

Technical Note

Gross Domestic Product, Third Quarter 2023 (Advance Estimate)

October 26, 2023

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 4.9 percent (1.2 percent at a quarterly rate¹) in the third quarter of 2023, compared with an increase of 2.1 percent (0.5 percent at a quarterly rate) in the second quarter. The increase in real GDP reflected increases in consumer spending, private inventory investment, exports, state and local government spending, federal government spending, and residential fixed investment that were partly offset by a decrease in nonresidential 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 housing and utilities, health care, financial services and insurance, and food services and accommodations. Within goods, the increase was led by other nondurable goods as well as recreational goods and vehicles.
 - The increase in housing and utilities was led by spending on electricity, based primarily on Energy Information Administration (EIA) usage data for July and EIA Short Term Energy Outlook projections for August and September.
 - Within health care, the increase reflected increases in both outpatient services and hospital and nursing home services (notably hospital services), based primarily on Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) employment, earnings, and hours data, as well as private trade data.
 - Within financial services and insurance, the increase was led by imputed financial services, as well as financial service charges, fees, and commissions, based primarily on market indicators and judgmental trends.
 - Within food services and accommodations, the increase was led by food services based on Census Bureau Monthly Retail Trade Survey (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?](#)

- The increase in other nondurable goods was led by prescription drugs, based on private trade data, and by recreational items, based on Census MRTS data.
- The increase in recreational goods and vehicles was led by computer software, based on Census MRTS data.
- Within private inventory investment, the increase was in nonfarm inventories, led by nondurable goods manufacturing (mainly petroleum and coal product industries) and retail trade industries, based primarily on Census inventory book value data through September.
- 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 September.
 - Within exports, both goods and services increased. The increase in goods was led by durable goods (mainly nonautomotive capital goods and automotive vehicles, engines, and parts). The increase in services was led by travel.
 - Within imports, both goods and services increased. Within goods, the increase was led by automotive vehicles, engines, and parts as well as nondurable consumer goods. Within services, the leading contributor to the increase was transport (which includes air transportation).
- 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 July and August.
- The increase in federal government spending reflected increases in both defense and nondefense spending.
 - The increase in defense spending was led by spending on services, based primarily on Monthly Treasury Statement data.
 - The increase in nondefense spending primarily reflected lower sales of crude oil from the Strategic Petroleum Reserve, based on data from the Department of Energy. Within the National Economic Accounts, sales are deducted from government consumption expenditures; therefore, a decrease in sales results in a corresponding increase in consumption expenditures. Because the oil sold by the government enters private inventories, there is no direct net effect on GDP.
- The increase in residential fixed investment primarily reflected an increase in new single-family construction, primarily reflecting July and August Census VPI construction spending data. Partly offsetting this increase was a decrease in brokers' commissions and other ownership transfer costs, primarily reflecting existing home sales data from the National Association of Realtors.

- The decrease in nonresidential fixed investment reflected a decrease in equipment that was partly offset by increases in intellectual property products and structures.
 - The decrease in equipment was led by information processing equipment (mainly computers and peripherals as well as communication equipment), based primarily on Census-BEA U.S. International Trade in Goods and Services data and the Census Advance Economic Indicators Report for September.
 - 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 primarily on Census VPIP construction spending data for July and August.

Compared to the second quarter, the acceleration in GDP in the third quarter primarily reflected accelerations in consumer spending and private inventory investment and an upturn in exports. These movements were partly offset by a downturn in nonresidential fixed investment. Imports turned up.

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 3.3 percent in the third quarter after increasing 1.7 percent in the second quarter.

Key Source Data and Assumptions for the Advance Estimate

The advance estimate of GDP for the third 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 third-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, increased 3.0 percent in the third quarter, following an increase of 1.4 percent in the second quarter. Excluding food and energy, gross domestic purchases prices increased 2.7 percent, after increasing 2.1 percent.

The price index for personal consumption expenditures (PCE) increased 2.9 percent in the third quarter, after increasing 2.5 percent in the second quarter. Excluding food and energy, the "core" PCE price index increased 2.4 percent, after increasing 3.7 percent. The leading contributors to the third-quarter increase in core PCE prices were housing as well as financial services and insurance. 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) decreased 1.0 percent in the third quarter, in contrast to an increase of 3.5 percent in the second quarter. Current-dollar DPI increased 1.9 percent, after increasing 6.1 percent.

The increase in third-quarter current-dollar DPI primarily reflected increases in compensation, proprietors' income, personal income receipts on assets, and rental income of persons, partly offset by an increase in personal current taxes, which is a subtraction in the calculation of DPI.

- 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 an increase in interest income that was partly offset by a decrease in dividend income.

The personal saving rate was 3.8 percent in the third quarter, compared with 5.2 percent in the second quarter.

More Information

The complete set of statistics for the third 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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