	14%
Other food at home	\$1,069	\$2,146	\$2,699	152%	26%
Food away from home	\$2,539	\$5,039	\$5,146	103%	2%
Alcoholic beverages	\$489	\$827	\$559	14%	-32%
Housing	\$14,207	\$26,540	\$27,799	96%	5%
Shelter	\$9,470	\$17,552	\$18,941	100%	8%
Owned dwellings	\$4,810	\$8,830	\$9,106	89%	3%
Rented dwellings	\$4,030	\$7,824	\$9,063	125%	16%
Other lodging	\$630	\$1,177	\$772	23%	-34%
Utilities, fuels, and public services	\$2,200	\$7,100	\$4,913	123%	-31%
Household operations	\$569	\$579	\$1,069	88%	85%
Housekeeping supplies	\$567	\$577	\$843	49%	46%
Household furnishings and equipment	\$1,402	\$1,427	\$2,033	45%	42%
Apparel and services	\$1,597	\$1,719	\$1,411	-12%	-18%
Transportation	\$7,230	\$11,513	\$10,103	40%	-12%
Vehicle purchases (net outlay)	\$3,040	\$5,329	\$3,700	22%	-31%
Gasoline and motor oil	\$1,124	\$3,476	\$2,571	129%	-26%
Other vehicle expenses	\$2,194	\$3,846	\$3,004	37%	-22%
Public transportation	\$873	\$1,530	\$828	-5%	-46%
Healthcare	\$2,365	\$4,515	\$5,133	117%	14%
Entertainment	\$2,249	\$3,943	\$2,425	8%	-38%
Personal care products and services	\$594	\$1,041	\$767	29%	-26%
Reading	\$161	\$282	\$121	-25%	-57%
Education	\$1,088	\$1,547	\$1,589	46%	3%
Tobacco products and smoking supplies	\$297	\$521	\$236	-21%	-55%
Miscellaneous	\$759	\$1,331	\$680	-10%	-49%
Cash contributions	\$1,278	\$2,240	\$1,566	23%	-30%
Personal insurance and pensions	\$4,727	\$8,287	\$9,634	104%	16%
Life and other personal insurance	\$641	\$1,124	\$436	-32%	-61%
Pensions and Social Security	\$4,086	\$7,163	\$9,198	125%	28%

Source: U.S. Bureau of Labor Statistics (bls.gov)

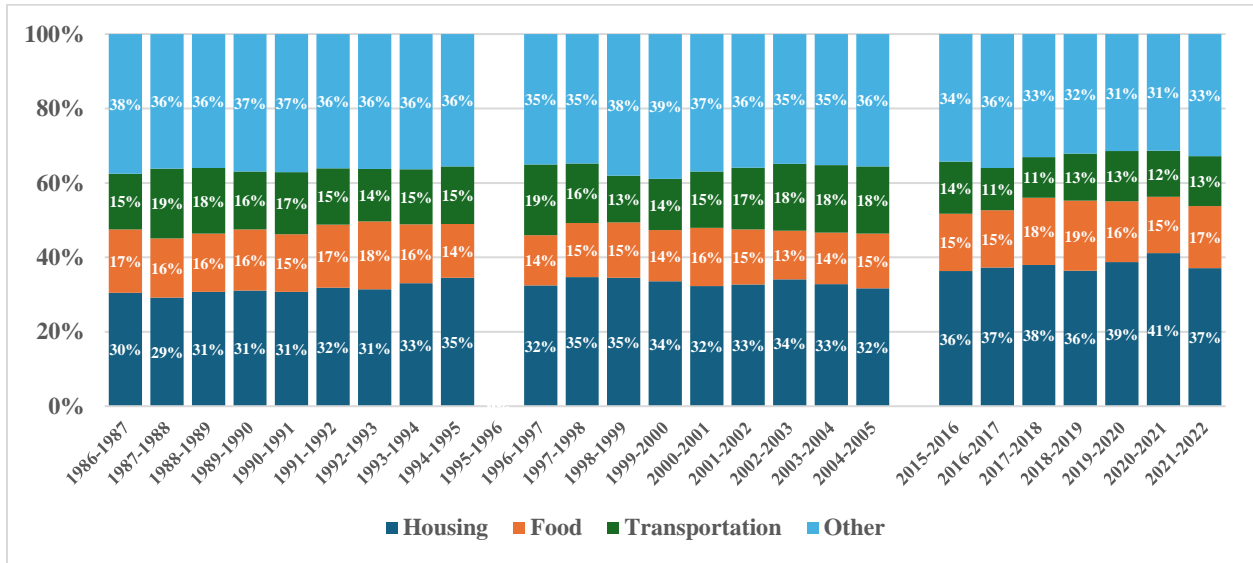
BLS estimates of consumer units and persons per consumer unit make it possible to track per capita expenditures. In the period between 1986-1987 and 2021-2022, annual per capita expenditures increased by 175 percent, or 2.9 percent on average annually. Among the three major areas of spending, housing saw the largest increase, 234 percent, or 3.5 percent on average annually. Food expenditures rose by 170 percent, or 2.9 percent on average annually. Transportation expenditures rose by 147 percent, or 2.4 percent on average annually. As shown in Figure 6, it is notable that housing accounted for 37.1 percent of 2021-2022 expenditures, well above the 30 percent level commonly used as a gauge to measure housing affordability (JCHS, 2023).

**Figure 5. Per Capita Consumption Expenditures, 1986-1987 through 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

**Figure 6. Per Capita Consumption– Share by Expenditure Category, 1986-1987 through 2021-2022**

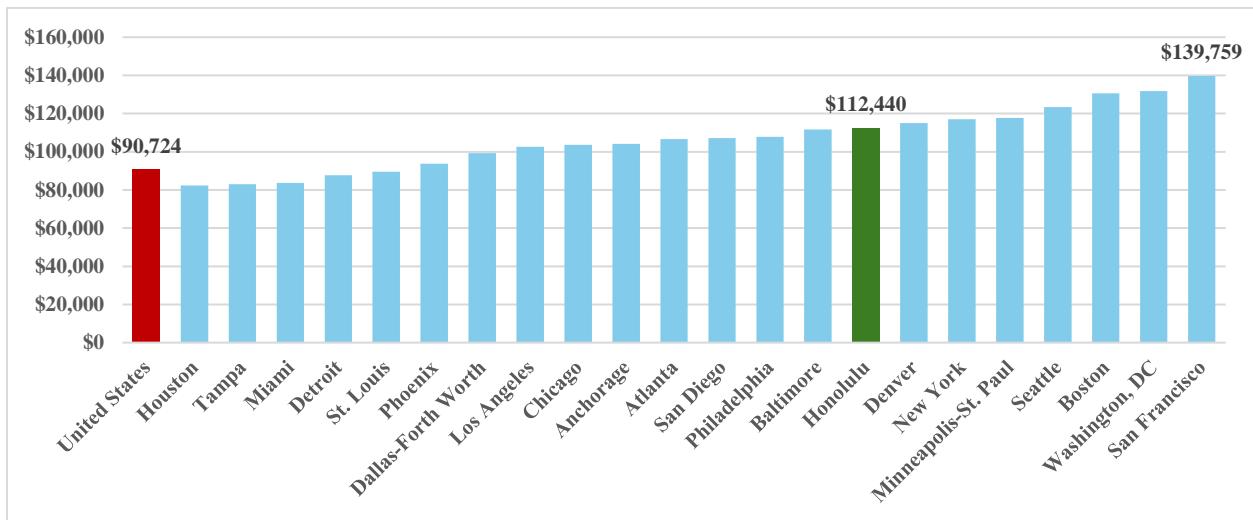


Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

### III. Honolulu Consumer Pretax Income and Spending Compared with Other U.S. MSAs

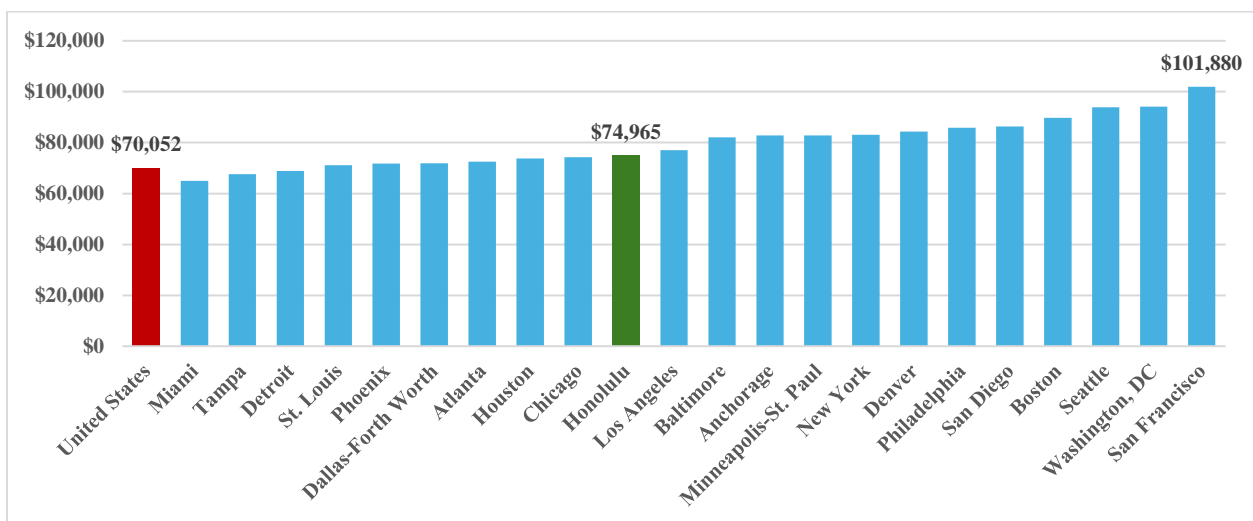
The BLS data reveal that both average pretax income and consumer expenditures vary broadly among the twenty-two Metropolitan Statistical Areas. The most recent data show Honolulu as having the eighth highest pretax income per consumer unit; the \$112,440 level is 24 percent above the national level. As shown in Figure 8, at \$74,965, average consumer expenditures for Honolulu rank thirteenth, just 7 percent above the national level.

**Figure 7. Average Income before Taxes by MSA, 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/ce/>

**Figure 8. Consumer Expenditures by MSA, 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/ce/>

Table 2 details how consumer expenditures in Honolulu differ from national levels. While the overall difference (7 percent) is relatively small, there is great disparity among categories. The high cost of food stands out; Honolulu consumers expend 47 percent more than is the case nationally, with higher spending levels on fruits and vegetables and meats, poultry, fish, and eggs noteworthy. Among housing expenditures, Honolulu rented dwellings cost consumers 87 percent more than consumers spend nationally. Conversely, Honolulu consumer spending levels on household operations, vehicle purchases and other vehicle expenses, and apparel and services are considerably lower than national levels.

**Table 2. Comparison of Honolulu and U.S. 2021-2022 Consumer Expenditures**

	<u>Honolulu</u>	<u>U.S.</u>	<u>Honolulu as pct. of U.S.</u>
<b>Expenditures</b>	<b>\$74,965</b>	<b>\$70,052</b>	<b>107%</b>
<b>Food</b>	<b>\$12,941</b>	<b>\$8,818</b>	<b>147%</b>
Food at home	\$7,795	\$5,482	142%
Cereals and bakery products	\$1,072	\$692	155%
Meats, poultry, fish, and eggs	\$1,731	\$1,165	149%
Dairy products	\$590	\$512	115%
Fruits and vegetables	\$1,703	\$1,066	160%
Other foods at home	\$2,699	\$2,046	132%
Food away from home	\$5,146	\$3,337	154%
<b>Alcoholic beverages</b>	<b>\$559</b>	<b>\$650</b>	<b>86%</b>
<b>Housing</b>	<b>\$27,799</b>	<b>\$23,462</b>	<b>118%</b>
Shelter	\$18,941	\$13,884	136%
Owned dwellings	\$9,106	\$7,911	115%
Rented dwellings	\$9,063	\$4,838	187%
Other lodging	\$772	\$1,135	68%
Utilities, fuels, and public service	\$4,913	\$4,387	112%
Household operations	\$1,069	\$1,744	61%
Household supplies	\$843	\$795	106%
Household furnishings and equipment	\$2,033	\$2,653	77%
<b>Apparel and services</b>	<b>\$1,411</b>	<b>\$1,850</b>	<b>76%</b>
<b>Transportation</b>	<b>\$10,103</b>	<b>\$11,645</b>	<b>87%</b>
Vehicle purchases (net outlay)	\$3,700	\$4,662	79%
Gasoline, other fuels, and motor oil	\$2,571	\$2,635	98%
Other vehicle expenses	\$3,004	\$3,684	82%
Public and other transportation	\$828	\$664	125%
<b>Healthcare</b>	<b>\$5,133</b>	<b>\$5,651</b>	<b>91%</b>
<b>Entertainment</b>	<b>\$2,425</b>	<b>\$3,513</b>	<b>69%</b>
<b>Personal care products and services</b>	<b>\$767</b>	<b>\$819</b>	<b>94%</b>
<b>Reading</b>	<b>\$121</b>	<b>\$115</b>	<b>105%</b>
<b>Education</b>	<b>\$1,589</b>	<b>\$1,281</b>	<b>124%</b>
<b>Tobacco products and smoking supplies</b>	<b>\$236</b>	<b>\$356</b>	<b>66%</b>
<b>Miscellaneous</b>	<b>\$680</b>	<b>\$997</b>	<b>68%</b>
<b>Cash contributions</b>	<b>\$1,566</b>	<b>\$2,585</b>	<b>61%</b>
<b>Personal insurance and pensions</b>	<b>\$9,634</b>	<b>\$8,308</b>	<b>116%</b>
Life and other personal insurance	\$436	\$496	88%
Pensions and Social Security	\$9,198	\$7,812	118%

Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

Table 3 breaks down expenditures on a per capita basis by major consumption category, ranking them by MSA. Honolulu ranked twentieth in terms of total expenditures, eighteenth in terms of housing expenditures, fourth in terms of food expenditures, and twenty-second in terms of transportation expenditures.

**Table 3. Per Capita Consumer Expenditure Ranking by City, 2021-2022**

<b>Total</b>		<b>Housing</b>		<b>Food</b>		<b>Transportation</b>	
Boston	\$40,816	San Francisco	\$16,547	San Francisco	\$5,255	Seattle	\$6,034
San Francisco	\$40,752	Boston	\$14,400	Anchorage	\$5,072	Baltimore	\$5,783
Seattle	\$39,127	Seattle	\$13,788	Boston	\$4,942	Anchorage	\$5,727
Washington, D.C.	\$36,220	Washington, D.C.	\$12,802	<b>Honolulu</b>	<b>\$4,622</b>	Detroit	\$5,712
Minneapolis-St. Paul	\$34,535	San Diego	\$12,741	Seattle	\$4,374	St. Louis	\$5,574
San Diego	\$34,520	New York	\$12,485	Washington, D.C.	\$4,356	Tampa	\$5,427
Anchorage	\$34,500	Denver	\$12,357	St. Louis	\$4,327	Boston	\$5,317
Philadelphia	\$34,359	Minneapolis-St. Paul	\$11,496	Baltimore	\$4,264	Miami	\$5,204
Denver	\$33,717	Philadelphia	\$11,381	New York	\$4,257	Denver	\$5,198
New York	\$33,226	Chicago	\$11,338	Philadelphia	\$4,197	San Francisco	\$5,196
Baltimore	\$32,838	Los Angeles	\$10,885	San Diego	\$4,180	San Diego	\$5,048
St. Louis	\$32,355	Tampa	\$10,766	Denver	\$3,950	Los Angeles	\$5,043
Detroit	\$31,303	Miami	\$10,543	Minneapolis-St. Paul	\$3,923	Houston	\$4,878
Chicago	\$30,944	Anchorage	\$10,475	Los Angeles	\$3,913	Phoenix	\$4,694
Tampa	\$30,744	Baltimore	\$10,419	Chicago	\$3,905	Washington, D.C.	\$4,678
Los Angeles	\$29,625	St. Louis	\$10,116	Detroit	\$3,847	Dallas-Fort Worth	\$4,655
Phoenix	\$28,700	Phoenix	\$9,937	Tampa	\$3,646	Atlanta	\$4,576
Miami	\$28,236	<b>Honolulu</b>	<b>\$9,928</b>	Miami	\$3,475	Philadelphia	\$4,499
Atlanta	\$26,866	Detroit	\$9,885	Atlanta	\$3,361	Minneapolis-St. Paul	\$4,174
<b>Honolulu</b>	<b>\$26,773</b>	Dallas-Fort Worth	\$9,620	Phoenix	\$3,332	New York	\$4,130
Dallas-Fort Worth	\$26,641	Atlanta	\$9,227	Dallas-Fort Worth	\$3,243	Chicago	\$3,987
Houston	\$26,347	Houston	\$8,848	Houston	\$2,446	<b>Honolulu</b>	<b>\$3,608</b>

Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

It should be noted that the per capita calculations are influenced by the consumer unit (household) size. Among the 22 MSAs, Honolulu and Houston had the largest consumer unit size, at 2.8 people. Four had unit sizes of just 2.2 people, a level which results in higher per capita expenditures.

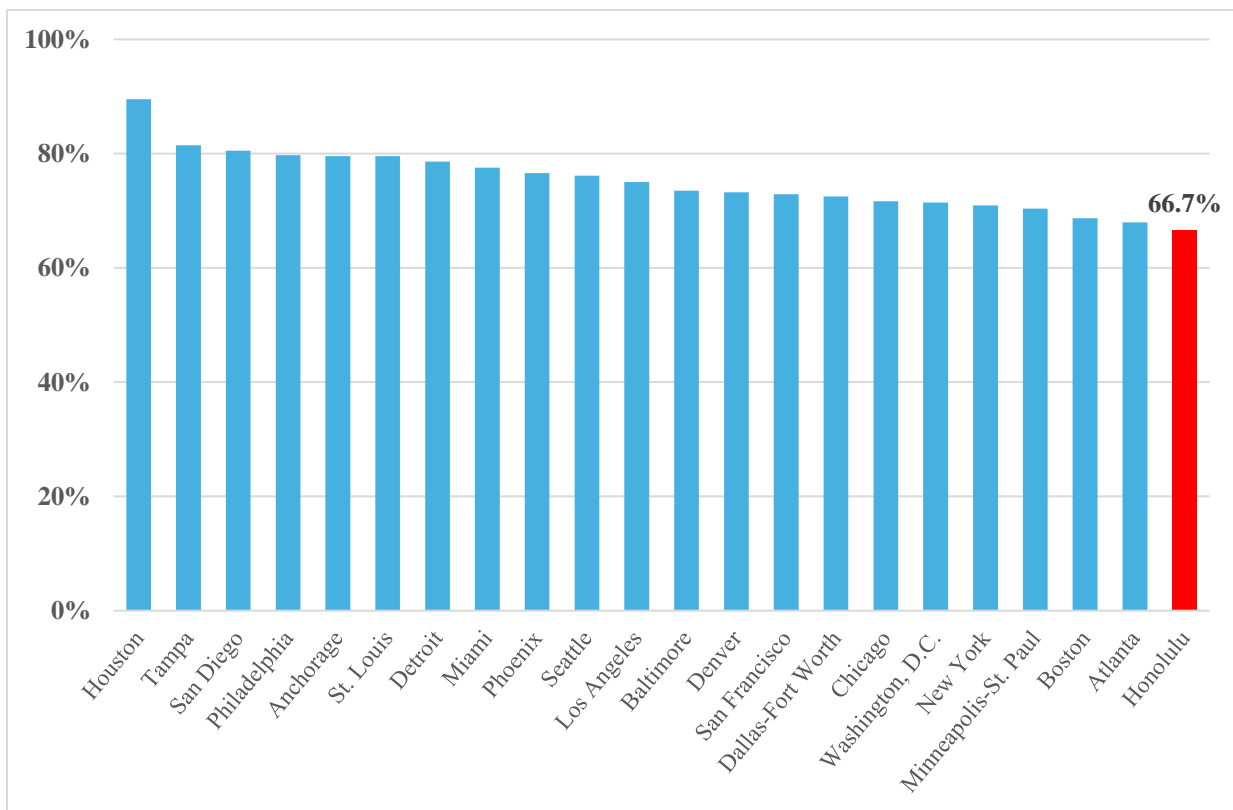
Based on spending on a per household basis, Honolulu ranked thirteenth in terms of total expenditures, tenth in terms of housing, second in terms of food, and twentieth in terms of transportation expenditures.

#### IV. Taxes and Consumer Spending

As Figure 7 illustrated, there is a broad range of average pretax incomes among the 22 MSAs for which BLS tracks data. At \$112,440, Honolulu ranked eighth in 2021-2022, 24 percent above the national level but 20 percent below San Francisco, which had the highest average income. Honolulu’s consumer expenditures rank was thirteenth, indicating a significant gap in pretax income and expenditures.

Honolulu household consumption was equivalent to 66.7 percent of pretax income in 2021-2022, the lowest among the 22 MSAs. As Table 9 shows, consumption accounted for over 80 percent of pre-tax income in three MSAs, led by Houston at 89.5 percent.

**Figure 9. Consumer Expenditures as a Percentage of Pretax Income, 2021-2022**



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

In terms of non-spent income, Honolulu ranked fourth, a level mitigated slightly when calculated on a per capita basis, by which it ranks sixth. These levels are expressed in Table 4, which shows the difference between income and expenditures is over four times greater for Honolulu households than it is for those in Houston.



**Table 4. Pre-tax Income Less Consumer Expenditure Ranking by MSA, 2021-2022**

Pre-tax income less expenditures		Pre-tax income less expenditures (per capita)	
Boston	\$40,868	Boston	\$18,576
San Francisco	\$37,879	San Francisco	\$15,152
Washington, D.C.	\$37,650	Minneapolis-St. Paul	\$14,532
<b>Honolulu</b>	<b>\$37,475</b>	Washington, D.C.	\$14,481
Minneapolis-St. Paul	\$34,876	New York	\$13,594
Atlanta	\$34,162	<b>Honolulu</b>	<b>\$13,384</b>
New York	\$33,984	Atlanta	\$12,653
Denver	\$30,819	Denver	\$12,328
Baltimore	\$29,549	Seattle	\$12,263
Seattle	\$29,432	Chicago	\$12,238
Chicago	\$29,372	Baltimore	\$11,820
Dallas-Fort Worth	\$27,301	Dallas-Fort Worth	\$10,111
Los Angeles	\$25,625	Los Angeles	\$9,856
Phoenix	\$21,911	Anchorage	\$8,858
Philadelphia	\$21,851	Phoenix	\$8,764
Anchorage	\$21,259	Philadelphia	\$8,740
San Diego	\$20,883	Detroit	\$8,525
Miami	\$18,813	San Diego	\$8,353
Detroit	\$18,756	St. Louis	\$8,310
St. Louis	\$18,283	Miami	\$8,180
Tampa	\$15,374	Tampa	\$6,988
Houston	\$8,610	Houston	\$3,075

Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey: Various Years. <https://www.bls.gov/cex/>

The purpose of this section is to trace where the income not spent on consumption goes. A large portion of this is taxes.

The following analysis is based on property tax data for tax year 2021-2022 for the City and County of Honolulu (2024), State of Hawai‘i Department of Taxation individual income data for 2021-2022 (2024), and Internal Revenue Service Statistics of Income for Tax Year 2021 (U.S. Treasury, 2024), the most recent available. State and federal data covers the entire state of Hawai‘i. Because Honolulu accounts for approximately 72.6 percent of the state’s income before taxes, this share of statewide tax payment data is used here to estimate the Honolulu share.

For starters, Honolulu had an estimated 338,438 households in 2022, according to the U.S. Census Bureau’s American Community Survey 1-year data (Table DP02). Multiplying that number by the non-expended pre-tax income per consumer unit (\$37,475) results in a total of \$12.68 billion.

Honolulu property tax revenue for the 2021-2022 fiscal year approached \$1.4 billion. The largest share of this was for residential properties. Those properties which served as the primary residences for local residents accounted for \$581.60 million in tax revenue.

A DBEDT analysis of Honolulu residential property ownership in 2016 found that 91.4 percent of properties (based on the data attached to 265,442 tax map keys, commonly abbreviated as TMKs) had Hawaii addresses listed for ownership. Mailing addresses categorized as “Hawaii and Other Mixed” accounted for 0.3 percent of properties. An additional 7.4 percent had other U.S. addresses, with 0.9 percent having foreign addresses for owners. For the purposes of our calculations, we’re assuming that local residents paid 91.7 percent of the residential property tax total in 2022.

A second category, called Residential A properties, designates homes which are not primary residences. Some are second homes owned by local residents, others vacation homes owned by non-residents. Homes over one million dollars in value for which a primary exemption has not been applied for also fit into the Residential A category, but Honolulu’s Department of Budget and Financial Services doesn’t separate data on the residence of owners by property tax category.

Assuming that local residents paid 50 percent of the taxes assessed on homes classified as Residential A translates to \$79.20 million in property tax revenue. The total taxes paid on residential properties by local residents becomes \$612.52 million, or \$1,810 on average per household.

State tax revenue neared \$10.5 billion in the 2022 fiscal year. The two largest components both fell heavily on residents; together the general excise tax (GET) and individual income taxes accounted for 74.3 percent of state revenues from taxes.

Our assumptions here are that local consumers paid 80 percent of GET, 10 percent of the transient accommodations tax (TAT), and 75 percent of all other state taxes. The combination results in local Honolulu residents paying \$6.03 billion in state taxes, with GET and income taxes accounting for 83.8 percent of the total. On a per household basis, the average cost of state taxes was \$17,837.

Individuals in Hawai‘i paid a total of \$8.53 billion in federal income tax in the 2021 tax year. Based on Honolulu’s 72.6% share of the state’s income for taxes, its residents paid \$6.19 billion in federal taxes, or \$18,309 on average per Honolulu household.

Using these three estimates of tax payments, Honolulu residents paid a total of \$12.84 billion of taxes, a number close to the \$12.68 billion resulting from the calculations based on the BLS expenditure and USCB Honolulu household number estimates. The per household total, \$37,956, approaches the non-expended share of pre-tax income (\$37,475) per consumer unit reported by BLS. This analysis suggests that the surge in 2021-2022 expenditures resulted in little to no savings during this time, which may have been made possible by higher savings occurring during the peak Covid years.

## **V. Conclusion**

This study examines the most recently reported income and consumer expenditure data for Honolulu, comparing it with other major cities across the nation. Honolulu data dates back to 1986-1987; with the exception of a few years in which the survey was not conducted here, annual Honolulu data exists for subsequent years, the most recent being 2021-2022. The newest data release forms the primary focus of the present analysis.

The gap between pre-tax income and expenditures in Honolulu has grown. Adjusted for inflation, between 1987 and 2002, income before taxes grew by 25 percent both nationally and in Honolulu. During the same period, average consumer expenditures grew by 7 percent nationally while declining by 3 percent in Honolulu.

The decline in the share of pre-tax income being spent by Honolulu residents is both clear and considerable. Honolulu's consumer spending as a percentage of pre-tax income ranks as the lowest among the 22 MSA cities. More money spent on taxes results in less for other expenditures and has broader implications in terms of limiting economic expansion.

Honolulu's location and limited manufacturing and agricultural base result in additional transportation and distribution costs which are specific to the state. The impacts are broad, but the disparities in what Honolulu residents pay for both food and housing stand out.

Transportation, the third major component of consumer expenditures, is a smaller component of spending than is the case nationally, both because of Honolulu's compactness and the sophistication of its public transport system.

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## Appendix 1 – Methodology

The Consumer Price Index (CPI) produced by the U.S. Bureau of Labor Statistics is a measure of the change over time in prices paid by consumers. In calculating how the value of consumer expenditures shown in Table 1 had changed between 2001-2002 and 2021-2022, a series of Honolulu-specific CPIs was employed, using levels from 2002 and 2022.

Certain expenditure categories have CPI categories which mirror them directly. Some do not or are measured by indices which didn't exist in 2001-2002. The table below indicates which CPIs were employed to calculate inflation-adjusted expenditure levels.

**Table 5. Consumer Price Index item codes, names used, by expenditure category**

<b>Expenditure category</b>	<b>CPI item code</b>	<b>CPI item name</b>
Income before taxes	CUURS49FSA0	CPI - All Urban Consumers
Average annual expenditures	CUURS49FSA0	CPI - All Urban Consumers
Food	CUURS49FSAF1	Food
Food at home	CUURS49FSAF11	Food at home
Cereals and bakery products	CUURS49FSAF1	Food
Meats, poultry, fish, and eggs	CUURS49FSAF1	Food
Dairy products	CUURS49FSAF	Food and beverages
Fruits and vegetables	CUURS49FSAF1	Food
Other food at home	CUURS49FSAF1	Food
Food away from home	CUURS49FSEFV	Food away from home
Alcoholic beverages	CUURS49FSAF116	Alcoholic beverages
Housing	CUURS49FSAH	Housing
Shelter	CUURS49FSAH1	Shelter
Owned dwellings	CUURS49FSEHC01	Owners' equivalent rent of primary residence
Rented dwellings	CUURS49FSEHA	Rent of primary residence
Other lodging	CUURS49FSAH	Housing
Utilities, fuels, and public services	CUURS49FSAH2	Fuels and utilities
Household operations	CUURS49FSAH3	Household furnishings and operations
Housekeeping supplies	CUURS49FSAH4	Household furnishings and operations
Household furnishings and equipment	CUURS49FSAH5	Household furnishings and operations
Apparel and services	CUURS49FSAA	Apparel
Transportation	CUURS49FSAT	Transportation
Vehicle purchases (net outlay)	CUURS49FSA0	All Items
Gasoline and motor oil	CUURS49FSETB01	Gasoline (all types)
Other vehicle expenses	CUURS49FSA0	All Items

Public transportation	CUURS49FSA0	All Items
Healthcare	CUURS49FSAM	Medical care
Entertainment	CUURS49FSA0	CPI - All Urban Consumers
Personal care products and services	CUURS49FSA0	CPI - All Urban Consumers
Reading	CUURS49FSA0	CPI - All Urban Consumers
Education	CUURS49FSAE	Education and communication
Tobacco products and smoking supplies	CUURS49FSA0	CPI - All Urban Consumers
Miscellaneous	CUURS49FSA0	CPI - All Urban Consumers
Cash contributions	CUURS49FSA0	CPI - All Urban Consumers
Personal insurance and pensions	CUURS49FSA0	CPI - All Urban Consumers
Life and other personal insurance	CUURS49FSA0	CPI - All Urban Consumers
Pensions and Social Security	CUURS49FSA0	CPI - All Urban Consumers