

# Technical Note

## Gross Domestic Product (Third Estimate), Corporate Profits, and GDP by Industry, Fourth Quarter and Year 2021

March 30, 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](http://www.bea.gov).

### COVID-19 Impact on Fourth-Quarter 2021 GDP

Real GDP increased 6.9 percent at an annual rate (1.7 percent at a quarterly rate<sup>1</sup>) in the fourth quarter of 2021, following an increase of 2.3 percent at an annual rate (0.6 percent at a quarterly rate) in the third quarter. In the fourth quarter, COVID-19 cases resulted in continued restrictions and disruptions in the operations of establishments in some parts of the country. Government assistance payments in the form of forgivable loans to businesses, grants to state and local governments, and social benefits to households all decreased as provisions of several federal programs expired or tapered off. Real GDP for the fourth quarter of 2021 is 3.1 percent above the level of real GDP for the fourth quarter of 2019<sup>2</sup>.

The increase in real GDP primarily reflected increases in private inventory investment, exports, consumer spending, and nonresidential 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 full economic effects of the COVID-19 pandemic cannot be quantified in the GDP estimate for the fourth quarter of 2021 because the impacts are generally embedded in source data and cannot be separately identified.

The acceleration in real GDP in the fourth quarter (that is, the increase in real GDP in the fourth quarter compared to the increase in the third quarter) primarily reflected an acceleration in private inventory investment, upturns in exports and in residential fixed investment, and an acceleration in consumer spending that were partly offset by a downturn in state and local government spending. Imports accelerated.

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<sup>1</sup> 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?](#).

<sup>2</sup> 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 fourth quarter of 2021 in news release table 3, line 1.

## Sources of Revision to Real GDP

The increase in fourth-quarter real GDP was revised down 0.1 percentage point from the "second" estimate. The updated estimates primarily reflected downward revisions to consumer spending, exports, and nonresidential fixed investment that were partly offset by upward revisions to private inventory investment and residential fixed investment. Imports were revised up.

- Within consumer spending, both services and goods were revised down.
  - For services, the revision primarily reflected downward revisions to health care (led by outpatient services) and transportation (mainly motor vehicles services, including maintenance and repair), based primarily on new and updated fourth-quarter data from the Census Quarterly Services Survey (QSS).
  - For goods, the leading contributor to the downward revision was food and beverages purchased for off-premises consumption, based on revised Census Monthly Retail Trade Survey data.
- For both exports and imports, the revised estimates primarily reflected updated data from BEA's International Transactions Accounts (ITAs). Within exports, a downward revision to "other" business services (which includes professional and management consulting services; financial services; and telecommunications, computer, and information services) was partly offset by an upward revision to charges for the use of intellectual property. Within imports, the leading contributor to the upward revision was industrial supplies and materials, reflecting upward revisions to nondurable goods (notably, petroleum) as well as durable goods.
- The revision to nonresidential fixed investment reflected a downward revision to intellectual property products led by research and development, based on new QSS data and updated company financial reports, as well as software, based on new and revised QSS data.
- The revision to private inventory investment reflected an upward revision to nonfarm inventories, led by retail trade (notably, general merchandise stores), "other" industries (specifically, information), and wholesale trade (led by durable goods), based primarily on revised Census Bureau inventory data.
- The upward revision to residential fixed investment was led by single-family structures, based on revised Census Value of Construction Put in Place data for November and December.

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, a downward revision of 0.4 percentage point, reflecting the downward revision to consumer spending.

## Prices

BEA's featured measure of inflation in the U.S. economy, the price index for gross domestic purchases, increased 7.0 percent in the fourth quarter, unrevised from the second estimate. The price index for personal consumption expenditures (PCE) increased 6.4 percent in the fourth quarter, an upward revision of 0.1 percentage point. Excluding food and energy, the “core” PCE price index increased 5.0 percent, unrevised from the second estimate.

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](#).

## 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 5.1 percent at an annual rate (1.2 percent at a quarterly rate) in the fourth quarter, following an increase of 6.4 percent at an annual rate (1.6 percent at a quarterly rate) in the third quarter.

The average of real GDP and real GDI increased 6.0 percent at an annual rate (1.5 percent at a quarterly rate) in the fourth quarter, following an increase of 4.3 percent at an annual rate (1.1 percent at a quarterly rate) in the third quarter.

Current-dollar GDI increased \$715.4 billion in the fourth quarter, primarily reflecting an increase in compensation. Subsidies, which are a subtraction in the calculation of GDI, decreased.

- Within compensation, the leading contributor to the increase was wages and salaries (both private and government), based primarily on data from the Bureau of Labor Statistics monthly Current Employment Statistics report.
- The decrease in subsidies primarily reflected the continued winding down of federal government pandemic response programs, such as the Paycheck Protection Program and Restaurant Revitalization Fund, which provided financial support to businesses impacted by the pandemic. More information on federal subsidy programs is presented in [“Effects of Selected Federal Pandemic Response Programs on Federal Government Receipts, Expenditures, and Saving”](#) on BEA’s website.

Profits from current production increased \$20.4 billion, or 0.7 percent (quarterly rate), in the fourth quarter. Domestic profits of financial corporations decreased \$1.3 billion, domestic profits of nonfinancial corporations increased \$5.0 billion, and rest-of-the-world profits increased \$16.8 billion.

The BEA profit measure that is conceptually most similar to S&P 500 profits—national after-tax profits without inventory valuation and capital consumption adjustments—decreased \$21.3 billion in the fourth quarter. Fourth-quarter national after-tax profits (shown in line 11 of table 9 of the GDP news release) increased 24.8 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 8.5 percent (2.1 percent at a quarterly rate), and government increased 0.1 percent (less than 0.1 percent at a quarterly rate).

Overall, 19 of 22 industry groups contributed to the fourth-quarter increase in real GDP.

- Within private goods-producing industries, the increase primarily reflected increases in nondurable goods (led by chemical products as well as food and beverage and tobacco products) and durable goods (led by motor vehicles, bodies and trailers, and parts) that were partly offset by a decrease in construction.
- Within private services-producing industries, the increase primarily reflected increases in information; professional, scientific, and technical services; real estate and rental and leasing (led by real estate); administrative and waste management services; health care and social assistance (led by ambulatory health care services); and wholesale trade. Partly offsetting these increases was a decrease in utilities.
- The increase in the government sector reflected an increase in state and local government that was partly offset by a decrease in federal government.

## 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. 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](#).

## **GDP, GDI, and GDP by Industry for 2021**

Real GDP increased 5.7 percent, unrevised from the second estimate, in 2021 (from the 2020 annual level to the 2021 annual level), in contrast to a decrease of 3.4 percent in 2020. The increase in real GDP for 2021 primarily reflected increases in consumer spending, nonresidential fixed investment, exports, residential fixed investment, and private inventory investment. Imports increased.

Measured from the fourth quarter of 2020 to the fourth quarter of 2021, real GDP increased 5.5 percent during the period, unrevised from the second estimate, in contrast to a decrease of 2.3 percent from the fourth quarter of 2019 to the fourth quarter of 2020.

Real GDI increased 7.2 percent in 2021 (from the 2020 annual level to the 2021 annual level), in contrast to a decrease of 2.9 percent in 2020. The average of real GDP and real GDI increased 6.4 percent in 2021, in contrast to a decrease of 3.2 percent in 2020.

In 2021, profits from current production increased \$562.0 billion, in contrast to a decrease of \$124.0 billion in 2020. Profits of domestic financial corporations increased \$64.3 billion, in contrast to an decrease of \$39.9 billion. Profits of domestic nonfinancial corporations increased \$461.0 billion, in contrast to a decrease of \$25.5 billion. Rest-of-the-world profits increased \$36.7 billion, compared with a decrease of \$58.7 billion.

For GDP by industry, private services-producing industries led the increase in GDP in 2021, increasing 6.6 percent. Private goods-producing industries increased 5.1 percent and the government sector increased 1.5 percent. Overall, 19 of 22 industry groups contributed to the increase, led by finance and insurance; professional, scientific, and technical services; and information.

## **Looking Ahead: 2022 Annual Update of the National Economic Accounts**

BEA will release results from the 2022 annual update of the National Economic Accounts, which includes the National Income and Product Accounts as well as the Industry Economic Accounts, on September 29, 2022. The update will present revised statistics for GDP, GDP by Industry, and gross domestic income that cover the first quarter of 2017 through the first quarter of 2022. Refer to BEA's recent blog post, "[National, Industry, and State Annual Updates Will Be United in 2022](#)", for additional detail.

## **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. 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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