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USDL 18-1910

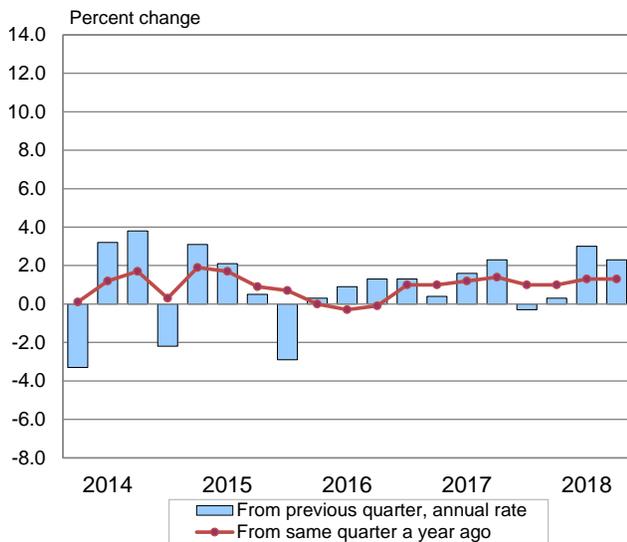
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**PRODUCTIVITY AND COSTS**  
 Third Quarter 2018, Revised

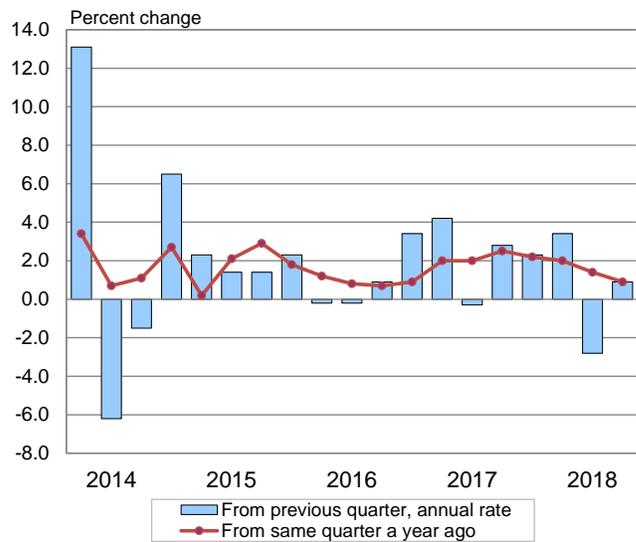
**Nonfarm business sector labor productivity** increased 2.3 percent during the third quarter of 2018, the U.S. Bureau of Labor Statistics reported today, as output increased 4.1 percent and hours worked increased 1.8 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) From the third quarter of 2017 to the third quarter of 2018, productivity increased 1.3 percent, reflecting a 3.7-percent increase in output and a 2.3-percent increase in hours worked. (See chart 1 and tables A1 and 2.)

Labor productivity, or output per hour, is calculated by dividing an index of real output by an index of hours worked by all persons, including employees, proprietors, and unpaid family workers.

**Chart 1. Labor productivity, nonfarm business, 2014Q1 – 2018Q3**



**Chart 2. Unit labor costs, nonfarm business, 2014Q1 – 2018Q3**



**Unit labor costs** in the nonfarm business sector increased 0.9 percent in the third quarter of 2018, reflecting a 3.1-percent increase in hourly compensation and a 2.3-percent increase in labor productivity. Unit labor costs also increased 0.9 percent over the last four quarters. (See chart 2 and tables A1 and 2.)

BLS calculates unit labor costs as the ratio of hourly compensation to labor productivity. Increases in hourly compensation tend to increase unit labor costs, and increases in output per hour tend to reduce them.

**Manufacturing sector labor productivity** increased 1.0 percent in the third quarter of 2018, as output increased 4.1 percent and hours worked increased 3.1 percent. Productivity increased 1.7 percent in the durable manufacturing sector, as output rose 5.2 percent and hours worked increased 3.5 percent. In the non-durable goods manufacturing sector, a 0.5-percent rise in productivity reflected a 2.9-percent increase in output and a 2.4-percent increase in hours worked. Over the last four quarters, total manufacturing sector productivity increased 1.4 percent, as output increased 3.6 percent and hours worked increased 2.1 percent. **Unit labor costs** in manufacturing decreased 1.2 percent in the third quarter of 2018 and also decreased 1.2 percent from the same quarter a year ago. (See tables A1 and 3.)

The concepts, sources, and methods used for the manufacturing output series differ from those used in the business and nonfarm business output series; these output measures are not directly comparable. See the Technical Notes for a more detailed explanation. (See page 6.)

Preliminary third-quarter 2018 measures of productivity and costs were announced for the **nonfinancial corporate sector**. Productivity increased at a 5.5-percent annual rate in the third quarter of 2018 and increased 1.9 percent over the last four quarters. Unit labor costs decreased 2.1 percent in the third quarter of 2018 and were unchanged (0.0 percent) over the last four quarters. Unit profits—a measure available only for the nonfinancial corporate sector—increased at a 14.4-percent annual rate in the third quarter of 2018. A four-quarter increase in unit profits of 11.1 percent is the largest since the first quarter of 2012, when the measure increased 18.8 percent. (See tables A2 and 6.)

### Revised measures

Measures released today are based on more recent source data than were available for the preliminary report. Regular updates of source data from the BLS, the Bureau of Economic Analysis (BEA), and the Board of Governors of the Federal Reserve System are reflected in data for the second and third quarters of 2018.

Table B1 presents revised and previous productivity and related measures for the nonfarm business, business, and manufacturing sectors for the third quarter of 2018. Revised quarterly and annual series for all sectors in recent years appear in tables 1-6.

In the **third quarter of 2018**, nonfarm business labor productivity increased 2.3 percent—about the same as the preliminary estimate of 2.2 percent—as both output and hours worked increased at the same rates reported November 1. Unit labor costs were revised down 0.3 percentage point due primarily to a downward revision to hourly compensation. In the manufacturing sector, productivity increased 1.0 percent rather than 0.5 percent as previously reported, as an upward revision to output was greater than an upward revision to hours worked. Unit labor costs were revised from a 0.9-percent increase to a 1.2-percent decline for the third quarter of 2018—the combined effect of the upward revision to productivity and a downward revision to hourly compensation.

Table B2 shows previous and revised productivity and related measures for the nonfarm business, business, manufacturing and nonfinancial corporate sectors for the second quarter of 2018.

In the **second quarter of 2018**, labor productivity, output, and hours worked were unrevised for the nonfarm business sector. Unit labor costs decreased 2.8 percent, rather than decreasing 1.0 percent as previously reported, due to a downward revision to hourly compensation. Productivity, output, and hours worked were also unrevised in the manufacturing sector. A large downward revision to manufacturing hourly compensation resulted in a similar downward revision to unit labor costs; after revision, unit labor costs fell 6.1 percent in the second quarter of 2018, in contrast to the 0.1 percent

increase reported previously. In the nonfinancial corporate sector, productivity decreased 1.9 percent rather than 0.9 percent as reported November 1, due solely to a downward revision to output; hours were unrevised. Because hourly compensation was revised down by more than productivity, unit labor costs increased less than previously reported.

Complete annual and quarterly data series can be found on the Productivity and Costs home page: [www.bls.gov/lpc/#data](http://www.bls.gov/lpc/#data).

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**The preliminary Productivity and Costs news release for fourth-quarter and annual averages 2018 is scheduled to be released on Wednesday, February 6, 2019 at 8:30 a.m. (EST).**

Calendar year 2019 release dates for Productivity and Costs news releases are now available at <a href="http://www.bls.gov/schedule/news_release/prod2.htm">www.bls.gov/schedule/news_release/prod2.htm</a> .
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**Table A1. Labor productivity growth and related measures - revised third-quarter 2018**

(percent change from previous quarter at annual rate and from same quarter a year ago)

Sector	Percent change from:	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	<b>Previous quarter</b>	<b>2.3</b>	<b>4.1</b>	<b>1.8</b>	<b>3.1</b>	<b>1.1</b>	<b>0.9</b>
	A year ago	1.3	3.7	2.3	2.2	-0.4	0.9
Business	<b>Previous quarter</b>	<b>1.9</b>	<b>4.1</b>	<b>2.1</b>	<b>2.8</b>	<b>0.8</b>	<b>0.9</b>
	A year ago	1.2	3.6	2.4	2.2	-0.4	1.0
Manufacturing	<b>Previous quarter</b>	<b>1.0</b>	<b>4.1</b>	<b>3.1</b>	<b>-0.2</b>	<b>-2.2</b>	<b>-1.2</b>
	A year ago	1.4	3.6	2.1	0.2	-2.4	-1.2
Durable manufacturing	<b>Previous quarter</b>	<b>1.7</b>	<b>5.2</b>	<b>3.5</b>	<b>0.3</b>	<b>-1.7</b>	<b>-1.4</b>
	A year ago	1.7	4.1	2.4	0.8	-1.8	-0.9
Nondurable manufacturing	<b>Previous quarter</b>	<b>0.5</b>	<b>2.9</b>	<b>2.4</b>	<b>-1.4</b>	<b>-3.3</b>	<b>-1.9</b>
	A year ago	1.4	3.0	1.6	-1.1	-3.6	-2.4

**Table A2. Labor productivity growth and related measures - preliminary third-quarter 2018**

(percent change from previous quarter at annual rate and from same quarter a year ago)

Sector	Percent change from:	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfinancial corporate	<b>Previous quarter</b>	<b>5.5</b>	<b>6.6</b>	<b>1.1</b>	<b>3.2</b>	<b>1.2</b>	<b>-2.1</b>
	A year ago	1.9	4.2	2.2	2.0	-0.6	0.0

**Table B1. Labor productivity growth and related measures - revised and previously published third-quarter 2018**

(percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	<b>Revised</b>	<b>2.3</b>	<b>4.1</b>	<b>1.8</b>	<b>3.1</b>	<b>1.1</b>	<b>0.9</b>
	Previously published	2.2	4.1	1.8	3.5	1.4	1.2
Business	<b>Revised</b>	<b>1.9</b>	<b>4.1</b>	<b>2.1</b>	<b>2.8</b>	<b>0.8</b>	<b>0.9</b>
	Previously published	1.9	4.1	2.1	3.2	1.2	1.2
Manufacturing	<b>Revised</b>	<b>1.0</b>	<b>4.1</b>	<b>3.1</b>	<b>-0.2</b>	<b>-2.2</b>	<b>-1.2</b>
	Previously published	0.5	3.4	2.9	1.5	-0.5	0.9
Durable manufacturing	<b>Revised</b>	<b>1.7</b>	<b>5.2</b>	<b>3.5</b>	<b>0.3</b>	<b>-1.7</b>	<b>-1.4</b>
	Previously published	1.5	4.9	3.4	1.8	-0.2	0.3
Nondurable manufacturing	<b>Revised</b>	<b>0.5</b>	<b>2.9</b>	<b>2.4</b>	<b>-1.4</b>	<b>-3.3</b>	<b>-1.9</b>
	Previously published	-0.1	1.9	2.0	0.8	-1.2	0.9

**Table B2. Labor productivity growth and related measures - revised and previously published second-quarter 2018**  
(percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	<b>Revised</b>	<b>3.0</b>	<b>5.0</b>	<b>2.0</b>	<b>0.0</b>	<b>-1.6</b>	<b>-2.8</b>
	Previously published	3.0	5.0	2.0	1.9	0.3	-1.0
Business	<b>Revised</b>	<b>3.6</b>	<b>5.1</b>	<b>1.5</b>	<b>0.5</b>	<b>-1.1</b>	<b>-2.9</b>
	Previously published	3.6	5.1	1.5	2.4	0.7	-1.1
Manufacturing	<b>Revised</b>	<b>1.2</b>	<b>2.6</b>	<b>1.4</b>	<b>-5.0</b>	<b>-6.5</b>	<b>-6.1</b>
	Previously published	1.2	2.6	1.4	1.3	-0.3	0.1
Durable manufacturing	<b>Revised</b>	<b>0.3</b>	<b>2.0</b>	<b>1.7</b>	<b>-4.8</b>	<b>-6.4</b>	<b>-5.1</b>
	Previously published	0.3	2.0	1.7	1.1	-0.6	0.8
Nondurable manufacturing	<b>Revised</b>	<b>2.4</b>	<b>3.3</b>	<b>0.8</b>	<b>-5.4</b>	<b>-6.9</b>	<b>-7.6</b>
	Previously published	2.4	3.3	0.8	1.7	0.0	-0.7
Nonfinancial corporate	<b>Revised</b>	<b>-1.9</b>	<b>0.8</b>	<b>2.8</b>	<b>0.0</b>	<b>-1.7</b>	<b>1.9</b>
	Previously published	-0.9	1.9	2.8	1.8	0.2	2.7

## TECHNICAL NOTES

### Labor Hours

Hours data for the labor productivity and cost measures include hours worked for all persons working in the sector—wage and salary workers, the self-employed and unpaid family workers. The primary source of hours and employment data is the BLS Current Employment Statistics (CES) program, which provides monthly survey data on the number of jobs held by wage and salary workers in nonfarm establishments, counting a person who is employed by two or more establishments at each place of employment. The CES also provides average weekly paid hours of production and nonsupervisory workers in these establishments. Weekly paid hours are adjusted to hours worked using data from the National Compensation Survey (NCS) for 1996 forward and data from the BLS Hours at Work survey, conducted for this purpose, prior to 1990. Between 1990 and 1995, weekly paid hours are adjusted to hours at work using a combination of NCS and Hours at Work survey data. The Office of Productivity and Technology estimates average weekly hours at work for nonproduction and supervisory workers using information from the Current Population Survey (CPS), the CES, and the NCS.

Data from the CPS are used to estimate hours worked for farm labor, nonfarm proprietors, and nonfarm unpaid family workers. Using CPS information on employment and hours worked at primary jobs and all other jobs, separately, the BLS productivity measures assign all hours worked to the appropriate industrial sector. Hours for government enterprises are derived from the CPS, the CES, and the National Income and Product Accounts (NIPA) prepared by the Bureau of Economic Analysis (BEA) of the Department of Commerce.

### Output

Business sector output is a chain-type, current-weighted index constructed after excluding from gross domestic product (GDP) the following outputs: general government, nonprofit institutions, and private households (including owner-occupied housing). Corresponding exclusions also are made in labor hours. Business output accounted for about 76 percent of the value of GDP in 2017. Nonfarm business, which excludes farming, accounted for about 75 percent of GDP in 2017.

Annual indexes for manufacturing and its durable and nondurable goods components are constructed by deflating current-dollar industry value of production data from the U.S. Bureau of the Census with deflators from the BLS. These deflators are based on data from the BLS Producer Price Index program and other sources. The industry shipments are aggregated using annual weights, and intrasector transactions are removed. Quarterly manufacturing output measures are based on the indexes of industrial production prepared monthly by the Board of Governors of the Federal Reserve System, adjusted to be consistent with annual indexes of manufacturing sector output prepared by BLS.

Nonfinancial corporate output is a chain-type, current-weighted index calculated on the basis of the costs incurred and the incomes earned from production. The output measure excludes the following outputs from GDP: general government; nonprofit institutions; private households; unincorporated business; and those corporations classified as offices of bank holding companies, offices of other holding companies, or offices in the finance and insurance sector. Nonfinancial corporations accounted for about 49 percent of the value of GDP in 2017.

### Labor Productivity

The measure describes the relationship between real output and the labor time involved in its production. Measures of labor productivity growth show the changes from period to period in the amount of goods and services produced per hour worked. They reflect the joint effects of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and effort of the work force.

## **Labor Compensation**

The measure includes accrued wages and salaries, supplements, employer contributions to employee benefit plans, and taxes. Estimates of labor compensation by major sector, required for measures of hourly compensation and unit labor costs, are based primarily on employee compensation data from the NIPA, prepared by the BEA. The compensation of employees in general government, nonprofit institutions and private households are subtracted from compensation of employees in domestic industries to derive employee compensation for the business sector. The labor compensation of proprietors cannot be explicitly identified and must be estimated. This is done by assuming that proprietors have the same hourly compensation as employees in the same sector. The quarterly labor productivity and cost measures do not contain estimates of compensation for unpaid family workers.

## **Unit Labor Costs**

These measures describe the relationship between compensation per hour and labor productivity, or real output per hour, and can be used as an indicator of inflationary pressure on producers. Increases in hourly compensation increase unit labor costs; labor productivity increases offset compensation increases and lower unit labor costs.

## **Presentation of the data**

The quarterly data in this release are presented in three ways: as percent changes from the previous quarter presented at a compound annual rate, as percent changes from the corresponding quarter of the previous year, and as index number series where 2012=100. Annual data are presented both as index number series and percent changes from the previous year.

The index numbers and rates of change reported in the productivity and costs news release are rounded to one decimal place. All percent changes in this release and on the BLS web site are calculated using index numbers to three decimal places. A complete historical series of these index numbers are available at the BLS web site, [www.bls.gov/data/home.htm](http://www.bls.gov/data/home.htm), or by contacting the BLS Division of Major Sector Productivity (Telephone 202-691-5606 or email [productivity@bls.gov](mailto:productivity@bls.gov)).

For a more detailed explanation of methodology see "Technical Information About the Major Sector Productivity and Costs Methods" at [www.bls.gov/lpc/lpcmmethods.pdf](http://www.bls.gov/lpc/lpcmmethods.pdf).

Information in this release will be made available to sensory-impaired individuals upon request. Voice phone: 202-691-5200; Federal Relay Service number: 1-800-877-8339.

Table 1. Business sector: Labor productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor payments (3)	Implicit price deflator (4)
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Percent change from previous quarter at annual rate (5)								
2018 III	1.9	4.1	2.1	2.8 r	0.8 r	0.9 r	1.1 r	1.0 r
II	3.6	5.1	1.5	0.5 r	-1.1 r	-2.9 r	12.7 r	3.6
I	0.6	2.5	1.9	4.3	0.8	3.7	-0.4	1.9
2017 ANNUAL	1.1	2.6	1.5	3.4	1.2	2.3	1.0	1.7
2017 IV	-1.1	2.9	4.1	1.2	-2.1	2.4	3.6	2.9
III	2.8	3.5	0.7	5.6	3.4	2.8	0.9	2.0
II	1.6	3.7	2.1	1.3	1.2	-0.3	2.3	0.8
I	-0.2	1.9	2.0	4.0	1.0	4.2	-1.3	1.8
2016 ANNUAL	0.2	1.7	1.5	1.0	-0.2	0.9	0.9	0.9
2016 IV	1.9	2.2	0.3	5.6	2.7	3.6	-0.6	1.7
III	1.6	2.2	0.6	2.5	0.6	0.9	1.7	1.3
II	0.7	2.6	1.9	0.3	-2.3	-0.4	7.7	3.1
I	0.2	1.6	1.4	0.0	0.1	-0.2	-1.5	-0.8
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Percent change from corresponding quarter of previous year								
2018 III	1.2	3.6	2.4	2.2 r	-0.4 r	1.0 r	4.1 r	2.3 r
II	1.4	3.5	2.0	2.9 r	0.2 r	1.4 r	4.1 r	2.6
I	0.9	3.1	2.2	3.1	0.8	2.1	1.6	1.9
2017 ANNUAL	1.1	2.6	1.5	3.4	1.2	2.3	1.0	1.7
2017 IV	0.8	3.0	2.2	3.0	0.9	2.3	1.4	1.9
III	1.5	2.8	1.3	4.1	2.1	2.6	0.3	1.6
II	1.2	2.5	1.3	3.3	1.4	2.1	0.5	1.4
I	1.0	2.2	1.2	3.1	0.5	2.1	1.8	2.0
2016 ANNUAL	0.2	1.7	1.5	1.0	-0.2	0.9	0.9	0.9
2016 IV	1.1	2.1	1.0	2.1	0.3	1.0	1.8	1.3
III	-0.1	1.6	1.8	0.5	-0.7	0.6	1.0	0.8
II	-0.4	1.3	1.6	0.4	-0.7	0.7	0.9	0.8
I	0.1	1.6	1.6	1.2	0.1	1.2	-0.2	0.6
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Indexes 2012=100								
2018 III	105.9 r	118.7	112.1 r	115.2 r	104.9 r	108.7 r	109.5 r	109.1 r
II	105.4	117.5	111.5	114.4 r	104.6 r	108.5 r	109.2 r	108.8
I	104.5	116.0	111.1	114.2	104.9	109.3	106.0	107.9
2017 ANNUAL	104.1	114.0	109.5	111.9	104.6	107.5	105.1	106.5
2017 IV	104.3	115.3	110.6	113.0	104.7	108.3	106.1	107.4
III	104.6	114.5	109.5	112.7	105.3	107.7	105.1	106.6
II	103.9	113.5	109.3	111.2	104.4	107.0	104.9	106.1
I	103.5	112.5	108.7	110.8	104.1	107.0	104.3	105.8
2016 ANNUAL	102.9	111.1	107.9	108.2	103.4	105.2	104.1	104.7
2016 IV	103.5	112.0	108.2	109.7	103.8	105.9	104.6	105.4
III	103.1	111.4	108.1	108.2	103.1	105.0	104.8	104.9
II	102.7	110.8	107.9	107.6	103.0	104.8	104.4	104.6
I	102.5	110.1	107.4	107.5	103.6	104.9	102.4	103.8
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See footnotes following Table 6.  
r=revised

December 6, 2018  
Source: Bureau of Labor Statistics

Table 2. Nonfarm business sector: Labor productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor payments (3)	Implicit price deflator (4)
-----								
Percent change from previous quarter at annual rate (5)								
2018 III	2.3 r	4.1	1.8	3.1 r	1.1 r	0.9 r	1.8 r	1.3 r
II	3.0	5.0	2.0	0.0 r	-1.6 r	-2.8 r	12.7 r	3.6
I	0.3	2.6	2.3	3.8	0.2	3.4	-0.3	1.8
2017 ANNUAL	1.1	2.7	1.6	3.4	1.2	2.2	0.9	1.6
2017 IV	-0.3	3.0	3.3	1.9	-1.3	2.3	3.7	2.9
III	2.3	3.6	1.3	5.1	2.9	2.8	1.1	2.1
II	1.6	3.8	2.2	1.3	1.2	-0.3	2.3	0.8
I	0.4	1.9	1.5	4.7	1.6	4.2	-2.4	1.3
2016 ANNUAL	0.1	1.6	1.5	1.1	-0.2	0.9	1.2	1.1
2016 IV	1.3	2.3	1.0	4.7	1.9	3.4	-0.1	1.8
III	1.3	2.2	0.9	2.2	0.3	0.9	2.2	1.5
II	0.9	2.5	1.6	0.7	-2.0	-0.2	7.8	3.2
I	0.3	1.6	1.3	0.1	0.1	-0.2	-0.5	-0.3
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Percent change from corresponding quarter of previous year								
2018 III	1.3	3.7	2.3 r	2.2 r	-0.4 r	0.9 r	4.3 r	2.4
II	1.3	3.5	2.2	2.7 r	0.0 r	1.4 r	4.2 r	2.6
I	1.0	3.2	2.3	3.0	0.7	2.0	1.7	1.9
2017 ANNUAL	1.1	2.7	1.6	3.4	1.2	2.2	0.9	1.6
2017 IV	1.0	3.1	2.1	3.2	1.1	2.2	1.1	1.8
III	1.4	2.9	1.5	3.9	1.9	2.5	0.2	1.5
II	1.2	2.6	1.4	3.2	1.3	2.0	0.5	1.4
I	1.0	2.2	1.2	3.1	0.5	2.0	1.8	1.9
2016 ANNUAL	0.1	1.6	1.5	1.1	-0.2	0.9	1.2	1.1
2016 IV	1.0	2.1	1.2	1.9	0.1	0.9	2.3	1.5
III	-0.1	1.6	1.7	0.6	-0.6	0.7	1.5	1.0
II	-0.3	1.2	1.5	0.5	-0.6	0.8	1.2	1.0
I	0.0	1.6	1.6	1.2	0.1	1.2	0.0	0.7
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Indexes 2012=100								
2018 III	105.7 r	118.5 r	112.1 r	115.3 r	104.9 r	109.0 r	110.5 r	109.7 r
II	105.1	117.3	111.7	114.4 r	104.6 r	108.8 r	110.0 r	109.3
I	104.3	115.9	111.1	114.3	105.1	109.6	106.8	108.4
2017 ANNUAL	103.9	113.8	109.5	112.1	104.8	107.9	105.9	107.0
2017 IV	104.3	115.2	110.5	113.3	105.0	108.7	106.9	107.9
III	104.3	114.3	109.6	112.8	105.3	108.1	105.9	107.1
II	103.8	113.3	109.2	111.4	104.6	107.3	105.6	106.6
I	103.4	112.3	108.6	111.0	104.3	107.4	105.0	106.4
2016 ANNUAL	102.8	110.8	107.8	108.5	103.6	105.5	104.9	105.3
2016 IV	103.2	111.7	108.2	109.7	103.9	106.3	105.7	106.0
III	102.9	111.1	108.0	108.5	103.4	105.4	105.7	105.6
II	102.6	110.5	107.7	107.9	103.3	105.2	105.1	105.2
I	102.3	109.8	107.3	107.7	103.8	105.2	103.2	104.4
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See footnotes following Table 6.  
r=revised

December 6, 2018  
Source: Bureau of Labor Statistics

Table 3. Manufacturing sector: Labor productivity, hourly compensation, and unit labor costs, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs
-----						
Percent change from previous quarter at annual rate (5)						
2018 III	1.0 r	4.1 r	3.1 r	-0.2 r	-2.2 r	-1.2 r
II	1.2	2.6	1.4	-5.0 r	-6.5 r	-6.1 r
I	-0.8	2.0	2.9	4.6	1.1	5.5
2017 ANNUAL	0.7	1.8	1.0	3.3	1.1	2.6
2017 IV	4.4	5.5	1.1	1.6	-1.7	-2.7
III	-5.0	-1.9	3.3	2.4	0.3	7.8
II	3.5	2.9	-0.6	3.0	2.9	-0.5
I	-0.3	2.2	2.5	3.9	0.9	4.2
2016 ANNUAL	0.3	0.4	0.0	0.6	-0.7	0.3
2016 IV	2.6	2.4	-0.3	5.8	3.0	3.0
III	0.6	1.7	1.1	1.8	-0.1	1.2
II	-0.8	-1.1	-0.2	1.5	-1.2	2.3
I	2.5	1.8	-0.6	-2.7	-2.6	-5.0
-----						
Percent change from corresponding quarter of previous year						
2018 III	1.4 r	3.6 r	2.1	0.2 r	-2.4 r	-1.2 r
II	-0.1	2.0	2.1	0.8 r	-1.8 r	0.9 r
I	0.5	2.1	1.6	2.9	0.6	2.4
2017 ANNUAL	0.7	1.8	1.0	3.3	1.1	2.6
2017 IV	0.6	2.1	1.5	2.7	0.6	2.1
III	0.2	1.4	1.2	3.8	1.7	3.6
II	1.6	2.3	0.7	3.6	1.7	2.0
I	0.5	1.3	0.8	3.2	0.6	2.7
2016 ANNUAL	0.3	0.4	0.0	0.6	-0.7	0.3
2016 IV	1.2	1.2	0.0	1.6	-0.3	0.3
III	-0.2	0.3	0.4	-0.2	-1.3	0.0
II	0.2	0.0	-0.2	0.4	-0.7	0.2
I	0.1	-0.1	-0.1	0.6	-0.5	0.6
-----						
Indexes 2012=100						
2018 III	101.2 r	108.2 r	107.0 r	110.7 r	100.8 r	109.4 r
II	100.9 r	107.2 r	106.2	110.8 r	101.4 r	109.8 r
I	100.6	106.5	105.8	112.2	103.1	111.5
2017 ANNUAL	100.4	104.9	104.5	110.1	102.9	109.6
2017 IV	100.8	105.9	105.1	111.0	102.8	110.1
III	99.7	104.5	104.8	110.5	103.3	110.8
II	101.0	105.0	104.0	109.9	103.2	108.8
I	100.2	104.3	104.1	109.1	102.5	108.9
2016 ANNUAL	99.7	103.1	103.4	106.6	101.8	106.9
2016 IV	100.2	103.7	103.5	108.0	102.2	107.8
III	99.6	103.1	103.5	106.5	101.5	107.0
II	99.4	102.7	103.3	106.1	101.5	106.7
I	99.6	103.0	103.3	105.7	101.8	106.0
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See footnotes following Table 6.  
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December 6, 2018  
Source: Bureau of Labor Statistics

Table 4. Durable manufacturing sector: Labor productivity, hourly compensation, and unit labor costs, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs
-----						
Percent change from previous quarter at annual rate (5)						
2018 III	1.7 r	5.2 r	3.5 r	0.3 r	-1.7 r	-1.4 r
II	0.3	2.0	1.7	-4.8 r	-6.4 r	-5.1 r
I	0.0	4.0	4.0	5.8	2.2	5.8
2017 ANNUAL	1.1	1.7	0.6	4.1	1.9	2.9
2017 IV	4.8	5.2	0.4	2.2	-1.1	-2.4
III	-4.8	-2.3	2.6	2.4	0.3	7.6
II	4.6	2.1	-2.3	6.1	6.0	1.5
I	-0.8	2.8	3.6	3.4	0.4	4.2
2016 ANNUAL	-0.8	-1.2	-0.4	0.9	-0.3	1.8
2016 IV	3.1	2.5	-0.6	6.8	4.0	3.6
III	1.9	2.2	0.3	2.2	0.4	0.3
II	-0.4	-1.9	-1.5	1.9	-0.8	2.3
I	-1.2	-1.1	0.1	-2.1	-2.0	-0.9
-----						
Percent change from corresponding quarter of previous year						
2018 III	1.7 r	4.1 r	2.4	0.8 r	-1.8 r	-0.9 r
II	0.0	2.2	2.2	1.3 r	-1.3 r	1.3 r
I	1.1	2.2	1.1	4.1	1.8	3.0
2017 ANNUAL	1.1	1.7	0.6	4.1	1.9	2.9
2017 IV	0.9	1.9	1.0	3.5	1.4	2.6
III	0.5	1.2	0.8	4.7	2.6	4.2
II	2.2	2.4	0.2	4.6	2.6	2.4
I	0.9	1.4	0.4	3.6	0.9	2.6
2016 ANNUAL	-0.8	-1.2	-0.4	0.9	-0.3	1.8
2016 IV	0.8	0.4	-0.4	2.2	0.3	1.3
III	-1.3	-1.4	0.0	0.2	-0.9	1.6
II	-1.4	-2.0	-0.7	0.7	-0.4	2.1
I	-1.5	-1.9	-0.4	0.7	-0.4	2.2
-----						
Indexes 2012=100						
2018 III	101.6 r	108.6 r	106.8 r	112.1 r	102.0 r	110.3 r
II	101.2 r	107.2 r	105.9	112.0 r	102.5 r	110.7 r
I	101.1	106.7	105.4	113.4	104.2	112.1
2017 ANNUAL	100.6	104.8	104.2	110.6	103.4	110.0
2017 IV	101.1	105.6	104.4	111.8	103.6	110.5
III	100.0	104.3	104.3	111.2	103.9	111.2
II	101.2	104.9	103.6	110.5	103.8	109.2
I	100.1	104.3	104.3	108.9	102.3	108.8
2016 ANNUAL	99.5	103.0	103.5	106.3	101.5	106.8
2016 IV	100.3	103.6	103.3	108.0	102.2	107.7
III	99.5	103.0	103.5	106.2	101.2	106.8
II	99.0	102.4	103.4	105.7	101.1	106.7
I	99.1	102.9	103.8	105.2	101.3	106.1
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See footnotes following Table 6.  
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December 6, 2018  
Source: Bureau of Labor Statistics

Table 5. Nondurable manufacturing sector: Labor productivity, hourly compensation, and unit labor costs, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs
-----						
Percent change from previous quarter at annual rate (5)						
2018 III	0.5 r	2.9 r	2.4 r	-1.4 r	-3.3 r	-1.9 r
II	2.4	3.3	0.8	-5.4 r	-6.9 r	-7.6 r
I	-1.0	0.0	1.0	2.0	-1.5	3.0
2017 ANNUAL	-0.2	1.6	1.8	2.0	-0.2	2.2
2017 IV	3.5	5.8	2.2	0.5	-2.8	-2.9
III	-5.5	-1.4	4.3	2.6	0.5	8.6
II	1.2	3.7	2.4	-2.5	-2.6	-3.7
I	0.8	1.5	0.7	4.6	1.6	3.8
2016 ANNUAL	0.7	1.4	0.7	0.0	-1.2	-0.6
2016 IV	1.7	1.9	0.2	3.9	1.2	2.2
III	-1.9	0.5	2.4	1.1	-0.7	3.1
II	-3.2	-1.2	2.0	0.9	-1.7	4.2
I	5.8	3.7	-1.9	-3.9	-3.9	-9.1
-----						
Percent change from corresponding quarter of previous year						
2018 III	1.4 r	3.0 r	1.6 r	-1.1 r	-3.6 r	-2.4 r
II	-0.2	1.9	2.1	-0.1 r	-2.7 r	0.1 r
I	-0.5	2.0	2.5	0.6	-1.6	1.1
2017 ANNUAL	-0.2	1.6	1.8	2.0	-0.2	2.2
2017 IV	-0.1	2.4	2.4	1.3	-0.8	1.3
III	-0.5	1.4	1.9	2.1	0.2	2.6
II	0.4	1.9	1.4	1.8	-0.1	1.3
I	-0.7	0.6	1.3	2.6	0.1	3.3
2016 ANNUAL	0.7	1.4	0.7	0.0	-1.2	-0.6
2016 IV	0.5	1.2	0.7	0.5	-1.3	0.0
III	0.0	1.2	1.2	-0.9	-2.0	-0.8
II	0.9	1.5	0.7	0.0	-1.1	-0.8
I	1.4	1.8	0.4	0.5	-0.6	-0.9
-----						
Indexes 2012=100						
2018 III	101.2 r	108.6 r	107.3 r	108.1 r	98.5 r	106.9 r
II	101.1 r	107.8 r	106.7	108.5 r	99.3 r	107.4 r
I	100.5	106.9	106.5	110.0	101.1	109.5
2017 ANNUAL	100.7	105.8	105.0	109.2	102.1	108.5
2017 IV	100.7	107.0	106.2	109.5	101.5	108.7
III	99.8	105.5	105.6	109.4	102.2	109.6
II	101.3	105.8	104.5	108.7	102.1	107.3
I	101.0	104.9	103.9	109.4	102.7	108.3
2016 ANNUAL	100.9	104.1	103.2	107.1	102.3	106.2
2016 IV	100.8	104.5	103.7	108.1	102.3	107.3
III	100.3	104.0	103.6	107.1	102.0	106.7
II	100.8	103.9	103.0	106.8	102.2	105.9
I	101.6	104.2	102.5	106.5	102.7	104.8
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See footnotes following Table 6.  
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December 6, 2018  
Source: Bureau of Labor Statistics

Table 6. Nonfinancial corporate sector: Labor productivity, hourly compensation, unit labor costs, unit profits, and prices, seasonally adjusted.

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor costs (6)	Total unit costs (7)	Unit profits (8)	Implicit price deflator (4)
Percent change from previous quarter at annual rate (5)										
2018 III	5.5	6.6	1.1	3.2	1.2	-2.1	-2.2	-2.1	14.4	-0.1
II	-1.9 r	0.8 r	2.8	0.0 r	-1.7 r	1.9 r	2.7 r	2.2 r	17.1 r	4.0
I	3.0	5.3	2.2	4.4	0.8	1.4	-1.0	0.6	5.5	1.2
2017 ANNUAL	1.6	3.4	1.7	3.2	1.0	1.5	1.0	1.3	-2.1	0.9
2017 IV	1.4	4.2	2.7	0.3	-2.9	-1.1	0.5	-0.6	7.8	0.4
III	1.1	2.5	1.5	2.8	0.6	1.7	0.6	1.3	-17.1	-1.2
II	4.5	7.4	2.7	-0.1	-0.2	-4.4	-2.4	-3.7	7.5	-2.4
I	3.1	5.0	1.8	8.1	5.0	4.9	0.0	3.2	10.6	4.1
2016 ANNUAL	0.0	1.5	1.5	1.1	-0.2	1.0	0.1	0.7	-6.8	-0.3
2016 IV	-2.4	-1.7	0.7	3.4	0.6	6.0	7.6	6.5	-9.1	4.4
III	4.7	6.3	1.5	1.5	-0.4	-3.1	-3.6	-3.3	-5.4	-3.5
II	-4.8	-3.6	1.3	0.3	-2.4	5.4	6.5	5.8	-21.8	1.6
I	3.3	3.8	0.5	2.0	2.1	-1.2	-14.3	-5.7	31.2	-1.5
Percent change from corresponding quarter of previous year										
2018 III	1.9	4.2	2.2	2.0	-0.6	0.0	0.0	0.0	11.1	1.4
II	0.9 r	3.2 r	2.3	1.8 r	-0.8 r	1.0 r	0.7 r	0.9	2.5 r	1.1
I	2.5	4.8	2.3	1.8	-0.4	-0.6	-0.6	-0.6	0.3	-0.5
2017 ANNUAL	1.6	3.4	1.7	3.2	1.0	1.5	1.0	1.3	-2.1	0.9
2017 IV	2.5	4.8	2.2	2.7	0.6	0.2	-0.3	0.0	1.5	0.2
III	1.5	3.2	1.7	3.5	1.5	1.9	1.4	1.8	-2.7	1.2
II	2.4	4.2	1.7	3.2	1.3	0.7	0.3	0.6	0.5	0.6
I	0.1	1.4	1.3	3.3	0.7	3.2	2.5	3.0	-7.1	1.6
2016 ANNUAL	0.0	1.5	1.5	1.1	-0.2	1.0	0.1	0.7	-6.8	-0.3
2016 IV	0.1	1.1	1.0	1.8	0.0	1.7	-1.4	0.7	-3.1	0.2
III	0.3	1.9	1.6	0.7	-0.5	0.4	0.2	0.4	-11.6	-1.4
II	-0.7	1.0	1.7	0.6	-0.5	1.2	1.1	1.2	-7.7	0.0
I	0.3	2.0	1.7	1.2	0.1	0.9	0.4	0.7	-4.4	0.0
Indexes 2012=100										
2018 III	106.1	120.1	113.2	114.3	104.1	107.7	104.0	106.5	98.9	105.4
II	104.7 r	118.2 r	112.9	113.4 r	103.7 r	108.3 r	104.5 r	107.1 r	95.6 r	105.4 r
I	105.2	118.0	112.2	113.4	104.2	107.8	103.8	106.5	91.9	104.4
2017 ANNUAL	103.7	114.7	110.6	111.7	104.5	107.7	104.1	106.5	91.2	104.3
2017 IV	104.4	116.5	111.5	112.2	104.0	107.4	104.1	106.3	90.7	104.1
III	104.1	115.3	110.8	112.1	104.7	107.7	104.0	106.5	89.0	104.0
II	103.8	114.6	110.4	111.3	104.6	107.3	103.8	106.1	93.3	104.3
I	102.6	112.6	109.7	111.4	104.6	108.5	104.4	107.1	91.6	104.9
2016 ANNUAL	102.1	111.0	108.7	108.3	103.4	106.1	103.1	105.1	93.1	103.4
2016 IV	101.9	111.2	109.2	109.2	103.3	107.2	104.4	106.3	89.4	103.9
III	102.5	111.7	109.0	108.3	103.2	105.7	102.5	104.6	91.5	102.8
II	101.3	110.0	108.6	107.9	103.3	106.5	103.5	105.5	92.8	103.7
I	102.6	111.0	108.2	107.8	103.9	105.1	101.9	104.0	98.7	103.3

See footnotes following Table 6.  
r=revised

December 6, 2018  
Source: Bureau of Labor Statistics

**SOURCES:** Output data are from the Bureau of Economic Analysis and the Census Bureau of the U.S. Department of Commerce; the Bureau of Labor Statistics, U.S. Department of Labor; and the Federal Reserve Board. Hours and compensation data are from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

**RELIABILITY:** Productivity and cost measures are regularly revised as more complete information becomes available. The measures are first published within 40 days of the close of the reference period; revisions appear 30 days later, and second revisions after an additional 60 days. In the business sector, the third publication (second revision) of a quarterly index of output per hour of all persons has differed from the initial value by between -1.5 and 1.4 index points approximately 95 percent of the time. This interval is based on the performance of this measure between the fourth quarter of 1995 and the second quarter of 2018.

### **Table Footnotes**

- (1) Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Except for nonfinancial corporations, where there are no self-employed, data also include an estimate of wages, salaries, and supplemental payments for the self-employed.
- (2) The change for recent quarters is based on the Consumer Price Index for all urban consumers (CPI-U). The trend from 1978-2017 is based on the Consumer Price Index research series (CPI-U-RS).
- (3) Unit nonlabor payments include profits, consumption of fixed capital, taxes on production and imports less subsidies, net interest and miscellaneous payments, business current transfer payments, rental income of persons, and the current surplus of government enterprises.
- (4) Current dollar output divided by the output index.
- (5) Quarterly changes: Percent change compounded at annual rate is calculated using index numbers to three decimal places. Indexes published in the news release are rounded to one decimal place for convenience. Annual changes: Percent change is calculated using annual indexes to three decimal places.
- (6) Unit nonlabor costs include consumption of fixed capital, taxes on production and imports less subsidies, net interest and miscellaneous payments, and business current transfer payments.
- (7) Total unit costs are the sum of unit labor and nonlabor costs.
- (8) Unit profits include corporate profits before tax with inventory valuation and capital consumption adjustments.