

Technical Note

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

January 25, 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 3.3 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, private inventory investment, and residential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased.

- The increase in consumer spending reflected increases in both services and goods. Within services, the leading contributors to the increase were food services and accommodations as well as health care. Within goods, the increase was led by other nondurable goods as well as recreational goods and vehicles.
 - Within food services and accommodations, the increase was led by food services based on Census Bureau Monthly Retail Trade Survey (MRTS) data.
 - Within health care, the increase reflected increases in both hospitals and outpatient services, based primarily on Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) employment, earnings, and hours data, as well as private trade data.
 - The increase in other nondurable goods was led by prescription drugs, based on private trade data, and by household supplies, based on Census MRTS data.
 - The increase in recreational goods and vehicles was led by computer software, based on Census MRTS 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?](#).

- Estimates of exports and imports primarily reflected Census-BEA U.S. International Trade in Goods and Services data as well as the Census Advance Economic Indicators Report for December.
 - Within exports, both goods and services increased. The increase in goods was led by petroleum. The increase in services was led by financial services.
 - Within imports, both services and goods increased. Within services, the leading contributor to the increase was travel. Within goods, the increase was led by computers.
- The increase in state and local government spending primarily reflected increases in state and local government employee compensation, based primarily on BLS CES data, and in gross investment in structures, based on Census Bureau Value-Put-in-Place (VPI) construction spending data for October and November.
- The increase in nonresidential fixed investment reflected increases in all three components.
 - The increase in intellectual property products was led by software, based primarily on BLS employment data and trends in Census Quarterly Services Survey revenue data.
 - The increase in structures was led by manufacturing structures, based on Census VPI construction spending data for October and November.
 - The increase in equipment primarily reflected increases in information processing and industrial equipment, based primarily on Census-BEA U.S. International Trade in Goods and Services data and the Census Advance Economic Indicators Report for December. These increases were partly offset by a decrease in transportation equipment, based on Wards Intelligence unit sales and IHS Markit Polk motor vehicle registrations.
- The increase in federal government spending reflected an increase in nondefense spending. The increase in nondefense spending primarily reflected an increase in federal government employee compensation, based primarily on BLS CES employment data.
- Within private inventory investment, the increase primarily reflected increases in wholesale trade and other industries that were partly offset by decreases in manufacturing and retail trade industries, based primarily on Census inventory book value data through December.
- The increase in residential fixed investment primarily reflected an increase in new single-family construction, based on October and November Census VPI construction spending data. Partly offsetting this increase was a decrease in brokers' commissions and other ownership transfer costs, based on existing home sales data from the National Association of Realtors.

Compared to the third quarter, the deceleration in GDP in the fourth quarter primarily reflected slowdowns in inventory investment, federal government spending, residential investment, and consumer spending. Imports decelerated.

Real final sales to private domestic purchasers, which measures private demand in the domestic economy and is derived as the sum of consumer spending and private fixed investment, increased 2.6 percent in the fourth quarter after increasing 3.0 percent in the third quarter.

Key Source Data and Assumptions for the Advance Estimate

The advance estimate of GDP for the fourth quarter is based on source data that are incomplete and subject to further revision by the source agency. Three months of source data were available for consumer spending on goods; shipments of capital equipment; motor vehicle sales and inventories; manufacturing, wholesale, and retail trade inventories; exports and imports of goods; federal government outlays; and consumer, producer, and international prices. For series for which monthly and quarterly data were incomplete or unavailable, BEA's assumptions are informed by a variety of sources, most notably private high-frequency payment card transactions data as well as volume data, such as health care patient visits and traveler throughput, from industry and trade associations. More information on the source data and BEA assumptions that underlie the fourth-quarter estimate is shown in the [Key Source Data and Assumptions](#) table.

Prices

BEA's featured measure of inflation in 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, following an increase of 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 consumers in the U.S.—increased 1.7 percent in the fourth quarter, after increasing 2.6 percent in the third quarter. Excluding food and energy, the “core” PCE price index increased 2.0 percent, the same increase as 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](#).

Disposable Personal Income

Real disposable personal income (DPI) increased 2.5 percent in the fourth quarter, compared to an increase of 0.3 percent in the third quarter. Current-dollar DPI increased 4.2 percent, after increasing 2.9 percent.

The increase in fourth-quarter current-dollar DPI primarily reflected increases in compensation, personal income receipts on assets, and proprietors' income that were partly offset by a decrease in personal current transfer receipts.

- Within compensation, the leading contributor to the increase was private wages and salaries, based primarily on BLS CES data.

- Within personal income receipts on assets, the increase reflected increases in both interest income and dividend income.
- Within personal current transfer receipts, government social benefits decreased, primarily reflecting decreases in benefits from the Supplemental Nutrition Assistance Program and Medicaid.

The personal saving rate was 4.0 percent in the fourth quarter, compared with 4.2 percent in the third quarter.

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.

Updated GDP and Personal Income Per Capita Statistics

BEA's per capita income and product statistics, featured in [NIPA table 7.1](#), have been updated beginning with the first quarter of 2020. The revised historical time series reflects the latest Census Bureau [population statistics](#), released in December 2023.

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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