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.

COVID-19 Impact on First-Quarter 2021 GDP

Real GDP increased 6.4 percent at an annual rate (1.6 percent at a quarterly rate) in the first quarter of 2021, following an increase of 4.3 percent at an annual rate (1.1 percent at a quarterly rate) in the fourth quarter. The increase in first quarter GDP reflected the continued economic recovery, reopening of establishments, and continued government response related to the COVID-19 pandemic. In the first quarter, government assistance payments, such as direct economic impact payments, expanded unemployment benefits, and Paycheck Protection Program loans, were distributed to households and businesses through the Coronavirus Response and Relief Supplemental Appropriations Act and the American Rescue Plan Act. Real GDP for the first quarter of 2021 is 0.9 percent below the level of real GDP for the fourth quarter of 2019.

The increase in real GDP reflected increases in consumer spending, nonresidential fixed investment, federal government spending, residential fixed investment, and state and local government spending that were partly offset by decreases in private inventory investment and exports. Imports, which are a subtraction in the calculation of GDP, increased. The full economic effects of the COVID-19 pandemic cannot be quantified in the GDP estimate for the first quarter of 2021 because the impacts are generally embedded in source data and cannot be separately identified.

Sources of Revision to Real GDP

The increase in first-quarter real GDP was unrevised from the “second” estimate. The updated estimates primarily reflected upward revisions to nonresidential fixed investment, private inventory investment,

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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 first quarter of 2021 in news release table 3, line 1.
exports, and consumer spending, that were offset by an upward revision to imports (which are a subtraction in the calculation of GDP).

- Within nonresidential fixed investment, the revision reflected upward revisions to structures (notably, warehouses), based on revised February and March Census Value of Construction Put in Place data, and equipment (notably, communication equipment and computers and peripheral equipment), based primarily on updated Census trade in goods data. Partly offsetting these upward revisions was a downward revision to intellectual property products (notably, software), based on updated Census Quarterly Services Survey (QSS) data.

- The revision to private inventory investment reflected an upward revision to nonfarm inventories, notably information industries, based primarily on updated inventory data from the Census Quarterly Financial Report (QFR).

- Within exports, the leading contributor to the upward revision was goods (notably, foods, feeds and beverages). Within imports, the leading contributor to the upward revision was also goods (notably non-automotive consumer and capital goods). The upward revisions to both exports and imports were based primarily on revised Census Bureau goods data and the annual revision of the international transactions accounts (ITAs), which was incorporated on a best-change basis.

- Within consumer spending, an upward revision to goods was mostly offset by a downward revision to services. Within goods, the leading contributors to the revision were upward revisions to food and beverages and other nondurable goods, based primarily on revised March data from the Census Monthly Retail Trade Survey. Within services, revisions were primarily based on updated Census QSS data. Downward revisions to health care (notably, physicians services and home health care) and transportation services (notably, motor vehicle maintenance and repair) were partly offset by upward revisions to financial services and insurance (notably, portfolio management and investment advice services) and recreation services (notably, casino gambling).

Prices

BEA’s featured measure of inflation in the U.S. economy, the price index for gross domestic purchases, increased 4.0 percent in the first quarter, an upward revision of 0.1 percentage point. The price index for personal consumption expenditures (PCE) increased 3.7 percent, unrevised from the second estimate. Excluding food and energy prices, the PCE price index increased 2.5 percent, also unrevised.

Gross Domestic Income and Corporate Profits

Real gross domestic income (GDI), which measures output of the economy as the costs incurred and the incomes earned in the production of goods and services (as measured by GDP), increased 7.6 percent at an annual rate (1.9 percent at a quarterly rate) in the first quarter, an upward revision of 0.8 percentage point from the previous estimate. The updated estimates primarily reflected an upward revision to corporate profits.
Profits from current production increased $55.2 billion, or 2.4 percent (quarterly rate), in the first quarter, in contrast to a decrease of $31.4 billion, or 1.4 percent, in the fourth quarter. Domestic profits of financial corporations increased $6.4 billion in the first quarter, domestic profits of nonfinancial corporations increased $72.1 billion, and rest-of-the-world profits decreased $10.6 billion.

- The upward revision to corporate profits reflected an upward revision to domestic nonfinancial industries profits, based on Census QFR data, that was partly offset by downward revisions to domestic financial industries profits, based on updated tabulations of publicly traded companies’ earnings reports, and to rest-of-the-world profits, based on updated ITA data.

- Estimates of corporate profits were affected by a legal settlement paid by Boeing in the first quarter. The national income and product accounts (NIPAs) record these settlements on an accrual basis in the quarter when the settlement is finalized, regardless of when they are recorded on a company's financial statement. The settlement agreement paid by Boeing totaled $2.5 billion ($10.1 billion at an annual rate), and reflected payments of $0.2 billion to the federal government, $0.6 billion to the air transportation industry, and $1.7 billion to the “rest of the world.”

BEA’s profits measure that is conceptually most similar to S&P 500 profits—national after-tax profits without inventory valuation and capital consumption adjustments—increased $145.3 billion in the first quarter. First-quarter national after-tax profits (shown in line 11 of table 9 of the GDP news release) increased 28.1 percent from the same quarter one year ago.

Real GDP by Industry

Today’s release includes estimates of GDP by industry, or value added—a measure of an industry’s contribution to GDP (shown in table 12 of the news release). Private goods-producing industries increased 5.4 percent at an annual rate (1.3 percent at a quarterly rate), private services-producing industries increased 7.7 percent (1.9 percent at a quarterly rate), and government increased 0.2 percent (less than 0.1 percent at a quarterly rate).

Overall, 17 of 22 industry groups contributed to the first-quarter increase in real GDP (table 13). Within private goods-producing industries, the leading contributor to the increase was durable goods manufacturing (led by computer and electronic products, fabricated metal products, and machinery). This was partly offset by a decrease to nondurable goods manufacturing (led by petroleum and coal products). Within private services-producing industries, the leading contributors to the increase in real GDP were professional, scientific, and technical services (with widespread increases across the industries); information (notably, data processing, internet publishing, and other information services); administrative and waste management services (led by administrative and support services); real estate and rental and leasing (led by other real estate); and retail trade (led by motor vehicle and parts dealers). The largest decrease to offset the increase in services were other services, except government (which includes activities of political organizations).
Federal Government Economic Response to the COVID-19 Pandemic

Since the onset of the COVID-19 pandemic, several legislative acts, including the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act and the American Rescue Plan (ARP) 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 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 first quarter, the CRRSA and ARP Acts reauthorized Economic Impact Payments and expanded provisions provided through the Unemployment Insurance Program and the Paycheck Protection Program originally introduced by the CARES Act. These programs provided additional social benefit payments to persons and government subsidies to industry in the first quarter.

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 website.

Looking Ahead: 2021 Annual Update of the National Economic Accounts

BEA will release results from the 2021 annual update of the National Economic Accounts, which includes the NIPAs as well as the Industry Economic Accounts, later this year. Results from the annual update of the NIPAs will be released on July 29, 2021, along with the advance estimate of GDP for the second quarter of 2021. Results from the annual update of the Industry Economic Accounts will be released on September 30, 2021, along with the third estimate of GDP for the second quarter of 2021. The update of the National Economic Accounts will cover the first quarter of 1999 through the first quarter of 2021 and will result in revisions to GDP, GDP by Industry, and gross domestic income. More information on the 2021 annual update was included in the May Survey of Current Business article, "GDP and the Economy."

More Information

The complete set of statistics for the first quarter is available on BEA’s website, along with a table presenting the Key Source Data and Assumptions that underlie the statistics. 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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