

GDP and the Economy

Advance Estimates for the Fourth Quarter of 2016

REAL GROSS domestic product (GDP) increased 1.9 percent at an annual rate in the fourth quarter of 2016 after increasing 3.5 percent in the third quarter, according to the advance estimates of the national income and product accounts (NIPAs) (chart 1 and table 1).¹ Real GDP increased 1.6 percent in 2016 (that is, from the 2015 annual level to the 2016 annual level) after increasing 2.6 percent in 2015 (see page 6).

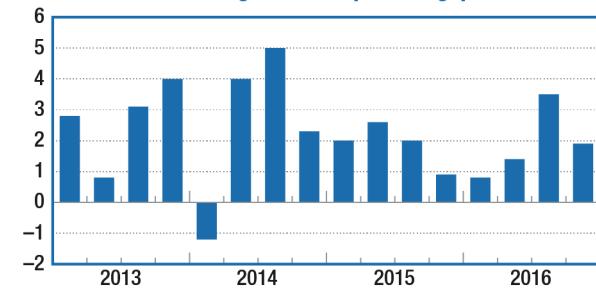
- The increase in real GDP in the fourth quarter reflected positive contributions from consumer spending, inventory investment, residential fixed investment, nonresidential fixed investment, and state and local government spending that were partly offset by negative contributions from exports and federal government spending. Imports, which are a subtraction in the calculation of GDP, increased.²
- Prices of goods and services purchased by U.S. residents increased 2.0 percent in the fourth quarter after increasing 1.5 percent in the third quarter. Food prices decreased less, and energy prices increased more in the fourth quarter than in the third quarter. Excluding food and energy, gross domestic purchases prices increased 1.4 percent after increasing 1.7 percent (see table 2).
- Real disposable personal income (DPI) increased 1.5 percent in the fourth quarter after increasing 2.6 percent in the third quarter. Current-dollar DPI increased 3.7 percent in the fourth quarter after increasing 4.1 percent in the third quarter (see table 3). The larger deceleration in real DPI than in current-dollar DPI reflected an acceleration in the implicit price deflator for consumer spending, which is used to deflate DPI.
- The personal saving rate, personal saving as a percentage of current-dollar DPI, was 5.6 percent in the fourth quarter; in the third quarter, the rate was 5.8 percent.

¹“Real” estimates are in chained (2009) dollars, and price indexes are chain-type measures. Each GDP estimate for a quarter (advance, second, and third) incorporates increasingly comprehensive and improved source data; for more information, see “[The Revisions to GDP, GDI, and Their Major Components](#)” in the August 2014 SURVEY OF CURRENT BUSINESS. Quarterly estimates are expressed at seasonally adjusted annual rates, which reflect a rate of activity for a quarter as if it were maintained for a year.

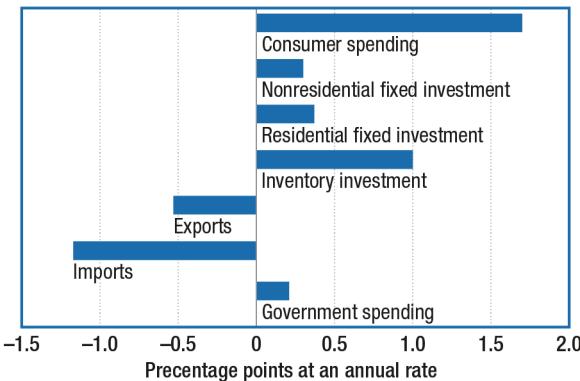
²In this article, “consumer spending” refers to “personal consumption expenditures,” “inventory investment” refers to “change in private inventories,” and “government spending” refers to “government consumption expenditures and gross investment.”

Chart 1. GDP, Prices, Disposable Personal Income (DPI)

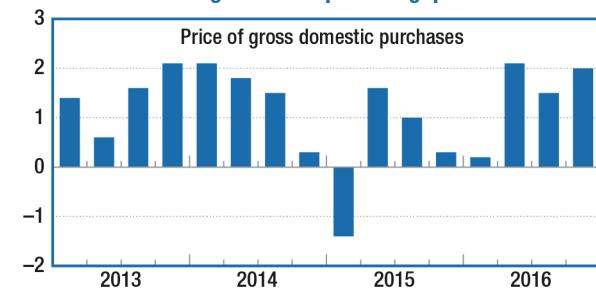
Real GDP: Percent change from the preceding quarter¹



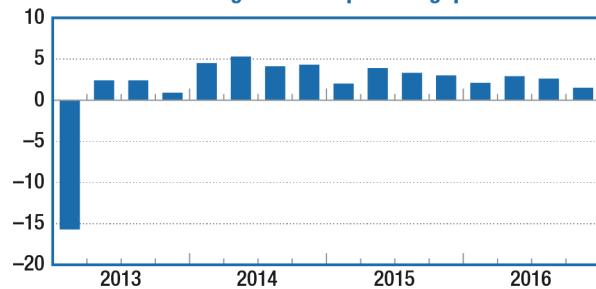
Contributions to the percent change in real GDP in 2016:IV



Prices: Percent change from the preceding quarter¹



Real DPI: Percent change from the preceding quarter¹



¹Seasonally adjusted at annual rates
U.S. Bureau of Economic Analysis

Real GDP Overview

Table 1. Real Gross Domestic Product (GDP) and Related Measures
 [Seasonally adjusted at annual rates]

	Share of current-dollar GDP (percent)	Change from preceding period (percent)				Contribution to percent change in real GDP (percentage points)			
		2016				2016			
		IV	I	II	III	IV	I	II	III
Gross domestic product¹	100.0	0.8	1.4	3.5	1.9	0.8	1.4	3.5	1.9
Personal consumption expenditures	68.8	1.6	4.3	3.0	2.5	1.11	2.88	2.03	1.70
Goods	22.2	1.2	7.1	3.5	5.2	0.25	1.51	0.77	1.11
Durable goods	7.6	-0.6	9.8	11.6	10.9	-0.05	0.70	0.84	0.79
Nondurable goods	14.6	2.1	5.7	-0.5	2.3	0.30	0.80	-0.07	0.32
Services	46.6	1.9	3.0	2.7	1.3	0.86	1.37	1.26	0.58
Gross private domestic investment	16.5	-3.3	-7.9	3.0	10.7	-0.56	-1.34	0.50	1.67
Fixed investment	16.2	-0.9	-1.1	0.1	4.2	-0.15	-0.18	0.02	0.67
Nonresidential	12.4	-3.4	1.0	1.4	2.4	-0.44	0.12	0.18	0.30
Structures	2.6	0.1	-2.1	12.0	-5.0	0.00	-0.06	0.30	-0.14
Equipment	5.6	-9.5	-2.9	-4.5	3.1	-0.59	-0.17	-0.26	0.18
Intellectual property products	4.1	3.7	9.0	3.2	6.4	0.15	0.35	0.13	0.26
Residential	3.8	7.8	-7.7	-4.1	10.2	0.29	-0.31	-0.16	0.37
Change in private inventories	0.3	.....	.....	.....	-0.41	-1.16	0.49	1.00	.....
Net exports of goods and services	-2.9	.....	.....	.....	.....	0.01	0.18	0.85	-1.70
Exports	12.0	-0.7	1.8	10.0	-4.3	-0.09	0.21	1.16	-0.53
Goods	7.8	0.1	1.7	14.4	-6.9	0.01	0.13	1.08	-0.57
Services	4.2	-2.2	1.9	2.0	0.9	-0.09	0.08	0.08	0.04
Imports	14.9	-0.6	0.2	2.2	8.3	0.09	-0.03	-0.31	-1.17
Goods	12.1	-1.3	0.0	0.5	10.9	0.16	0.00	-0.06	-1.25
Services	2.7	2.5	1.1	9.8	-2.7	-0.07	-0.03	-0.26	0.08
Government consumption expenditures and gross investment	17.6	1.6	-1.7	0.8	1.2	0.28	-0.30	0.14	0.21
Federal	6.6	-1.5	-0.4	2.4	-1.2	-0.10	-0.02	0.16	-0.08
National defense	3.9	-3.2	-3.2	2.0	-3.6	-0.13	-0.13	0.08	-0.14
Nondefense	2.8	0.9	3.8	3.0	2.3	0.03	0.10	0.08	0.06
State and local	10.9	3.5	-2.5	-0.2	2.6	0.39	-0.28	-0.02	0.28
Addenda:									
Gross domestic income (GDI) ²	.....	0.8	0.7	4.8	.....	.....	.....	.....	.....
Average of GDP and GDI	.....	0.8	1.1	4.1	.....	.....	.....	.....	.....
Final sales of domestic product	99.7	1.2	2.6	3.0	0.9	1.24	2.57	3.03	0.87
Goods	29.7	-1.4	2.2	7.6	2.5	-0.42	0.66	2.22	0.75
Services	62.3	1.1	2.4	2.1	1.0	0.68	1.48	1.34	0.60
Structures	8.0	7.4	-8.7	-0.6	6.8	0.57	-0.73	-0.05	0.52
Motor vehicle output	2.9	2.2	7.5	3.2	0.9	0.06	0.21	0.09	0.03
GDP excluding motor vehicle output	97.1	0.8	1.2	3.5	1.9	0.77	1.20	3.42	1.85
Final sales of computers	0.4	54.3	17.8	-9.0	1.8	0.18	0.07	-0.04	0.01
GDP excluding final sales of computers	99.6	0.7	1.3	3.6	1.9	0.65	1.34	3.55	1.87
Research and development (R&D)	2.7	0.6	11.8	-0.1	5.9	0.01	0.29	0.00	0.15
GDP excluding R&D	97.3	0.8	1.2	3.6	1.8	0.82	1.12	3.52	1.72

1. The estimates of GDP under the contribution columns are also percent changes.

2. GDI is deflated by the implicit price deflator for GDP.

Note: Percent changes are from NIPA tables 1.1.1 and 1.2.1, contributions are from NIPA tables 1.1.2 and 1.2.2, and shares are from NIPA table 1.1.10, or they are calculated from NIPA table 1.2.5.

The deceleration in real GDP in the fourth quarter reflected a downturn in exports, an acceleration in imports, a deceleration in consumer spending, and a downturn in federal government spending that were partly offset by an upturn in residential fixed investment, an acceleration in inventory investment, and an upturn in state and local government spending.

The deceleration in consumer spending primarily reflected a deceleration in spending for services (mainly reflecting a downturn in spending for electricity) that was partly offset by an upturn in spending for nondurable goods (mainly reflecting an upturn in pharmaceuticals and medical products).

The upturn in residential fixed investment primarily reflected an upturn in investment in new single-family structures.

The acceleration in inventory investment reflected a larger increase in nonfarm inventory investment that was partly offset by a downturn in farm inventory investment.

The downturn in exports primarily reflected a downturn in goods exports.

The downturn in goods exports was mainly attributable to a downturn in exports of foods, feeds, and beverages, reflecting a decrease in exports of soybeans to recent historical levels after an unusually strong increase in the third quarter.

The acceleration in imports reflected an acceleration in imports of goods that was partly offset by a downturn in imports of services.

The acceleration in goods imports was widespread, with a notable upturn in nonfood, nonautomotive consumer goods.

The downturn in federal spending primarily reflected a downturn in national defense spending.

The upturn in state and local government spending primarily reflected an upturn in gross investment in structures that was partly offset by a deceleration in consumption expenditures.

Prices

Table 2. Prices for Gross Domestic Purchases

[Percent change at annual rates; based on seasonally adjusted index numbers (2009=100)]

	Change from preceding period (percent)				Contribution to percent change in gross domestic purchases prices (percentage points)			
	2016				2016			
	I	II	III	IV	I	II	III	IV
Gross domestic purchases¹	0.2	2.1	1.5	2.0	0.2	2.1	1.5	2.0
Personal consumption expenditures	0.3	2.0	1.5	2.2	0.19	1.35	0.98	1.45
Goods.....	-4.0	0.8	-0.9	2.1	-0.87	0.17	-0.18	0.46
Durable goods.....	-0.9	-2.5	-4.1	-2.7	-0.06	-0.19	-0.30	-0.20
Non durable goods.....	-5.6	2.5	0.8	4.7	-0.81	0.36	0.12	0.66
Services.....	2.4	2.6	2.6	2.2	1.06	1.18	1.16	0.99
Gross private domestic investment	0.6	1.8	1.1	1.4	0.09	0.29	0.17	0.22
Fixed investment.....	0.6	2.2	1.4	1.5	0.10	0.35	0.21	0.24
Nonresidential.....	0.2	1.2	0.2	1.0	0.03	0.14	0.03	0.12
Structures.....	-1.5	3.2	-0.6	2.4	-0.04	0.08	-0.01	0.06
Equipment.....	0.3	0.1	1.0	-0.1	0.02	0.01	0.06	-0.01
Intellectual property products.....	1.3	1.4	-0.4	1.6	0.05	0.05	-0.02	0.06
Residential.....	2.0	5.6	5.2	3.2	0.07	0.20	0.19	0.12
Change in private inventories.....	.....	.....	.....	-0.01	-0.06	-0.05	-0.02	
Government consumption expenditures and gross investment	-0.4	2.7	2.1	2.0	-0.08	0.47	0.37	0.35
Federal.....	1.5	2.1	1.7	1.6	0.10	0.14	0.11	0.11
National defense.....	0.9	2.1	1.6	1.5	0.04	0.08	0.06	0.06
Nondesign.....	2.3	2.2	1.7	1.8	0.06	0.06	0.05	0.05
State and local.....	-1.6	3.1	2.4	2.3	-0.17	0.33	0.26	0.24
Addenda:								
Gross domestic purchases:								
Food.....	-1.5	-1.8	-2.3	-1.3	-0.07	-0.09	-0.11	-0.07
Energy goods and services.....	-31.0	15.0	1.2	32.5	-0.98	0.35	0.03	0.74
Excluding food and energy.....	1.4	2.0	1.7	1.4	1.25	1.84	1.60	1.33
Personal consumption expenditures (PCE):								
Food and beverages purchased for off-premises consumption.....	-1.7	-1.8	-2.1	-1.2	.....	.....	.....	.....
Energy goods and services.....	-30.6	15.5	2.1	32.5	.....	.....	.....	.....
Excluding food and energy.....	2.1	1.8	1.7	1.3	.....	.....	.....	.....
Gross domestic product (GDP).....	0.5	2.3	1.4	2.1	.....	.....	.....	.....
Exports of goods and services.....	-5.1	3.9	2.4	2.2	.....	.....	.....	.....
Imports of goods and services.....	-6.0	2.1	2.9	1.6	.....	.....	.....	.....

1. The estimates of gross domestic purchases under the contribution columns are also percent changes.

NOTE. Most percent changes are from NIPA table 1.6.7; percent changes for PCE for food and energy goods and services and for PCE excluding food and energy are from NIPA table 2.3.7. Contributions are from NIPA table 1.6.8. GDP, export, and import prices are from NIPA table 1.1.7.

Prices paid by U.S. residents, as measured by the gross domestic purchases price index, increased 2.0 percent in the fourth quarter after increasing 1.5 percent in the third quarter. The acceleration mainly reflected an acceleration in consumer prices.

The acceleration in consumer prices reflected an upturn in the prices paid for goods that was partly offset by a deceleration in the prices paid for services.

The upturn in the prices paid for goods primarily reflected an upturn in gasoline prices.

The main contributors to the deceleration in the prices paid for services were decelerations in financial services and insurance and in “other” services.

Consumer prices excluding food and energy, a measure of the “core” rate of inflation, decelerated, increasing 1.3 percent in the fourth quarter after increasing 1.7 percent in the third quarter.

Note on Prices

BEA's gross domestic purchases price index is the most comprehensive index of prices paid by U.S. residents for all goods and services. It is derived from the prices of personal consumption expenditures (PCE), private investment, and government consumption expenditures and gross investment.

BEA also produces price indexes for all the components of GDP. The PCE price index is a measure of the total cost of consumer goods and services, including durable goods, nondurable goods, and services. PCE prices for food, for energy goods and services, and for all items except food and energy are also estimated and reported.

Because prices for food and for energy can be volatile, the

price measure that excludes food and energy is often used as a measure of underlying, or “core,” inflation. The core PCE price index includes purchased meals and beverages, such as restaurant meals and pet food. (See the FAQ [“What is the core PCE price index?”](#) on BEA's Web site.)

BEA also prepares a supplemental PCE price index, the “market-based” PCE price index, that is based on market transactions for which there are corresponding price measures. This index excludes many imputed expenditures, such as financial services furnished without payment, that are included in PCE and in the PCE price index. BEA also prepares a market-based measure that excludes food and energy.

Personal Income

Table 3. Personal Income and Its Disposition

[Billions of dollars; quarterly estimates are seasonally adjusted at annual rates]

	Level		Change from preceding period			
	2016		2016			
	III	IV	I	II	III	IV
Personal income	16,101.7	16,253.7	49.9	189.2	172.3	152.0
Compensation of employees.....	10,176.0	10,268.9	0.1	153.9	129.6	92.9
Wages and salaries.....	8,252.3	8,330.1	-13.4	131.6	109.3	77.9
Private industries.....	6,933.6	7,004.6	-20.6	123.3	95.1	71.0
Goods-producing industries.....	1,353.0	1,365.9	-6.9	15.3	10.0	12.9
Manufacturing	834.2	841.2	-12.0	14.0	8.3	7.1
Services-producing industries	5,580.6	5,638.6	-13.7	108.0	85.1	58.0
Trade, transportation, and utilities	1,285.9	1,301.4	-10.5	19.5	12.8	15.5
Other services-producing industries	4,294.7	4,337.2	-3.1	88.6	72.3	42.5
Government.....	1,318.6	1,325.6	7.2	8.3	14.2	6.9
Supplements to wages and salaries	1,923.8	1,938.8	13.5	22.3	20.2	15.0
Proprietors' income with IVA and CCAdj.....	1,420.8	1,434.5	3.0	3.9	12.9	13.8
Farm	28.3	23.5	-5.8	-2.5	-1.5	-4.9
Nonfarm	1,392.4	1,411.1	8.8	6.4	14.4	18.6
Rental income of persons with CCAdj	705.9	721.5	15.5	7.8	5.3	15.6
Personal income receipts on assets	2,270.3	2,289.8	0.4	19.9	14.5	19.5
Personal interest income.....	1,317.8	1,333.9	3.1	14.1	7.6	16.1
Personal dividend income	952.5	955.9	-2.7	5.7	7.0	3.4
Personal current transfer receipts	2,786.5	2,805.9	35.8	19.6	22.9	19.4
Government social benefits to persons	2,733.0	2,751.8	35.6	19.2	22.4	18.8
Social security	899.7	905.9	4.8	7.8	5.6	6.2
Medicare.....	666.2	671.6	10.1	9.2	7.0	5.5
Medicaid.....	570.7	580.5	8.4	3.1	12.0	9.8
Unemployment insurance.....	29.9	28.7	0.1	-1.2	-0.5	-1.2
Veterans benefits.....	95.7	97.0	0.9	2.1	0.4	1.3
Other	470.8	468.0	11.4	-1.9	-2.2	-2.8
Other current transfer receipts from business, net	53.5	54.1	0.2	0.4	0.5	0.6
Less: Contributions for government social insurance.....	1,257.8	1,266.9	4.9	15.8	13.0	9.1
Less: Personal current taxes.....	1,982.9	2,004.7	-31.1	19.4	30.8	21.8
<i>Equals:</i> Disposable personal income (DPI)	14,118.8	14,249.0	81.1	169.9	141.5	130.2
Less: Personal outlays	13,300.7	13,457.7	62.3	192.6	146.2	157.0
<i>Equals:</i> Personal saving	818.1	791.2	18.7	-22.7	-4.7	-26.9
Personal saving as a percentage of DPI.....	5.8	5.6	.....	.....	.....	.....
Addenda:						
Percent change from preceding period						
Current-dollar DPI			2.4	5.0	4.1	3.7
Real DPI (chained 2009 dollars).....			2.1	2.9	2.6	1.5

Note. Dollar levels and percent changes are from NIPA tables 2.1 and 2.2B.

Personal income, which is measured in current dollars, decelerated in the fourth quarter, increasing \$152.0 billion after increasing \$172.3 billion in the third quarter. The deceleration primarily reflected a deceleration in wages and salaries.

Wages and salaries increased \$77.9 billion after increasing \$109.3 billion in the third quarter, reflecting decelerations in services-producing industries and in government that were partly offset by an upturn in goods-producing industries.

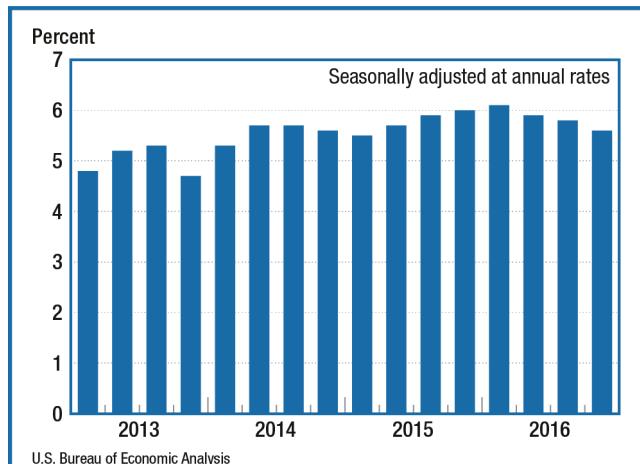
Personal current taxes decelerated, reflecting decelerations in both state and local income taxes and in federal income taxes.

Disposable personal income increased \$130.2 billion in the fourth quarter; in the third quarter, it increased \$141.5 billion.

Personal saving—disposable personal income less personal outlays—was \$791.2 billion in the fourth quarter, decreasing \$26.9 billion after decreasing \$4.7 billion in the third quarter.

The personal saving rate—personal saving as a percentage of disposable personal income—was 5.6 percent in the fourth quarter; in the third quarter, the personal saving rate was 5.8 percent.

Chart 2. Personal Saving Rate



Source Data for the Advance Estimates for the Fourth Quarter of 2016

Table 4A. Source Data and Key Assumptions for the Advance Estimates of GDP and Its Components
 [Billions of dollars, seasonally adjusted at annual rates]

	2016					
	July	August	Sept.	Oct.	Nov.	Dec. ¹
Private fixed investment:						
Nonresidential structures:						
Value of new nonresidential construction put in place	428.3	432.2	432.6	426.2	429.9	428.0
Residential structures:						
Value of new residential construction put in place:						
Single family	238.6	237.0	236.7	243.3	247.6	249.4
Multifamily.....	59.7	61.1	61.5	63.6	61.9	62.3
Change in private inventories:						
Change in inventories for nondurable manufacturing	-4.5	6.7	-10.4	6.9	7.8	16.9

1. Assumption.

Table 4B. Census Bureau Data From the Advance Economic Indicators Report

[Billions of dollars, seasonally adjusted at annual rates]

	2016		
	Oct.	Nov.	Dec. ¹
Change in private inventories:			
Merchant wholesale trade inventories.....	589.4	595.2	601.1
Retail trade inventories.....	603.3	608.4	608.3
Net exports of goods:			
U.S. exports of goods, Census basis	122.9	121.8	125.5
U.S. imports of goods, Census basis	184.6	187.2	190.5

1. The data for the third month of the quarter are preliminary and are subject to further revision.

Source Data and Key Assumptions for the Advance Estimates of GDP

The advance estimates of many components of GDP are based on 3 months of source data, but the estimates of some components are based on only 2 months of data. For the following items, the number of months for which data are available is shown in parentheses.

Consumer spending: sales of retail stores (3), unit auto and truck sales (3), consumers' shares of auto and truck sales (2), motor vehicle fuels data (3), and electricity and gas usage and unit-value data (3);

Nonresidential fixed investment: unit auto and truck sales (3), construction spending (value put in place) (2), manufacturers' shipments of machinery and equipment (3), and exports and imports of machinery and equipment (3);

Residential fixed investment: construction spending (value put in place) (2), single-family housing starts (3), sales of new homes (3), and sales of existing houses (3);

Inventory investment: nondurable-goods manufacturing inventories (2), trade inventories (3) durable-goods manufacturing inventories (3), and unit auto and truck inventories (3);

Net exports of goods and services: exports and imports of goods (3) and services (2) and values and quantities of petroleum imports (3);

Government spending: federal government outlays (3),

state and local government construction spending (value put in place) (2), and state and local government employment (3);

Compensation: employment, average hourly earnings, and average weekly hours (3); and

Prices: consumer price indexes (3), producer price indexes (3), and values and quantities of petroleum imports (3).

Key assumptions

When source data were unavailable, BEA made various assumptions for December, including the following (table 4A):

- A decrease in nonresidential structures,
- An increase in single-family structures,
- An increase in multifamily structures, and
- An increase in nondurable-goods manufacturing inventories.

A more [comprehensive list](#) is available on BEA's Web site.

Advance indicators data

Table 4b shows the data for wholesale and retail trade inventories and for exports and imports of goods from the Census Bureau's Advance Economic Indicators Report.

Real GDP for 2016

Table 5. Real Gross Domestic Product (GDP) and Components
 [Seasonally adjusted at annual rates]

	Share of current-dollar GDP (percent)	Change from preceding period (percent)	Contribution to percent change in real GDP (percentage points)	
	2016	2015	2016	2015
Gross domestic product¹	100.0	2.6	1.6	2.4
Personal consumption expenditures	68.7	3.2	2.7	2.16
Goods.....	22.1	4.0	3.6	0.91
Durable goods.....	7.6	6.9	5.7	0.51
Nondurable goods.....	14.5	2.6	2.4	0.40
Services.....	46.6	2.8	2.3	1.26
Gross private domestic investment	16.4	5.0	-1.5	0.82
Fixed investment.....	16.2	4.0	0.7	0.65
Nonresidential.....	12.4	2.1	-0.4	0.27
Structures.....	2.7	-4.4	-3.1	-0.13
Equipment.....	5.7	3.5	-2.8	0.21
Intellectual property products.....	4.1	4.8	5.0	0.19
Residential.....	3.8	11.7	4.9	0.39
Change in private inventories.....	0.1	.....	.....	0.18
Net exports of goods and services	-2.7	.....	.....	-0.71
Exports.....	12.0	0.1	0.4	0.01
Goods.....	7.8	-0.6	0.6	-0.06
Services.....	4.2	1.6	0.0	0.07
Imports.....	14.7	4.6	1.1	-0.73
Goods.....	12.0	4.9	0.7	-0.65
Services.....	2.7	2.9	2.8	-0.08
Government consumption expenditures and gross investment	17.7	1.8	0.9	0.32
Federal.....	6.7	0.0	0.6	0.00
National defense.....	3.9	-2.1	-0.7	-0.09
Nondefense.....	2.8	3.3	2.6	0.09
State and local.....	11.0	2.9	1.0	0.32

1. The estimates of GDP under the contribution columns are also percent changes.

Note. Percent changes are from NIPA table 1.1.1, contributions are from NIPA table 1.1.2, and shares are from NIPA table 1.1.10.

Real GDP increased 1.6 percent in 2016 after increasing 2.6 percent in 2015. The deceleration in real GDP from 2015 to 2016 primarily reflected a downturn in inventory investment, a deceleration in consumer spending, a downturn in nonresidential fixed investment, and decelerations in residential fixed investment and in state and local government spending that were partly offset by a deceleration in imports.

The deceleration in consumer spending reflected decelerations in spending for both services and goods.

The deceleration in goods was due to decelerations in “other” nondurable goods (which was more than accounted for by a slowdown in pharmaceutical and other medical products), in gasoline and other energy goods, in motor vehicles and parts, and in clothing and footwear. These decelerations were partly offset by an acceleration in food and beverages purchased for off-premises consumption.

The deceleration in services was mainly attributable to decelerations in health care, in food services and accommodations, and in housing.

The downturn in nonresidential fixed investment reflected a downturn in equipment (mainly transportation equipment) that was partly offset by a smaller decrease in structures and a slight acceleration in intellectual property products.

The deceleration in residential fixed investment primarily reflected a deceleration in single family structures.

The downturn in inventory investment primarily reflected widespread downturns in nonfarm industries.

The deceleration in state and local government spending primarily reflected decelerations in consumption expenditures and structures investment.

Chart 3. Contributions to the Change in Real GDP in 2016

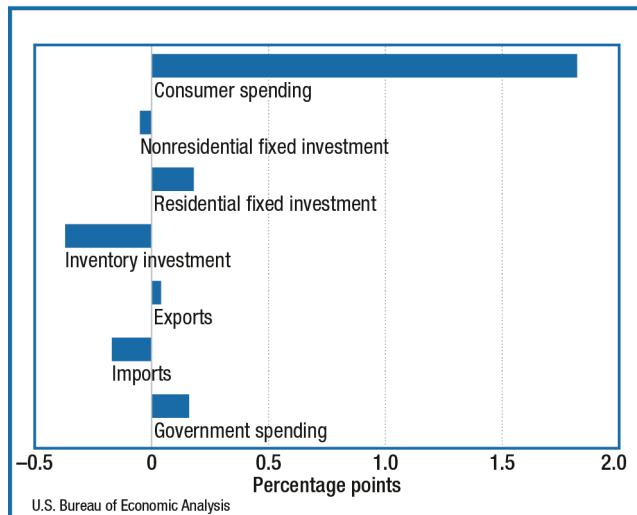


Chart 4. Change in Selected Components of Real GDP

