

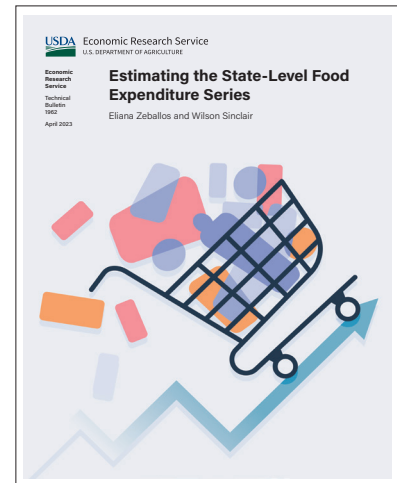


Addendum to Estimating the State-Level Food Expenditure Series

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Note:

The USDA, Economic Research Service (ERS) Technical Bulletin (TB-1962) *Estimating the State-Level Food Expenditure Series* outlines the methodology and data sources used to generate food expenditure estimates over time for all 50 U.S. States and the District of Columbia. The State-Level Food Expenditure Series (State-level FES) follows a methodology similar to the national-level FES. In the USDA, ERS report, the State-level estimates are based mainly on sales data calculated using employment headcounts reported in the National Establishment Time Series (NETS) Database from Dun & Bradstreet and Walls & Associates. Because the NETS database is being discontinued, the State-level FES will be re-released with estimates based mainly on sales calculated using employment headcounts reported in the U.S. Department of Labor, Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW). This change will allow the State-level FES to be updated over time and does not substantially affect most estimates or trends. This addendum to the report describes the QCEW and outlines the effect of the switch.



ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

Addendum to TB-1962: Revisions to the State-level Food Expenditure Series (FES)

This addendum to the USDA, Economic Research Service report *Estimating the State-Level Food Expenditure Series* (Zeballos & Sinclair, 2023) describes the changes in the data sources used to estimate the State-level Food Expenditure Series (State-level FES). The State-level FES estimates published in May 2023 were based on sales data calculated using employment headcounts reported in the National Establishment Time Series (NETS) Database. However, the NETS database is being discontinued, and the State-level FES will now be based on the sales calculated using employment headcounts reported in the U.S. Department of Labor, Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) program.

Quarterly Census of Employment and Wages

The Quarterly Census of Employment and Wages (QCEW) program publishes a quarterly count of the number of establishments, employment, and wages as reported by employers. The QCEW covers more than 95 percent of U.S. jobs and is available at the county, metropolitan statistical area, State, and national levels by industry.¹ These types of industries are defined by the North American Industry Classification System (NAICS). The QCEW is obtained from administrative data from State-level unemployment insurance programs and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employed individuals that are excluded from the QCEW data include: members of the Armed Forces, proprietors, the unincorporated self-employed, unpaid family members, certain farm and domestic workers, and railroad workers covered by the railroad unemployment insurance system. However, these exclusions generally do not affect the industries used in the State-level FES estimation (see tables 1 and 2 in TB-1962 for a complete list of the NAICS codes used).

As described in the report, a two-step process was used to estimate food sales based on employment headcounts. First, a ratio of total sales to the number of employees was calculated by using the last five rounds of the U.S. Department of Commerce, Bureau of the Economic Census for each NAICS code by State:

$$\text{Ratio}(i) = \frac{\text{Total Sales}(i)_{EC}}{\text{Number of Employees}(i)_{EC}}$$

Since the Economic Census is completed every 5 years, a linear interpolation of the ratio between the Economic Censuses was performed and with the aid of the regional consumer price index for food the ratio from 2017 to the present was calculated. Once this ratio was determined for each State, year, and NAICS code, estimated total sales were adjusted at each establishment in the QCEW by multiplying this ratio by the number of employees.

$$\text{Adjusted sales}(i)_{QCEW} = \text{Ratio}(i) * \text{employees}(i)_{QCEW}$$

Methodology

The new State-level FES estimates also use the retail sales approach to measure expenditures and continue to provide information on the total value of all food and beverage acquisitions for off-premises consumption (food-at-home or FAH) and for on-premises consumption (food-away-from-home or FAFH) in each State. The new State-level FES estimates use a similar methodology as in the already published State-level FES, with a small change: The new State-level FES estimates present inflation-adjusted estimates by deflating each nominal value by BLS's Regional Consumer Price Index (CPI). By using the Regional CPI, the new State-level FES can more accurately produce constant dollar spending estimates across different regions. BLS publishes the CPI for both FAH and FAFH to represent the growth in prices over time for four regions of the United States: the Northeast, Midwest, South, and West. The FAH expenditures are deflated with the CPI for FAH and the FAFH expenditures, with the CPI for FAFH using 1988 as the base year.

¹ Information was gathered from the Quarterly Census of Employment and Wages program, accessible through the U.S. Bureau of Labor Statistics website.

Finally, the new State-level FES provides more timely estimates. While the original State-level estimates lagged 2 years compared to the national-level FES, the new estimates can be released with advance estimates. The advance estimates are lagged only 1 calendar year from the reference year, the same as the national-level FES.

Comparisons Between the Previously Published State-Level FES and the New Estimates

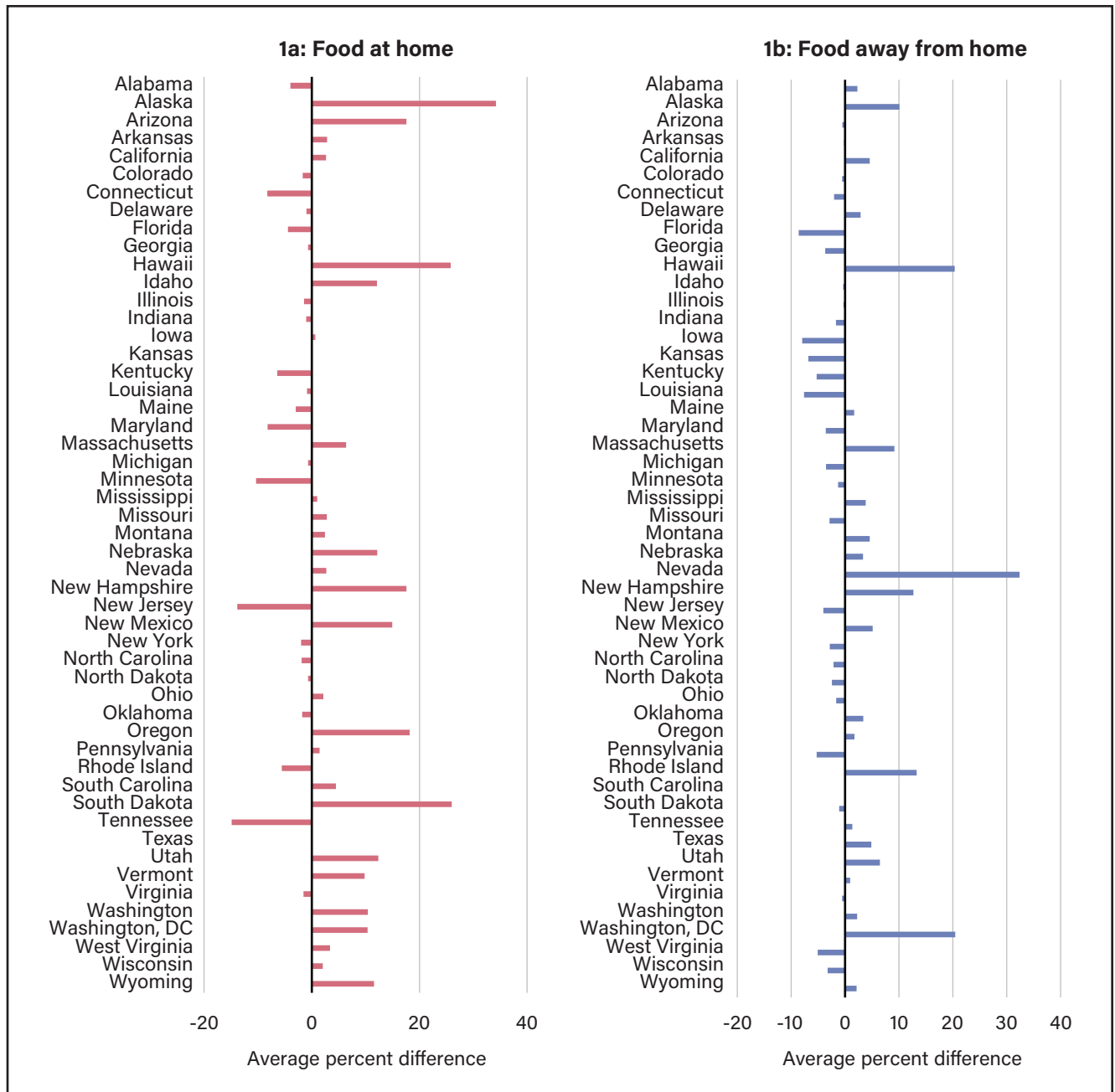
While food spending trends over time and the overall rankings of States are similar between the previous and new estimates, the point estimates are not equal, and a few larger differences exist. The new State-level FES shows that the median per capita total food spending was \$5,221 in 2019, compared with the previously published total of \$5,218. Eighteen States plus Washington, DC, had a higher per capita total food spending than the national average in 2019 (\$5,375), and 32 States had a lower per capita total food spending than the national average (compared to 17 States plus Washington, DC, and 33 States, respectively, that was previously published).

For FAH, the median per capita food spending in 2019 was \$2,495, compared with \$2,448. The highest per capita FAH spending was \$3,619, and the lowest was \$2,046 (compared with \$3,587 and \$1,219, respectively, that was previously published). As with what was previously published, 25 States had higher per capita FAH spending than the national average in 2019 of \$2,505, while 25 States plus Washington, DC, had lower per capita FAH spending than the national average. Between 1997 and 2019, the overall average percent change between the new and previous estimates for FAH was 3.4 percent. The largest differences were in Alaska, Hawaii, and South Dakota (larger than 20 percent). The changes for Alaska and Hawaii are mainly explained by a larger coverage of food retail establishments in the QCEW (figure 1a).

For FAFH, the median per capita food spending in 2019 was \$2,752, compared with \$2,721 that was previously published. The highest FAFH per capita spending was \$7,279 and the lowest was \$2,081 (compared with \$4,774 and \$2,030, respectively). Thirteen States plus Washington, DC, had higher per capita FAFH spending than the national average in 2019 of \$2,871, while 37 States had lower per capita FAFH spending than the national average (compared to 18 States plus Washington, DC, and 32 States, respectively). Between 1997 and 2019, the overall average percent change between the new and the previous estimates for FAFH was smaller, at 1.7 percent. The largest differences were in Nevada, Hawaii, and Washington, DC (larger than 20 percent) (figure 1b). These two States and Washington, DC, were already identified as outliers, with more information provided in the box “Food Spending in Washington, DC” in the report.

Figure 1

Average percent difference between new and previously published estimates for food-at-home and food-away-from-home nominal expenditures, with taxes and tips, for all purchasers between 1997 and 2019, by State

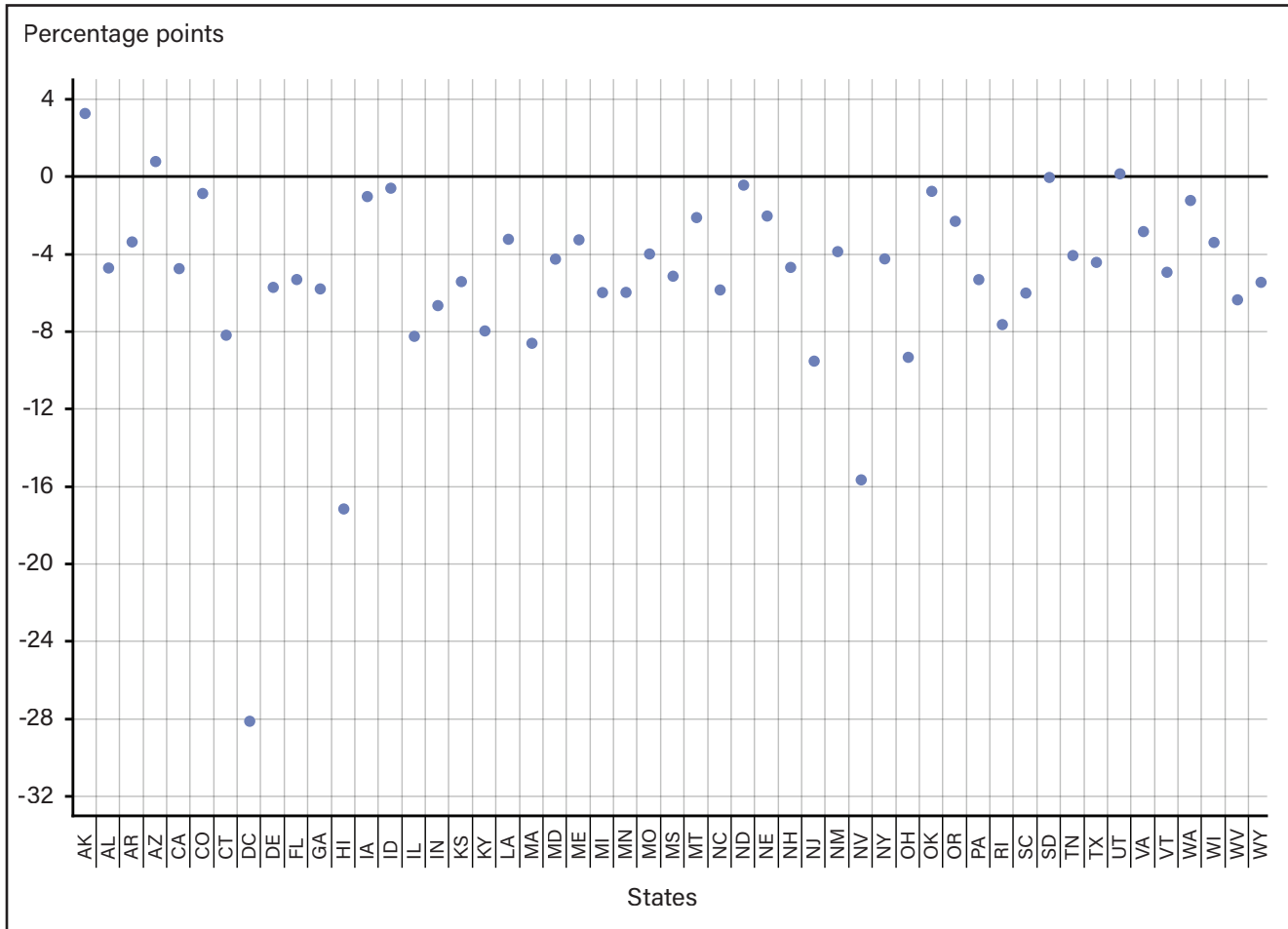


Note: These estimates are for sales only and exclude food furnished, donated, home-grown, and served at educational institutions.
 Source: USDA, Economic Research Service using data from the State-level Food Expenditure Series.

When comparing the new State-level FES and the U.S. Department of Commerce, Bureau of Economic Analysis's (BEA) Personal Consumption Expenditures (PCE), results showed that between 1997 and 2019 (and for all States plus Washington, DC), the share of total food spending devoted to FAH was approximately 2.4 percentage points higher in the BEA's PCE estimates than in the new State-level FES estimates (compared with the previously published 2.6 percentage points). PCE estimates were adjusted to measure spending in a consumer's State of residence, as opposed to a point of sale in the FES estimates. As such, some variation between the two measures

was expected, particularly in States with significant tourism industries or many non-resident employees. In 2019, the PCE estimates were an average of 5.1 percentage points higher than in the new State-level FES for the FAH share (compared with the previously published 4.9 percentage points). Similar to the previous publication, the PCE estimates for the FAH share (on average) were considerably higher than that of the new State-level FES estimates in three locations: Washington, DC (29.7 percentage points), Nevada (16.4 percentage points), and Hawaii (15.9 percentage points) (figure 2).

Figure 2
Average percentage point difference in the food-away-from-home share of total food spending between the new State-level Food Expenditure Series and Personal Consumption Expenditures, from 1997 to 2019



Note: These estimates are for sales only and exclude food furnished, donated, home-grown, and served at educational institutions.

Source: USDA, Economic Research Service using data from the State-level Food Expenditure Series.