



Transmission of material in this release is embargoed until 8:30 a.m. (EST) Thursday, March 5, 2020

USDL 20-0378

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PRODUCTIVITY AND COSTS

Fourth Quarter and Annual Averages 2019, Revised

Nonfarm business sector labor productivity increased 1.2 percent in the fourth quarter of 2019, the U.S. Bureau of Labor Statistics reported today, as output increased 2.4 percent and hours worked increased 1.2 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) From the fourth quarter of 2018 to the fourth quarter of 2019, productivity increased 1.8 percent, reflecting a 2.6-percent increase in output and a 0.8-percent increase in hours worked. (See chart 1 and table A1.)

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, 2015Q1 - 2019Q4

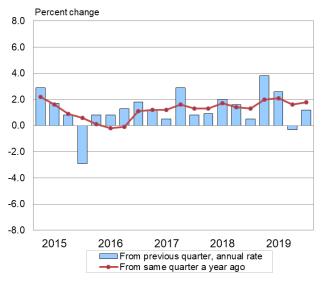
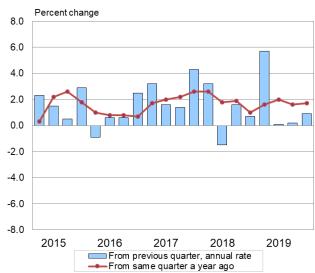


Chart 2. Unit labor costs, nonfarm business, 2015Q1 - 2019Q4



Unit labor costs in the nonfarm business sector increased 0.9 percent in the fourth quarter of 2019 as hourly compensation grew at a faster rate (2.1 percent) than productivity (1.2 percent). Unit labor costs increased 1.7 percent over the last four quarters. (See chart 2 and table 2.)

Historical Revisions to Productivity and Costs Data

Data in this release reflect the annual benchmark revision of BLS Current Employment Statistics program data on private nonfarm employment and hours. See Revised measures on page 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 0.8 percent in the fourth quarter of 2019, as output decreased 0.4 percent and hours worked increased 0.4 percent. Total manufacturing sector productivity declined 0.6 percent over the last four quarters, as output decreased 1.1 percent and hours worked decreased 0.5 percent. (See chart 3 and tables A1 and 3.) Productivity decreased 0.9 percent in the durable manufacturing sector in the fourth quarter of 2019, reflecting a 1.4-percent decrease in output and a 0.5-percent decrease in hours worked. Productivity decreased 1.2 percent in the nondurable manufacturing sector, as output increased 0.8 percent and hours worked increased 2.0 percent. (See tables A1, 4, and 5.) Unit labor costs in the total manufacturing sector increased 3.6 percent in the fourth quarter of 2019, and increased 3.7 percent from the same quarter a year ago. (See chart 4 and table A1.)

Chart 3. Labor productivity, manufacturing, 2015Q1 - 2019Q4

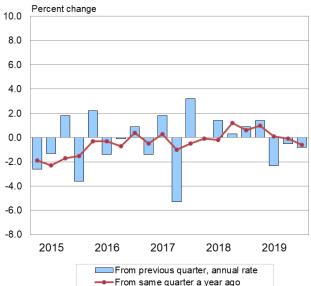
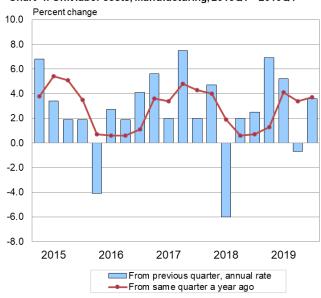


Chart 4. Unit labor costs, manufacturing, 2015Q1 - 2019Q4



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.)

Revised measures

Quarterly and annual measures of hours and related series—including productivity—were revised historically for all major sectors. The revisions incorporate revised Current Employment Statistics (CES) program data published February 7, 2020. From 2015 to 2019, the data were subject to revision as a result of annual benchmarking of CES data and revised seasonal adjustment of those data. From 1990 onward, there were small revisions due to the CES reconstruction of two sectors; the transportation and warehousing sector, and the financial activities sector. Because hours worked were revised for the index base year of 2012, all measures incorporating hours worked—including productivity—were subject to revision back to 1947; resulting revisions to percent changes are small. Quarterly and annual measures of real hourly compensation for 2019 were revised due to revisions to consumer prices. In addition, third quarter, fourth quarter, and annual average data for 2019 were revised to incorporate regular updates of source data on output and compensation.

Revised and previous measures for the fourth quarter of 2019 are shown in table B1 for the business, nonfarm business, and manufacturing sectors. In the **fourth quarter of 2019**, nonfarm business productivity was revised down slightly from an increase of 1.4 percent to an increase of 1.2 percent, reflecting a 0.1-percentage point downward revision to output and a 0.1-percentage point upward revision to hours. Unit labor costs were revised down from an increase of 1.4 percent to an increase of 0.9 percent.

Manufacturing productivity decreased 0.8 percent rather than decreasing 1.2 percent in the fourth quarter of 2019, reflecting an upward revision to output that was larger than an upward revision to hours. A downward revision to hourly compensation and an upward revision to productivity both contributed to a downward revision to unit labor costs, which increased 3.6 percent rather than 5.9 percent as previously reported. (See table B1.)

In the **third quarter of 2019**, nonfarm business productivity was revised down slightly to a decline of 0.3 percent. Unit labor costs were revised down to an increase of 0.2 percent rather than 2.5 percent as previously reported, reflecting a 2.4-percentage point downward revision to hourly compensation. In the manufacturing sector, productivity declined 0.5 percent rather than declining 0.3 percent as previously reported. Unit labor costs declined 0.7 percent rather than increasing 3.3 percent as previously reported, reflecting a large downward revision to hourly compensation. (See table B2.) **Nonfinancial corporate sector** productivity increased 0.9 percent in the third quarter of 2019 rather than 2.4 percent as previously reported, reflecting a 1.3-percentage point downward revision to output and a 0.1-percentage point upward revision to hours. (See table A2.)

Annual averages

Table C1 presents **annual average changes** for the most recent 5 years for the nonfarm business sector and the total manufacturing sector. **Nonfarm business sector** productivity grew 1.9 percent in 2019, as output increased 2.7 percent and hours worked increased 0.8 percent. The 1.9-percent increase in nonfarm business labor productivity is the largest annual increase since 2010, when it increased 3.4 percent. The 0.8-percent increase in hours worked is the smallest increase in the annual series since 2010 (-0.1 percent). The average annual rate of nonfarm business sector productivity growth from 2007 to 2019—corresponding to the current business cycle—is 1.4 percent, which is below the long-term rate from 1947 to 2019 of 2.1 percent.

Unit labor costs in the nonfarm business sector increased 1.7 percent in 2019, reflecting increases of 3.6 percent in hourly compensation and 1.9 percent in productivity. Real hourly compensation, which takes into account changes in consumer prices, increased 1.8 percent in 2019.

In the **manufacturing sector**, productivity grew 0.1 percent in 2019, as output was unchanged and hours worked decreased 0.1 percent. The average annual rate of manufacturing productivity growth from 2007 to 2019 is 0.4 percent, well below the long-term rate from 1987 to 2019 of 2.5 percent. Unit labor costs increased 3.1 percent in 2019.

Quarterly and annual data for all sectors from 2017 to 2019 appear in tables 1-6. Full historical measures can be found on the Productivity and Costs home page: www.bls.gov/lpc/#data.

The preliminary Productivity and Costs news release for first-quarter 2020 is scheduled to be released on Thursday, May 7, 2020 at 8:30 a.m. (EDT).

Table A1. Labor productivity growth and related measures - revised fourth-quarter 20 (percent change from previous quarter at annual rate and from same quarter a year ago)	
	2019
(percent change from previous quarter at annual rate and from same quarter a year ago)	

		Labor		Hours	Hourly	Real hourly	Unit labor
Sector	Percent change from:	productivity	Output	worked	compensation	compensation	costs
Nonfarm busines	s Previous quarter	1.2	2.4	1.2	2.1	-0.2	0.9
	A year ago	1.8	2.6	0.8	3.5	1.5	1.7
Business	Previous quarter	1.0	2.4	1.4	1.9	-0.5	0.9
	A year ago	1.8	2.7	0.8	3.6	1.5	1.7
Manufacturing	Previous quarter	-0.8	-0.4	0.4	2.8	0.4	3.6
	A year ago	-0.6	-1.1	-0.5	3.1	1.1	3.7
Durable	Previous quarter	-0.9	-1.4	-0.5	4.2	1.7	5.1
manufacturing	A year ago	-0.3	-1.2	-1.0	3.2	1.1	3.5
Nondurable	Previous quarter	-1.2	0.8	2.0	0.4	-1.9	1.6
manufacturing	A year ago	-1.2	-0.9	0.2	3.1	1.0	4.3

Table A2. Labor productivity growth and related measures - revised and previously published third-quarter 2019 (percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfinancial	Revised	0.9	1.7	0.7	0.1	-1.7	-0.8
corporate	Previously published	2.4	3.0	0.6	2.4	0.6	0.0

Table B1. Labor productivity growth and related measures - revised and previously published fourth-quarter 2019 (percent change from previous quarter at annual rate)

		Labor		Hours	Hourly	Real hourly	Unit labor
Sector		productivity	Output	worked	compensation	compensation	costs
Nonfarm business	Revised	1.2	2.4	1.2	2.1	-0.2	0.9
	Previously published	1.4	2.5	1.1	2.8	0.3	1.4
Business	Revised	1.0	2.4	1.4	1.9	-0.5	0.9
	Previously published	1.1	2.4	1.3	2.6	0.0	1.5
Manufacturing	Revised	-0.8	-0.4	0.4	2.8	0.4	3.6
· ·	Previously published	-1.2	-1.0	0.2	4.6	2.0	5.9
Durable	Revised	-0.9	-1.4	-0.5	4.2	1.7	5.1
manufacturing	Previously published	-0.8	-1.6	-0.8	6.6	3.9	7.5
Nondurable	Revised	-1.2	0.8	2.0	0.4	-1.9	1.6
manufacturing	Previously published	-2.2	-0.4	1.9	1.1	-1.4	3.4

Table B2. Labor productivity growth and related measures - revised and previously published third-quarter 2019 (percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	Revised	-0.3	2.3	2.7	-0.1	-1.9	0.2
	Previously published	-0.2	2.3	2.5	2.3	0.5	2.5
Business	Revised	-0.4	2.4	2.7	-0.1	-1.9	0.3
	Previously published	-0.2	2.4	2.6	2.3	0.5	2.6
Manufacturing	Revised	-0.5	0.9	1.4	-1.2	-3.0	-0.7
	Previously published	-0.3	1.0	1.3	3.1	1.2	3.3
Durable	Revised	0.4	1.5	1.1	-2.2	-3.9	-2.6
manufacturing	Previously published	0.6	1.7	1.1	2.5	0.7	1.9
Nondurable	Revised	-1.7	0.2	1.9	0.9	-0.9	2.6
manufacturing	Previously published	-1.3	0.3	1.6	4.2	2.4	5.5

Sector	Year	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm	2019	1.9	2.7	0.8	3.6	1.8	1.7
business	2018	1.4	3.5	2.0	3.2	0.8	1.8
	2017	1.3	2.9	1.5	3.5	1.3	2.1
	2016	0.3	1.7	1.5	1.1	-0.2	0.8
	2015	1.3	3.5	2.1	3.1	2.9	1.7
Manufacturing	2019	0.1	0.0	-0.1	3.2	1.3	3.1
J	2018	0.4	2.3	1.9	2.2	-0.3	1.8
	2017	-0.4	0.6	1.0	3.6	1.4	4.0
	2016	-0.2	-0.2	0.0	0.5	-0.8	0.7
	2015	-1.8	-0.9	1.0	2.5	2.3	4.4

TECHNICAL NOTES

Labor Hours

Hours worked 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.

Detailed hours data are presented in the table "Hours Worked in Total U.S. Economy and Subsectors" on the BLS website (https://www.bls.gov/lpc/special_requests/us_total_hrs_emp.xlsx).

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 worked. Business output accounted for about 77 percent of the value of GDP in 2018. Nonfarm business, which excludes farming, accounted for about 76 percent of GDP in 2018.

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 55 percent of the value of GDP in 2018.

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, or by contacting the BLS Division of Major Sector Productivity (Telephone 202-691-5606 or email 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.

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.

	Labor produc-		Hours		Real hourly compen- sation		Unit nonlabor payments	price
quarter	tivity			(1)	(2)	costs	(3)	(4)
	E	Percent char	nge from pre	evious quart	er at annua	l rate (5)		
2019 ANNUAL	1.9 r	2.7	0.8 r	3.7 r	1.8 r	1.7 r	0.9 r	1.4
2019 IV	1.0 r	2.4	1.4 r	1.9 r	-0.5 r	0.9 r	1.0 r	0.9 r
III	-0.4 r	2.4		-0.1 r		0.3 r	2.5 r	1.2
II -	2.9 r 3.9 r	2.0	-0.8 r	2.9 r	-0.1 8.8 r	0.1	7.0	3.0
I	3.9 r	3.9	0.1 r	9.8 r	8.8 r	5./	-/.3 r	-0.1
2018 ANNUAL	1.4 r	3.4	1.9 r	3.3 r	0.9 r	1.9	2.8	2.3
2018 IV		1.2			-0.6 r			1.2
III II	1.2 r 2.6 r	3.4 4.0	2.2 r 1.3 r	3.0 r	1.0 r -1.2 r	1.8 r		1.5 3.6
I	1.3	2.9	1.6	4.7	1.4	3.4	0.1	2.0
2017 ANNUAL	1.4 r	2.8	1.4 r	3.5	1.3	2.1	1.2	1.7
2017 IV	0.1	4.1	4.1 r	4.4	1.2	4.3	0.7	2.7
III	3.3 r	4.0			2.7 r		2.9	2.1
II -	0.5 r	2.6	2.1 r	2.2 r	1.7 0.9 r	1.7	0.3	1.1
I	0.7 r		1.9 r 	3./ r	0.9 r	2.9	0.1	1.7
	Per	cent change	e from corre	esponding qu	arter of pr	evious year		
2019 ANNUAL	1.9 r	2.7	0.8 r	3.7 r	1.8 r	1.7 r	0.9 r	1.4
2019 IV	1.8	2.7		3.6 r				1.3
III II	1.7 r 2.1 r	2.4	0.7 r 0.6 r	3.3 r 4.1 r	1.5 r 2.2 r		0.9 r 0.6	1.3 1.4
I	2.1 1 2.0 r			3.6 r	1.9 r			
2018 ANNUAL	1.4 r	3.4	1.9 r	3.3 r	0.9 r	1.9	2.8	2.3
2018 IV	1.4 r	2.9	1.5 r	2.4 r	0.2 r	1.0	3.4 r	2.1
III	1.3 r	3.6	2.3 r	3.2 r	0.6 r	1.9	3.1	2.4
ΙΙ	1.8	3.7	1.9	3.7	1.0	1.9	3.5	2.6
I	1.3	3.4	2.1	4.0	1.8	2.7	1.0	2.0
2017 ANNUAL	1.4 r	2.8	1.4 r	3.5	1.3	2.1	1.2	1.7
2017 IV	1.1	3.3	2.2	3.8 r	1.6	2.6	1.0	1.9
III	1.7	2.9	1.2	4.0	1.9 1.3	2.2	0.9	1.6
I	1.3	2.5	1.3 1.1 r	3.0	0.4	1.7	2.2	1.4
				exes 2012=10	00			
2019 ANNUAL	108.1 r	121.6	112.5 r	120.1 r	107.6 r	111.1 r	109.1 r	110.2 r
2019 TV	108.4 r	122 6 r	113 1 r	120 7 r	107 2 r	111.3 r	110.1 r	110 8 r
2019 IV III II I	108.2 r	121.9	112.7 r	120.1 r	107.4 r	111.1 r	109.8 r	110.5
II	108.3 r	121.2	111.9 r	120.1 r	107.9 r	111.0 r	109.1 r	110.2
I	107.5 r	120.6	112.2 r	119.3 r	107.9 r	111.0 r	107.3 r	109.4
2018 ANNUAL	106.1 r	118.3	111.6 r	115.8 r	105.7 r	109.2 r	108.1 r	108.7
2018 IV III	106.5 r	119.4	112.1 r	116.5 r	105.6 r	109.4 r	109.3 r	109.4
III	106.4 r	119.0	111.9 r	116.3 r	105.8 r	109.3 r	108.8 r	109.1
II	105.4 r	116.9	111.3 r 110.9 r	115.4 r 115.1 r	105.5 r 105.9 r	100.8 r 109.2 r	100.5 r	107.7
2017 ANNUAL								
2017 737	105 0 ∽	116 1	110 5 ~	113 ₽ ∽	105 5 ∽	108 3 ∽	105 7 ∽	107 2
III	105.0 r	114.9	109.4 r	112.6 r	105.2 r	107.2	105.7 r	106.5
II	104.2 r	113.8	109.2 r	111.3 r	104.5 r	106.8 r	104.8 r	105.9
2017 IV III II I	104.1 r	113.1	108.6 r	110.7 r	104.0 r	106.4	104.7 r	105.6
See footnote	s following	r Table 6.					Mare	ch 5, 2020

March 5, 2020 Source: Bureau of Labor Statistics

r=revised

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

Year and quarter	Labor productivity		Hours worked	sation (1)	(2)	labor costs	Unit nonlabor payments (3)	deflator (4)
		Percent chang						
2019 ANNUAI	L 1.9 r	2.7	0.8 r	3.6 r	1.8 r	1.7 r	1.0 r	1.4
2019 IV	1.2 r	2.4 r	1.2 r	2.1 r	-0.2 r	0.9 r	0.9 r	0.9 r
III	-0.3 r		2.7 r			0.2 r	2.4 r	1.2
II	2.6 r	1.9 3.9	-0.7 r		-0.3 r	0.1 5.7	7.2 -7.1	3.1 0.0
2018 ANNUAI	L 1.4 r		2.0 r	3.2 r	0.8 r		3.0	2.3
2018 IV	0.5 r		0.7 r	1.2 r		0.7 r	1.8 r	1.2
II	1.6 r 2.0 r		1.8 r 1.9 r		1.3 r -1.7 r	1.6	1.9 10.8 r	1.7 3.6
I	0.9	2.9	2.0	4.1	0.9	3.2	0.4	2.0
0017 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7								
2017 ANNUAI		2.9	1.5	3.5				1.6
2017 IV		4.2	3.3		1.9 r		0.8	2.7
III	2.9 r 0.5	4.2 2.7	1.3 r 2.2	4.3 r 2.1	2.1 r 1.7	1.4 1.6	3.2 0.4	2.2 1.1
I	1.2 r	2.5		4.3 r	1.5 r	3.2 r		1.2
		ercent change						
2019 ANNUAI				3.6 r				1.4
2019 IV III	1.8 1.6 r		0.8 r 0.7 r	3.5 r 3.3 r	1.5 r 1.4 r	1.7 r 1.6 r	0.7 r 0.9 r	1.3 1.3
II	2.1 r		0.7 r	4.2 r	2.2 r	2.0	0.8	1.5
I	2.0 r		1.2 r	3.6 r	1.9 r		1.7	1.6
2018 ANNUAL	L 1.4 r	3.5	2.0 r	3.2 r	0.8 r	1.8	3.0	2.3
2018 IV	1.3 r	2.9	1.6 r	2.3 r	0.0 r	1.0	3.6 r	2.1
III	1.4 r	3.6	2.3 r	3.2 r	0.6 r	1.9	3.4	2.5
II	1.7 r	3.8	2.1	3.5	0.8	1.8	3.7	2.6
I	1.3	3.5	2.2	3.9	1.7	2.6	1.2	2.0
2017 ANNUAL	L 1.3	2.9	1.5	3.5	1.3	2.1	1.0	1.6
2017 IV	1.3	3.4	2.0	4.0	1.8	2.6	0.7	1.8
III	1.6	3.0 2.6	1.4 r	3.8	1.7	2.2	0.7	1.5
II	1.2 1.2				0.4		0.6 2.1	1.4 1.9
2019 AMMIIA	r. 107 8 r	121.3 r				111 4 r	110 2 r	110 9 ~
2019 IV	108.2 r	122.4 r 121.6	113.1 r	120.7 r	107.3 r 107.4 r	111.6 r 111.4 r		111.4 r 111.2
II	107.8 r	120.9	112.0 r	120.1 r	107.4 I 107.9 r			
I	107.2 r	120.9 120.4	112.2 r	119.4 r	108.0 r	111.3 r		110.0
2018 ANNUAI	L 105.8 r	118.1	111.7 r	115.9 r	105.8 r	109.5 r	109.1 r	109.3
2018 777	106.3 r	110 2	112.2 r	116.6 r	105.7 r	109.8 r	110.4 r	110.0
		118.8	112.0 r	116.3 r				
II	105.7 r	118.8 117.8	111.5 r	115.4 r	105.5 r	109.1 r	109.4 r	109.3
I	105.2 r	116.7	111.0 r	115.2 r		109.6 r	106.6 r	108.3
2017 ANNUAI	L 104.4	114.2	109.4	112.3	105.0	107.6	105.9	106.9
2017 IV	104.9 r	115.8	110.4 r	114.1 r	105.7 r	108.7 r	106.5 r	107.8
III	104.7 r	115.8 114.7	109.5 r	112.6 r	105.2 r	107.6 r	106.3 r	
ΙΙ	104.0 r	113.5 112.7	109.2 r	111.5 r	104.7 r	107.2 r		106.5
I	103.8 r	112 . 7	108.6 r	110.9 r	104.2 r	106.8 r	105.4 r	106.2

March 5, 2020 Source: Bureau of Labor Statistics

r=revised

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

Year and		Labor produc-		Hours		Real hourly compensa-	
quart	ter		Output	worked		tion (2)	
					at annual rate		
2019	ANNUAL	0.1 r	0.0	-0.1 r	3.2 r	1.3 r	3.1 r
2019	IV	-0.8 r	-0.4 r	0.4 r	2.8 r	0.4 r	3.6 r
	III	-0.5 r	0.9 r	1.4 r			-0.7 r
	II	-2.3 r	-3.1	-0.9 r	2.8 r 8.3 r	-0.3	5.2 r
	I	1.4 r	-1.7	-3.1 r	8.3 r	7.3 r	6.9
2018	ANNUAL	0.4 r	2.3	1.9	2.2	-0.3	1.8
2018	IV	0.9	1.6		3.5 r		2.5
	III	0.3 r	4.0	3.7 r	2.3 r	0.3 r	2.0
	II	1.4	2.7	1.3 r	-4.7 r		-6.0
	I	0.0 r	1.9	1.9 r	4.6 r	1.4 r	4.7
2017	ANNUAL	-0.4 r	0.6	1.0	3.6 r	1.4 r	4.0
2017		3.2	5.1	1.8 r	5.3 r	2.1 r	2.0
			-2.7	2.8 r	1.8 r	2.1 r -0.3 r	7.5
	II	1.8	1.7	-0.1 r 1.9 r	3.9	3.4 r	2.0
	I 	-1.4 r	0.4	1.9 r 	4.1 r	1.3 r	5.6
		Percent	change from cor	responding quar	ter of previous	year	
2019	ANNUAL	0.1 r	0.0	-0.1 r	3.2 r	1.3 r	3.1 r
2019	IV	-0.6 r	-1.1 r		3.1 r	1.1 r	3.7 r
	III	-0.1 r	-0.6	-0.5 r		1.4 r	3.4 r
	II	0.1 r	0.1	0.1 r	4.2 r	2.3 r	4.1
	I	1.0	1.6	0.6	2.3 r	0.6	1.3
2018	ANNUAL	0.4 r	2.3	1.9	2.2	-0.3	1.8
2018	IV	0.6	2.5	1.9	1.4 r	-0.8 r	0.7
	III	1.2	3.4	2.2	1.8	-0.8	0.6
	II	-0.2	1.7	1.9	1.7	-1.0 r	1.9
	I	-0.1	1.4	1.6	3.9	1.6	4.0
2017	ANNUAL	-0.4 r	0.6	1.0	3.6 r	1.4 r	4.0
2017	IV	-0.5	1.1	1.6	3.8	1.6	4.3
	III	-1.0 r	0.1	1.1 r	3.7	1.7	4.8
	II	0.3	1.0	0.7	3.7	1.7	3.4
	I 	-0.5 r 	0.1	0.6 r	3.1 r 	0.5 r	3.6
			Ir	ndexes 2012=100			
2019	ANNUAL	98.7 r	104.9 r	106.3 r	116.3 r	104.2 r	117.8 r
2019	IV	98.3 r	104.8 r	106.6 r	116.9 r	103.9 r 103.8 r 104.5 r	118.9 r
	III	98.5 r	104.9 r	106.4 r	116.1 r	103.8 r	117.8 r
	II	98.6 r	104.6	106.1 r	116.4 r	104.5 r	118.0 r
	I	99.2 r	105.5	106.3 r	115.6 r	104.6 r	116.6 r
2018	ANNUAL	98.6 r	104.9	106.4 r	112.6 r	102.8 r	114.3 r
	IV	98.9 r	105.9	107.1 r	113.4 r	102.8 r 102.3 r	114.6 r
			105.5	107.0 r	112.4 r	102.3 r	113.9
	II	98.6 r 98.2 r	104.5	106.0 r	111.7 r 113.1 r	102.2 r 104.0 r	113.4 r
	I	98.2 r	103.8	105.7 r	113.1 r	104.0 r	115.1 r
2017	ANNUAL	98.2 r	102.6	104.5 r	110.2 r	103.1 r	112.2
		98.2 r	103.3	105.2 r	111.8 r	103.6 r	113.8 r
	III	97.5 r	102.0	104.7 r	110.4 r	103.1 r 103.2 r	113.2
	II	98.8 r	102.7	104.0 r	109.9 r	103.2 r 102.3 r	111.2 r
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March 5, 2020 Source: Bureau of Labor Statistics

r=revised

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

Year and quart	ter	Labor produc- tivitv	Output	Hours worked	Hourly compensa- tion (1)	Real hourly compensa- tion (2)	Unit labor costs
					at annual rate		
2019	ANNUAL	0.5 r	0.7	0.2	3.0 r	1.1 r	2.5 r
2019	TV	-0.9 r	-1.4 r	-0.5 r	4.2 r	1.7 r	5.1 r
2010	III	0.4 r	1.5 r	1.1	-2.2 r	-3.9 r	-2.6 r
	II	-0.7 r	-2.3	-1.6 r	2.3 r	-0.7 r	3.1
	I	0.2 r	-2.7	-2.9 r	8.8 r	7.7 r	8.5
2018	ANNUAL	0.7	3.0	2.2 r	2.6	0.2	1.9
2018	IV	1.6 r	4.7	3.1 r	2.6 r	1.1 r	1.0
	III	2.1 r	5.8	3.7 r	2.0 r	0.0 r	-0.1
	II	0.2 r	2.2	2.0 r	-4.4 r	-6.4 r	-4.6
	I	0.7 r	3.9	3.1 r	4.6 r	1.3 r	3.8
2017	ANNUAL	0.1	0.7	0.6	4.3 r	2.1 r	4.2
2017	TV	3.2 r	4.6	1.4 r	7.3 r	4.1 r	4.0
	III	-4.7	-2.5	2.3	1.5	-0.7	6.5
	II	2.8 r	0.9	-1.9 r	6.7 r	6.3 r	3.7 r
	I	-1.2 r	1.4	2.6 r	3.6 r	0.8 r	5.0 r
					ter of previous		
2019	ANNUAL	0.5 r	0.7	0.2	3.0 r	1.1 r	2.5 r
2019	TV	-0.3	-1.2	-1.0 r	3.2 r	1.1 r	3.5 r
2015	III	0.4	0.3	-0.1	2.8 r	1.0 r	2.4 r
	II	0.8 r	1.3	0.5 r	3.9 r	2.0 r	3.1
	I	1.0 r	2.5	1.4	2.1 r	0.5	1.1
2018	ANNUAL	0.7	3.0	2.2 r	2.6	0.2	1.9
2010	T17	1.1	4.2	3.0	1.1	-1.1	0.0
2018	III	1.5	4.1	2.5 r	2.3 r	-0.3 r	0.0
	II	-0.2	2.0	2.2	2.3 r	-0.5	2.4
	I	0.5	1.7	1.2	5.0	2.7	4.5
2017	ANNUAL	0.1	0.7	0.6	4.3 r	2.1 r	4.2
2017		0.0	1.1	1.1	4.8	2.6	4.8
	III	-0.7	0.1	0.8	4.4 r	2.3	5.1
	II	1.0	1.2	0.2	4.6	2.6	3.6
		0.2 r	0.4	0.2 F	3.4 r	U.8 r	J.Z
			In	dexes 2012=100			
					117.0 r		
2019	IV	99.8 r	106.4 r	106.6 r	117.7 r 116.5 r 117.2 r 116.5 r	104.6 r	118.0 r
	III	100.0 r	106.8 r	106.7 r	116.5 r	104.1 r	116.5 r
	II	99.9 r	106.4	106.4 r	117.2 r	105.2 r	117.3 r
	I	100.1 r	107.0	106.9 r	116.5 r	105.4 r	116.4
2018	ANNUAL	99.5 r	105.9	106.5 r	113.6 r	103.6 r	114.2 r
2018	IV	100.0 r	107.7	107.7 r	114.1 r	103.4 r	114.0 r
	III	99.6 r	106.5	106.9 r	113.3 r	103.2 r	113.7 r
	II	99.1 r	105.0	105.9 r	113.3 r 112.8 r	103.2 r	113.8 r
	I	99.1 r	104.4	105.4 r	114.1 r	104.9 r	115.1 r
2017	ANNUAL	98.7 r	102.8	104.1 r	110.7 r	103.5 r	112.1
2017	IV	98.9 r	103.4	104.6 r	112.8 r	104.5 r	114.0 r
	III	98.1	102.3	104.2	112.8 r 110.8	103.5	112.9 r
	II	99.3	102.9	103.6 r	110.4	103.7	111.2
	I	98.6 r	102.7	104.1 r	110.4 108.6 r	102.1 r	110.1 r

See footnotes following Table 6. r=revised

March 5, 2020 Source: Bureau of Labor Statistics

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

Year and quart	cer	Labor produc- tivity	Output	Hours worked	Hourly compensa- tion (1)	Real hourly compensa- tion (2)	Unit labor costs
					at annual rate		
2019	ANNUAL	-0.1 r	-0.7 r	-0.6	3.6 r	1.7 r	3.7 r
2019	IV	-1.2 r	0.8 r	2.0 r	0.4 r	-1.9 r	1.6 r
	III	-1.7 r	0.2 r	1.9 r	0.9 r	-0.9 r	2.6 r
	II	-4.4 r	-4.0	0.4 r	3.9 r	0.8 r	8.6
	I	2.6 r	-0.7	-3.3 r	7.4 r	6.4 r	4.6
2018	ANNUAL	0.1	1.5	1.3 r	1.2	-1.2	1.1
2018	IV	1.9 r	-1.6	-3.5 r	4.6 r	3.0 r	2.6
	III	-1.6 r	2.2	3.8 r	3.1 r	1.1 r	4.7
	II	3.1 r	3.1	0.0 r	-5.5	-7.5	-8.3
	I	-0.1	-0.1	0.0	4.4	1.1	4.5
2017	ANNUAL	-1.6	0.1	1.7	2.3	0.1	3.9
2017	IV	2.9 r	5.4	2.4 r	1.6 r	-1.5 r	-1.3
	III	-6.4 r	-2.9	3.7 r	2.6 r	0.4 r	9.6
	II	-0.6 r	2.3	2.9 r	-1.0 r	-1.4 r	-0.4
	I 	-1.5 	-0.8	0.6	4.8	1.9	6.3
		Percent	change from cor	responding quar	ter of previous	year	
2019	ANNUAL	-0.1 r	-0.7 r	-0.6	3.6 r	1.7 r	3.7 r
2019	IV	-1.2 r	-0.9 r	0.2 r	3.1 r	1.0 r	4.3 r
	III	-0.4 r	-1.5	-1.1 r	4.1 r	2.3 r	4.6 r
	II	-0.4 r	-1.1	-0.7 r	4.7 r	2.8 r	5.1
	I	1.5 r	0.7	-0.8 r	2.3 r	0.6 r	0.8
2018	ANNUAL	0.1	1.5	1.3 r	1.2	-1.2	1.1
2018	IV	0.8 r	0.9	0.1 r	1.6 r	-0.7 r	0.7
	III	1.1	2.6	1.5	0.8 r	-1.8 r	-0.2
	II	-0.2	1.3	1.5	0.7	-1.9	0.9
	I	-1.1	1.1	2.2 r	1.9 r	-0.3 r	3.0
2017	ANNUAL	-1.6	0.1	1.7	2.3	0.1	3.9
2017	IV	-1.4 r	0.9	2.4 r	2.0 r	-0.1 r	3.5
	III	-1.9	-0.2	1.7	2.5	0.5	4.5
	II	-1.1	0.4	1.4 r	2.1	0.2 r	3.2
	I 	-1.9 	-0.7 	1.3 	2.6	0.0	4.6
			Ir	ndexes 2012=100			
2019	ANNUAL	98.7 r	104.4 r	105.8 r	114.8 r	102.9 r	116.3 r
2019	IV	98.0 r	104.3 r	106.4 r	115.3 r	102.4 r	117.6 r
	III	98.3 r	104.1 r	105.9 r	115.2 r	102.9 r	117.1 r
	II	98.7 r	104.1	105.4 r	115.3 r 115.2 r 114.9 r 113.8 r	103.2 r	116.4 r
	I	99.8 r	105.1	105.3 r	113.8 r	103.0 r	114.0 r
2018	ANNUAL	98.8 r	105.2	106.4 r	110.8 r	101.2 r	112.2 r
2018	IV	99.2 r	105.3	106.2 r	111.8 r	101.4 r	112.7 r
	III	98.7 r	105.8	107.1 r	110.6 r 109.7 r	100.6 r	112.0 r
		99.1 r	105.2	106.2 r	109.7 r	100.4 r	110.7 r
	I	98.4 r	104.4	106.1 r	111.3 r	102.3 r	113.2 r
2017	ANNUAL	98.7 r	103.6	105.0 r	109.5 r	102.4 r	110.9 r
2017	IV	98.4 r	104.4	106.2 r	110.1 r 109.7	102.1 r	111.9 r
	III	97.7	103.1	105.5	109.7	102.4	112.3
	II	99.3 r	103.8	104.6 r	109.0 r 109.2	102.3 r	109.7 r
	I	99.5	103.3	103.8	109.2	102.7	109.8

See footnotes following Table 6. r=revised

March 5, 2020 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 quarte		Labor produc- tivity			Hourly compensation (1)	compen- sation	labor	Unit nonlabor costs (6)	costs	Unit profits	deflator
					rom previou						
2019 I	II	0.9 r	1.7 r	0.7 r	0.1 r	-1.7 r	-0.8 r	5.7 r	1.2 r	-3.6 r	0.7
	I	1.0 r	1.1	0.1 r			1.4			12.0	2.4
I	-	2.0 r	3.6	1.6 r	9.4 r	8.4 r	7.3	1.1	5.3	-33.7	-0.1
2018 A	NNUAL	0.0 r	1.9	2.0 r	3.4 r	0.9 r	3.4	3.0	3.3	-1.1	2.8
2018 I	V	1.8 r	2.4	0.6 r		-0.7 r	-1.0	3.5	0.5	0.0	0.4
	II	5.1 r	6.3	1.2 r		-0.1 r	-3.0	-2.5	-2.9		-1.2
	I		-0.4		-0.4 r		2.5	5.3	3.4	4.8	3.6
I	=	1.4	3.3	1.9	9.7	6.3	8.2	1.6	6.0	0.2	5.3
2017 A	NNUAL	0.3	2.0	1.7	3.3	1.1	3.0	2.2	2.7	-2.9	2.0
2017 I		-1.0 r		2.7	2.6	-0.5	3.6	4.3	3.8	-7.6	2.4
	ΙΙ	-3.7 r	-2.3	1.5 r	2.1 r 0.5	0.0 r	6.0	6.6	6.2		3.2
	I	0.6									0.7
	: 	5.0 r	6.7	1.6 r 	8.0 r	5.0 r	2.8	-3.7 	0.6	16.4	2.5
			Percent o	change fro	m correspor	nding quar	ter of pr	revious yea	ır		
2019 I	II	1.4 r	2.2 r	0.8 r	3.1 r	1.3 r	1.7 r	2.9 r	2.1	-8.0 r	0.9
I	I	2.5 r	3.4	0.9 r	3.6 r	1.7 r	1.1		1.0	-4.4	
I	-	1.5 r	3.0	1.5 r	2.9 r	1.2 r	1.4	1.8	1.5	-5.9	0.7
2018 A	NNUAL	0.0 r	1.9	2.0 r	3.4 r	0.9 r	3.4	3.0	3.3	-1.1	2.8
2018 I	V	1.4 r	2.9	1.5 r	3.0 r	0.7 r		1.9	1.7	4.3	2.0
	II	0.6 r	2.7	2.1 r		0.8 r	2.7	2.1	2.5	2.2	2.5
	I	-1.5	0.6	2.1 r			5.1	4.4	4.9	-5.0	3.6
I	-	-0.7 r	1.5	2.2	3.7	1.4 r	4.4	3.5	4.1	-5.4	2.9
2017 A	NNUAL	0.3	2.0	1.7	3.3	1.1	3.0	2.2	2.7	-2.9	2.0
2017 I	V	0.2	2.3	2.1	3.3		3.1			-1.8	2.2
	II	0.3		1.6	3.4		3.1			-4.0	2.0
	I	1.2	3.0	1.7	3.2 r		1.9	1.1			1.5
		-0.7	0.6	1.3 	3.2	0.7 r	3.9	3.0	3.6	-6.2 	2.3
					Indexes	2012=100					
2019 I					119.5 r						
					119.4 r						
I	-	102.4 r	116.4	113.6 r	118.7 r	107.4 r	115.9	111.0	114.3	82.0	109.7
2018 A	NNUAL	101.1 r	114.0	112.7 r	115.6 r	105.5 r	114.3	110.0	112.9	89.3	109.5
2018 I		101.9 r			116.1 r				112.8		109.7
	II	101.5 r			115.8 r			109.7	112.7	90.9	109.6
	I	100.2 r			115.3 r				113.5		109.9
I	-	100.9 r	113.0	112.0 r	115.4 r	106.1 r	114.3	109.0	112.6	87.2	108.9
2017 A	NNUAL	101.2 r	111.9	110.5 r	111.9 r	104.6 r	110.6	106.8	109.3	90.3	106.6
2017 I	V	100.6 r	112.1	111.5 r	112.7 r 112.0 r	104.5 r	112.1	108.6	110.9	87.2	107.5
			111.6	110.7 r	112.0 r	104.6 r	111.1	107.5	109.9	88.9	106.9
	I	101.8 r	112.3	110.3 r	111.4 r 111.3 r	104.6 r	109.5	105.7	108.2	92.9	106.0
	: 	101.6 r	111.3	109.6 r	111.3 r	104.6 r	109.5	105.4	108.1	92.1	105.9
			ng Table 6								n 5, 2020

r=revised

March 5, 2020 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 -1.4 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 2019.

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 1978-2018 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 adjustment.