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USDL 17-1221

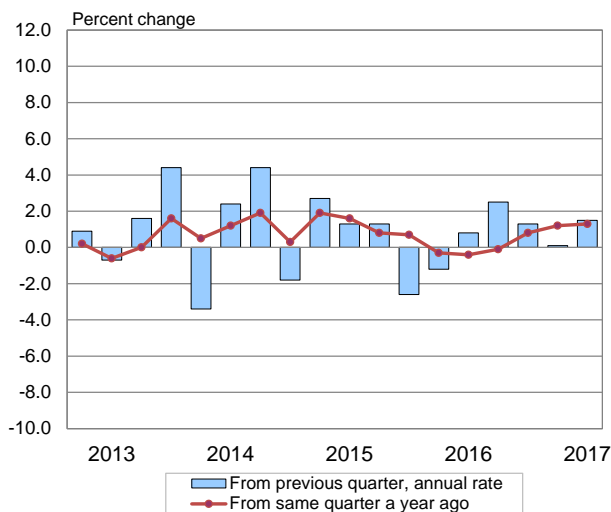
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**PRODUCTIVITY AND COSTS**  
 Second Quarter 2017, Revised

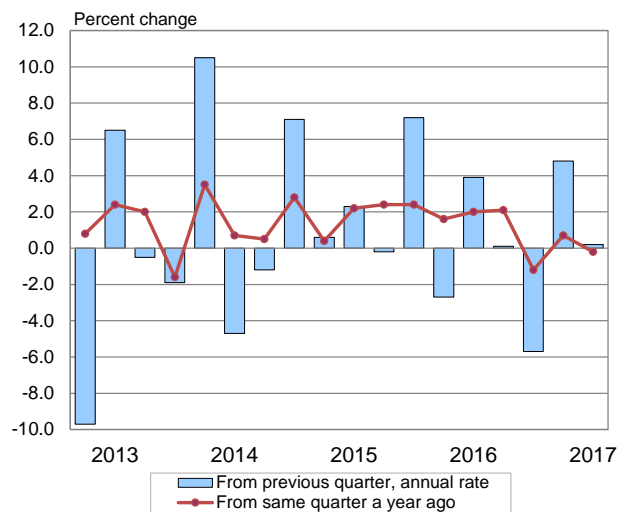
**Nonfarm business sector labor productivity** increased 1.5 percent during the second quarter of 2017, the U.S. Bureau of Labor Statistics reported today, as output increased 4.0 percent and hours worked increased 2.5 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) From the second quarter of 2016 to the second quarter of 2017, productivity increased 1.3 percent, reflecting a 2.8-percent increase in output and a 1.5-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, 2013Q1 – 2017Q2**



**Chart 2. Unit labor costs, nonfarm business, 2013Q1 – 2017Q2**



**Unit labor costs** in the nonfarm business sector increased 0.2 percent in the second quarter of 2017, reflecting a 1.8-percent increase in hourly compensation and a 1.5-percent increase in productivity. Unit labor costs decreased 0.2 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 2.9 percent in the second quarter of 2017, as output increased 2.1 percent and hours worked decreased 0.7 percent. The increase in manufacturing output per hour is the largest since the first quarter of 2012, when the measure increased 3.2 percent. Productivity increased 3.8 percent in the durable goods manufacturing sector and increased 0.5 percent in the nondurable goods sector in the second quarter of 2017. The larger productivity gain in durable goods industries was due primarily to a 2.7-percent decline in hours worked, as output increased 1.0 percent. In contrast, the modest increase in nondurable manufacturing productivity reflected a 2.8-percent increase in hours worked and a 3.4-percent increase in output. Over the last four quarters, total manufacturing sector productivity increased 1.1 percent, as output increased 1.6 percent and hours worked increased 0.5 percent. (See tables A1, 3, 4 and 5.) **Unit labor costs** in manufacturing decreased 0.4 percent in the second quarter of 2017 and rose 0.1 percent from the same quarter a year ago.

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 second-quarter 2017 measures of productivity and costs were announced for the **nonfinancial corporate sector**. Productivity increased 4.6 percent in the second quarter of 2017, as output increased 7.8 percent, and hours worked increased 3.1 percent; the increase in output was the largest since a 9.9-percent gain in the first quarter of 2012. Unit labor costs decreased 2.6 percent, as hourly compensation increased 1.9 percent and productivity increased 4.6 percent. (See tables A2 and 6.)

### Revised measures

The measures released today are based on more recent source data than were available for the preliminary report. Table B1 presents previous and revised productivity and related measures for the nonfarm business, business, and manufacturing sectors.

In the **second quarter of 2017**, nonfarm business productivity was revised up 0.6 percentage point to an increase of 1.5 percent. Output was revised up to an increase of 4.0 percent; hours were not revised. Unit labor costs increased 0.2 percent rather than increasing 0.6 percent as reported August 9, as a 0.6-percentage point upward revision to productivity was slightly offset by a 0.2-percentage point upward revision to hourly compensation.

In the second quarter of 2017, manufacturing sector productivity was revised up to an increase of 2.9 percent from a previously-reported increase of 2.5 percent. Unit labor costs decreased 0.4 percent, a slightly larger decline than previously reported. Durable goods manufacturing productivity was not revised, and nondurable goods manufacturing productivity was revised up to an increase of 0.5 percent.

Table B2 shows previous and revised productivity and related measures for the nonfarm business, business, manufacturing and nonfinancial corporate sectors for the first quarter of 2017.

In the **first quarter of 2017**, nonfarm business productivity increased at the same 0.1-percent rate reported in the preliminary estimate. Unit labor costs were revised down 0.6 percentage point to an increase of 4.8 percent. Manufacturing sector productivity was revised down slightly to an increase of 0.2 percent. Hourly compensation and unit labor costs had upward revisions of 0.2 percentage point and 0.4 percentage point, respectively.

In the nonfinancial corporate sector, first-quarter 2017 productivity increased at the same 2.0-percent rate that was previously reported. Unit labor costs were revised up slightly to an increase of 2.3 percent. (See table B2.)

Hourly compensation and related measures, including unit labor costs, in the business and nonfarm business sectors were revised back to the first quarter of 2014 to incorporate revised data used in the estimation of employee compensation. In both sectors, annual average growth in unit labor costs was revised up 0.1 percentage point in 2016, revised down 0.1 percentage point in 2015, and revised up 0.1 percentage point in 2014.

Full historical annual and quarterly measures 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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#### **Methodology change for manufacturing output**

Beginning with the *Productivity and Costs* news release scheduled for December 6, 2017, BLS plans to incorporate source data reflecting a change in methodology for estimating manufacturing output. For more information see: [www.bls.gov/mfp/sectoraloutputrevisions.htm](http://www.bls.gov/mfp/sectoraloutputrevisions.htm).

**The preliminary Productivity and Costs news release for third-quarter 2017 is scheduled to be released on Thursday, November 2, 2017 at 8:30 a.m. (EDT).**

**Table A1. Labor productivity growth and related measures - revised second-quarter 2017**  
(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>1.5</b>	<b>4.0</b>	<b>2.5</b>	<b>1.8</b>	<b>2.1</b>	<b>0.2</b>
	A year ago	1.3	2.8	1.5	1.1	-0.8	-0.2
Business	<b>Previous quarter</b>	<b>1.3</b>	<b>3.7</b>	<b>2.4</b>	<b>1.8</b>	<b>2.1</b>	<b>0.5</b>
	A year ago	1.3	2.6	1.3	1.3	-0.6	0.0
Manufacturing	<b>Previous quarter</b>	<b>2.9</b>	<b>2.1</b>	<b>-0.7</b>	<b>2.5</b>	<b>2.8</b>	<b>-0.4</b>
	A year ago	1.1	1.6	0.5	1.3	-0.6	0.1
Durable manufacturing	<b>Previous quarter</b>	<b>3.8</b>	<b>1.0</b>	<b>-2.7</b>	<b>3.1</b>	<b>3.5</b>	<b>-0.6</b>
	A year ago	1.3	1.6	0.3	0.9	-1.0	-0.4
Nondurable manufacturing	<b>Previous quarter</b>	<b>0.5</b>	<b>3.4</b>	<b>2.8</b>	<b>1.6</b>	<b>1.9</b>	<b>1.0</b>
	A year ago	0.8	1.5	0.8	1.9	0.0	1.1

**Table A2. Labor productivity growth and related measures - preliminary second-quarter 2017**  
(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>4.6</b>	<b>7.8</b>	<b>3.1</b>	<b>1.9</b>	<b>2.2</b>	<b>-2.6</b>
	A year ago	1.9	3.7	1.8	1.1	-0.8	-0.8

**Table B1. Labor productivity growth and related measures - revised and previously published second-quarter 2017**  
(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>1.5</b>	<b>4.0</b>	<b>2.5</b>	<b>1.8</b>	<b>2.1</b>	<b>0.2</b>
	Previously published	0.9	3.4	2.5	1.6	1.9	0.6
Business	<b>Revised</b>	<b>1.3</b>	<b>3.7</b>	<b>2.4</b>	<b>1.8</b>	<b>2.1</b>	<b>0.5</b>
	Previously published	0.6	3.1	2.4	1.6	1.9	0.9
Manufacturing	<b>Revised</b>	<b>2.9</b>	<b>2.1</b>	<b>-0.7</b>	<b>2.5</b>	<b>2.8</b>	<b>-0.4</b>
	Previously published	2.5	1.6	-0.9	2.2	2.5	-0.3
Durable manufacturing	<b>Revised</b>	<b>3.8</b>	<b>1.0</b>	<b>-2.7</b>	<b>3.1</b>	<b>3.5</b>	<b>-0.6</b>
	Previously published	3.8	0.9	-2.7	3.0	3.3	-0.8
Nondurable manufacturing	<b>Revised</b>	<b>0.5</b>	<b>3.4</b>	<b>2.8</b>	<b>1.6</b>	<b>1.9</b>	<b>1.0</b>
	Previously published	-0.1	2.3	2.4	1.1	1.4	1.2

**Table B2. Labor productivity growth and related measures - revised and previously published first-quarter 2017**  
(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>0.1</b>	<b>1.8</b>	<b>1.6</b>	<b>4.9</b>	<b>1.7</b>	<b>4.8</b>
	Previously published	0.1	1.8	1.6	5.5	2.3	5.4
Business	<b>Revised</b>	<b>-0.8</b>	<b>1.4</b>	<b>2.1</b>	<b>4.3</b>	<b>1.1</b>	<b>5.1</b>
	Previously published	-0.8	1.4	2.1	4.9	1.7	5.7
Manufacturing	<b>Revised</b>	<b>0.2</b>	<b>2.3</b>	<b>2.1</b>	<b>4.4</b>	<b>1.2</b>	<b>4.3</b>
	Previously published	0.3	2.4	2.1	4.2	1.0	3.9
Durable manufacturing	<b>Revised</b>	<b>-1.0</b>	<b>2.6</b>	<b>3.6</b>	<b>2.5</b>	<b>-0.6</b>	<b>3.6</b>
	Previously published	-0.9	2.7	3.6	2.3	-0.9	3.2
Nondurable manufacturing	<b>Revised</b>	<b>2.5</b>	<b>2.0</b>	<b>-0.5</b>	<b>8.0</b>	<b>4.7</b>	<b>5.3</b>
	Previously published	2.6	2.1	-0.5	7.8	4.5	5.1
Nonfinancial corporate	<b>Revised</b>	<b>2.0</b>	<b>4.1</b>	<b>2.0</b>	<b>4.3</b>	<b>1.1</b>	<b>2.3</b>
	Previously published	2.0	4.0	2.0	4.2	1.0	2.2

## 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 75 percent of the value of GDP in 2016. Nonfarm business, which excludes farming, also accounted for about 75 percent of GDP in 2016.

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 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 50 percent of the value of GDP in 2016.

### 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 2009=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/lpcmethods.pdf](http://www.bls.gov/lpc/lpcmethods.pdf).

Information in this release will be made available to sensory-impaired individuals upon request. Voice phone: 202-691-5606; 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)								
2017 II	1.3 r	3.7 r	2.4	1.8 r	2.1 r	0.5 r	0.7 r	0.6
I	-0.8	1.4	2.1	4.3 r	1.1 r	5.1 r	-3.0 r	1.5
2016 ANNUAL	0.0	1.6	1.6	1.0 r	-0.2 r	1.0 r	1.0 r	1.0
2016 IV	2.0	2.2	0.2	-3.7 r	-6.5 r	-5.5 r	13.3 r	2.2
III	2.7	3.3	0.6	2.8 r	1.0 r	0.1 r	2.5 r	1.1
II	0.6	2.6	2.0	4.4 r	2.0 r	3.7 r	0.0 r	2.1
I	-1.1	0.4	1.5	-3.8 r	-3.9 r	-2.8 r	5.2 r	0.5
2015 ANNUAL	1.2	3.5	2.3	2.9 r	2.8	1.7 r	-0.8	0.6
2015 IV	-2.7	0.2	3.0	4.3	3.9	7.2	-9.3	-0.2
III	1.6	1.6	0.0	1.2 r	-0.3 r	-0.4 r	3.1 r	1.1
II	1.6	3.3	1.7	3.9 r	1.5 r	2.3 r	1.6 r	2.0
I	2.4	4.0	1.5	3.0 r	5.6 r	0.5 r	-2.4 r	-0.7
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Percent change from corresponding quarter of previous year								
2017 II	1.3 r	2.6 r	1.3	1.3 r	-0.6 r	0.0	3.2	1.3 r
I	1.1	2.4	1.2	1.9 r	-0.7 r	0.8	3.0 r	1.7
2016 ANNUAL	0.0	1.6	1.6	1.0 r	-0.2 r	1.0 r	1.0 r	1.0
2016 IV	1.0	2.1	1.1	-0.1 r	-1.9 r	-1.2 r	5.1 r	1.5
III	-0.1	1.6	1.8	1.9 r	0.7 r	2.0 r	-0.6 r	0.9
II	-0.4	1.2	1.6	1.5 r	0.4 r	1.9 r	-0.4 r	0.9
I	-0.2	1.4	1.5	1.3 r	0.2 r	1.5 r	0.0 r	0.8
2015 ANNUAL	1.2	3.5	2.3	2.9 r	2.8	1.7 r	-0.8	0.6
2015 IV	0.7	2.3	1.6	3.1	2.6	2.4	-1.9	0.5
III	0.9	2.8	1.9	3.2	3.0 r	2.3	-1.6	0.6
II	1.4	4.1	2.7	3.5	3.5	2.1	-1.1	0.7
I	1.6	4.8	3.1	1.9	1.9 r	0.3	1.5	0.8
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Indexes 2009=100								
2017 II	107.8 r	122.9 r	114.0 r	117.3 r	103.2 r	108.8 r	115.8 r	111.7 r
I	107.5	121.8	113.3	116.8 r	102.7 r	108.7 r	115.6 r	111.6
2016 ANNUAL	106.9	120.3	112.5	115.7 r	103.4 r	108.2 r	113.4 r	110.4
2016 IV	107.7	121.4	112.7	115.6 r	102.4 r	107.3 r	116.5 r	111.2
III	107.2	120.8	112.7	116.7 r	104.1 r	108.9 r	112.9 r	110.5
II	106.5	119.8	112.5	115.9 r	103.9 r	108.8 r	112.2 r	110.2
I	106.3	119.0	112.0	114.6 r	103.3 r	107.8 r	112.2 r	109.7
2015 ANNUAL	106.9	118.4	110.7	114.5 r	103.7 r	107.1 r	112.3 r	109.3
2015 IV	106.6	118.9	111.5	115.8 r	104.4 r	108.6 r	110.8 r	109.5
III	107.3	118.8	110.7	114.6 r	103.4 r	106.7 r	113.5 r	109.6
II	106.9	118.4	110.7	114.2 r	103.5 r	106.9 r	112.6 r	109.3
I	106.5	117.4	110.3	113.1 r	103.1 r	106.3 r	112.2 r	108.7
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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)								
2017 II	1.5 r	4.0 r	2.5	1.8 r	2.1 r	0.2 r	1.0 r	0.6
I	0.1	1.8	1.6	4.9 r	1.7 r	4.8 r	-3.9 r	0.9
2016 ANNUAL	-0.1	1.5	1.6	1.0 r	-0.2 r	1.1 r	1.4 r	1.2
2016 IV	1.3	2.2	1.0	-4.5 r	-7.3 r	-5.7 r	13.9 r	2.3
III	2.5	3.3	0.8	2.5 r	0.7 r	0.1 r	3.1 r	1.3
II	0.8	2.5	1.7	4.8 r	2.4 r	3.9 r	0.0 r	2.2
I	-1.2	0.2	1.4	-3.8 r	-3.9 r	-2.7 r	5.8 r	0.9
2015 ANNUAL	1.3	3.4	2.1	3.1 r	3.0	1.8 r	-0.3 r	0.9
2015 IV	-2.6	0.3	2.9	4.5	4.1	7.2	-8.8	0.1
III	1.3	1.3	0.0	1.1 r	-0.4 r	-0.2 r	3.0 r	1.2
II	1.3	3.3	2.0	3.6 r	1.2 r	2.3 r	1.5 r	1.9
I	2.7	4.0	1.2	3.3 r	6.0 r	0.6 r	-0.9 r	0.0
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Percent change from corresponding quarter of previous year								
2017 II	1.3 r	2.8 r	1.5	1.1 r	-0.8 r	-0.2	3.3	1.3
I	1.2	2.5	1.3	1.9	-0.7	0.7	3.1 r	1.7
2016 ANNUAL	-0.1	1.5	1.6	1.0 r	-0.2 r	1.1 r	1.4 r	1.2
2016 IV	0.8	2.1	1.2	-0.3 r	-2.1 r	-1.2 r	5.6 r	1.7
III	-0.1	1.6	1.7	1.9 r	0.8 r	2.1 r	-0.1 r	1.1
II	-0.4	1.1	1.5	1.6 r	0.5 r	2.0	-0.2 r	1.1
I	-0.3	1.3	1.6	1.3 r	0.2 r	1.6 r	0.2 r	1.0
2015 ANNUAL	1.3	3.4	2.1	3.1 r	3.0	1.8 r	-0.3 r	0.9
2015 IV	0.7	2.2	1.5	3.1	2.7	2.4	-1.4	0.8
III	0.8	2.7	1.9	3.3	3.1 r	2.4	-1.3	0.8
II	1.6	4.1	2.5	3.8	3.8	2.2	-0.5	1.0
I	1.9	4.7	2.8	2.3	2.3 r	0.4	2.0 r	1.1
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Indexes 2009=100								
2017 II	108.1 r	123.2 r	114.0 r	117.6 r	103.4 r	108.8 r	115.8 r	111.7 r
I	107.7	122.0	113.3	117.1 r	102.9 r	108.7 r	115.5 r	111.5
2016 ANNUAL	107.0	120.2	112.4	116.0 r	103.7 r	108.4 r	113.4 r	110.5
2016 IV	107.6	121.4	112.8	115.7 r	102.4 r	107.5 r	116.6 r	111.3
III	107.3	120.8	112.5	117.0 r	104.4 r	109.1 r	112.9 r	110.7
II	106.6	119.8	112.3	116.3 r	104.2 r	109.1 r	112.0 r	110.3
I	106.4	119.0	111.9	114.9 r	103.6 r	108.0 r	112.0 r	109.7
2015 ANNUAL	107.1	118.5	110.7	114.8 r	103.9 r	107.2 r	111.8 r	109.1
2015 IV	106.7	119.0	111.5	116.1 r	104.6 r	108.7 r	110.4 r	109.5
III	107.4	118.9	110.7	114.8 r	103.6 r	106.9 r	113.0 r	109.4
II	107.1	118.5	110.7	114.5 r	103.7 r	106.9 r	112.2 r	109.1
I	106.7	117.6	110.1	113.5 r	103.4 r	106.3 r	111.8 r	108.6
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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)						
2017 II	2.9 r	2.1 r	-0.7 r	2.5 r	2.8 r	-0.4 r
I	0.2 r	2.3 r	2.1	4.4 r	1.2 r	4.3 r
2016 ANNUAL	0.2	0.2	0.0	0.7	-0.5	0.6
2016 IV	2.0	1.8	-0.2	-4.2	-7.1	-6.1
III	-0.5	0.2	0.7	2.6	0.8	3.1
II	-0.8	-0.9	-0.1	7.1	4.7	8.0
I	1.3	1.0	-0.3	-10.1	-10.2	-11.3
2015 ANNUAL	-0.6	0.3	1.0	2.5	2.4	3.1
2015 IV	-1.6	-0.6	1.0	9.1	8.7	10.9
III	2.3	1.1	-1.2	1.8	0.3	-0.5
II	-0.4	-0.3	0.0	3.5	1.1	3.9
I	-1.9	-2.3	-0.4	0.0	2.6	1.9
-----						
Percent change from corresponding quarter of previous year						
2017 II	1.1 r	1.6 r	0.5 r	1.3 r	-0.6 r	0.1
I	0.2	0.8 r	0.6	2.4 r	-0.2	2.2 r
2016 ANNUAL	0.2	0.2	0.0	0.7	-0.5	0.6
2016 IV	0.5	0.5	0.0	-1.4	-3.1	-1.9
III	-0.4	-0.1	0.3	1.9	0.7	2.3
II	0.3	0.1	-0.2	1.7	0.6	1.4
I	0.4	0.3	-0.1	0.8	-0.3	0.4
2015 ANNUAL	-0.6	0.3	1.0	2.5	2.4	3.1
2015 IV	-0.4	-0.5	-0.2	3.5	3.1	3.9
III	-0.5	0.1	0.6	2.6	2.4	3.1
II	-1.0	0.2	1.3	2.7	2.7	3.8
I	-0.6	1.6	2.2	1.0	1.1	1.7
-----						
Indexes 2009=100						
2017 II	119.9 r	129.8 r	108.3 r	113.3 r	99.7 r	94.5 r
I	119.1 r	129.2 r	108.5	112.7 r	99.0 r	94.6 r
2016 ANNUAL	118.7	128.1	107.8	111.5	99.7	93.9
2016 IV	119.0	128.4	107.9	111.4	98.7	93.6
III	118.5	127.9	107.9	112.6	100.5	95.1
II	118.6	127.8	107.8	111.9	100.3	94.4
I	118.9	128.1	107.8	110.0	99.2	92.6
2015 ANNUAL	118.5	127.8	107.8	110.7	100.2	93.4
2015 IV	118.5	127.8	107.9	113.0	101.9	95.4
III	118.9	128.0	107.6	110.6	99.8	92.9
II	118.3	127.6	107.9	110.1	99.7	93.1
I	118.4	127.7	107.9	109.1	99.4	92.2
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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)						
2017 II	3.8	1.0 r	-2.7	3.1 r	3.5 r	-0.6 r
I	-1.0 r	2.6 r	3.6	2.5 r	-0.6 r	3.6 r
2016 ANNUAL	0.1	-0.2	-0.3	1.0	-0.3	0.9
2016 IV	1.8	2.0	0.2	-4.3	-7.1	-6.0
III	0.7	1.0	0.3	2.5	0.7	1.7
II	1.9	0.2	-1.6	9.5	7.0	7.5
I	-0.6	0.1	0.7	-11.4	-11.5	-10.9
2015 ANNUAL	-1.3	-0.8	0.6	3.0	2.9	4.4
2015 IV	-3.1	-2.5	0.7	10.8	10.4	14.4
III	2.6	0.5	-2.0	1.4	-0.2	-1.2
II	-0.8	-1.3	-0.5	2.8	0.5	3.6
I	-3.9	-4.9	-1.1	2.0	4.6	6.1
-----						
Percent change from corresponding quarter of previous year						
2017 II	1.3	1.6 r	0.3	0.9 r	-1.0 r	-0.4 r
I	0.8 r	1.4 r	0.6	2.4	-0.1 r	1.6 r
2016 ANNUAL	0.1	-0.2	-0.3	1.0	-0.3	0.9
2016 IV	1.0	0.8	-0.1	-1.2	-3.0	-2.2
III	-0.3	-0.3	0.0	2.4	1.3	2.8
II	0.2	-0.4	-0.6	2.2	1.1	2.0
I	-0.5	-0.8	-0.3	0.6	-0.5	1.1
2015 ANNUAL	-1.3	-0.8	0.6	3.0	2.9	4.4
2015 IV	-1.3	-2.0	-0.7	4.2	3.7	5.6
III	-0.9	-1.2	-0.3	3.0	2.9	4.0
II	-1.7	-0.8	0.9	3.3	3.3	5.1
I	-1.3	1.1	2.4	1.6	1.7	2.9
-----						
Indexes 2009=100						
2017 II	120.9 r	133.8 r	110.6 r	112.5 r	98.9 r	93.0 r
I	119.8 r	133.4 r	111.4	111.6 r	98.1 r	93.2 r
2016 ANNUAL	119.5	131.9	110.4	110.9	99.1	92.8
2016 IV	120.1	132.6	110.4	111.0	98.3	92.4
III	119.6	131.9	110.3	112.2	100.1	93.8
II	119.4	131.6	110.2	111.5	99.9	93.4
I	118.8	131.5	110.7	109.0	98.2	91.7
2015 ANNUAL	119.4	132.1	110.7	109.8	99.4	92.0
2015 IV	119.0	131.5	110.5	112.3	101.3	94.4
III	119.9	132.3	110.3	109.5	98.8	91.3
II	119.2	132.2	110.9	109.1	98.9	91.6
I	119.4	132.6	111.0	108.4	98.7	90.7
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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)						
2017 II	0.5 r	3.4 r	2.8 r	1.6 r	1.9 r	1.0 r
I	2.5 r	2.0 r	-0.5	8.0 r	4.7 r	5.3 r
2016 ANNUAL	0.2	0.6	0.5	0.4	-0.9	0.2
2016 IV	2.3	1.5	-0.8	-4.3	-7.2	-6.5
III	-2.2	-0.8	1.5	2.8	1.0	5.2
II	-4.5	-2.2	2.5	3.0	0.7	7.9
I	4.0	2.1	-1.8	-7.7	-7.8	-11.3
2015 ANNUAL	-0.1	1.6	1.7	1.5	1.4	1.6
2015 IV	0.0	1.5	1.4	6.1	5.7	6.0
III	1.6	1.8	0.2	2.8	1.2	1.2
II	-0.2	0.7	1.0	4.8	2.4	5.0
I	0.2	0.9	0.7	-3.5	-1.0	-3.7
-----						
Percent change from corresponding quarter of previous year						
2017 II	0.8 r	1.5 r	0.8 r	1.9 r	0.0 r	1.1
I	-0.5	0.1	0.7	2.3 r	-0.3	2.8
2016 ANNUAL	0.2	0.6	0.5	0.4	-0.9	0.2
2016 IV	-0.2	0.2	0.3	-1.7	-3.4	-1.5
III	-0.7	0.1	0.9	0.9	-0.2	1.6
II	0.2	0.8	0.6	0.9	-0.2	0.7
I	1.3	1.5	0.2	1.3	0.2	0.0
2015 ANNUAL	-0.1	1.6	1.7	1.5	1.4	1.6
2015 IV	0.4	1.2	0.8	2.5	2.0	2.1
III	-0.6	1.6	2.2	1.9	1.8	2.5
II	-0.4	1.5	1.9	1.7	1.7	2.1
I	0.3	2.1	1.9	-0.2	-0.1	-0.4
-----						
Indexes 2009=100						
2017 II	113.5 r	118.7 r	104.5 r	114.4 r	100.6 r	100.8 r
I	113.4 r	117.7 r	103.8	113.9 r	100.1 r	100.5 r
2016 ANNUAL	112.8	117.0	103.7	112.1	100.2	99.4
2016 IV	112.7	117.1	103.9	111.8	99.0	99.2
III	112.0	116.6	104.1	113.0	100.8	100.9
II	112.6	116.9	103.8	112.2	100.6	99.6
I	114.0	117.5	103.1	111.4	100.4	97.7
2015 ANNUAL	112.6	116.3	103.2	111.7	101.1	99.2
2015 IV	112.8	116.9	103.6	113.6	102.5	100.7
III	112.8	116.5	103.2	112.0	101.1	99.2
II	112.4	116.0	103.2	111.2	100.8	99.0
I	112.5	115.8	102.9	109.9	100.2	97.7
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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)										
2017 II	4.6	7.8	3.1	1.9	2.2	-2.6	-2.9	-2.7	14.3	-0.6
I	2.0	4.1 r	2.0	4.3 r	1.1 r	2.3 r	-1.0 r	1.2	-2.7 r	0.7
2016 ANNUAL	-0.1	1.4	1.5	1.1	-0.2	1.2	-0.5	0.7	-5.3	-0.2
2016 IV	-4.5	-3.9	0.6	-3.6	-6.5	0.9	9.2	3.5	-2.8	2.7
III	5.9	7.4	1.5	1.9	0.1	-3.7	-4.5	-4.0	7.3	-2.6
II	-2.0	-0.6	1.4	3.7	1.4	5.9	1.7	4.5	-28.8	-0.8
I	0.5	1.1	0.6	-1.8	-1.9	-2.3	-13.0	-5.9	47.7	0.0
2015 ANNUAL	1.4	3.6	2.2	3.0	2.9	1.6	0.4	1.2	-5.1	0.3
2015 IV	-1.4	1.5	3.0	3.4	3.0	4.9	13.8	7.7	-41.5	-0.9
III	0.7	2.5	1.8	0.5	-1.0	-0.2	-0.1	-0.2	5.3	0.6
II	-2.0	-0.9	1.1	2.7	0.4	4.8	4.0	4.5	-1.3	3.7
I	3.3	4.6	1.3	7.1	9.9	3.7	-2.2	1.8	-23.7	-2.5
-----										
Percent change from corresponding quarter of previous year										
2017 II	1.9	3.7	1.8	1.1	-0.8	-0.8	0.1	-0.5	3.8	0.0
I	0.3	1.7 r	1.4	1.5	-1.0	1.3	1.2	1.3	-7.8	0.0
2016 ANNUAL	-0.1	1.4	1.5	1.1	-0.2	1.2	-0.5	0.7	-5.3	-0.2
2016 IV	-0.1	0.9	1.0	0.0	-1.8	0.1	-2.0	-0.6	2.3	-0.2
III	0.7	2.3	1.6	1.8	0.6	1.1	-1.0	0.4	-9.9	-1.1
II	-0.6	1.1	1.7	1.4	0.3	2.0	0.1	1.4	-10.3	-0.3
I	-0.6	1.1	1.6	1.2	0.1	1.7	0.7	1.4	-2.6	0.8
2015 ANNUAL	1.4	3.6	2.2	3.0	2.9	1.6	0.4	1.2	-5.1	0.3
2015 IV	0.1	1.9	1.8	3.4	3.0	3.3	3.7	3.4	-17.5	0.2
III	1.0	2.8	1.8	3.3	3.1	2.3	0.1	1.6	-6.1	0.4
II	1.8	3.9	2.1	3.5	3.5	1.6	-0.4	1.0	-2.1	0.5
I	2.7	6.0	3.2	1.9	2.0	-0.8	-1.8	-1.1	7.6	0.1
-----										
Indexes 2009=100										
2017 II	109.2	127.2	116.5	116.9	102.8	107.0	100.1	104.7	139.2	108.3
I	108.0 r	124.9 r	115.7	116.3 r	102.2 r	107.7 r	100.9 r	105.4 r	134.6 r	108.5
2016 ANNUAL	107.7	123.5	114.6	115.4	103.1	107.1	99.9	104.7	138.0	108.2
2016 IV	107.4	123.6	115.1	115.1	101.9	107.1	101.1	105.1	135.5	108.3
III	108.7	124.9	114.9	116.2	103.7	106.9	98.9	104.2	136.5	107.6
II	107.1	122.6	114.5	115.6	103.6	107.9	100.1	105.3	134.1	108.3
I	107.7	122.8	114.1	114.6	103.3	106.4	99.7	104.1	146.0	108.5
2015 ANNUAL	107.9	121.8	112.9	114.1	103.3	105.8	100.5	104.0	145.8	108.4
2015 IV	107.5	122.5	113.9	115.1	103.8	107.0	103.2	105.7	132.4	108.5
III	107.9	122.0	113.1	114.1	103.0	105.7	99.9	103.8	151.4	108.8
II	107.8	121.3	112.6	114.0	103.3	105.8	99.9	103.8	149.5	108.6
I	108.3	121.6	112.2	113.2	103.2	104.6	98.9	102.7	150.0	107.6
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See footnotes following Table 6.  
r=revised

September 7, 2017  
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 first quarter of 2017.

### 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 1978-2016 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.