Technical Note

Gross Domestic Product, Third Quarter 2022 (Advance Estimate)

October 27, 2022

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 brief summary of "highlights" is available on BEA's website at www.bea.gov.

Economic Factors and Third-Quarter 2022 GDP

Real GDP increased 2.6 percent (0.6 percent at a quarterly rate[1]) in the third quarter of 2022, in contrast to a decrease of 0.6 percent at an annual rate (0.1 percent at a quarterly rate) in the second quarter. The increase occurred amid continued inflation, a strengthening dollar, low unemployment, supply-chain disruptions, and rising interest rates. The economic effects of these factors cannot be quantified in the GDP estimate for the third quarter of 2022 because the impacts are generally embedded in source data and cannot be separately identified.

Real GDP turned up in the third quarter, compared to the second quarter. The upturn primarily reflected a smaller decrease in private inventory investment, an acceleration in nonresidential fixed investment, and an upturn in federal government spending that were partly offset by a larger decrease in residential fixed investment and a deceleration in consumer spending. Imports, which are a subtraction in the calculation of GDP, turned down.

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 updates. 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 major source data series for which only two months of data were available, or for which data for the third quarter are not yet available, BEA's assumptions were based on a variety of sources, most notably: private high-frequency payment card transactions data, industry and trade association reports that include volume data, such as health care patient visits and traveler throughput, as well as revenues for airlines and motion pictures. 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.

[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?.

Real GDP and Related Aggregates

Real GDP increased 2.6 percent (annual rate) in the third quarter of 2022, following a decrease of 0.6 percent in the second quarter. The increase in real GDP reflected increases in exports, consumer spending, nonresidential fixed investment, federal government spending, and state and local government spending, that were partly offset by a decrease in residential fixed investment and inventory investment. Imports decreased.

- Estimates of exports and imports primarily reflected Census-BEA U.S. International Trade in Goods and Services data and the Census Advance Economic Indicators Report for September.

    - Within exports, both goods and services increased. Within goods, the leading contributors to the increase were industrial supplies and materials (notably petroleum and products as well as other nondurable goods) and nonautomotive capital goods. Within services, the increase was led by travel and "other" business services (mainly financial services).

    - Within imports, a decrease in imports of goods (notably consumer goods) was partly offset by an increase in imports of services (mainly travel).

- Within consumer spending, an increase in services was partly offset by a decrease in goods.

    - The increase in services was led by health care and "other" services. Within health care, both outpatient services and hospitals increased, based primarily on Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) and trade data on patient volumes. For other services, the leading contributor to the increase was international travel, based primarily on data from BEA’s International Transactions Accounts.

    - The decrease in goods primarily reflected declines in motor vehicles and parts, based primarily on IHS-Polk registrations data for July and August, as well as food and beverages, based on Census Bureau Monthly Retail Trade Survey (MRTS) data.

- Within nonresidential fixed investment, increases in equipment and intellectual property products were partly offset by a decrease in structures.

    - Within equipment, the leading contributors to the increase were transportation equipment (notably, aircraft and new light trucks) and information processing equipment (notably, computers and peripheral equipment). For aircraft, the increase primarily reflected Census M3 shipments data. For trucks, the increase primarily reflected registrations data from IHS-Polk. For computers and peripheral equipment, the increase primarily reflected an increase in imports based 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 reflected increases in software as well as research and development based primarily on trends in Census Quarterly Services Survey revenue data as well as BLS CES data.

    - The decrease in structures reflected widespread decreases across all new construction categories, led by commercial and health care structures, based on July and August Census Value of Construction Put in Place (VPIP) data.

- The increase in federal government spending was led by defense spending, mainly for intermediate goods and services, based primarily on data from the Monthly Treasury Statement.

- The increase in state and local government spending primarily reflected an increase in compensation of employees, based primarily on BLS employment data.

- Within residential fixed investment, the leading contributors to the decrease were new single-family construction, primarily reflecting July and August Census VPIP data, and brokers' commissions and other ownership transfer costs, primarily reflecting existing home sales data from the National Association of Realtors.

- Within private inventory investment, the decrease primarily reflected a decrease in retail trade (led by "other" retailers), based on Census inventory data.

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 0.1 percent in the third quarter after increasing 0.5 percent in the second quarter.

Prices

BEA's featured measure of inflation in the U.S. economy, the price index for gross domestic purchases, increased 4.6 percent in the third quarter, following an increase of 8.5 percent in the second quarter. Excluding food and energy, gross domestic purchases prices increased 4.8 percent, after increasing 6.9 percent.

The price index for personal consumption expenditures (PCE) increased 4.2 percent in the third quarter, after increasing 7.3 percent in the second quarter. Energy prices decreased 13.1 percent, after increasing 52.7 percent. Excluding food and energy, the "core" PCE price index increased 4.5 percent, after increasing 4.7 percent. The third-quarter increase in core PCE prices reflected increases for most goods and services. The leading contributors were increases in the prices for housing; "other" nondurable goods (mainly recreational items), and health care (mainly hospital services). 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 1.7 percent in the third quarter, in contrast to a decrease of 1.5 percent in the second quarter. Current-dollar DPI increased 6.0 percent, after increasing 5.7 percent in the second quarter.

The increase in third-quarter current-dollar DPI primarily reflected an increase in compensation (notably, private and government wages and salaries), based primarily on BLS CES data. Personal income receipts on assets, nonfarm proprietors' income, and rental income also increased.

The personal saving rate was 3.3 percent in the third quarter, compared with 3.4 percent in the second quarter.

Impact of Hurricane Ian on Third Quarter 2022 Estimates

Hurricane Ian struck central and southwest Florida on September 28, and South Carolina on September 30, causing extensive wind, flood, and storm surge damage across the southeastern United States. This disaster disrupted usual consumer and business activities and prompted emergency services and remediation activities. These responses to this disaster are included, but not separately identified, in the source data that BEA uses to prepare the estimates of GDP; consequently, it is not possible to estimate the overall impact of Hurricane Ian on third quarter GDP. The destruction of fixed assets, such as residential and nonresidential structures, does not directly affect GDP or personal income. BEA estimates of disaster losses are presented in NIPA table 5.1, "Saving and Investment." BEA's preliminary estimates show that Hurricane Ian resulted in losses of $57.0 billion in privately-owned fixed assets ($228.0 billion at an annual rate) and $3.0 billion in state and local government-owned fixed assets ($12.0 billion at an annual rate).

BEA also estimates the insurance benefits paid and received because of major disasters. These benefits are recorded on an accrual basis in the quarter in which the disaster occurred and are classified as capital transfers; they do not directly affect the measures of GDP, personal income, or saving. BEA's preliminary estimates, presented in NIPA table 5.11U, "Capital Transfers," show domestic insurance companies expect to pay benefits for disaster losses related to Hurricane Ian in the amount of $24.7 billion ($98.9 billion at an annual rate). The federal government's National Flood Insurance Program expects to pay an additional $10.0 billion ($40.0 billion at an annual rate); Florida Citizens Property Insurance Corporation expects to pay $2.5 billion ($10.0 billion at an annual rate); and foreign insurance companies expect to pay $9.1 billion ($36.3 billion at an annual rate).

For additional information, refer to "How are the measures of production and income in the national accounts affected by a disaster?" and "How are the fixed assets accounts (FAAs) and consumption of fixed capital (CFC) impacted by disasters?"

More Information

The complete set of statistics for the third quarter is available on BEA's website. In a few weeks, the *Survey of Current Business*, BEA's online monthly journal, will present a more detailed analysis of the estimates ("GDP and the Economy").

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