

# The 2019 Annual Update of the Industry Economic Accounts

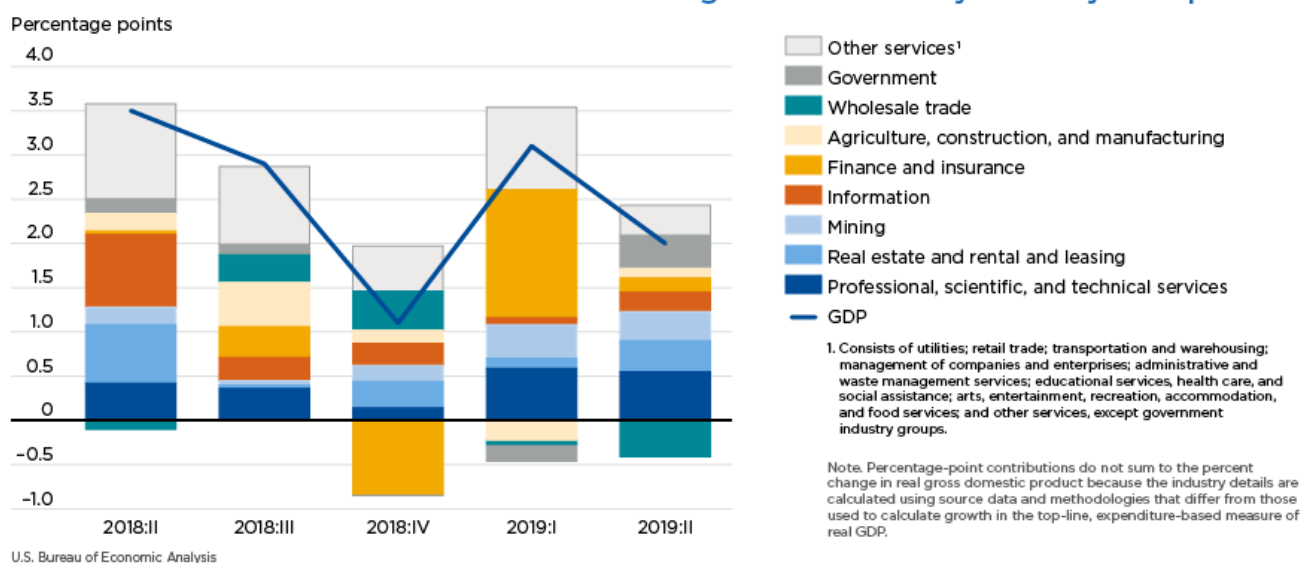
## Initial Statistics for the Second Quarter of 2019 Revised Statistics for 2014–2018 and the First Quarter of 2019

On October 29<sup>th</sup>, the Bureau of Economic Analysis (BEA) released estimates of real gross domestic product (GDP) by industry for the second quarter of 2019 and revised quarterly and annual estimates beginning with 2014. These estimates reflect newly available source data for the second quarter of 2019 as well as new and revised data for 2014 through the first quarter of 2019, which were incorporated as part of this year's annual update of the Industry Economic Accounts (IEAs).

The revisions to the statistics for 2014 through the first quarter of 2019 also reflect the results from the 2019 annual update of the National Income and Product Accounts (NIPAs) and the 2019 annual update of BEA's international transactions accounts (ITAs).<sup>1</sup>

The statistics show that economic growth in the second quarter of 2019 was led by private services-producing industries. Professional, scientific, and technical services; real estate and rental and leasing; and mining together contributed 1.23 percentage points to the overall 2.0 percent increase in real GDP, with 14 of 22 industry groups contributing to growth (chart 1).

**Chart 1. Contributions to Percent Change in Real GDP by Industry Group**



The newly released estimates include real, nominal, and price data on value added, gross output, and intermediate inputs for both annual and quarterly frequencies. Annual statistics are available for 1947 onward.<sup>2</sup> In addition, more detailed annual statistics at the 138 industry level are available as part of the underlying detail for the IEAs for 1997 onward. Quarterly statistics are available at the 71 industry publication level for the first quarter of 2005 onward.

## The Latest Snapshot of U.S. Producers

Table 1 shows the percent changes in real value added in the second quarter of 2019 by major industry group.

- Real GDP increased at a 2.0 percent annualized rate in the second quarter of 2019. Overall, 14 of 22 major industry groups contributed to GDP growth.
- Professional, scientific, and technical services, the leading contributor to GDP growth, increased 7.4 percent after increasing 8.0 percent. The increase was led by a 7.0 percent increase in miscellaneous professional, scientific, and technical services.
- Real estate and rental and leasing, the second leading contributor to GDP growth, increased 2.6 percent after increasing 0.8 percent. This growth primarily reflected an 8.3 percent increase in other real estate.
- Mining increased 23.5 percent after increasing 26.0 percent. This growth was mainly driven by a 34.5 percent increase in oil and gas extraction.
- Federal government increased 7.6 percent after decreasing 5.1 percent. The second quarter increase was driven by a 20.3 percent increase in federal nondefense.
- Utilities increased 18.1 percent after decreasing 3.5 percent.
- Information increased 4.4 percent in the second quarter after increasing 1.5 percent. The second quarter increase was driven by a 15.4 percent increase in data processing, internet publishing, and other information services.
- Finance and insurance increased 2.0 percent after increasing 20.9 percent. The increase was driven by a 7.3 percent increase in insurance.

- Health care and social assistance increased 1.6 percent after increasing 5.3 percent, primarily reflecting an 8.3 percent increase in social assistance and a 1.0 percent increase in ambulatory health care services.
- Administrative and waste management services increased 3.2 percent after decreasing 0.9 percent. The increase was driven by a 2.8 percent increase in administrative and support services.
- Wholesale trade decreased 6.7 percent after decreasing 0.8 percent.

**Table 1. Percent Changes in Real Value Added by Industry Group**  
[Seasonally adjusted at annual rates]

Line		2018				2019	
		I	II	III	IV	I	II
<b>1</b>	<b>Gross domestic product</b>	<b>2.5</b>	<b>3.5</b>	<b>2.9</b>	<b>1.1</b>	<b>3.1</b>	<b>2.0</b>
<b>2</b>	<b>Private industries</b>	<b>2.8</b>	<b>3.8</b>	<b>3.2</b>	<b>1.3</b>	<b>3.8</b>	<b>1.9</b>
3	Agriculture, forestry, fishing, and hunting	0.4	7.9	-4.5	4.9	3.0	9.3
4	Mining	-15.2	12.4	2.7	11.3	26.0	23.5
5	Utilities	-12.9	13.3	-5.5	3.0	-3.5	18.1
6	Construction	5.3	-2.1	0.7	-3.4	3.8	-0.3
7	Manufacturing	3.4	1.9	4.6	2.2	-3.6	0.4
8	Durable goods	4.1	2.8	2.3	4.2	1.3	1.0
9	Nondurable goods	2.4	0.7	7.5	-0.2	-9.6	-0.3
10	Wholesale trade	0.0	-1.8	5.4	7.6	-0.8	-6.7
11	Retail trade	6.3	0.1	3.0	-2.6	8.8	0.2
12	Transportation and warehousing	9.3	-0.1	3.4	1.5	-0.6	-2.9
13	Information	6.5	16.9	5.0	4.8	1.5	4.4
14	Finance, insurance, real estate, rental, and leasing	1.3	3.3	1.8	-2.5	7.7	2.4
15	Finance and insurance	-3.6	0.4	4.6	-10.4	20.9	2.0
16	Real estate and rental and leasing	4.2	5.0	0.3	2.3	0.8	2.6
17	Professional and business services	4.1	5.2	6.0	2.5	6.9	6.3
18	Professional, scientific, and technical services	6.4	5.6	4.9	1.9	8.0	7.4
19	Management of companies and enterprises	-0.6	5.4	10.9	-0.5	15.8	7.1
20	Administrative and waste management services	1.7	4.1	5.6	6.2	-0.9	3.2
21	Educational services, health care, and social assistance	6.0	2.0	3.1	2.8	4.3	0.7
22	Educational services	3.1	0.9	2.2	4.1	-1.7	-4.4
23	Health care and social assistance	6.5	2.2	3.3	2.5	5.3	1.6
24	Arts, entertainment, recreation, accommodation, and food services	-0.1	8.9	0.8	2.1	-1.2	-2.0
25	Arts, entertainment, and recreation	-1.0	16.3	-0.1	-0.4	2.8	-2.6
26	Accommodation and food services	0.3	6.3	1.1	3.0	-2.5	-1.8
27	Other services, except government	3.2	4.8	1.3	1.9	-0.9	-1.9
<b>28</b>	<b>Government</b>	<b>0.5</b>	<b>1.3</b>	<b>0.9</b>	<b>-0.2</b>	<b>-1.6</b>	<b>3.1</b>
29	Federal	0.3	0.6	0.3	-2.0	-5.1	7.6
30	State and local	0.7	1.6	1.2	0.6	0.1	1.1
	<b>Addenda</b>						
31	Private goods-producing industries <sup>1</sup>	1.9	2.2	3.1	1.9	0.8	2.5
32	Private services-producing industries <sup>2</sup>	3.0	4.2	3.2	1.1	4.5	1.7

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.

Table 2 shows each industry's contribution to real GDP growth in the second quarter of 2019.

- U.S. economic growth decelerated in the second quarter of 2019, increasing 2.0 percent after increasing 3.1 percent in the first quarter. Deceleration in 13 out of 22 major industry groups contributed to the deceleration in overall economic activity.
- Finance and insurance was the leading contributor to the deceleration in real GDP growth, contributing 0.16 percentage point to GDP growth after contributing 1.45 percentage points in the first quarter. The deceleration in this sector was driven by a downturn in securities, commodity contracts, and investments.
- Retail trade was the second-largest contributor to the deceleration in real GDP growth, contributing just 0.01 percentage point after contributing 0.46 percentage point. The deceleration in retail trade was driven by a slowdown in other retail.
- Wholesale trade was the third-largest contributor to the deceleration with a contribution of 0.41 percentage point following a contribution of 0.05 percentage point.
- Health care and social assistance contributed 0.12 percentage point after contributing 0.39 percentage point. The deceleration was largely driven by a deceleration in ambulatory health care services.
- Construction turned down, subtracting 0.01 percentage point after contributing 0.16 percentage point last quarter.
- Federal government, which turned up, was the largest offsetting industry group to the deceleration, contributing 0.28 percentage points after subtracting 0.20 percentage point. The upturn was largely driven by federal nondefense.

**Table 2. Contributions to Percent Change in  
Real Gross Domestic Product (GDP) by Industry Group**  
[Percentage points, seasonally adjusted at annual rates]

Line		2018				2019	
		I	II	III	IV	I	II
<b>1</b>	<b>Gross domestic product<sup>1</sup></b>	<b>2.5</b>	<b>3.5</b>	<b>2.9</b>	<b>1.1</b>	<b>3.1</b>	<b>2.0</b>
<b>2</b>	<b>Private industries</b>	<b>2.41</b>	<b>3.31</b>	<b>2.76</b>	<b>1.11</b>	<b>3.27</b>	<b>1.64</b>
3	Agriculture, forestry, fishing, and hunting	0.00	0.07	-0.04	0.04	0.02	0.07
4	Mining	-0.26	0.20	0.05	0.18	0.38	0.33
5	Utilities	-0.22	0.20	-0.09	0.05	-0.06	0.26
6	Construction	0.21	-0.08	0.03	-0.14	0.16	-0.01
7	Manufacturing	0.37	0.21	0.51	0.25	-0.40	0.05
8	Durable goods	0.26	0.18	0.15	0.26	0.09	0.06
9	Nondurable goods	0.11	0.03	0.36	-0.02	-0.49	-0.01
10	Wholesale trade	0.00	-0.10	0.31	0.44	-0.05	-0.41
11	Retail trade	0.34	0.01	0.16	-0.14	0.46	0.01
12	Transportation and warehousing	0.28	0.00	0.11	0.05	-0.02	-0.09
13	Information	0.33	0.82	0.26	0.25	0.08	0.22
14	Finance, insurance, real estate, rental, and leasing	0.27	0.70	0.39	-0.54	1.55	0.51
15	Finance and insurance	-0.28	0.04	0.35	-0.83	1.45	0.16
16	Real estate and rental and leasing	0.55	0.66	0.04	0.30	0.11	0.35
17	Professional and business services	0.51	0.65	0.73	0.31	0.85	0.78
18	Professional, scientific, and technical services	0.47	0.42	0.36	0.14	0.59	0.55
19	Management of companies and enterprises	-0.01	0.10	0.20	-0.01	0.28	0.13
20	Administrative and waste management services	0.05	0.13	0.17	0.19	-0.03	0.10
21	Educational services, health care, and social assistance	0.51	0.18	0.27	0.24	0.37	0.06
22	Educational services	0.04	0.01	0.03	0.05	-0.02	-0.06
23	Health care and social assistance	0.47	0.17	0.24	0.19	0.39	0.12
24	Arts, entertainment, recreation, accommodation, and food services	0.00	0.36	0.03	0.09	-0.05	-0.09
25	Arts, entertainment, and recreation	-0.01	0.17	0.00	0.00	0.03	-0.03
26	Accommodation and food services	0.01	0.19	0.03	0.09	-0.08	-0.06
27	Other services, except government	0.07	0.10	0.03	0.04	-0.02	-0.04
<b>28</b>	<b>Government</b>	<b>0.07</b>	<b>0.16</b>	<b>0.12</b>	<b>-0.02</b>	<b>-0.19</b>	<b>0.37</b>
29	Federal	0.01	0.02	0.01	-0.08	-0.20	0.28
30	State and local	0.06	0.14	0.10	0.05	0.01	0.09
	<b>Addenda</b>						
31	Private goods-producing industries <sup>2</sup>	0.33	0.39	0.55	0.33	0.15	0.43
32	Private services-producing industries <sup>3</sup>	2.08	2.91	2.21	0.78	3.12	1.21

1. The estimates of GDP under the contributions columns are percent changes.
2. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
3. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.

Note. Percentage-point contributions do not sum to the percent change in real GDP, because the industry details are calculated using source data and methodologies that differ from those used to calculate growth in the top-line, expenditure-based measure of real GDP.

## Annual Update Highlights

Annual updates are conducted to maintain the accuracy and relevance of BEA accounts, incorporating source data that are more complete and reliable than those previously available. Past annual updates have typically affected the 3 most recent years of previously published estimates. Beginning with this year's annual update, the revision window was extended back an additional 2 years, featuring revised annual and quarterly estimates for 2014 through the first quarter of 2019. As is usual for the annual IEA revisions, the incorporation of more complete and revised source data and the results of the 2019 annual update of the NIPAs and the ITAs were the primary drivers of the revisions. Overall, the revised statistics continue to reflect the same picture of economic growth observed in the previously published estimates.

Improvements incorporated during this annual update include the incorporation of new and revised source data, the incorporation of the 2019 annual update of the NIPAs, and new and revised supply-use tables (SUTs).

### Source data

The updated estimates reflect the incorporation of newly available and revised source data, which are regularly included in the annual updates and which became available after the comprehensive update in November 2018. These data include the following:

- U.S. Census Annual Survey of State and Local Government Finances for fiscal year 2014–2016 (revised) and 2017 (new)
- U.S. Census Annual Wholesale Trade Survey for 2014–2016 (revised) and 2017 (new)
- U.S. Census Annual Retail Trade Survey for 2014–2016 (revised) and 2017 (new)
- U.S. Census Service Annual Survey for 2016–2017 (revised) and 2018 (new)
- Office of Management and Budget federal government budget data for fiscal years 2016–2019
- BEA international transactions accounts statistics for 2016–2018 (revised)
- Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages for 2015–2017 (revised)
- Internal Revenue Service (IRS) tabulations of corporate tax returns for 2016 (revised) and for 2017 (new)
- IRS tabulations of sole proprietorship and partnership tax returns for 2017 (new)
- U.S. Department of Agriculture Economic Research Service farm statistics for 2016–2018 (revised)

Some of the source data that are typically incorporated as part of the annual update were not available for incorporation this year. Specifically, the Census Bureau Annual Survey of Manufactures (ASM) for 2017 was not available, because the survey is not conducted in years during which the quinquennial Economic Census is conducted; results from the Economic Census for 2017 are being released on a flow basis between now and December 2021. Typically, data from the ASM would replace data from the Census Bureau monthly survey of Manufacturers' Shipments, Inventories, and Orders. Additionally, the annual revision of the Census Bureau Value of Construction Put in Place series was not available in time for incorporation into the IEAs due to the partial shutdown of the federal government.<sup>3</sup>

Principal sources of data used to construct current-dollar and chained-dollar estimates for benchmark and nonbenchmark years can be found in table A and table B. Principal sources of data used to construct the quarterly estimates can be found in table C.

## **The 2019 annual update of the NIPAs**

The IEAs are a consistent time series that are fully integrated with the NIPAs, thus the results of the 2019 annual update of the NIPAs directly affects the industry statistics.<sup>4</sup> The most significant revisions for 2014 through the first quarter of 2019 resulted from the incorporation of revised and newly available source data into the NIPA estimates of personal consumption expenditures (PCE), corporate profits, proprietors' income, and net interest. Additionally, estimates of PCE and corporate profits were further revised to reflect ongoing improvements to the NIPA seasonal adjustment process.<sup>5</sup> Following the comprehensive update of the NIPAs in 2018, the revision period was expanded to include the previous 5 years (beginning with 2014) in order to better account for the impact of seasonal trends on the data. The updated seasonal factors reflect a mix of data that are seasonally adjusted by source agencies as well as data directly adjusted by BEA.

## **Supply-use tables**

New SUTs for 2018 and revised SUTs for 2014 through 2017 are available with the 2019 annual update of the IEAs. Beginning with the 2018 comprehensive update of the IEAs, the supply-use framework is BEA's featured presentation of input-output tables. The tables provide an integrated presentation of the total supply of goods and services from both domestic and foreign producers and the use of this supply. The supply table presents the total supply of goods and services from both domestic and foreign producers that are available for use in the domestic economy. The use table shows the use of this supply by domestic industries as intermediate inputs and by final users including exports. The tables also show value added by industry.

## Revisions

The percent change in real GDP growth for the first quarter of 2019 was unrevised at 3.1 percent. Private goods-producing industries was revised down 4.0 percentage points to 0.8 percent. Private services-producing industries was revised up 1.1 percentage points to 4.5 percent. The direction of growth in real value added was revised in 6 of 22 major industry groups.

- The 18.0 percentage points downward revision to real value added in nondurable goods manufacturing drove the downward revision within private goods-producing industries; the growth in this industry was revised down to -9.6 percent from 8.4 percent and was driven by petroleum and coal products.
- Finance and insurance was the leading driver of the upward revision within private services-producing industries. This industry was revised up to 20.9 percent from 9.5 percent.
- Professional, scientific, and technical services was revised up to 8.0 percent from 2.1 percent.

Quarterly statistics for the 2014–2018 period were benchmarked to the corresponding annual estimates, and revisions to these quarters typically follow the revisions to the annual data. Updated quarterly source data and revised seasonal factors also contribute to revisions to the quarterly estimates in these periods. Table 3 presents revisions to annual percent changes in real value added by industry group.



**Table 3. Revisions to Percent Change in Real Value Added by Industry Group — Continues**

Line		2014			2015			2016		
		Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
1	<b>Gross domestic product</b>	2.5	2.5	0.0	2.9	2.9	0.0	1.6	1.6	0.0
2	<b>Private industries</b>	2.9	2.7	0.2	3.3	3.1	0.2	1.6	1.6	0.0
3	Agriculture, forestry, fishing, and hunting	1.1	0.5	0.6	6.6	6.7	-0.1	4.8	4.3	0.5
4	Mining	11.0	9.9	1.1	8.5	8.4	0.1	-5.8	-4.8	-1.0
5	Utilities	-3.9	-4.2	0.3	-0.2	-0.6	0.4	5.1	5.0	0.1
6	Construction	1.9	1.3	0.6	4.6	4.2	0.4	3.4	3.4	0.0
7	Manufacturing	1.7	1.0	0.7	0.9	0.5	0.4	-0.5	-1.2	0.7
8	Durable goods	1.5	0.8	0.7	1.5	1.3	0.2	0.4	-0.5	0.9
9	Nondurable goods	2.0	1.2	0.8	0.1	-0.4	0.5	-1.7	-2.1	0.4
10	Wholesale trade	3.8	4.0	-0.2	4.3	4.0	0.3	-1.3	-1.1	-0.2
11	Retail trade	1.8	1.5	0.3	3.3	3.3	0.0	3.5	3.8	-0.3
12	Transportation and warehousing	3.1	2.7	0.4	2.7	2.5	0.2	1.8	1.2	0.6
13	Information	2.5	2.1	0.4	9.2	11.3	-2.1	8.7	10.5	-1.8
14	Finance, insurance, real estate, rental, and leasing	3.0	3.0	0.0	2.6	2.3	0.3	1.1	1.1	0.0
15	Finance and insurance	5.2	5.1	0.1	3.6	2.8	0.8	0.1	0.1	0.0
16	Real estate and rental and leasing	1.8	1.9	-0.1	2.0	2.1	-0.1	1.7	1.7	0.0
17	Professional and business services	4.6	4.4	0.2	3.2	3.1	0.1	1.9	1.8	0.1
18	Professional, scientific, and technical services	4.3	4.2	0.1	4.2	3.8	0.4	2.9	2.3	0.6
19	Management of companies and enterprises	6.7	6.5	0.2	2.6	1.7	0.9	1.0	1.0	0.0
20	Administrative and waste management services	3.8	3.7	0.1	1.3	2.2	-0.9	0.2	1.1	-0.9
21	Educational services, health care, and social assistance	1.8	1.8	0.0	3.9	3.2	0.7	2.6	2.4	0.2
22	Educational services	1.1	1.2	-0.1	1.8	1.0	0.8	1.9	1.3	0.6
23	Health care and social assistance	1.9	1.9	0.0	4.3	3.6	0.7	2.7	2.6	0.1
24	Arts, entertainment, recreation, accommodation, and food services	3.6	3.2	0.4	2.5	2.2	0.3	1.2	0.6	0.6
25	Arts, entertainment, and recreation	4.5	4.2	0.3	-1.8	-2.0	0.2	3.4	2.2	1.2
26	Accommodation and food services	3.3	2.8	0.5	4.1	3.8	0.3	0.5	0.0	0.5
27	Other services, except government	2.9	2.7	0.2	0.9	0.8	0.1	-0.6	-0.7	0.1
28	<b>Government</b>	<b>-0.2</b>	<b>-0.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>
29	Federal	-0.6	-0.6	0.0	0.2	0.1	0.1	0.8	0.8	0.0
30	State and local	0.0	-0.1	0.1	0.0	0.0	0.0	1.1	1.1	0.0
<b>Addenda</b>										
31	Private goods-producing industries <sup>1</sup>	2.8	2.1	0.7	2.8	2.4	0.4	0.2	-0.2	0.4
32	Private services-producing industries <sup>2</sup>	2.9	2.8	0.1	3.4	3.3	0.1	2.0	2.1	-0.1
33	Information-communications-technology-producing industries <sup>3</sup>	4.5	4.3	0.2	10.0	11.3	-1.3	9.2	10.5	-1.3

**Table 3. Revisions to Percent Change in Real Value Added by Industry Group — Table Ends**

Line		2017			2018			2019:1		
		Revised	Previously published	Revision	Revised	Previously published	Revision	Revised	Previously published	Revision
1	<b>Gross domestic product</b>	2.4	2.2	0.2	2.9	2.9	0.0	3.1	3.1	0.0
2	<b>Private industries</b>	2.6	2.1	0.5	3.2	3.0	0.2	3.8	3.7	0.1
3	Agriculture, forestry, fishing, and hunting	-1.5	-4.8	3.3	-1.4	-4.1	2.7	3.0	-2.5	5.5
4	Mining	7.2	1.5	5.7	3.3	1.5	1.8	26.0	26.5	-0.5
5	Utilities	1.7	-1.0	2.7	-0.2	2.1	-2.3	-3.5	1.6	-5.1
6	Construction	2.3	0.8	1.5	2.2	2.9	-0.7	3.8	0.1	3.7
7	Manufacturing	2.6	2.4	0.2	3.9	4.5	-0.6	-3.6	4.4	-8.0
8	Durable goods	3.4	3.2	0.2	4.7	5.4	-0.7	1.3	1.4	-0.1
9	Nondurable goods	1.6	1.5	0.1	2.9	3.4	-0.5	-9.6	8.4	-18.0
10	Wholesale trade	1.8	2.1	-0.3	1.6	3.3	-1.7	-0.8	-1.6	0.8
11	Retail trade	3.5	4.0	-0.5	3.5	3.9	-0.4	8.8	11.9	-3.1
12	Transportation and warehousing	4.6	4.0	0.6	4.0	2.4	1.6	-0.6	-0.7	0.1
13	Information	5.9	7.1	-1.2	8.5	8.5	0.0	1.5	4.5	-3.0
14	Finance, insurance, real estate, rental, and leasing	1.2	0.1	1.1	1.2	0.5	0.7	7.7	4.0	3.7
15	Finance and insurance	-0.6	-1.6	1.0	-1.9	-3.1	1.2	20.9	9.5	11.4
16	Real estate and rental and leasing	2.2	1.0	1.2	3.0	2.5	0.5	0.8	1.1	-0.3
17	Professional and business services	4.3	4.2	0.1	5.4	5.0	0.4	6.9	2.1	4.8
18	Professional, scientific, and technical services	2.9	3.4	-0.5	5.2	5.5	-0.3	8.0	2.1	5.9
19	Management of companies and enterprises	7.2	6.5	0.7	7.1	4.8	2.3	15.8	7.1	8.7
20	Administrative and waste management services	6.1	4.8	1.3	4.6	3.8	0.8	-0.9	-0.6	-0.3
21	Educational services, health care, and social assistance	1.6	1.7	-0.1	3.1	2.9	0.2	4.3	5.9	-1.6
22	Educational services	-2.6	-2.1	-0.5	1.1	1.4	-0.3	-1.7	4.3	-6.0
23	Health care and social assistance	2.3	2.3	0.0	3.5	3.2	0.3	5.3	6.2	-0.9
24	Arts, entertainment, recreation, accommodation, and food services	2.1	1.8	0.3	2.6	1.1	1.5	-1.2	1.6	-2.8
25	Arts, entertainment, and recreation	2.3	3.6	-1.3	4.0	2.1	1.9	2.8	1.8	1.0
26	Accommodation and food services	2.1	1.2	0.9	2.1	0.7	1.4	-2.5	1.5	-4.0
27	Other services, except government	0.1	0.5	-0.4	3.1	1.5	1.6	-0.9	-2.6	1.7
28	<b>Government</b>	<b>0.9</b>	<b>0.7</b>	<b>0.2</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>	<b>-1.6</b>	<b>-1.1</b>	<b>-0.5</b>
29	Federal	0.6	0.3	0.3	0.3	-0.4	0.7	-5.1	-3.7	-1.4
30	State and local	1.1	0.9	0.2	1.0	0.2	0.8	0.1	0.0	0.1
<b>Addenda</b>										
31	Private goods-producing industries <sup>1</sup>	2.7	1.6	1.1	3.2	3.4	-0.2	0.8	4.8	-4.0
32	Private services-producing industries <sup>2</sup>	2.5	2.3	0.2	3.2	2.9	0.3	4.5	3.4	1.1
33	Information-communications-technology-producing industries <sup>3</sup>	7.2	8.1	-0.9	9.1	...	...	...	...	...

... Data not available quarterly

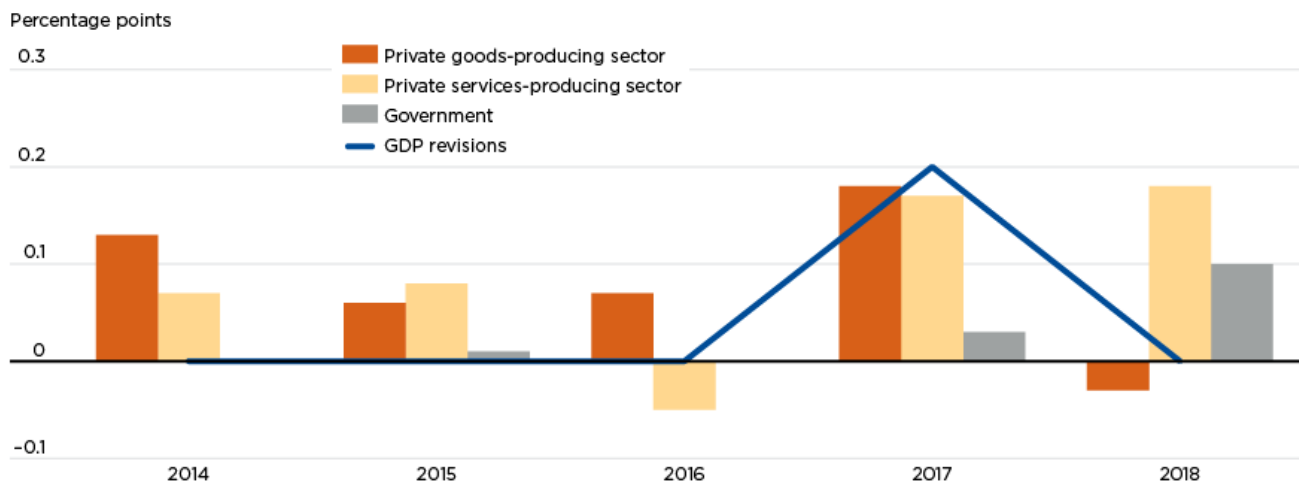
1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.
3. Consists of computer and electronic product manufacturing (excluding navigational, measuring, electromedical, and control instruments manufacturing); software publishers; broadcasting and telecommunications; data processing, hosting, and related services; internet publishing and broadcasting and web search portals; and computer systems design and related services.

## 2018

Real growth in GDP was unrevised from 2.9 percent in 2018. Private services-producing industries was revised up to 3.2 percent from 2.9 percent. Private goods-producing industries was revised down 0.2 percentage point to 3.2 percent. Government was revised up to 0.8 percent from 0.0 percent. The direction of growth was unchanged in 20 of 22 major industry groups (chart 2).

- Finance and insurance drove the upward revision to real value added for private services-producing industries. Growth in this industry was revised from –3.1 percent to –1.9 percent. This revision was led by revisions to insurance carriers and related activities and securities, commodity contracts, and investments.
- Durable goods manufacturing was revised down 0.7 percentage point and led the downward revision in private goods-producing industries. The downward revision in durable goods manufacturing was led by the motor vehicles, bodies and trailers, and parts industry.
- Utilities was revised down from 2.1 percent to –0.2 percent. The downward revision was driven by the incorporation of newly released BLS Producer Price Index data for electric power generation.

**Chart 2. Contributions to the Revisions in Percent Change in Real GDP**



Note. Percentage-point contributions do not sum to the percent change in real gross domestic product because the industry details are calculated using source data and methodologies that differ from those used to calculate growth in the top-line, expenditure-based measure of real GDP.

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## 2017

Real GDP growth was revised upwards in 2017 from 2.2 percent to 2.4 percent, reflecting upward revisions in both the private goods-producing industries and the private services-producing industries. The private goods-producing industries was revised up 1.1 percentage points to 2.7 percent. Private services-producing industries was revised up 0.2 percentage point to 2.5 percent. Government was revised up from 0.7 percent to 0.9 percent. The direction of growth was unchanged in 21 of 22 major industry groups, with utilities as the only major industry group that had a revision in the direction of growth.

- Mining was the leading contributor to the upward revision in private goods-producing industries with an upward revision of 5.7 percentage points to 7.2 percent and was driven by the oil and gas extraction industry.
- Real estate and rental and leasing was the leading contributor to the upward revision in private services-producing industries with an upward revision of 1.2 percentage points to 2.2 percent and was driven by an upward revision in other real estate.
- Utilities was revised from -1.0 percent to 1.7 percent as a result of the incorporation of newly available data from the Statistics of Income.

## 2016

Real GDP was unrevised at 1.6 percent in 2016. Private goods-producing industries was revised up to 0.2 percent from -0.2 percent. Private services-producing industries was revised down 0.1 percentage point to 2.0 percent. Government was unrevised at 1.0 percent. The direction of growth was unchanged in 20 of 22 major industry groups.

- The leading contributor to the upward revision for private goods-producing industries was durable goods manufacturing, which was revised up from -0.5 percent to 0.4 percent.
- Information was the leading driver to the downward revision to private services-producing industries. Information was revised down 1.8 percentage points to 8.7 percent and was led by a downward revision to data processing, internet publishing, and other information services.

## 2015

Real GDP was unrevised at 2.9 percent in 2015. Private services-producing industries was revised up to 3.4 percent from 3.3 percent. Private goods-producing industries was revised up to 2.8 percent from 2.4 percent. Government was revised up to 0.1 percent. The direction of growth was unchanged in 21 of 22 major industry groups, with nondurable goods as the only major industry group that had a change in the direction of growth.

- Finance and insurance was revised up to 3.6 percent from 2.8 percent, led by an upward revision in insurance carriers and related activities.
- Health care and social assistance was revised up to 4.3 percent from 3.6 percent, led by an upward revision in hospitals.
- Nondurable goods was revised up to 0.1 percent from -0.4 percent and reflected upward revisions to food and beverage and tobacco products, chemical products, and plastics and rubber products.

## 2014

Real GDP was unrevised at 2.5 percent in 2014. Private goods-producing industries was revised up to 2.8 percent from 2.1 percent. Private services-producing industries was revised up to 2.9 percent from 2.8 percent. Government was unrevised at -0.2 percent. There were no revisions in the direction of growth within the 22 major industry groups.

- Nondurable goods was revised up to 2.0 percent from 1.2 percent and reflected upward revisions to petroleum and coal products manufacturing.
- Durable goods was revised up to 1.5 percent from 0.8 percent.

## Data Availability and Methodology

**Data availability.** The entire time series of industry statistics are available interactively on the BEA website. The [GDP by industry section](#) includes real, current-dollar, and price data for value added, gross output, intermediate inputs, and [KLEMS](#) (K-capital, L-labor, E-energy, M-materials, and S-purchased services) statistics as well as access to the underlying detail tables. The [input-output section](#) includes an annual time series of supply and use tables as well as total requirements tables. The 2007 and 2012 benchmark tables are also available.

**Methodology.** For information on the methodology for preparing the annual statistics, see Donald D. Kim, Erich H. Strassner, and David B. Wasshausen, “[Industry Economic Accounts: Results of the Comprehensive Revision and Revised Statistics for 1997–2012](#),” *Survey* 94 (February 2014). For information on the methodology used for preparing the 2012 benchmark input-output tables, see [Concepts and Methods of the U.S. Input-Output Accounts](#) on the BEA website. For more detailed information on the updates to methodology and source data in the 2018 comprehensive update, see Thomas F. Howells III, Edward T. Morgan, Kevin B. Barefoot, Louis E. Feagans, Teresa L. Gilmore, and Chelsea K. Smith-Nelson, “[Preview of the 2018 Comprehensive Update of the Industry Economic Accounts](#),” *Survey of Current Business* 98 (August 2018). For information on the methodology for preparing the quarterly statistics, see Erich H. Strassner and David B. Wasshausen, “[New Quarterly Gross Domestic Product by Industry Statistics](#),” *Survey* 94 (May 2014).

## Data Source Tables

**Table A. Principal Data Sources for Industry and Commodity Output and Prices**

Industry and commodity	2012 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
<b>Agriculture, forestry, fishing and hunting</b>			
Farms	BEA NIPA statistics based on USDA ERS data	Farm output from BEA NIPAs based on USDA ERS data	NIPA prices based on USDA price indexes received by farmers
Forestry, fishing, and related activities	For forestry, logging, hunting, and trapping, BEA NIPA farm output; for fishing, commercial landings data from NOAA, Census Bureau 2012 Economic Census NAICS Sector 11, and ERS data	For forestry, logging, hunting, and trapping, BEA NIPA farm output; for fishing, commercial landings data from NOAA, Census Bureau M3 data, and ERS data	BLS PPI, NIPA PCE prices, USDA/National Agricultural Statistics Service unit prices
<b>Mining</b>			
Oil and gas extraction	Census Bureau 2012 Economic Census, NAICS Sector 21, Mining	EIA data on quantities produced and prices	BLS PPI and EIA
Mining, except oil and gas	Census Bureau 2012 Economic Census, NAICS Sector 21, Mining	For coal mining, <i>EIA U.S. Coal Supply and Demand in Review</i> ; for uranium, <i>EIA Uranium Marketing Annual Report</i> ; for all other, USGS Mineral Commodity Summaries and Mineral Industry Survey	EIA, USGS, and BLS PPI
Support activities for mining	Census Bureau 2012 Economic Census, NAICS Sector 21, Mining	For mining exploration, trade source data on drilling costs and footage drilled; all other support activities, USGS <i>Mineral Commodity Summaries</i>	EIA, USGS, BLS PPI, and trade sources
<b>Utilities</b>			
	For electric power generation, transmission, and distribution; natural gas distribution; and water, sewage, and other systems, Census Bureau 2012 Economic Census	For electric power generation transmission and distribution, EIA forms 861 and 861M; for natural gas distribution, EIA form 176 and <i>Natural Gas Monthly</i> ; for water, sewage, and other systems, Census Bureau SAS	BLS CPI and BLS PPI
<b>Construction</b>			
Residential	Census Bureau VIP survey	Census Bureau VIP survey	Census Bureau price deflator for multi-family home construction, composite price of new single-family houses under construction and the Turner Cost Index, and BEA prices
Nonresidential	Census Bureau VIP survey	Census Bureau VIP survey, DOD expenditures, USDA expenditures, and BLS occupational employment statistics	BLS PPI and BEA composite prices based on trade source data and on the Census Bureau price deflator for single-family houses under construction
<b>Manufacturing</b>			

Industry and commodity	2012 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
	Census Bureau 2012 Economic Census, NAICS Sector 31–33, Manufacturing	Census Bureau ASM data, M3 shipments and inventories data, nonemployer survey data, EIA production data, FRB data, and BLS PPI	BLS PPI and NIPA prices based on DOD prices paid for military equipment, and NIPA hedonic prices
<b>Wholesale trade</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 42, Wholesale Trade; Census Bureau 2012 Annual Wholesale Trade Survey	Census Bureau Monthly Wholesale Trade Survey data and Annual Wholesale Trade Survey data	BLS PPI and NIPA sales deflators
<b>Retail trade</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 44–45, Retail Trade; Census Bureau 2012 ARTS	Census Bureau Monthly Retail Trade Survey data and ARTS data	BLS PPI and NIPA sales deflators
<b>Transportation and warehousing</b>			
Air transportation	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing; DOT BTS	Census Bureau SAS data; DOT BTS <i>Air Carrier Financial Statistics</i> and <i>U.S. Air Carrier Traffic Statistics</i>	BLS PPI
Rail transportation	For rail passenger, <i>Amtrak Annual Report</i> ; for rail freight, DOT STB selected earning data	For rail passenger, <i>Amtrak Annual Report</i> ; for rail freight, DOT STB selected earning data	BLS PPI
Water transportation	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	For freight, BLS PPI; for passenger, BLS CPI
Truck transportation	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	BLS PPI
Transit and ground passenger transportation	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	NIPA PCE prices
Pipeline transportation	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	BLS PPI
Other transportation and support activities	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	BLS PPI and NIPA PCE prices
Warehousing and storage	Census Bureau 2012 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data	BLS PPI
<b>Information</b>			
Publishing industries, except internet (includes software)	Census Bureau 2012 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data	BLS PPI and BEA price indexes for software
Motion picture and sound recording industries	Census Bureau 2012 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data	NIPA PCE prices
Broadcasting and telecommunications	Census Bureau 2012 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data	BLS PPI
Data processing, internet publishing, and other information services	Census Bureau 2012 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data	BLS PPI and NIPA PCE prices
<b>Finance and insurance</b>			
Federal Reserve banks, credit intermediation, and related activities	Census Bureau 2012 Economic Census, NAICS Sector 52, Finance and Insurance; IRS Statistics of Income; FRB 2012 Annual Report; and FDIC, 2012 Statistics on Banking	Census Bureau SAS data; FDIC Commercial Bank Call Report data; FRB data; NCUA; and NIPA measures of financial services indirectly measured	FRB-priced services and NIPA PCE prices



Industry and commodity	2012 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
Securities, commodity contracts, and investments	Census Bureau 2012 Economic Census, NAICS Sector 52, Finance and Insurance; IRS Statistics of Income; and New York Stock Exchange, 2012 Annual Report	SEC FOCUS Report data and Census Bureau SAS data	BLS PPI and NIPA PCE prices
Insurance carriers and related activities	AM Best Company statistics; Census Bureau 2012 Economic Census, NAICS Sector 52, Finance and Insurance; American Council of Life Insurers Handbook; BEA NIPA statistics on medical and hospital insurance premiums	For property and casualty insurance, life insurance, and reinsurance, AM Best Company statistics and Census Bureau SAS; for medical and hospitalization insurance, private trade source data and BEA NIPA statistics on medical and hospital insurance premiums	BLS PPI and NIPA PCE prices
Funds, trusts, and other financial vehicles	NIPA imputed service charges for other financial institutions	NIPA imputed service charges for other financial institutions	NIPA PCE prices
<b>Real estate and rental and leasing</b>			
Real estate	Census Bureau 2012 Economic Census, NAICS Sector 53, Real Estate and Rental and Leasing; for residential dwellings, NIPA housing data and USDA data on farm housing; for nonresidential structures, IRS tabulations of business tax returns, NIPA rental value of buildings owned by nonprofit institutions serving households, and NIPA foreign trade statistics	For residential dwellings, NIPA housing data and USDA data on farm housing; for nonresidential structures, IRS tabulations of business tax returns, NIPA rental value of buildings owned by nonprofit institutions serving households, and NIPA foreign trade statistics	For residential dwellings, NIPA PCE prices and NIPA implicit price deflators for farm rents paid; for nonresidential structures, BLS PPI; for real estate managers and agents, BLS PPI and trade source data
Rental and leasing services and lessors of intangible assets	Census Bureau 2012 Economic Census, NAICS Sector 53, Real Estate and Rental and Leasing; for royalties, IRS tabulations of business tax returns	For rental and leasing services, Census Bureau SAS data; for royalties, IRS tabulations of business tax returns	BLS PPI, BTS and construction index, mining, crude oil receipts, and trade source data
<b>Professional, scientific, and technical services</b>			
Legal services	Census Bureau 2012 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data and BLS QCEW data	BLS PPI and NIPA PCE prices
Computer systems design and related services	Census Bureau 2012 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data	BEA price indexes for software
Miscellaneous professional, scientific, and technical services	Census Bureau 2012 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data, NIPA PCE, BLS QCEW data, and NIPA R&D data	BLS PPI, NIPA PCE prices, and BEA price indexes for R&D
<b>Management of companies and enterprises</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 55, Management of Companies and Enterprises	BLS QCEW data	BLS PPI
<b>Administrative and waste management services</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 56, Administrative and Support and Waste Management and Remediation Services	Census Bureau SAS data; BLS QCEW for auxiliary industries	BLS PPI and NIPA PCE prices
<b>Educational services</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 61, Educational Services; Department of Education, National Center for Education Statistics, 2012 Digest of Education Statistics	PCE data for education services based on data from the Department of Education and data from BLS consumer expenditure survey	NIPA PCE prices
<b>Health care and social assistance</b>			



Industry and commodity	2012 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
	Census Bureau 2012 Economic Census, NAICS Sector 62, Health Care and Social Assistance	Census Bureau SAS data	BLS PPI and NIPA PCE prices
<b>Arts, entertainment, and recreation</b>			
	Census Bureau 2012 Economic Census, NAICS Sector 71, Arts, Entertainment, and Recreation	Census Bureau SAS data	BLS PPI and NIPA PCE prices
<b>Accommodation and food services</b>			
Accommodation	Census Bureau 2012 Economic Census, NAICS Sector 72, Accommodation and Food Services	For hotels and motels, PCE; for all other traveler accommodations and bed and breakfasts, BLS QCEW data	BLS PPI and NIPA PCE prices
Food services and drinking places	Census Bureau 2012 Economic Census, NAICS Sector 72, Accommodation and Food Services	Census Bureau ARTS data	NIPA PCE prices
<b>Other services, except government</b>			
	For religious, grant making, civic, and other nonprofit services; personal services and dry cleaning services; and repair and maintenance: 2012 Economic Census taxable revenue and tax-exempt expenses, NEA PCE, NEA WS; for private household services, PCE	For religious, grant making, civic, and other nonprofit services, personal services, and dry cleaning services, Census Bureau SAS data, PCE, and data from the National Center for Charitable Statistics; for repair and maintenance, BLS QCEW; for private household services, PCE	BLS PPI and NIPA PCE prices
<b>Federal</b>			
General government	Federal budget data; Center for Medicare and Medicaid Services; BLS Current Employment Statistics	NIPA government expenditure statistics; for federal structures, DOD investment expenditures	NIPA prices based on BLS PPI and CPI; for military facilities, DOD data on employment, prices for military construction, and construction cost indexes from trade source data
Government enterprises	U.S. Postal Service receipts; EIA data for electric utilities; FHA data; federal government agency reports for specific federal enterprises	U.S. Postal Service receipts; EIA data for electric utilities; FHA data; government agency data for specific federal enterprises	BLS PPI
<b>State and local</b>			
General government	Census Bureau 2012 Census of Governments; Census Bureau 2012 Government Finances; Census Bureau 2012 Public Employment	NIPA government expenditure statistics	BLS PPI and NIPA PCE prices
Government enterprises	Census Bureau 2012 Census of Governments; Census Bureau 2012 Government Finances; Census Bureau 2012 Public Employment; Alaska Railroad Administration data for Alaskan ferries, watersports, and airports; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP survey	NIPA statistics on government enterprises based on the Census Bureau annual survey of government finances; for Alaskan ferries, watersports, and airports, Alaska Railroad Administration; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP survey	BLS PPI and NIPA PCE prices

<b>ARTS</b>	Annual Retail Trade Survey	<b>M3</b>	Manufacturers' Shipments, Inventories, and Orders
<b>ASM</b>	Annual Survey of Manufactures	<b>NAICS</b>	North American Industry Classification System
<b>BEA</b>	Bureau of Economic Analysis	<b>NIPA</b>	National Income and Product Accounts
<b>BLS</b>	Bureau of Labor Statistics	<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>BTS</b>	Bureau of Transportation Statistics	<b>PCE</b>	Personal Consumption Expenditures
<b>CPI</b>	Consumer Price Index	<b>PPI</b>	Producer Price Index
<b>DOD</b>	Department of Defense	<b>QCEW</b>	Quarterly Census of Employment and Wages
<b>DOE</b>	Department of Energy	<b>R&amp;D</b>	Research and development
<b>DOT</b>	Department of Transportation	<b>SAS</b>	Service Annual Survey
<b>EIA</b>	Energy Information Administration	<b>SEC</b>	Securities and Exchange Commission
<b>ERS</b>	Economic Research Service	<b>SOI</b>	Statistics of Income
<b>FDIC</b>	Federal Deposit Insurance Corporation	<b>STB</b>	Surface Transportation Board
<b>FHA</b>	Federal Housing Administration	<b>USDA</b>	U. S. Department of Agriculture
<b>FRB</b>	Federal Reserve Board	<b>USGS</b>	U. S. Geological Survey
<b>IRS</b>	Internal Revenue Service	<b>VIP</b>	Value of Construction Put in Place Survey
<b>ITAs</b>	International transactions accounts	<b>survey</b>	

**Table B. Principal Data Sources and Methods for Estimating Intermediate Inputs and Value Added**

Source data and methods used in 2012 benchmark year
Intermediate inputs <sup>1</sup>
<p><b>Agriculture, forestry, fishing, and hunting</b></p> <p>Inputs to the agriculture, forestry, fishing, and hunting industries were estimated from U.S. Department of Agriculture 2012 Census of Agriculture or by extrapolating 2007 benchmark I-O estimates.</p>
<p><b>Mining</b></p> <p>Inputs to the mining industries were estimated primarily from 2012 Economic Census mining sector reports. Detailed expense data used to estimate intermediate inputs included accounting, auditing, and bookkeeping services; advertising and promotional expenses; communication services; legal services; purchased electricity; purchased fuels consumed; rental payments for buildings and other structures; rental payments for machinery and equipment; supplies used and minerals received; and all other operating expenses.</p>
<p><b>Construction</b></p> <p>Inputs to the construction industries were estimated primarily from 2012 Economic Census construction data.</p>
<p><b>Manufacturing</b></p> <p>Inputs to the manufacturing industries were estimated primarily from 2012 Economic Census manufacturing sector reports. Detailed expense data used to estimate intermediate inputs included accounting, auditing, and bookkeeping services; advertising and promotional services; communication services; legal services; management consulting and administrative services; materials, parts, containers, packaging, etc. used; purchased computer services; purchased electricity; purchased fuels; refuse removal services; rental payments for buildings and other structures; rental payments for machinery and equipment; repair and maintenance services of buildings and/or machinery; and all other operating expenses. Inputs were also interpolated using the 2007 benchmark I-O estimates and ASM data.</p>
<p><b>Wholesale trade, retail trade, and accommodation and food services</b></p> <p>Inputs to the wholesale trade, retail trade, and accommodation and food services industries were estimated primarily from the Census Bureau 2012 AWTS and ARTS quinquennial Business Expenses Supplement. Detailed expense data used to estimate intermediate inputs included packaging materials and containers; data processing and other purchased computer services; communication services; repairs and maintenance to machinery and equipment; repairs and maintenance to buildings, structures, and offices; rental payments for machinery and equipment; rental payments for buildings, offices, and stores; purchased electricity; purchased fuels (except motor fuels); water, sewer, refuse removal, and other utility payments; purchased transportation, shipping, and warehousing services; purchased advertising and promotional services; and purchased professional and technical services. Inputs were also interpolated using the 2007 benchmark I-O estimates.</p>
<p><b>Services, transportation and warehousing, and utilities</b></p> <p>For selected Census-covered industries, information from the 2012 SAS on operating expenses was used. Detailed expense data used to estimate intermediate inputs included materials, parts, and supplies (not for resale); purchased electricity; purchased fuels (except motor fuels); rental payments for machinery, equipment, and other tangible items; rental payments for buildings, structures, and land; repairs and maintenance to machinery and equipment; repairs and maintenance to buildings, structures, and offices; advertising and promotional services; printing services; data processing and other purchased computer services; communication services; water, sewer, refuse removal, and other utilities; professional and technical services; and all other operating expenses.</p> <p>For industries not covered by Census, inputs were estimated from a variety of sources, including data from the 2012 SAS on operating expenses, and data from Amtrak, Department of Transportation Surface Transportation Board, Alaska Rail, Department of Energy, and Federal Reserve Board.</p>
Source data and methods used in 2012 benchmark year
Value added
<p><b>Compensation of employees</b></p> <p>Tabulations of wages and salaries from the Bureau of Labor Statistics QCEW program and estimates of supplements to wages and salaries from the NIPAs were used; data were adjusted for misreporting and I-O industry definitions.</p> <p>For industries not covered by the QCEW, payroll data from the 2012 Economic Censuses were used; data were adjusted for misreporting and I-O industry definitions. Benefits data were based on the relationship between the Economic Census, SAS, and Business Expenses Supplement reported benefits and payroll data, applied to the 2012 QCEW wage and salary data. For the remaining industries, benefits were estimated using indirect techniques.</p> <p>All estimates were adjusted to sum to total compensation by industry in the NIPAs.</p>
<p><b>Taxes on production and imports less subsidies</b></p> <p>The estimates by industry were prepared in two parts: For excise and general sales taxes, the values were estimated either as part of each industry's output or directly assigned; for other taxes, assessments and license fees, the estimates were distributed on the basis of a variety of source data, including state government tax collections statistics, the ASM, ARTS, AWTS and SAS. For all other tax liabilities, estimates were distributed to industries using indirect techniques. Subsidies are directly assigned to specific industries based on which industry is collecting the subsidy.</p> <p>All estimates were adjusted to balance to total taxes on production and imports less subsidies, by industry in the NIPAs.</p>

**Source data and methods used in 2012 benchmark year****Intermediate inputs<sup>1</sup>****Gross operating surplus**

For most industries, gross operating surplus reflects a quality-weighted average of a residual estimate (total industry output less total intermediate inputs, compensation of employees, and taxes on production and imports less subsidies) and a direct estimate based on summing up the components of gross operating surplus from the NIPAs adjusted to an establishment basis.<sup>2</sup>

<b>ARTS</b>	Annual Retail Trade Survey
<b>ASM</b>	Annual Survey of Manufactures
<b>AWTS</b>	Annual Wholesale Trade Survey
<b>I-O</b>	Input-Output
<b>NIPAs</b>	National Income and Product Accounts
<b>QCEW</b>	Quarterly Census of Employment and Wages
<b>SAS</b>	Service Annual Survey

1. Estimates for intermediate inputs were adjusted during the process of balancing commodity purchases across industries with commodity output totals.
2. See Dylan G. Rassier, Thomas F. Howells III, Edward T. Morgan, Nicholas R. Empey, and Conrad E. Roesch, [“Integrating the 2002 Benchmark Input-Output Accounts with the 2002 Annual Industry Accounts,”](#) *Survey of Current Business* 87 (December 2007): 14–22.

**Table C. Principal Data Sources for Quarterly Industry and Commodity Output and Prices**

Industry and commodity	Source data for current-dollar statistics	Source for price indexes
<b>Agriculture, forestry, fishing, and hunting</b>		
Farms	Farm output from the BEA NIPAs based on USDA ERS data	NIPA prices based on USDA price indexes received by farmers
Forestry, fishing, and related activities	For forestry, FRB IPI and BLS PPI; for fishing, commercial fishery landings data from NOAA	BLS PPI and USDA National Agriculture Statistics Services unit prices
<b>Mining</b>		
Oil and gas extraction	FRB IPI and BLS PPI	BLS PPI
Mining, except oil and gas	FRB IPI and BLS PPI	BLS PPI
Support activities for mining	FRB IPI, BLS PPI, and NIPA fixed investment in mining exploration based on trade source data	BLS PPI and NIPA prices based on trade source data
<b>Utilities</b>		
	For electric power generation, transmission, and distribution, EIA form 861M; for natural gas distribution, EIA <i>Natural Gas Monthly</i> ; for water, sewage, and other systems, Census Bureau QSS	BLS CPI and BLS PPI
<b>Construction</b>		
Residential	NIPA fixed investment in structures based primarily on Census Bureau VIP survey	Census Bureau price deflator for multi-family home construction, composite price of new single-family houses under construction and the Turner Cost Index, and BEA prices
Nonresidential	NIPA fixed investment in structures based primarily on Census Bureau VIP survey	BEA composite prices based on trade source data and on data from the Bureau of Reclamation and BLS PPI
<b>Manufacturing</b>		
	Census Bureau M3 and NIPA electronic computer shipments; for petroleum products, EIA production data and BLS PPI	BLS PPI and NIPA price indexes based on DOD prices paid for military equipment, and NIPA hedonic prices
<b>Wholesale trade</b>		
	Census Bureau Monthly Wholesale Trade Survey data	BLS PPI and NIPA sales deflators
<b>Retail trade</b>		
	Census Bureau Monthly Retail Trade Survey data	BLS PPI and NIPA sales deflators
<b>Transportation and warehousing</b>		
	For air transportation, NIPA PCE and Census Bureau QSS data; for rail transportation, Surface Transportation Board freight earnings data; for water, truck, transit and ground passenger, pipeline transportation, and warehousing, Census Bureau QSS data	For air transportation, BLS PPI; for rail, BLS PPI for rail passenger transportation and BLS PPI for freight; water transportation, BLS PPI, BLS CPI, and trade source data; for truck transportation, BLS PPI; for transit and ground passenger transportation, NIPA PCE prices; for pipeline transportation, BLS PPI; for warehousing, BLS PPI; for other transportation and support activities, NIPA PCE prices and BLS PPI
<b>Information</b>		
	Census Bureau QSS data, BLS QCEW, and box office revenues from trade source data	For publishing industries (including software), BEA prices for software and BLS PPI; for information and data processing, NIPA PCE prices and BLS PPI
<b>Finance and insurance</b>		

Industry and commodity	Source data for current-dollar statistics	Source for price indexes
Federal Reserve banks, credit intermediation, and related activities	Census Bureau QSS data, Federal Deposit Insurance Corporation commercial bank call report data, FBR data, National Credit Union Administration data, and NIPA measures of financial services indirectly measured	NIPA PCE prices
Securities, commodity contracts, and investments	Census Bureau QSS data and Securities and Exchange Commission's <i>Financial and Operational Combined Uniform Single Reports</i>	BLS PPI and NIPA PCE prices
Insurance carriers and related activities	NIPA PCE, Census Bureau QSS data, and trade source data	BLS PPI and NIPA PCE prices
Funds, trusts, and other financial vehicles	NIPA PCE and NIPA imputed service charges for other financial institutions	NIPA PCE prices
<b>Real estate and rental and leasing</b>		
Real estate	For residential dwellings, NIPA PCE and NIPA housing data; for nonresidential structures, NIPA government receipts, NIPA private fixed investment, NIPA brokers' commissions, BEA foreign expenditures from the international transactions accounts, and BLS QCEW data	For residential dwellings, NIPA PCE prices and NIPA implicit price deflators for farm rents paid; for nonresidential structures, BLS PPI and NIPA implicit price deflators for nonprofit imputed rents
Rental and leasing services and lessors of intangible assets	For rental and leasing services, Census Bureau QSS data, NIPA royalty income, and NIPA PCE rental income	BLS PPI and NIPA prices
<b>Professional, scientific, and technical services</b>		
	Census Bureau QSS data, NIPA PCE data, BLS QCEW data, and NIPA R&D data	For legal services, BLS PPI and NIPA PCE prices; for computer systems design and related services, BEA price indexes for software; for miscellaneous services, BLS PPI, NIPA PCE prices, and BEA price index for R&D
<b>Management of companies and enterprises</b>		
	BLS QCEW data	BLS PPI
<b>Administrative and waste management services</b>		
	Census Bureau QSS data and BLS QCEW data	BLS PPI and NIPA PCE prices
<b>Educational Services</b>		
	Census Bureau QSS data and NIPA PCE data	NIPA PCE prices based on trade source data for input costs
<b>Health care and social assistance</b>		
	Census Bureau QSS data	For ambulatory health care services, NIPA PCE prices based on BLS CPI and BLS PPI; for hospitals and nursing and residential care facilities, NIPA PCE prices based on BLS CPI and Center for Medicare and Medicaid Services; for social assistance, NIPA PCE prices based on trade source data
<b>Arts, entertainment, and recreation</b>		
	Census Bureau QSS data	BLS PPI and NIPA PCE prices
<b>Accommodation and food services</b>		
	Census Bureau QSS data and Monthly Retail Trade Survey data	For accommodation, BLS PPI and NIPA PCE prices; for food services, NIPA PCE prices
<b>Other services, except government</b>		

Industry and commodity	Source data for current-dollar statistics	Source for price indexes
	For repair and maintenance, personal services, and grantmaking, civic, professional, and similar organizations, Census Bureau QSS data; for religious, labor, and political organizations, NIPA PCE data; for private households, NIPA compensation	BLS PPI and NIPA PCE prices
<b>Federal</b>		
General government	NIPA government expenditures statistics	NIPA prices based on BLS PPI, BLS CPI, DOD data on employment prices, BLS employment cost indexes, and construction cost indexes from trade source data
Government enterprises	U.S. Postal Service quarterly reports, EIA monthly data for electric utility sales and revenue data for publicly owned utilities, and NIPA PCE data for broader aggregates for other components	BLS PPI and NIPA PCE prices
<b>State and local</b>		
General government	NIPA government expenditures statistics	NIPA PCE prices
Government enterprises	NIPA statistics on government enterprises based on the Census Bureau annual Survey of Government Finances; for Alaskan ferries, water ports, and airports, Alaska Railroad Administration; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP survey	BLS PPI and NIPA PCE prices

<b>BEA</b>	Bureau of Economic Analysis	<b>NIPA</b>	National Income and Product Accounts
<b>BLS</b>	Bureau of Labor Statistics	<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>CPI</b>	Consumer Price Index	<b>PCE</b>	Personal Consumption Expenditures
<b>DOD</b>	Department of Defense	<b>PPI</b>	Producer Price Index
<b>EIA</b>	Energy Information Administration	<b>QCEW</b>	Quarterly Census of Employment and Wages
<b>ERS</b>	Economic Research Service	<b>QSS</b>	Quarterly Services Survey
<b>FRB</b>	Federal Reserve Board	<b>R&amp;D</b>	Research and development
<b>IPI</b>	Industrial production index	<b>USDA</b>	U. S. Department of Agriculture
<b>M3</b>	Manufacturers' Shipments, Inventories, and Orders	<b>VIP</b>	Value of Construction Put in Place Survey
<b>NAICS</b>	North American Industry Classification System	<b>survey</b>	

1. For more information, see [“The 2019 Annual Update of the National Income and Product Accounts” Survey of Current Business](#) 99 (August 2019) and Eric Bryda, C. Omar Kebbeh, and Ted Peck, [“Annual Update of the U.S. International Transactions Accounts” Survey](#) 99 (July 2019).
2. With the release of the 2019 annual update of the IEAs, the statistics for 1947–1996 have been updated to reflect the [2018 comprehensive update](#).
3. Certain federal government agencies were shut down from December 22, 2018, through January 25, 2019, due to a lapse in appropriations; as a result, the annual revision of Census Bureau construction data was not released in time for incorporation in this annual update.
4. See Erich H. Strassner and David B. Wasshausen, [“Preview of the 2013 Comprehensive Revision of the Industry Economic Accounts: Statistical Changes” Survey](#) 93 (June 2013): 19–33.
5. For more information, see Benjamin Cowan, Shelly Smith, and Sarahelen Thompson, [“Seasonal Adjustment in the National Income and Product Accounts: Results From the 2018 Comprehensive Update” Survey](#) 98 (August 2018).

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