Technical Note

Gross Domestic Product, Third Quarter of 2020 (Advance Estimate)

October 29, 2020

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 also available on BEA's Web site at www.bea.gov.

COVID-19 Impact on Third-Quarter 2020 GDP

Real GDP increased 33.1 percent at an annual rate (7.4 percent at a quarterly rate[1]) in the third quarter of 2020, following a decrease of 31.4 percent at an annual rate (9.0 percent at a quarterly rate) in the second quarter. The increase in third quarter GDP reflected continued efforts to reopen businesses and resume activities that were postponed or restricted due to COVID-19. Real GDP for the third quarter of 2020 is 3.5 percent below the level of real GDP for the fourth quarter of 2019[2]. The full economic effects of the COVID-19 pandemic cannot be quantified in the GDP estimate for the third quarter of 2020 because the impacts are generally embedded in source data and cannot be separately identified.

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 subject to updates. Three months of source data were available for consumer spending on goods; shipments of capital equipment; motor vehicle sales and inventories; durable goods manufacturing inventories; 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 where 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 to better capture shifts in consumer spending, news reports on re-openings, and industry and trade association reports that include volume data, such as health care patient visits and traveler throughput. 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 on the BEA Web site.

[1] Percent changes in quarterly seasonally adjusted series are displayed at annual rates, unless otherwise specified. For more information, see the FAQ "Why does BEA publish percent changes in quarterly series at annual rates?"
[2] The fourth quarter of 2019 was the most recent quarter prior to the onset of the COVID-19 pandemic. Calculated as the percent change from the fourth quarter of 2019 to the third quarter of 2020 in news release table 3, line 1.

Real GDP and Related Aggregates

Real GDP increased 33.1 percent (annual rate) in the third quarter, following a decrease of 31.4 percent in the second quarter. The increase in real GDP reflected increases in consumer spending, private inventory investment, exports, nonresidential fixed investment, and residential fixed investment that were partly offset by decreases in both federal and state and local government spending. Imports, which are a subtraction in the calculation of GDP, increased.

- The increase in consumer spending reflected widespread increases in both goods and services. Within goods, the leading contributors were motor vehicles and parts as well as clothing and footwear. Within services, the leading contributors were health care, food services and accommodations, recreation services, “other” services, and transportation services.

    - For motor vehicles and parts, the increase primarily reflected an increase in new light trucks, based on unit sales data from Ward’s Automotive Report.

    - The increase in clothing and footwear primarily reflected Census Bureau Monthly Retail Trade Survey (MRTS) data.

    - Within health care, the increase was widespread; the leading contributors were hospitals, physicians, and dental services. The estimates were based primarily on volume data for hospital services and outpatient visits, revenue data, and data from the American Dental Association.

    - Within food services and accommodations, the increase primarily reflected an increase in purchased meals and beverages, based primarily on Census MRTS data.

    - Within recreation services, the leading contributors to the increase were gambling, based on data from state gaming control commissions, as well as membership clubs, sports centers, parks, theaters and museums, based primarily on payment card transactions data.

    - Within “other” services, the increase was relatively widespread. The largest contributors were personal care and social services, based primarily on employment, hours, and earnings data from the Bureau of Labor Statistics (BLS) Current Employment Statistics report as well as payment card transactions data.

    - Within transportation services, the increase was widespread. The largest contributor was air transportation, based primarily on monthly traveler throughput data from the Transportation Security Administration.

- The increase in nonresidential fixed investment was more than accounted for by equipment. Within equipment, the leading contributors were transportation equipment (notably trucks), based primarily on Ward’s Automotive Report sales data, and information processing equipment, based on Census imports and shipments data for communication equipment.

- Within residential fixed investment, the leading contributor to the increase was brokers' commissions and other ownership transfer costs, based primarily on existing home sales data from the National Association of Realtors.

- Within private inventory investment, the largest contributor to the increase was retail trade inventories, notably motor vehicle dealers, based on Census inventory book value data and inventory data from Ward's Automotive Report.

- For exports, the increase was widespread; the largest contributors were automotive vehicles, engines, and parts as well as non-automotive capital goods, based primarily on Census-BEA U.S. International Trade in Goods and Services and Census Advance Economic Indicators Report data.

- Within imports, the increase was widespread. The largest contributors were automotive vehicles, engines, and parts; consumer goods; and non-automotive capital goods, based on Census-BEA U.S. International Trade in Goods and Services and Census Advance Economic Indicators Report data.

- Within federal government spending, the decline primarily reflected a decrease in the purchases of intermediate services. In the third quarter, the processing and administration of Paycheck Protection Program loan applications by banks on behalf of the federal government added approximately $3 billion (about $13 billion at an annual rate) to nondefense services; in the second quarter, the processing charges added $15 billion (about $60 billion at an annual rate).

- Within state and local government spending, the decline was primarily accounted for by a decrease in consumption expenditures. Within consumption expenditures, government sales to other sectors, notably hospital charges, increased; these charges are subtracted in the calculation of government consumption expenditures. The contribution of the increase in government sales was partly offset by an increase in state and local government compensation, based primarily on BLS employment 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 38.1 percent in the third quarter after declining 32.4 percent in the second quarter.

Prices

The price index for gross domestic purchases increased 3.4 percent in the third quarter, following a 1.4 percent decrease in the second. Excluding food and energy, gross domestic purchases prices increased 3.2 percent, after decreasing 0.8 percent.

The price index for personal consumption expenditures (PCE) increased 3.7 percent in the third quarter, after decreasing 1.6 percent in the second. Excluding food and energy, the PCE price index increased 3.5 percent, after decreasing 0.8 percent. The increase in the PCE price index excluding food and energy primarily reflected increases in prices for used motor vehicles, portfolio management and investment advice services, and hospital services, based primarily on producer price indexes from BLS.

Disposable Personal Income

Real disposable personal income (DPI) decreased 16.3 percent in the third quarter, following a 46.6 percent increase in the second. The decrease in current-dollar DPI was more than accounted for by a decrease in personal current transfer receipts (notably, government social benefits) that was partly offset by increases in compensation and proprietors' income.

- Within government social benefits, unemployment insurance and "other" social benefits declined, primarily reflecting the expiration of supplemental Pandemic Unemployment Compensation (PUC) payments and one-time Economic Impact Payments to individuals authorized by federal recovery legislation, including the CARES Act. These declines were partly offset by "Lost Wage Supplemental Payments," a Federal Emergency Management Administration program that provides wage assistance to individuals impacted by the pandemic that took effect in the third quarter.

- Within compensation, the leading contributor to the increase was private wages and salaries, based primarily on data from the BLS monthly Current Employment Statistics report.

- Within proprietors' income, the increase was largely accounted for by nonfarm proprietors' income. The increase reflected the continued reopening and resumption of business operations in the third quarter. In addition, small businesses continued to receive support through the Paycheck Protection Program in the third quarter.

The personal saving rate was 15.8 percent in the third quarter, compared with 25.7 percent in the second. Additional information on factors impacting quarterly personal income and saving can be found in "Effects of Selected Federal Pandemic Response Programs on Personal Income".

Federal Government Economic Response to the COVID-19 Pandemic

Since the onset of the COVID-19 pandemic, several legislative acts, including the CARES Act, were signed into law. The acts established several temporary programs and provided additional funding for existing federal programs to support individuals, communities, and businesses impacted by the pandemic. Because the effects of the acts were in the form of transfers to individuals, subsidies to businesses, and grants to state and local governments, their effects on GDP show up indirectly through the components of GDP, such as consumer spending, business investment, and government spending. Thus, BEA cannot separately identify the total quarterly or annual effect of the acts on changes in GDP.

It is possible, however, to identify the impacts of select recovery programs on aggregate federal government spending. In the third quarter, expanded Unemployment Insurance Program benefits boosted the level of government social benefits, and the portion of forgivable loans to businesses and nonprofits provided through the Paycheck Protection Program raised government subsidies and social benefit payments, respectively. Further information on these and other pandemic response programs, including estimates of the effects of these programs on federal government spending, is available in "Effects of Selected Federal Pandemic Response Programs on Federal Government Receipts, Expenditures, and Saving" on BEA's Web site.

More Information

The complete set of statistics for the third quarter is available on BEA's Web site. 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").

Erich H. Strassner
Associate Director, National Economic Accounts
Bureau of Economic Analysis
(301) 278-9612