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## PRODUCTIVITY AND COSTS

Fourth Quarter and Annual Averages 2015, Preliminary

**Nonfarm business sector labor productivity** decreased at a 3.0-percent annual rate during the fourth quarter of 2015, the U.S. Bureau of Labor Statistics reported today, as output increased 0.1 percent and hours worked increased 3.3 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) From the fourth quarter of 2014 to the fourth quarter of 2015, productivity increased 0.3 percent. (See chart 1 and table A.) Annual average productivity increased 0.6 percent from 2014 to 2015. (See table C.)

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

Chart 1. Labor productivity, nonfarm business, all persons, 2011Q1 – 2015Q4

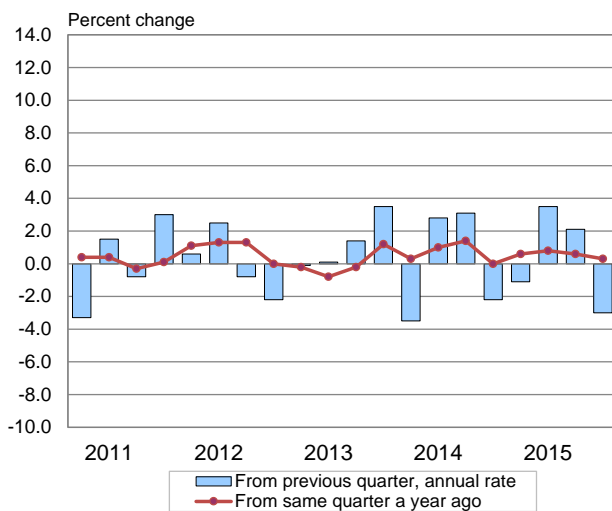
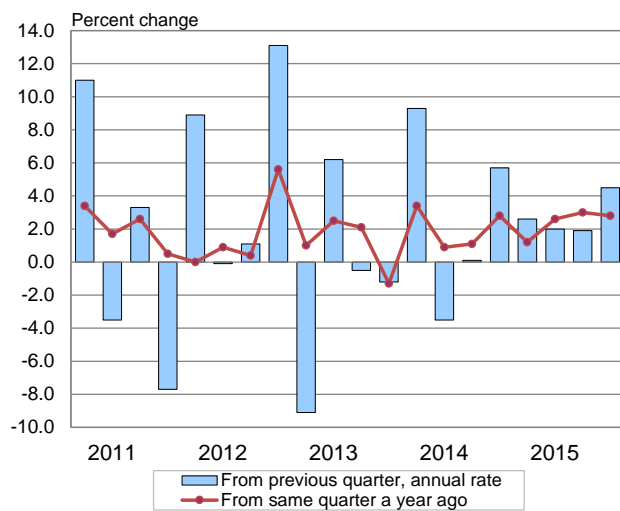


Chart 2. Unit labor costs, nonfarm business, all persons, 2011Q1 – 2015Q4



**Unit labor costs in the nonfarm business sector** increased 4.5 percent in the fourth quarter of 2015, reflecting a 1.3-percent increase in hourly compensation and a 3.0-percent decrease in productivity. Unit labor costs increased 2.8 percent over the last four quarters. (See chart 2 and tables A 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** decreased 0.4 percent in the fourth quarter of 2015, as output increased 0.5 percent and hours worked increased 0.9 percent. Productivity decreased 1.0 percent in the durable goods manufacturing sector and increased 0.3 percent in the nondurable goods sector. (See tables A, 3, 4, and 5.) Over the last four quarters, manufacturing productivity increased 1.5 percent, as output increased 1.1 percent and hours decreased 0.4 percent. **Unit labor costs in manufacturing** increased 3.6 percent in the fourth quarter of 2015 and increased 1.9 percent from the same quarter a year ago. (See tables A 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 5.)

Table C presents **annual average changes** for the most recent five years for the nonfarm business sector and the total manufacturing sector. **Nonfarm business sector** productivity grew 0.6 percent in 2015, as output and hours increased 2.8 percent and 2.2 percent, respectively. The increase in hours was due solely to an increase in employment of 2.3 percent, which was the largest employment gain since a 2.3-percent increase in 1998. Productivity increased at an annual rate of less than 1.0 percent in each of the last five years, reflecting steady growth in both output and hours during these years. The average annual rate of productivity growth from 2007 to 2015—corresponding to the current business cycle—is 1.2 percent, well below the long-term rate from 1947 to 2015 of 2.1 percent.

Unit labor costs in the nonfarm business sector rose 2.4 percent in 2015, reflecting increases of 3.0 percent in hourly compensation and 0.6 percent in productivity. The increases in unit labor costs and hourly compensation are the largest since 2007, when these series rose 2.7 percent and 4.3 percent, respectively. Real hourly compensation, which takes into account changes in consumer prices, increased 2.8 percent in 2015. This is the largest annual increase in real hourly compensation since a 3.9-percent increase in 2000.

In the **manufacturing sector**, productivity increased 1.3 percent in 2015, which is the same rate of increase as in 2014. The average annual rate of productivity growth from 2007 to 2015 is 2.1 percent, which is below the long-term rate from 1987 to 2015 of 3.4 percent. Unit labor costs increased 1.3 percent in 2015, which is similar to a 1.4-percent increase in 2014. Real hourly compensation in manufacturing increased 2.4 percent in 2015.

### **Revised measures**

Revised and previous measures for the third quarter of 2015 are shown in tables B and D and cover the following major sectors: nonfarm business, business, manufacturing, and nonfinancial corporations.

In the **third quarter of 2015**, nonfarm business productivity was revised down 0.1 percentage point, to an increase of 2.1 percent. (See table B.) Unit labor costs in the nonfarm business sector increased 1.9 percent in the third quarter—rather than 1.8 percent as previously reported.

In the manufacturing sector, productivity was revised down 0.1 percentage point, to an increase of 5.0 percent. Manufacturing unit labor costs increased 2.3 percent, the same rate as previously reported.

In the **nonfinancial corporate sector**, productivity was revised down 1.2 percentage points in the third quarter of 2015, to an increase of 1.7 percent. This downward revision to productivity is due solely to a 1.2 percentage point downward revision to output. (See table D.)

Quarterly and annual data for all sectors from 2013 to 2015 appear in tables 1-6. Full historical 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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**The revised Productivity and Costs news release for fourth-quarter 2015 is scheduled to be released on Thursday, March 3, 2016 at 8:30 a.m. (EST).**

<b>Table A. Preliminary fourth-quarter 2015 measures: percent change from previous quarter, at annual rate (Q to Q) and from same quarter a year ago (Y to Y)</b>										
Sector	Nonfarm Business		Business		Manufacturing		Durable Manufacturing		Nondurable Manufacturing	
	Q to Q	Y to Y	Q to Q	Y to Y	Q to Q	Y to Y	Q to Q	Y to Y	Q to Q	Y to Y
Labor Productivity	<b>-3.0</b>	0.3	<b>-2.7</b>	0.5	<b>-0.4</b>	1.5	<b>-1.0</b>	1.5	<b>0.3</b>	1.2
Output	<b>0.1</b>	1.9	<b>0.6</b>	2.1	<b>0.5</b>	1.1	<b>-0.2</b>	0.6	<b>1.5</b>	1.7
Hours worked	<b>3.3</b>	1.5	<b>3.4</b>	1.5	<b>0.9</b>	-0.4	<b>0.8</b>	-0.9	<b>1.1</b>	0.5
Hourly compensation	<b>1.3</b>	3.1	<b>1.1</b>	3.1	<b>3.2</b>	3.4	<b>3.6</b>	3.1	<b>2.6</b>	4.1
Real hourly compensation	<b>1.1</b>	2.7	<b>0.9</b>	2.7	<b>3.0</b>	3.0	<b>3.3</b>	2.7	<b>2.4</b>	3.6
Unit labor costs	<b>4.5</b>	2.8	<b>3.9</b>	2.5	<b>3.6</b>	1.9	<b>4.6</b>	1.6	<b>2.3</b>	2.8

<b>Table B. Revised and previous measures: third quarter 2015</b>										
Sector	Nonfarm Business		Business		Manufacturing		Durable Manufacturing		Nondurable Manufacturing	
	Revised	Previous	Revised	Previous	Revised	Previous	Revised	Previous	Revised	Previous
Percent change, annual rate, third quarter 2015										
Labor Productivity	<b>2.1</b>	2.2	<b>2.6</b>	2.7	<b>5.0</b>	5.1	<b>6.8</b>	6.9	<b>2.2</b>	2.3
Output	<b>1.8</b>	1.8	<b>2.2</b>	2.3	<b>3.2</b>	3.2	<b>3.9</b>	3.7	<b>2.4</b>	2.7
Hours worked	<b>-0.3</b>	-0.3	<b>-0.4</b>	-0.4	<b>-1.7</b>	-1.8	<b>-2.7</b>	-3.0	<b>0.2</b>	0.3
Hourly compensation	<b>4.1</b>	4.0	<b>4.1</b>	4.1	<b>7.4</b>	7.5	<b>7.3</b>	7.5	<b>7.8</b>	7.7
Real hourly compensation	<b>2.5</b>	2.4	<b>2.5</b>	2.4	<b>5.7</b>	5.8	<b>5.6</b>	5.9	<b>6.1</b>	6.0
Unit labor costs	<b>1.9</b>	1.8	<b>1.6</b>	1.3	<b>2.3</b>	2.3	<b>0.4</b>	0.6	<b>5.5</b>	5.3

<b>Table C. Annual average changes in productivity and related measures: 2011-2015</b>										
Sector	Nonfarm Business					Manufacturing				
	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011
Labor Productivity	0.6	0.7	0.0	0.9	0.2	1.3	1.3	0.7	0.7	5.6
Output	2.8	3.0	1.7	3.1	2.2	2.2	2.9	1.5	3.0	7.8
Hours worked	2.2	2.3	1.7	2.2	2.0	0.9	1.6	0.8	2.3	2.1
Hourly compensation	3.0	2.7	1.1	2.7	2.2	2.6	2.7	0.2	1.8	1.7
Real hourly compensation	2.8	1.1	-0.4	0.6	-0.9	2.4	1.0	-1.2	-0.3	-1.4
Unit labor costs	2.4	2.0	1.1	1.7	2.1	1.3	1.4	-0.5	1.0	-3.6

<b>Table D. Nonfinancial corporations: revised and previous third-quarter 2015 productivity and cost measures</b>									
	Labor Productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs	Unit profits	Implicit price deflator	
Percent change, annual rate, third quarter 2015									
<b>Q to Q Revised</b>	<b>1.7</b>	<b>3.1</b>	<b>1.4</b>	<b>4.2</b>	<b>2.5</b>	<b>2.4</b>	<b>-6.6</b>	<b>0.5</b>	
Q to Q Previous	2.9	4.3	1.4	4.1	2.5	1.2	0.7	0.5	

## 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 at work using data from the National Compensation Survey (NCS) for 2001 forward and data from the BLS Hours at Work survey, conducted for this purpose, for earlier years. 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 correct 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 inputs. Business output accounted for about 76 percent of the value of GDP in 2015. Nonfarm business, which excludes farming, accounted for about 75 percent of GDP in 2015.

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 49 percent of the value of GDP in 2014.

### 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 domestic employees 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 [dprweb@bls.gov](mailto:dprweb@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: Productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (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)								
2015 ANNUAL	0.5	2.9	2.3	2.8	2.7	2.3	-1.4	0.7
2015 IV	-2.7	0.6	3.4	1.1	0.9	3.9	-4.5	0.3
III	2.6 r	2.2 r	-0.4	4.1	2.5 r	1.6 r	0.1 r	0.9
II	3.7	5.0	1.2	5.9	2.8	2.1	2.4	2.2
I	-1.3	0.6	1.9	1.3	4.4	2.6	-3.7	-0.1
2014 ANNUAL	0.6	3.0	2.4	2.6	1.0	2.0	0.6	1.4
2014 IV	-2.4	2.6	5.2	3.0	3.9	5.6	-8.2	-0.6
III	2.5	5.5	2.9	2.5	1.3	0.0	2.9	1.2
II	2.9	5.7	2.7	-0.9	-3.2	-3.7	10.6	2.3
I	-3.6	-1.7	2.0	5.9	3.7	9.9	-8.5	1.5
2013 ANNUAL	0.4	2.0	1.6	1.2	-0.2	0.8	2.4	1.5
2013 IV	3.4	5.1	1.7	2.1	0.7	-1.2	4.4	1.2
III	1.3	3.9	2.5	0.5	-1.8	-0.9	5.3	1.7
II	0.6	1.6	1.0	6.3	6.5	5.7	-5.6	0.6
I	1.2	2.5	1.3	-8.6	-9.9	-9.7	18.8	1.6
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Percent change from corresponding quarter of previous year								
2015 ANNUAL	0.5	2.9	2.3	2.8	2.7	2.3	-1.4	0.7
2015 IV	0.5	2.1	1.5	3.1	2.7	2.5	-1.4	0.8
III	0.6	2.6	2.0	3.6	3.4	2.9	-2.4	0.6
II	0.6	3.4	2.8	3.2	3.1	2.5	-1.8	0.7
I	0.4	3.6	3.2	1.5	1.5	1.1	0.2	0.7
2014 ANNUAL	0.6	3.0	2.4	2.6	1.0	2.0	0.6	1.4
2014 IV	-0.2	3.0	3.2	2.6	1.4	2.8	-1.1	1.1
III	1.3	3.6	2.3	2.4	0.6	1.1	2.1	1.5
II	1.0	3.2	2.2	1.9	-0.2	0.9	2.7	1.7
I	0.4	2.2	1.8	3.7	2.2	3.3	-1.3	1.3
2013 ANNUAL	0.4	2.0	1.6	1.2	-0.2	0.8	2.4	1.5
2013 IV	1.6	3.3	1.6	-0.1	-1.3	-1.7	5.4	1.3
III	0.3	2.0	1.7	2.0	0.5	1.7	0.9	1.3
II	-0.3	1.2	1.5	2.0	0.6	2.3	0.4	1.5
I	0.1	1.4	1.3	1.1	-0.6	1.0	3.1	1.9
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Indexes 2009=100								
2015 ANNUAL	105.8	117.2	110.8	114.3	103.4	108.0	110.6	109.1
2015 IV	105.8	118.0	111.5	115.5	104.1	109.2	109.8	109.4
III	106.5 r	117.8 r	110.6 r	115.2 r	103.9 r	108.1 r	111.1 r	109.4 r
II	105.8	117.2	110.7	114.0	103.2	107.7	111.1	109.1
I	104.9	115.8	110.4	112.4	102.5	107.1	110.4	108.5
2014 ANNUAL	105.2	113.9	108.3	111.1	100.7	105.6	112.2	108.4
2014 IV	105.2	115.6	109.9	112.0	101.4	106.5	111.4	108.5
III	105.9	114.8	108.5	111.2	100.4	105.0	113.9	108.7
II	105.2	113.3	107.7	110.5	100.1	105.0	113.1	108.4
I	104.5	111.8	107.0	110.7	100.9	106.0	110.2	107.8
2013 ANNUAL	104.6	110.6	105.7	108.3	99.7	103.6	111.5	106.9
2013 IV	105.4	112.2	106.5	109.2	100.0	103.6	112.7	107.4
III	104.6	110.9	106.0	108.6	99.9	103.9	111.5	107.1
II	104.2	109.8	105.4	108.5	100.3	104.1	110.1	106.6
I	104.1	109.4	105.1	106.8	98.7	102.7	111.7	106.4
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See footnotes following Table 6.  
r=revised

February 4, 2016  
Source: Bureau of Labor Statistics

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

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (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)								
2015 ANNUAL	0.6	2.8	2.2	3.0	2.8	2.4	-0.9	1.0
2015 IV	-3.0	0.1	3.3	1.3	1.1	4.5	-4.4	0.7
III	2.1 r	1.8	-0.3	4.1 r	2.5 r	1.9 r	-0.3 r	1.0
II	3.5	5.1	1.5	5.6	2.5	2.0	2.7	2.3
I	-1.1	0.5	1.6	1.5	4.6	2.6	-2.2	0.5
2014 ANNUAL	0.7	3.0	2.3	2.7	1.1	2.0	0.9	1.5
2014 IV	-2.2	2.6	4.9	3.4	4.2	5.7	-8.1	-0.5
III	3.1	5.5	2.3	3.2	2.0	0.1	4.1	1.8
II	2.8	5.4	2.5	-0.8	-3.1	-3.5	9.5	1.9
I	-3.5	-1.2	2.3	5.5	3.4	9.3	-8.4	1.3
2013 ANNUAL	0.0	1.7	1.7	1.1	-0.4	1.1	2.1	1.5
2013 IV	3.5	5.2	1.7	2.3	0.9	-1.2	5.7	1.7
III	1.4	3.5	2.1	0.9	-1.4	-0.5	5.8	2.2
II	0.1	1.1	1.1	6.3	6.5	6.2	-5.0	1.2
I	-0.1	1.7	1.8	-9.2	-10.5	-9.1	16.8	1.2
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Percent change from corresponding quarter of previous year								
2015 ANNUAL	0.6	2.8	2.2	3.0	2.8	2.4	-0.9	1.0
2015 IV	0.3	1.9	1.5	3.1	2.7	2.8	-1.1	1.1
III	0.6	2.5	1.9	3.6	3.4	3.0	-2.1 r	0.8
II	0.8	3.4	2.6	3.4	3.3	2.6	-1.0	1.0
I	0.6	3.5	2.8	1.8	1.9	1.2	0.6	0.9
2014 ANNUAL	0.7	3.0	2.3	2.7	1.1	2.0	0.9	1.5
2014 IV	0.0	3.0	3.0	2.8	1.6	2.8	-1.0	1.1
III	1.4	3.7	2.2	2.5	0.7	1.1	2.5	1.7
II	1.0	3.2	2.2	1.9	-0.1	0.9	2.9	1.8
I	0.3	2.1	1.8	3.7	2.3	3.4	-0.7	1.6
2013 ANNUAL	0.0	1.7	1.7	1.1	-0.4	1.1	2.1	1.5
2013 IV	1.2	2.9	1.7	-0.1	-1.3	-1.3	5.5	1.6
III	-0.2	1.6	1.9	1.9	0.3	2.1	0.5	1.4
II	-0.8	1.0	1.8	1.7	0.3	2.5	-0.1	1.4
I	-0.2	1.4	1.6	0.8	-0.9	1.0	2.5	1.6
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Indexes 2009=100								
2015 ANNUAL	105.8	117.1	110.7	114.4	103.6	108.2	110.1	109.0
2015 IV	105.7	117.8	111.5	115.7	104.3	109.5	109.3	109.4
III	106.5 r	117.7 r	110.6 r	115.3 r	104.0 r	108.3 r	110.6 r	109.2
II	105.9	117.2	110.7	114.1	103.3	107.8	110.7	109.0
I	105.0	115.8	110.2	112.6	102.7	107.2	109.9	108.3
2014 ANNUAL	105.2	114.0	108.4	111.1	100.7	105.7	111.1	107.9
2014 IV	105.3	115.6	109.8	112.2	101.6	106.5	110.5	108.2
III	105.9	114.9	108.5	111.3	100.5	105.1	112.9	108.3
II	105.1	113.4	107.9	110.4	100.0	105.0	111.8	107.8
I	104.4	111.9	107.2	110.6	100.8	106.0	109.3	107.4
2013 ANNUAL	104.4	110.6	105.9	108.2	99.6	103.6	110.1	106.3
2013 IV	105.3	112.2	106.6	109.1	100.0	103.7	111.7	107.0
III	104.4	110.8	106.2	108.5	99.8	104.0	110.2	106.5
II	104.0	109.9	105.6	108.3	100.1	104.1	108.6	106.0
I	104.0	109.6	105.3	106.6	98.6	102.5	110.0	105.7
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See footnotes following Table 6.  
r=revised

February 4, 2016  
Source: Bureau of Labor Statistics



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

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs
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Percent change from previous quarter at annual rate(5)						
2015 ANNUAL	1.3	2.2	0.9	2.6	2.4	1.3
2015 IV	-0.4	0.5	0.9	3.2	3.0	3.6
III	5.0 r	3.2	-1.7 r	7.4 r	5.7 r	2.3
II	2.2	1.3	-0.8	5.5	2.4	3.2 r
I	-0.6	-0.5	0.1	-2.2	0.8	-1.6
2014 ANNUAL	1.3	2.9	1.6	2.7	1.0	1.4
2014 IV	-0.4	4.0	4.4	4.3	5.1	4.7
III	2.9	4.4	1.4	2.7	1.5	-0.2
II	2.8	6.3	3.4	-1.8	-4.2	-4.4
I	2.0	1.0	-1.0	8.7	6.5	6.5
2013 ANNUAL	0.7	1.5	0.8	0.2	-1.2	-0.5
2013 IV	-0.5	3.4	3.9	-0.3	-1.6	0.2
III	-0.9	0.6	1.5	1.0	-1.3	1.9
II	2.5	0.1	-2.3	4.1	4.3	1.6
I	1.1	3.5	2.3	-5.4	-6.7	-6.4
-----						
Percent change from corresponding quarter of previous year						
2015 ANNUAL	1.3	2.2	0.9	2.6	2.4	1.3
2015 IV	1.5	1.1	-0.4	3.4	3.0	1.9
III	1.5	2.0	0.5 r	3.7	3.5	2.1
II	1.0	2.3	1.2	2.5	2.5	1.5
I	1.2	3.5	2.3	0.7	0.8	-0.4
2014 ANNUAL	1.3	2.9	1.6	2.7	1.0	1.4
2014 IV	1.8	3.9	2.0	3.4	2.2	1.5
III	1.8	3.7	1.9	2.2	0.5	0.4
II	0.8	2.8	2.0	1.8	-0.2	1.0
I	0.8	1.3	0.5	3.3	1.9	2.5
2013 ANNUAL	0.7	1.5	0.8	0.2	-1.2	-0.5
2013 IV	0.5	1.9	1.3	-0.2	-1.4	-0.7
III	1.1	1.5	0.4	0.9	-0.6	-0.2
II	1.0	1.2	0.2	0.4	-0.9	-0.6
I	0.1	1.2	1.2	-0.3	-2.0	-0.4
-----						
Indexes 2009=100						
2015 ANNUAL	121.6	131.1	107.8	110.7	100.1	91.0
2015 IV	122.4	131.9	107.8	112.7	101.6	92.1
III	122.5 r	131.7 r	107.5 r	111.8 r	100.8 r	91.2 r
II	121.0 r	130.7 r	108.0	109.8	99.4	90.7 r
I	120.4	130.2	108.2	108.4	98.8	90.0
2014 ANNUAL	120.0	128.3	106.9	107.9	97.8	89.9
2014 IV	120.6	130.4	108.2	109.0	98.6	90.4
III	120.7	129.1	107.0	107.8	97.4	89.3
II	119.8	127.8	106.6	107.1	97.0	89.4
I	119.0	125.8	105.7	107.6	98.1	90.4
2013 ANNUAL	118.5	124.6	105.2	105.0	96.8	88.7
2013 IV	118.4	125.5	106.0	105.4	96.5	89.0
III	118.6	124.5	105.0	105.4	96.9	88.9
II	118.8	124.3	104.6	105.2	97.3	88.5
I	118.1	124.2	105.2	104.1	96.2	88.2
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See footnotes following Table 6.  
r=revised

February 4, 2016  
Source: Bureau of Labor Statistics

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

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs
-----						
Percent change from previous quarter at annual rate(5)						
2015 ANNUAL	1.4	2.1	0.7	2.3	2.1	0.9
2015 IV	-1.0	-0.2	0.8	3.6	3.3	4.6
III	6.8 r	3.9 r	-2.7 r	7.3 r	5.6 r	0.4 r
II	2.8	1.4	-1.4	5.3	2.3	2.4 r
I	-2.3	-2.4	-0.1	-3.4	-0.4	-1.1
2014 ANNUAL	1.9	4.2	2.3	2.1	0.5	0.2
2014 IV	0.5	3.9	3.3	5.0	5.9	4.5
III	3.2	6.4	3.1	2.3	1.1	-0.9
II	3.0	8.7	5.5	-2.6	-5.0	-5.5
I	2.6	1.5	-1.1	8.6	6.4	5.8
2013 ANNUAL	0.7	1.8	1.1	-0.4	-1.8	-1.1
2013 IV	0.7	5.5	4.8	-2.5	-3.8	-3.1
III	-0.3	1.4	1.7	1.7	-0.6	2.0
II	2.4	-0.3	-2.6	3.5	3.7	1.0
I	-0.5	3.4	3.9	-6.7	-8.0	-6.2
-----						
Percent change from corresponding quarter of previous year						
2015 ANNUAL	1.4	2.1	0.7	2.3	2.1	0.9
2015 IV	1.5	0.6	-0.9	3.1	2.7	1.6
III	1.9	1.7 r	-0.2 r	3.5	3.3 r	1.5 r
II	1.0	2.3	1.2	2.2	2.2	1.2
I	1.1	4.0	2.9	0.3	0.3	-0.8
2014 ANNUAL	1.9	4.2	2.3	2.1	0.5	0.2
2014 IV	2.3	5.1	2.7	3.2	2.0	0.9
III	2.4	5.5	3.0	1.3	-0.4	-1.0
II	1.5	4.2	2.7	1.2	-0.9	-0.3
I	1.3	2.0	0.7	2.7	1.3	1.4
2013 ANNUAL	0.7	1.8	1.1	-0.4	-1.8	-1.1
2013 IV	0.6	2.5	1.9	-1.1	-2.3	-1.6
III	1.0	1.7	0.7	0.9	-0.6	-0.1
II	0.8	1.1	0.3	-0.1	-1.5	-0.9
I	0.6	2.1	1.5	-1.1	-2.8	-1.8
-----						
Indexes 2009=100						
2015 ANNUAL	125.6	139.5	111.1	108.9	98.6	86.7
2015 IV	126.6	140.2	110.7	111.0	100.0	87.7
III	126.9 r	140.3 r	110.5 r	110.0 r	99.2 r	86.7 r
II	124.8 r	138.9 r	111.3	108.1	97.9	86.6 r
I	124.0	138.4	111.7	106.7	97.3	86.1
2014 ANNUAL	123.9	136.5	110.2	106.5	96.5	86.0
2014 IV	124.7	139.3	111.7	107.6	97.4	86.3
III	124.5	138.0	110.8	106.3	96.0	85.4
II	123.6	135.9	110.0	105.7	95.8	85.6
I	122.6	133.1	108.5	106.4	97.0	86.8
2013 ANNUAL	121.6	131.0	107.8	104.3	96.1	85.8
2013 IV	121.9	132.6	108.8	104.2	95.5	85.5
III	121.7	130.8	107.5	104.9	96.4	86.2
II	121.8	130.4	107.1	104.5	96.6	85.8
I	121.0	130.4	107.8	103.6	95.7	85.6
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See footnotes following Table 6.  
r=revised

February 4, 2016  
Source: Bureau of Labor Statistics

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

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs
-----						
Percent change from previous quarter at annual rate(5)						
2015 ANNUAL	1.1	2.3	1.2	3.2	3.1	2.1
2015 IV	0.3	1.5	1.1	2.6	2.4	2.3
III	2.2 r	2.4 r	0.2 r	7.8 r	6.1 r	5.5 r
II	1.1	1.2	0.1	5.9	2.8	4.7
I	1.3	1.7	0.4	0.2	3.2	-1.1
2014 ANNUAL	1.0	1.5	0.5	3.7	2.0	2.6
2014 IV	-2.1	4.1	6.3	3.1	3.9	5.3
III	3.6	2.1	-1.4	3.2	2.1	-0.4
II	3.7	3.7	0.0	-0.6	-3.0	-4.2
I	1.4	0.4	-0.9	8.8	6.6	7.3
2013 ANNUAL	0.9	1.1	0.2	1.2	-0.2	0.3
2013 IV	-1.4	1.0	2.4	4.0	2.5	5.4
III	-1.6	-0.4	1.2	-0.3	-2.6	1.3
II	2.1	0.3	-1.8	5.3	5.5	3.1
I	3.6	3.3	-0.3	-3.2	-4.6	-6.6
-----						
Percent change from corresponding quarter of previous year						
2015 ANNUAL	1.1	2.3	1.2	3.2	3.1	2.1
2015 IV	1.2	1.7	0.5	4.1	3.6	2.8
III	0.6	2.3 r	1.7 r	4.2	4.0	3.6 r
II	1.0	2.3	1.3	3.1	3.0	2.1
I	1.6	2.9	1.3	1.5	1.5	-0.2
2014 ANNUAL	1.0	1.5	0.5	3.7	2.0	2.6
2014 IV	1.6	2.6	0.9	3.6	2.4	1.9
III	1.8	1.8	0.0	3.8	2.0	1.9
II	0.5	1.2	0.7	2.9	0.8	2.4
I	0.1	0.4	0.2	4.4	2.9	4.3
2013 ANNUAL	0.9	1.1	0.2	1.2	-0.2	0.3
2013 IV	0.7	1.1	0.4	1.4	0.1	0.7
III	1.3	1.2	-0.1	0.9	-0.6	-0.4
II	1.5	1.5	0.0	1.5	0.1	0.0
I	0.2	0.8	0.6	1.2	-0.5	1.1
-----						
Indexes 2009=100						
2015 ANNUAL	113.5	116.6	102.7	113.3	102.5	99.8
2015 IV	114.0	117.4	103.0	115.3	103.9	101.2
III	113.9 r	116.9 r	102.7 r	114.6 r	103.3 r	100.6 r
II	113.3 r	116.2 r	102.6	112.4	101.8	99.2 r
I	113.0	115.9	102.6	110.8	101.1	98.1
2014 ANNUAL	112.3	114.0	101.5	109.8	99.5	97.7
2014 IV	112.6	115.4	102.5	110.8	100.3	98.4
III	113.2	114.3	100.9	109.9	99.3	97.1
II	112.2	113.6	101.3	109.1	98.8	97.2
I	111.2	112.6	101.3	109.2	99.6	98.3
2013 ANNUAL	111.2	112.3	101.0	105.9	97.5	95.3
2013 IV	110.8	112.5	101.5	107.0	98.0	96.5
III	111.2	112.2	100.9	105.9	97.4	95.3
II	111.6	112.3	100.6	106.0	98.0	95.0
I	111.0	112.2	101.1	104.7	96.7	94.2
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See footnotes following Table 6.  
r=revised

February 4, 2016  
Source: Bureau of Labor Statistics

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

Year and quarter	Output per all-employee hour	Output	Employee hours	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit non-labor costs (6)	Total unit cost (7)	Unit profits (8)	Implicit price deflator (4)
Percent change from previous quarter at annual rate(5)										
2015 III	1.7 r	3.1 r	1.4	4.2 r	2.5	2.4 r	0.2 r	1.7 r	-6.6 r	0.5
II	1.6	2.0	0.4	5.7	2.6	4.1	-2.9	1.8	5.8	2.4
I	-2.1	-0.3	1.8	0.5	3.6	2.6	3.2	2.8	-19.3	-0.8
2014 ANNUAL	0.4	3.2	2.8	2.4	0.8	2.0	-1.4	0.9	-0.4	0.7
2014 IV	3.4	7.4	3.9	1.5	2.3	-1.8	-6.4	-3.3	-6.5	-3.8
III	2.4	5.2	2.7	1.6	0.4	-0.8	-1.1	-0.9	17.2	1.6
II	1.7	6.2	4.4	-1.7	-4.1	-3.3	-3.4	-3.4	27.4	0.5
I	-1.7	0.2	2.0	8.4	6.2	10.3	-0.8	6.5	-22.0	1.9
2013 ANNUAL	1.0	3.0	2.0	1.3	-0.2	0.3	-0.2	0.1	4.4	0.8
2013 IV	-0.2	2.3	2.4	0.9	-0.5	1.1	0.8	1.0	0.9	1.0
III	-2.0	0.5	2.6	-0.3	-2.6	1.7	1.2	1.6	-7.5	0.2
II	4.8	6.0	1.1	4.4	4.6	-0.5	-4.0	-1.6	6.9	-0.4
I	-0.5	2.8	3.3	-4.2	-5.6	-3.7	1.8	-1.9	14.6	0.3
Percent change from corresponding quarter of previous year										
2015 III	1.1 r	3.0 r	1.9	2.9	2.8 r	1.8 r	-1.5 r	0.7 r	-7.1 r	-0.5 r
II	1.3	3.5	2.2	2.3	2.2	1.0	-1.8	0.1	-1.7	-0.2
I	1.3	4.6	3.2	0.5	0.5	-0.9	-2.0	-1.2	3.0	-0.6
2014 ANNUAL	0.4	3.2	2.8	2.4	0.8	2.0	-1.4	0.9	-0.4	0.7
2014 IV	1.4	4.7	3.3	2.4	1.1	0.9	-2.9	-0.3	2.1	0.0
III	0.5	3.4	2.9	2.2	0.4	1.7	-1.1	0.8	4.1	1.3
II	-0.6	2.3	2.9	1.7	-0.3	2.3	-0.6	1.4	-1.9	0.9
I	0.2	2.2	2.0	3.3	1.9	3.1	-0.7	1.8	-6.1	0.7
2013 ANNUAL	1.0	3.0	2.0	1.3	-0.2	0.3	-0.2	0.1	4.4	0.8
2013 IV	0.5	2.9	2.4	0.1	-1.1	-0.4	-0.1	-0.3	3.4	0.3
III	2.0	4.2	2.2	1.8	0.3	-0.2	-1.2	-0.5	4.3	0.2
II	1.2	3.1	1.9	1.9	0.5	0.7	-0.4	0.3	4.8	1.0
I	0.1	1.9	1.8	1.3	-0.4	1.1	0.9	1.0	5.2	1.6
Indexes 2009=100										
2015 III	109.7 r	123.9 r	112.9 r	113.9 r	102.7 r	103.8 r	95.2 r	100.9 r	142.8 r	105.3 r
II	109.3	123.0	112.6	112.7	102.0	103.2	95.2	100.5	145.3	105.2
I	108.8	122.4	112.4	111.2	101.4	102.1	95.9	100.0	143.2	104.6
2014 ANNUAL	108.3	119.6	110.5	110.6	100.2	102.1	96.6	100.3	148.0	105.3
2014 IV	109.4	122.5	111.9	111.0	100.5	101.5	95.1	99.4	151.1	104.8
III	108.5	120.3	110.9	110.6	99.9	101.9	96.7	100.2	153.7	105.8
II	107.9	118.8	110.1	110.2	99.8	102.1	97.0	100.4	147.7	105.4
I	107.4	117.0	108.9	110.7	100.9	103.0	97.8	101.3	139.0	105.2
2013 ANNUAL	107.9	116.0	107.5	108.0	99.5	100.1	98.0	99.4	148.5	104.6
2013 IV	107.9	117.0	108.4	108.5	99.4	100.5	98.0	99.7	148.0	104.7
III	107.9	116.3	107.7	108.2	99.5	100.2	97.8	99.4	147.6	104.5
II	108.5	116.1	107.1	108.3	100.1	99.8	97.5	99.1	150.5	104.4
I	107.2	114.5	106.8	107.1	99.0	99.9	98.5	99.5	148.0	104.5

See footnotes following Table 6.  
r=revised

February 4, 2016  
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 -1.6 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 third quarter of 2015.

### **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 1978-2014 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.