

Technical Note

Gross Domestic Product, Fourth Quarter and Year 2023 (Second Estimate)

February 28, 2024

This technical note provides background information about the source data and estimating methods used to produce the estimates presented in the GDP news release; a summary of "highlights" is available on BEA's website at www.bea.gov.

Real GDP and Related Aggregates

Real GDP increased at an annual rate of 3.2 percent (0.8 percent at a quarterly rate¹) in the fourth quarter of 2023, compared with an increase of 4.9 percent (1.2 percent at a quarterly rate) in the third quarter. The increase in real GDP reflected increases in consumer spending, exports, state and local government spending, nonresidential fixed investment, federal government spending, and residential fixed investment that were partly offset by a decrease in private inventory investment. Imports, which are a subtraction in the calculation of GDP, increased.

Sources of Revision to Real GDP

The increase in fourth-quarter real GDP was revised down 0.1 percentage point from the "advance" estimate. The updated estimates primarily reflected a downward revision to private inventory investment that was partly offset by upward revisions to state and local government spending, consumer spending, residential fixed investment, and nonresidential fixed investment. Imports were revised up.

- Within private inventory investment, the downward revision was led by retail trade, based on updated and new Census Bureau inventory data.
- The revision to state and local government spending primarily reflected an upward revision to structures investment, based on new December and revised October and November Census Bureau Construction Value Put in Place (VPIP) data.
- The revision to consumer spending reflected an upward revision to spending on services that was partly offset by a downward revision to spending on goods.
 - Within services, the leading contributor to the upward revision was health care, based primarily on new fourth-quarter Census Bureau Quarterly Services Survey (QSS) data.

¹ Percent changes in quarterly seasonally adjusted series are displayed at annual rates, unless otherwise specified. For more information, refer to the FAQ [Why does BEA publish percent changes in quarterly series at annual rates?](#).

- Within goods, the leading contributor to the downward revision was recreational goods and vehicles, based primarily on revised November and December Census Bureau Monthly Retail Trade Survey data.
- Within residential fixed investment, the leading contributor to the upward revision was improvements, based primarily on new December and revised October and November Bureau of Labor Statistics (BLS) remodelers' payroll data.
- Within nonresidential fixed investment, the upward revision reflected upward revisions to structures and intellectual property products that were partly offset by a downward revision to equipment.
 - For structures, the upward revision was led by commercial and health care structures, based primarily on new December and revised October and November Census Bureau VPIP data.
 - For intellectual property products, the upward revision primarily reflected an upward revision to software, based on new Census Bureau QSS data.
 - The downward revision to equipment was mainly to information processing equipment, based on new and revised imports and exports from Census Bureau trade in goods data as well as revised Census Bureau manufacturing shipments data.
- Within imports, both goods and services were revised up, based on updated data from BEA's International Transactions Accounts as well as new and revised Census Bureau trade in goods data.
 - Within goods, the revision was led by industrial supplies and materials (specifically durable goods) and consumer goods (both durable and nondurable).
 - Within services, the revision primarily reflected a revision to transport services.

Prices

BEA's featured measure of inflation for the U.S. economy, the price index for gross domestic purchases—prices of goods and services purchased by U.S. residents, regardless of where the goods and services were produced—increased 1.9 percent in the fourth quarter, the same as in the previous estimate. This index increased 2.9 percent in the third quarter. Excluding food and energy, gross domestic purchases prices increased 2.1 percent, after increasing 2.5 percent.

The price index for personal consumption expenditures (PCE)—prices of goods and services purchased by U.S. consumers—increased 1.8 percent in the fourth quarter, an upward revision of 0.1 percentage point, following an increase of 2.6 percent in the third quarter. Excluding food and energy, the “core” PCE price index increased 2.1 percent, following an increase of 2.0 percent in the third quarter. The leading contributors to the fourth-quarter increase in core PCE prices were housing as well as health care. Prices were based primarily on BLS consumer and producer price indexes. For a comparison of PCE

prices to BLS consumer price indexes, refer to NIPA [Table 9.1U. Reconciliation of Percent Change in the CPI with Percent Change in the PCE Price Index](#).

Updates to Third-Quarter Wages and Salaries

In addition to presenting updated estimates for the fourth quarter, today's release presents revised estimates of third-quarter wages and salaries, personal taxes, and contributions for government social insurance, based on updated data from the BLS Quarterly Census of Employment and Wages program. Wages and salaries are now estimated to have increased \$184.2 billion in the third quarter, an upward revision of \$23.0 billion. Personal taxes are now estimated to have increased \$61.5 billion in the third quarter, an upward revision of \$8.9 billion. Contributions for government social insurance are now estimated to have increased \$23.2 billion in the third quarter, an upward revision of \$3.0 billion.

Real gross domestic income (GDI) is now estimated to have increased 1.9 percent in the third quarter, an upward revision of 0.4 percentage point from the previously published estimate. The average of real GDP and real GDI increased 3.4 percent, an upward revision of 0.2 percentage point. The personal saving rate—personal saving as a percentage of disposable personal income—was 4.3 percent in the third quarter, an upward revision of 0.1 percentage point.

GDP for 2023

Real GDP increased 2.5 percent in 2023 (from the 2022 annual level to the 2023 annual level), compared with an increase of 1.9 percent in 2022. The increase in real GDP in 2023 primarily reflected increases in consumer spending, nonresidential fixed investment, state and local government spending, exports, and federal government spending. These increases were partly offset by decreases in residential fixed investment and private inventory investment. Imports decreased.

Measured from the fourth quarter of 2022 to the fourth quarter of 2023, real GDP increased 3.1 percent during the period, compared with an increase of 0.7 percent from the fourth quarter of 2021 to the fourth quarter of 2022.

More Information

The complete set of statistics for the fourth quarter is available on [BEA's website](#), along with a table presenting the "[Key Source Data and Assumptions](#)" that underlie the statistics. The *Survey of Current Business*, BEA's online journal, will present a more detailed analysis of the estimates ("GDP and the Economy").

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