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PRODUCTIVITY AND COSTS

Fourth Quarter and Annual Averages 2021, Revised

Nonfarm business sector labor productivity increased 6.6 percent in the fourth quarter of 2021, the U.S. Bureau of Labor Statistics reported today, as output increased 9.1 percent and hours worked increased 2.4 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) From the fourth quarter of 2020 to the fourth quarter of 2021, nonfarm business sector labor productivity increased 1.9 percent. (See chart 1 and table A1.) Annual average productivity increased 1.9 percent from 2020 to 2021. (See table C1.)

Chart 1. Labor productivity, nonfarm business, 2017Q1 - 2021Q4

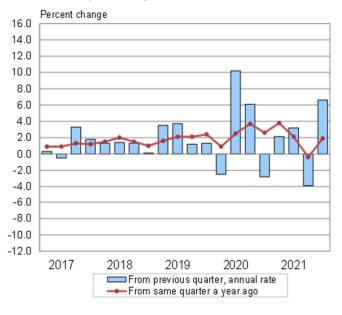
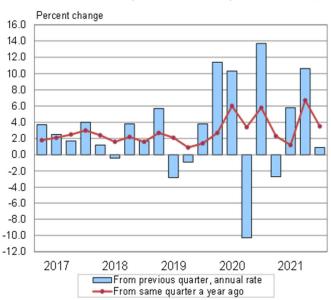


Chart 2. Unit labor costs, nonfarm business, 2017Q1 - 2021Q4



Unit labor costs in the nonfarm business sector increased 0.9 percent in the fourth quarter of 2021, reflecting a 7.5-percent increase in hourly compensation and a 6.6-percent increase in productivity. Unit labor costs increased 3.5 percent over the last four quarters. (See chart 2 and table A1.) 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 productivity tend to reduce them.

Historical Revisions to Productivity and Costs Data

Data in this release incorporate the annual benchmark revision of BLS Current Employment Statistics program data on employment and hours of employees on nonfarm payrolls. Data also include revised employment and hours of all other business sector workers that reflect updated seasonal adjustment of those data by the BLS Major Sector Productivity program. See Revised measures on page 3.

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. In the fourth quarter of 2021, both output and hours worked increased for the sixth consecutive quarter following historic declines in those measures in the second quarter of 2020. The fourth-quarter 2021 output index is 4.1 percent above the level seen in the fourth quarter of 2019, the last quarter not affected by the COVID-19 pandemic, while the hours worked index remains 0.4 percent below its fourth quarter 2019 level. (See chart 3 and tables A1 and 2.)

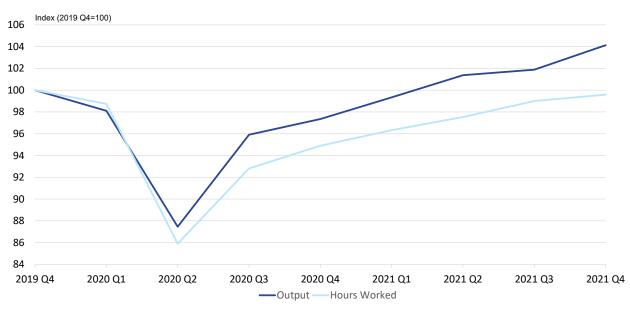


Chart 3. Output and Hours Worked index series, nonfarm business, 2019 Q4 - 2021 Q4

The nonfarm business sector labor productivity index is 4.6 percent higher in the fourth quarter of 2021 than it was in the fourth quarter of 2019, corresponding to an annual growth rate of 2.3 percent during the pandemic so far. This rate is higher than the 1.4-percent average annual growth rate during the previous business cycle—from 2007 to 2019—and slightly above the long-term average rate since 1947 of 2.1 percent.

Manufacturing sector labor productivity decreased 0.1 percent in the fourth quarter of 2021; output and hours worked both increased 5.8 percent. In the durable manufacturing sector, productivity increased 2.8 percent, with a 6.9-percent increase in output and a 4.0-percent increase in hours worked. Nondurable manufacturing sector productivity decreased 4.0 percent, as 4.5-percent growth in output was outpaced by 8.8-percent growth in hours worked. Total manufacturing sector productivity increased 1.3 percent from the same quarter a year ago. (See tables A1, 3, 4, and 5.)

Index (2019 Q4=100) 104 102 100 98 96 94 92 90 88 86 84 2020 Q1 2020 Q2 2020 Q3 2019 Q4 2020 Q4 2021 Q1 2021 Q2 2021 Q3 2021 Q4 Output — Hours Worked

Chart 4. Output and Hours Worked index series, manufacturing, 2019 Q4 - 2021 Q4

Manufacturing sector output is now 2.1 percent above its level in the fourth quarter of 2019, the last quarter not affected by the COVID-19 pandemic. Hours worked in manufacturing remain 2.3 percent below the fourth-quarter 2019 level. The manufacturing labor productivity index is 4.5 percent higher in fourth-quarter 2021 than in fourth-quarter 2019, corresponding to an annual labor productivity growth rate of 2.2 percent during that period. This rate is much higher than the 0.2-percent average annual growth rate during the previous business cycle—from 2007 to 2019—but is just below the long-term rate of 2.3 percent per year from 1987 to 2021. (See chart 4 and tables A1 and 3.)

Unit labor costs in the total manufacturing sector increased 1.4 percent in the fourth quarter of 2021, reflecting a 1.3-percent increase in hourly compensation and a 0.1-percent decrease in productivity. Manufacturing unit labor costs increased 1.5 percent from the same quarter a year ago. (See tables A1 and 3.)

The concepts, sources, and methods used for the manufacturing output series differ from those used in the business and nonfarm business output series; these output measures are not directly comparable. See the Technical Notes for a more detailed explanation. (See page 8.)

Revised measures

Quarterly and annual measures of hours worked and related series—including productivity—were revised for all major sectors. From 1990 to 2021, the revisions reflect revised BLS Current Employment Statistics (CES) program data for employment and hours of employees on nonfarm payrolls, due to annual benchmarking of CES data and revised seasonal adjustment of those data. Revisions from 2017 to 2021 reflect revised seasonal adjustment of hours worked by nonfarm proprietors and unpaid family workers, all farm workers, and employees of government enterprises. These measures, based on source data from the BLS Current Population Survey (CPS), are seasonally adjusted by the BLS Major Sector Productivity program. Revisions to hours worked in all sectors also incorporate data from the 2017 Economic Census on the proportion of employment in tax exempt establishments and in corporations; data were subject to revision back to 2006. 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 measures of real hourly compensation in 2021 were revised to reflect revised data from the BLS Consumer Price Index program. In addition, third quarter, fourth quarter, and annual average data for 2021 were revised to incorporate regular updates of source data on output and compensation.

Revised and previous measures for the fourth quarter of 2021 are shown in table B1 for the business, nonfarm business, and manufacturing sectors. In the **fourth quarter of 2021**, nonfarm business productivity was not revised, increasing at the same 6.6-percent rate that was previously reported. Unit labor costs were revised up, from an increase of 0.3 percent to an increase of 0.9 percent, reflecting a 0.6-percentage point upward revision to hourly compensation to an increase of 7.5 percent. When a revised 7.9-percent increase in consumer prices in fourth-quarter 2021 is taken into account, real hourly compensation declined 0.3 percent.

Manufacturing productivity decreased 0.1 percent in the fourth quarter of 2021, rather than decreasing 0.8 percent as reported February 3, as an upward revision to output was larger than an upward revision to hours worked. A 2.1-percentage point downward revision to hourly compensation and the 0.7-percentage point upward revision to productivity both contributed to a downward revision to unit labor costs, which increased 1.4 percent rather than 4.2 percent as previously reported. Productivity was revised up 2.0 percentage points in the durable manufacturing sector and was revised down 0.3 percentage point in the nondurable manufacturing sectors. (See table B1.)

In the **third quarter of 2021,** nonfarm business productivity was revised up to a decline of 3.9 percent due to a downward revision to hours worked; output was not revised. Unit labor costs increased 10.6 percent rather than 9.3 percent as previously reported, as a 2.3-percentage point upward revision to hourly compensation was greater than the 1.1-percentage point upward revision to productivity. In all manufacturing sectors, productivity was revised up slightly. In the total manufacturing sector, unit labor costs were revised down to an increase of 1.7 percent—lower than a preliminary estimate of 5.5 percent—with a large downward revision in unit labor costs in durable manufacturing and a large upward revision in nondurable manufacturing unit labor costs. (See table B2.)

Nonfinancial corporate sector productivity increased 1.8 percent in the third quarter of 2021 rather than decreasing 0.8 percent as previously reported, reflecting a 1.5-percentage point upward revision to output and a 1.2-percentage point downward revision to hours worked. (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 2021, as output increased 7.4 percent and hours worked increased 5.4 percent. The increases in output and hours were the largest since 1984, when these measures increased 8.5 percent and 6.1 percent, respectively.

Unit labor costs in the nonfarm business sector increased 3.5 percent in 2021, reflecting increases of 5.4 percent in hourly compensation and 1.9 percent in productivity. Real hourly compensation, which takes into account changes in consumer prices, increased 0.7 percent in 2021.

In the **manufacturing sector**, productivity increased 3.2 percent in 2021, reflecting an increase in output of 6.5 percent and an increase in hours worked of 3.1 percent. The increase in output was the largest annual increase since an increase of 6.5 percent in 2010, and the increase in hours worked was the largest in the series, which goes back to 1987.

Manufacturing unit labor costs increased 0.7 percent in 2021, with hourly compensation increasing 4.0 percent. Manufacturing real hourly compensation decreased 0.6 percent.

Quarterly and annual data for all sectors from 2019 to 2021 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 2022 is scheduled to be released on Thursday, May 5, 2022 at 8:30 a.m. (ET).

Table A1. Labor productivity growth and related measures - revised fourth-quarter 2021
(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 busines	s Previous quarter	6.6	9.1	2.4	7.5	-0.3	0.9
	A year ago	1.9	7.0	4.9	5.5	-1.1	3.5
Business	Previous quarter	6.6	9.0	2.3	7.7	-0.2	1.0
	A year ago	2.0	6.8	4.7	5.8	-0.8	3.7
Manufacturing	Previous quarter	-0.1	5.8	5.8	1.3	-6.1	1.4
	A year ago	1.3	4.6	3.2	2.9	-3.6	1.5
Durable	Previous quarter	2.8	6.9	4.0	-0.6	-7.9	-3.3
manufacturing	A year ago	2.2	5.1	2.9	1.3	-5.1	-0.9
Nondurable	Previous quarter	-4.0	4.5	8.8	5.1	-2.6	9.4
manufacturing	A year ago	0.3	4.0	3.7	5.9	-0.7	5.6

Table A2. Labor productivity growth and related measures - revised and previously published third-quarter 2021 (percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfinancial	Revised	1.8	6.7	4.8	9.1	2.3	7.2
corporate	Previously published	-0.8	5.2	6.0	5.4	-1.2	6.2

Table B1. Labor productivity growth and related measures - revised and previously published fourth-quarter 2021 (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	6.6	9.1	2.4	7.5	-0.3	0.9
	Previously published	6.6	9.2	2.4	6.9	-1.2	0.3
Business	Revised	6.6	9.0	2.3	7.7	-0.2	1.0
	Previously published	6.6	9.1	2.4	7.0	-1.1	0.4
Manufacturing	Revised	-0.1	5.8	5.8	1.3	-6.1	1.4
_	Previously published	-0.8	4.8	5.6	3.4	-4.5	4.2
Durable	Revised	2.8	6.9	4.0	-0.6	-7.9	-3.3
manufacturing	Previously published	0.8	3.9	3.0	4.1	-3.8	3.3
Nondurable	Revised	-4.0	4.5	8.8	5.1	-2.6	9.4
manufacturing	Previously published	-3.7	5.7	9.8	2.7	-5.1	6.7

Table B2. Labor productivity growth and related measures - revised and previously published third-quarter 2021 (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	-3.9	2.0	6.2	6.2	-0.4	10.6
	Previously published	-5.0	2.0	7.3	3.9	-2.6	9.3
Business	Revised	-3.7	1.8	5.7	6.7	-0.1	10.8
	Previously published	-4.7	1.8	6.8	4.3	-2.2	9.5
Manufacturing	Revised	-2.4	3.8	6.4	-0.8	-7.0	1.7
	Previously published	-2.6	4.1	6.9	2.7	-3.7	5.5
Durable	Revised	-0.8	7.1	8.0	-8.2	-14.0	-7.5
manufacturing	Previously published	-1.0	7.7	8.7	1.7	-4.6	2.7
Nondurable	Revised	-3.4	0.3	3.8	14.1	6.9	18.1
manufacturing	Previously published	-3.5	0.3	4.0	4.0	-2.5	7.8

Table C1. Labor productivity growth and related measures - annual average changes: 2017-2021
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Sector	Year	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor
Nonfarm business	2021	1.9	7.4	5.4	5.4	0.7	3.5
	2020	2.4	-4.4	-6.6	7.0	5.7	4.5
	2019	2.1	2.7	0.7	3.9	2.0	1.8
	2018	1.5	3.5	2.0	3.4	1.0	1.9
	2017	1.1	2.7	1.6	3.5	1.3	2.3
Manufacturing	2021	3.2	6.5	3.1	4.0	-0.6	0.7
_	2020	0.3	-6.5	-6.8	6.9	5.6	6.6
	2019	-1.4	-1.7	-0.2	2.8	1.0	4.3
	2018	-0.1	1.8	1.9	2.2	-0.2	2.3
	2017	-1.2	-0.2	1.0	3.2	1.0	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 (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 75 percent of the value of GDP in 2020. Nonfarm business, which excludes farming, accounted for about 74 percent of GDP in 2020.

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

Nonfinancial corporate output is a chain-type, current-weighted index calculated on the basis of the costs incurred and the incomes earned from production. The output measure excludes the following outputs from GDP: general government; nonprofit institutions; private households; unincorporated business; and those corporations classified as offices of bank holding companies, offices of other holding companies, or offices in the finance and insurance sector. Nonfinancial corporations accounted for about 49 percent of the value of GDP in 2020.

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.

Year and quarter		Output			sation (2)	costs	payments (3)	deflator (4)
		Percent char						
2021 ANNUA	AL 1.9	7.2	5.3	5.5 r	0.8 r	3.6 r	5.8 r	4.5
2021 IV	6.6	9.0 r	2.3 r	7.7 r	-0.2 r	1.0 r	17.3 r	7.5 r
III	-3.7 r		5.7 r	6.7 r	-0.1 r	10.8 r	-0.1 r	6.2
II	3.4 r		4.7 r		1.3 r			7.3
I	2.1 r	8.2	6.0 r	-0.5 r	-4.2 r	-2.5 r	17.2 r	5.1
2020 ANNUA	AL 2.4	-4.2	-6.5	6.9 r	5.5	4.3	-4.8	0.4
2020 IV	-3.5 r		9.9 r	9.8 r	7.2 r	13.8 r	-13.7 r	1.6
III		44.7	34.9 r		-8.2 r			5.1
II	9.2 r	-36.8 -6.8	-42.1 r	20.7 r	24.6 r 7.4 r	10.6	-23.1 r	-4.6
I				8.5 T	7.4 T	10.6 r	-12./ r	0.0
2019 ANNUA	AL 2.0 r	2.6	0.7	3.8	2.0	1.8	1.1	1.5
2019 IV		1.8						
III	1.0 r	3.1	2.1 r -0.1 r	0.2 r	-1.1 r -2.6 r	-0.8 r	3.0 r	0.8
II	3.6 r 3.3 r	3.5 3.1	-0.1 r -0.2	0.8 r 9.5 r	-2.6 r	-2.8 r	10.3 -6.0 r	2.7 0.7
	P	ercent change	e from corre	esponding qı	uarter of pr	evious year	•	
2021 ANNUA	AL 1.9	7.2	5.3	5.5 r	0.8 r	3.6 r	5.8 r	4.5
2021 IV	2.0 r	6.8 6.0	4.7 r 6.6 r	5.8 r	-0.8 r	3.7 r	10.6 r	6.5
III	-0.5 r	6.0	6.6 r	6.3 r	1.0 r	6.8 r	2.5 r	5.0
II	2.2 r	15.8	13.3 r		-1.2 r	1.3	10.0 r	
I	3.6 r	1.2	-2.3 r		4.1 r	2.4	0.7	1.7
2020 ANNUA	AL 2.4	-4.2	-6.5	6.9 r	5.5	4.3	-4.8	0.4
2020 IV		-2.5					-6.4	0.5
III	3.9 r		-7.1 r	7.3 r		3.2 r		0.4
II			-13.3 r -0.7			5.9 2.6 r	-9.2 -0.6	-0.6 1.2
2019 ANNUA	AL 2.0 r	2.6	0.7	3.8	2.0	1.8	1.1	1.5
2019 IV	2 2 ~	2 0	0 6 2	2 0	1 0	1.5	1.2 r	1.4
III	2.0		0.6 r 0.7 r	3.0 r	1.8 r 1.2 r		2.1 r	1.4
		2.4						1.5
I	1.5	2.5	1.0	4.3 r	2.6	2.7	0.4	1.7
				exes 2012=10				
2021 ANNUA	AL 112.4 r	124.4 r	110.7 r	135.7 r	114.7 r	120.7 r	109.0 r	115.6 r
2021 IV	113.4 r	127.3 r	112.3 r	139.4 r	114.7 r	122.9 r	112.9 r	118.5 r
III	111.6 r	127.3 r 124.6	111.6 r	136.8 r	114.8 r	122.6 r		116.4
II	112.7 r	124.1 121.6	110.1 r	134.7 r	114.8 r	119.5 r		
I	111.8 r	121.6	108.8 r	131.6 r	114.5 r	117.7 r	106.1 r	112.6
2020 ANNUA	AL 110.3 r	116.0	105.2 r	128.6 r	113.8 r	116.5 r	103.1 r	110.6
2020 IV	111.2 r	119.3	107.3 r	131.8 r	115.7 r	118.5 r	102.0 r	
III	112.2 r	117.5 107.2	104.8 r	128.7 r	113.7 r	114.7 r		
		107.2				11/.9 r 115 ∩ ∽	98.6 r 105.3 r	109.5 110.8
		121.2					108.3 r	
2019 IV	108.4 r	122.3 121.8	112.9 r	121.5 r	108.0 r	112.1 r	109.0 r	110.8
III ++	108.0 r	121.8	112.8 r	120.0 r	107.3 r	111.1 r	109.4 r	110.4
T T	10/./ Y	120.8 119.8	112.2 T	120.0 r	10/./ r	111.3 T	108.0 r	110.Z
_	100.0 I	119.0			100.1 L	+	100.0 I	

r=revised

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

Year and quarter		Output		sation (1)	Real hourly compen- sation (2)	labor costs	payments (3)	=
					ter at annua			
2021 ANNUAL	1.9	7.4	5.4	5.4 r	0.7 r	3.5 r	4.9 r	4.0
2021 IV	6.6		2.4	7.5 r	-0.3 r			7.8
III	-3.9 r	2.0	6.2 r	6.2 r	-0.4 r	10.6 r 5.8 r	-0.4 r	6.0
II -	3.2 r	8.5	5.1 r				6.6 r	6.1
Ι		8.4	6.2 r	-0.6 r	-4.4 r	-2.7 r	16.5 r	4.6
2020 ANNUAL	2.4	-4.4	-6.6	7.0		4.5	-4.9	0.4
2020 IV	-2.8 r	6.2	9.3 r	10.5 r	7.9 r	13.7 r	-15.3 r	0.9
III II	6.1 r 10.2 r	44.6	36.3 r -42.7 r	-4.8 r 21.5 r	-9.1 r 25.4 r	-10.3 r		4.7 -3.9
I	-2.5 r	-36.9 -7.4	-42.7 r	8.7 r			-21.6 f -13.4 r	
2019 ANNUAL	2.1 r	2.7	0.7	3.9 r	2.0	1.8	1.2	1.5
2019 IV		1.8	0.5 r		2.5 r			1.3
III	1.2 r	3.2	1.9 r -0.1 r		-1.0 r		2.9 r	0.7
II I	3.7 r 3.5 r	3.6 3.4	-0.1 r		-2.6 r 8.5 r		10.7 r -5.6 r	2.7 0.7
					arter of pr			
2021 ANIMITAT		_			_	_	4.9 r	4 0
2021 ANNUAL					0.7 r			
2021 IV	1.9 r	7.0	4.9 6.7 r		-1.1 r		10.0 r	6.1
III II	-0.4 r 2.1 r	6.2 15.9	6.7 r 13.5 r	6.2 r 3 4 r	0.9 r -1.4 r	6.7 r 1.2 r	1.2 r 8.4	4.4 4.1
I	3.8 r	1.3	-2.4 r	6.2 r			0.4	1.5
2020 ANNUAL	2.4	-4.4	-6.6	7.0	5.7 r	4.5	-4.9	0.4
2020 IV	2.6 r	-2.7	-5.1 r	8.6 r	7.3 r	5.8	-6.8	0.4
III	3.7 r	-3.7	-7.1 r	7.2 r	5.9 r	3.4	-3.3	0.5
II	2.5 r	-11.5	-13.6 r	8.7 r	8.2 r	6.0	-9.0	-0.4
I	0.9 r	0.2	-0.7 r	3.7	1.5 r	2.7	-0.8	1.2
2019 ANNUAL	2.1 r	2.7	0.7	3.9 r	2.0	1.8	1.2	1.5
2019 IV	2.4 r	3.0	0.5 r	3.8 r	1.8 r	1.4	1.3 r	1.4
III	2.1	2.8	0.7 r	3.0 r	1.2 r	0.9	2.2 r	1.4
II					2.4			1.5
I	1.6						0.6	1.8
			Inde	exes 2012=10	00			
2021 ANNUAL	112.1 r	124.2 r	110.8 r	135.8 r	114.9 r	121.1 r	108.9 r	115.8 r
2021 IV III	113.1 r	127.2 r	112.5 r	139.4 r	114.8 r	123.3 r	112.7 r	118.7 r
III	111.3 r	124.5	111.8 r	136.9 r	114.9 r	123.0 r		116.5
II -	112.5 r	123.9	110.2 r	134.9 r	115.0 r 114.7 r	119.9 r	108.2 r	
Τ	111.6 r	121.4	108.8 T	131.9 r	114./ r	118.2 r	106.4 r	113.1
2020 ANNUAL	110.1 r	115.7	105.1 r	128.9 r	114.1 r	117.1 r	103.8 r	111.3
2020 IV	111.0 r	118.9	107.2 r	132.1 r			102.5 r	111.8
III	111.8 r	117.2	104.8 r	128.9 r	113.8 r 116.6 r	115.3 r	106.8 r	
II ÷	110.1 r	106.9	97.0 r	130.5 r				110.3
	107.5 r						106.0 r	111.4
2019 ANNUAL							109.2 r	110.8
2019 IV III	108.2 r	122.2	112.9 r	121.7 r	108.2 r	112.5 r	109.9 r	
III 	107.8 r	121.6	112.8 r	120.2 r	107.5 r	111.5 r		111.0
II I	107.5 r 106.5 r	12U.7 119 6	112.3 r 112 3 r	120.1 r 119 9 r	107.8 r 108.5 r	111.7 r 112.5 r	109.6 r 106.9 r	
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r=revised

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

Year and		Labor produc-		Hours	Hourly compensa-	Real hourly compensa-	Unit labor
	ter		Output			tion (2)	
				previous quarter			
2021	ANNUAL	3.2 r	6.5	3.1 r	4.0 r	-0.6 r	0.7 r
2021	IV	-0.1 r	5.8 r	5.8 r	1.3 r	-6.1 r	1.4 r
	III	-2.4 r	3.8 r	6.4 r	-0.8 r	-7.0 r	1.7 r
	II	9.5 r -1.2 r	5.8 2.9	-3.3 r 4.2 r	11.2 r 0.2 r	2.8 r -3.6 r	1.6 1.4
2020	ANNUAL	0.3 r	-6.5	-6.8 r	6.9 r	5.6 r	6.6
2020		2.9 r	11.0	7.8 r	10.3 r	7.7 r	7.1 r
	III	20.3 r	56.2	29.9 r	-11.4 r	-15.4 r	-26.3
	II I	-10.4 r 1.8 r	-44.5 -5.5	-38.0 r -7.2	27.1 r 7.9 r	31.2 r 6.8 r	41.9 6.0
2019	ANNUAL	-1.4	-1.7	-0.2	2.8	1.0	4.3
2019		-1.6 r	-2.0	-0.5 r	7.4 r	4.7 r -2.0 r	9.1
	III	-1.2 r	-0.5 -3.4				0.4
	II I	-3.1 r -0.6 r	-3.4 -4.0	-0.3 r -3.4 r	0.6 r 6.5 r	-2.8 r 5.7 r	3.8 7.1
			,	cresponding quar	-	-	
2021	ANNUAL	3.2 r	6.5	3.1 r	4.0 r	-0.6 r	0.7 r
2021		1.3 r	4.6 r	3.2 r	2.9 r	-3.6 r	1.5 r
	III	2.1 r	5.8 r	3.7 r	5.1 r	-0.2 r	2.9 r
	II I	7.6 r 2.3	17.2 -0.2	9.0 r -2.5	2.2 r 5.6	-2.5 r 3.6 r	-5.0 3.2
2020	ANNUAL	0.3 r	-6.5	-6.8 r	6.9 r	5.6 r	6.6
2020		3.1 r	-2.4	-5.3 r	7.6 r	6.3 r	4.4
	III	1.9 r	-5.4	-7.1 r	6.9 r	5.5 r	4.9
	II	-3.0 r -1.0	-15.4 -2.9	-12.9 r -1.9	10.0 r 3.7	9.5 r 1.6	13.3 4.8
2019	ANNUAL	-1.4	-1.7	-0.2	2.8	1.0	4.3
2019		-1.6 r	-2.5	-0.9 r	3.4 r	1.3	5.1
	III	-1.8 -1.8 r	-2.5 -1.7	-0.6 r 0.1 r	2.3 3.4 r	0.5 1.5 r	4.2 5.2 r
	I	-0.5 r	0.1	0.6	2.2 r	0.6 r	2.7
				ndexes 2012=100			
2021	ANNUAL	99.4 r	101.5 r	102.1 r	128.4 r	108.6 r	129.2 r
0001		00.6	100 4	100.0	100.4	106 5	100.0
2021	III			103.8 r			129.9 r 129.5 r
	II	99.6 r 100.2 r	101.0	102.3 r 100.7 r	129.0 r 129.2 r	108.2 r 110.2 r	128.9 r
	I			101.6 r			
2020	ANNUAL	96.2 r	95.3	99.0 r	123.4 r	109.3 r	128.2 r
2020	IV	08 3 ~	98 9	100 6 ~	125 0 ~	110 4	120 ∩ ~
2020	III	98.3 r 97.6 r	98.9 96.3	98.7 r	122.7 r	110.4 r 108.4 r	125.8 r
	II	93.2 r	86.2	92.5 r 104.2 r	126.5 r	113.0 r	135.8 r
	I	93.2 r 95.8 r	86.2 99.8	104.2 r	126.5 r 119.2 r	113.0 r 105.6 r	124.4 r
2019	ANNUAL	96.0 r	101.9	106.2 r	115.4 r	103.5 r	120.3
2019	IV	95.4 r	101.2	106.2 r	116.9 r	103.9 r	122.6 r
	III	95.7 r	101.8	106.3 r 106.1 r	114.8 r	102.7 r 103.3 r	120.0 r
	II	96.0 r	101.9				119.8 r
	I	96.8 r		106.2 r	114.9 r		

March 3, 2022 Source: Bureau of Labor Statistics

r=revised

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

Year and quar		Labor produc- tivity	Out.out	Hours worked	Hourly compensa- tion (1)	Real hourly compensa- tion (2)	Unit labor costs
					at annual rate		
0001			_	_			1 0
2021	ANNUAL	5.5 r	8.5 r	2.8 r	3.5 r	-1.2 r	-1.9
2021		2.8 r	6.9 r	4.0 r	-0.6 r	-7.9 r	-3.3
	III	-0.8 r	7.1 r -0.2	8.0 r	-8.2 r	-14.0 r 5.3 r	-7.5 ı
	II	6.3 r 0.6 r	-0.2 6.7	-6.1 r 6.0 r	13.9 r 1.2 r	-2.6 r	7.2 0.7
2020							
2020	ANNUAL	0.0 r	-8.1	-8.1 r	7.0 r	5.6 r	7.0
2020		4.8	11.0	5.9 r	12.3	9.7 r	7.2
	III	45.9 r	97.9	35.7 r	-15.4 r	-19.2 r	-42.0
	II I	-20.8 r -2.3 r	-54.4 -10.0	-42.4 r -7.9 r	28.8 r 7.2 r	33.0 r 6.2 r	62.7 9.7
0010							
2019	ANNUAL	-2.0	-2.0	0.0	2.2 r	0.4	4.4
2019		-0.5 r	-1.9	-1.4 r	10.6 r	7.8 r	11.2 1
	III	-0.2 r	-0.3	-0.1 r -1.3 r	-1.5 r -0.2 r	-2.8 r -3.6 r	-1.3
	II I	-2.3 r -3.2 r	-3.6 -6.2	-1.3 r -3.1 r	-0.2 r 5.9 r		2.2 9.4
		Percent	change from cor	rresponding quar	ter of previous	year	
2021	ANNUAL	5.5 r	8.5 r	2.8 r	3.5 r	-1.2 r	-1.9 n
2021	IV	2.2 r	5.1 r	2.9 r	1.3 r	-5.1 r	-0.9 1
	III	2.7 r	6.1 r	3.3 r	4.4 r	-0.8 r	1.7 1
	II	13.1 r	23.7	9.4 r	2.3 r	-2.4 r	-9.5
	I	5.0 r	1.7	-3.2 r	5.5 r	3.5 r	0.5
2020	ANNUAL	0.0 r	-8.1	-8.1 r	7.0 r	5.6 r	7.0
2020		4.3 r	-2.6	-6.6 r	7.0 r	5.8 r	2.6
	III	3.0 r	-5.5	-8.2 r	6.6 r	5.3 r	3.6
	II	-6.4 r -1.3 r	-20.4 -4.0	-15.0 r -2.7 r	10.8 r 3.9 r	10.3 r 1.8 r	18.3 5.3
	1	-1.5 1	-4.0	-2.7 1	3.9 1	1.0 1	3.3
2019	ANNUAL	-2.0	-2.0	0.0	2.2 r	0.4	4.4
2019		-1.6	-3.0	-1.5 r	3.6 r	1.5	5.2
	III	-2.3	-2.7	-0.4	1.3	-0.5	3.7
	II	-2.5 r -1.7	-2.0 -0.4	0.4 r 1.4	2.5 r 1.7 r	0.6 r 0.0	5.1 3.4
				 ndexes 2012=100			
2021	7 NINII 7 T	101 5 2			128.3 r	100 5 ~	126 / 3
							120.4 1
2021	IV	102.3 r	104.2 r	101.9 r	127.9 r 128.1 r	105.3 r	125.0 1
	II	101.6 r 101.8 r	102.5 r 100.8	100.9 r 98.9 r	128.1 r 130.8 r	107.4 r 111.6 r	126.0 n 128.5 n
	I	100.3 r	100.8	100.5 r	126.6 r	110.1 r	126.3
2020	ANNUAL	96.3 r	94.1	97.8 r	124.0 r	109.8 r	128.8 1
							106 1
	III	100.2 r		99.0 r 97.6 r	126.3 r 122.6 r	100 2 2	126.1 1 123.9 1
	II	99.0 r 90.1	96.6 81.5	90.5	127.9 r	114.3	142.0
	I	95.5 r			120.0 r		
2019	ANNUAL	96.3 r	102.5	106.4 r	116.0 r	104.0 r	120.4
2019	IV	96.0 r	101.8	106.0 r	117.9 r	104.8 r	122.8 1
	III	96.2 r	102.3	106.4 r	117.9 r 115.0 r	104.8 r 102.9 r	119.6
	II	96.2 r	102.4	106.4 r	115.4 r 115.5 r	103.6 r 104.5 r	120.0 1
	I	96.8 r	103.3	106.8 r	115.5 r	104.5 r	119.3 1

See footnotes following Table 6. r=revised

March 3, 2022

Source: Bureau of Labor Statistics

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

Year and		Labor produc-		Hours		Real hourly compensa-	
quart	ter 	tivity 	Output 	worked 	tion (1)	tion (2) 	costs
		Percen	t change from p	revious quarter	at annual rate	(5)	
2021	ANNUAL	0.7 r	4.3 r	3.6 r	5.1 r	0.4 r	4.4 1
2021		-4.0 r	4.5 r	8.8 r	5.1 r	-2.6 r	9.4 1
	III	-3.4 r	0.3	3.8 r	14.1 r	6.9 r	18.1 1
	II	11.4 r -2.2 r	12.9 -1.1	1.3 r 1.1 r	7.2 r -2.2 r	-0.9 r -5.9 r	-3.8 0.0
2020	ANNUAL	-0.2 r	-4.7	-4.5 r	7.3 r	5.9 r	7.5
2020	IV	0.0 r 0.4 r	10.9 21.4	11.0 r 20.9 r	7.0 r -4.4 r	4.5 r -8.7 r	7.0 -4.8
	II	-2.6 r	-31.7	-29.9 r	26.2 r	30.3 r	29.5
	I	6.2 r	-0.3	-6.1 r			3.1
2019	ANNUAL	-0.7	-1.3	-0.6	3.9	2.0	4.6
2019			-2.1	1.2 r		-1.0 r	
	III	-2.6 r	-0.7	1.9 r	1.0 r	-0.4 r	3.7
	II I	-4.6 r 2.5 r	-3.1 -1.6	1.5 r -4.0 r		-1.0 r 6.7 r	7.4 4.9
					ter of previous		
0001	7 111117 7		-		_	_	4 4
		0.7 r		3.6 r		0.4 r	
2021		0.3 r	4.0 r	3.7 r		-0.7 r	5.6 1
	III	1.3 r 2.3 r	5.6 10.7	4.2 r 8.3 r	6.4 r 1.8 r	1.0 r -2.9 r	5.0 i -0.5
	I	-1.1 r	-2.4	-1.3 r	6.0 r	4.0 r	7.2
2020	ANNUAL	-0.2 r	-4.7	-4.5 r	7.3 r	5.9 r	7.5
2020	IV	0.9	-2.2	-3.1 r	9.0	7.7 r	8.0
	III	0.1 r	-5.2	-5.3 r	7.6 r	6.3 r	7.5
	II	-0.7 r -1.2 r	-9.8 -1.6	-9.2 r -0.4 r	9.1 r 3.6 r	8.6 r 1.4 r	9.8 4.8
2010							
	ANNUAL	-0.7	-1.3	-0.6	3.9	2.0	4.6
2019	IV III	-2.0 r -1.1	-1.9 -2.2	0.1 r -1.1	3.1 4.3	1.0 2.5	5.2 5.5
	II	-0.9 r	-1.4	-0.6 r	5.1 r	3.2 r	6.0
	I	1.2 r	0.4	-0.8 r	3.1 r	1.4 r	1.9
				ndexes 2012=100			
2021	ANNUAL	97.3 r	101.9 r	104.8 r	128.8 r	109.0 r	132.4 1
2021	IV	96.8 r	103.6 r	107.0 r	132.7 r		137.1 1
	III	97.8 r 98.6 r	102.5 r	104.8 r 103.8 r	131.1 r 126.8 r	110.0 r	134.1 1
	11		102.4	103.8 r		108.2 r	128.6 1
	I	96.0 r	99.3	103.5 r	124.6 r	108.4 r	129.8 1
2020	ANNUAL	96.6 r	97.7	101.1 r	122.6 r	108.6 r	126.9 1
	IV	96.5 r	99.6	103.2 r	125.3 r 123.2 r	110.1 r 108.9 r	129.8 1
		96.5 r	97.1	100.5 r	123.2 r	108.9 r	127.6 1
	II	97.1 r	101.7	95.9 r 104.8 r	124.6 r 117.6 r	111.4 r 104.2 r	129.2 1 121.1 1
2019	ANNUAL		102.5		114.3		
					115.0 r		
∠∪⊥9	III	95.6 r 96.4 r				102.2 r 102.4 r	120.2 i 118.7 i
	II	97.1 r	102.5	106.1 r 105.6 r	114.2 r	102.4 r	117.7
	I	98.2 r			113.5 r		

See footnotes following Table 6. r=revised

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

Year and quarter	Labor produc- tivity			(1)	sation (2)	labor costs	Unit nonlabor costs (6)	costs (7)	Unit profits (8)	Implicit price deflator (4)
				from previo						
2021 III II I	1.8 r 1.5 r 3.1 r	6.7 r 5.7 8.9	4.8 r 4.1 r 5.6 r		1.0 r	7.6	14.4 r -14.4 18.7	0.7	0.4 r 58.8 30.0	7.8 7.9 5.1
2020 ANNU	AL 2.1 r	-4.2	-6.2 r	6.8 r	5.5 r	4.6	-10.6	-0.2	2.4	0.1
2020 IV III II		31.7 -39.0	32.2 r -40.5 r	8.4 r -5.3 r 23.6 r 7.3 r	-9.5 r 27.6 r	-4.9 20.5	-21.4 -49.3		-9.1	-0.2 6.2 -6.8 -0.4
2019 ANNU			0.9	3.9	2.1		1.9			1.9
2019 IV III II I	1.9 r 0.5 0.8 r 2.5 r	1.1 1.6 3.4	0.9 r	1.0 1.7 r 7.8 r	-1.7 r 7.0 r	1.0 5.2	3.2	1.2 4.6	13.3 -31.2	1.8 2.1 2.6 -1.0
				om correspo						
2021 III II I	5.7 r 5.1 5.4 r	12.1 r 18.1 3.0	6.1 r 12.4 -2.3 r	2.4 r	0.8 r -2.2 3.6 r	0.4 r -2.5 0.2	15.5 r 5.2 -7.7	-0.4		5.1 4.7 1.0
2020 ANNU	AL 2.1 r	-4.2	-6.2 r	6.8 r	5.5 r	4.6	-10.6	-0.2	2.4	0.1
2020 IV III II I		-5.6 -11.6	-4.6 r -6.7 r -12.9 r -0.6	7.1 8.8 r	6.7 r 5.7 r 8.3 r 1.5	5.8 7.3	-10.7 -20.3 -14.2 2.1	-2.5 0.4	18.3	-0.4 0.1 -0.9 1.5
2019 ANNU	AL 1.4	2.3	0.9	3.9	2.1	2.5	1.9	2.3	-1.2	1.9
2019 IV III II I	1.4 1.0 r 2.2 0.9	2.1 1.7 3.0 2.3	0.6 r 0.7 0.8 1.4	3.7 3.4 r 4.4 r 4.1	1.7 r 1.6 r 2.5 r 2.5		1.8 3.2 1.1 1.4	2.1 2.6 1.9 2.6	-3.4 -2.4 0.8 0.6	1.4 2.0 1.7 2.3
				Indexes	2012=100					
2021 III II I	113.4 r 112.9 r 112.4 r	125.7 r 123.7 122.0	110.9 r 109.6 r 108.5 r	139.0 r 136.0 r 133.0 r	116.6 r 116.0 r 115.7 r	120.5		115.1 r 112.6 112.4	127.9 r 127.8 113.8	117.0 114.8 112.6
2020 ANNU	AL 108.2 r	113.7	105.0 r	130.7 r	115.7 r	120.8	96.3	112.6	100.9	111.0
2020 IV III II I	111.6 r 107.3 r 107.4 r 106.7 r	112.2	107.0 r 104.6 r 97.5 r 111.0 r		117.3 r 115.7 r 118.6 r 111.6 r	119.8 122.1 123.6 118.0	86.7 92.1	112.0 110.3 113.1 115.0	106.6 117.2 88.6 90.7	111.2 111.3 109.6 111.6
2019 ANNU	AL 106.0 r	118.7	112.0 r	122.4 r	109.7 r	115.5	107.7	112.9	98.5	110.8
2019 IV III II I	106.0 r 105.9 r 105.7 r	118.8 118.5 118.0	112.1 r 111.9 r 111.7 r	123.7 r 122.3 r 122.0 r 121.5 r	109.4 r 109.5 r 110.0 r	115.4 115.3 115.0	108.7 107.3 106.9	112.3	101.2 99.1 98.4 95.4	

r=revised

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.

SIZE OF REVISIONS: Productivity and cost measures are revised on a regular schedule as more complete data become available. The first estimate is published within 40 days of the close of the reference quarter, the second estimate approximately 30 days later, and the third estimate approximately 60 days after the second estimate. Based on past revisions, the third estimate of nonfarm business sector quarterly labor productivity growth has differed from the first estimate by -1.1 to +1.4 percentage point about 80 percent of the time. This interval is based on estimates for reference quarters from the first quarter of 2001 to the third quarter of 2021. For more about revisions to labor productivity growth see "How large are revisions to estimates of quarterly labor productivity growth?" at www.bls.gov/osmr/research-papers/2021/ec210040.htm.

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 1978-2020 is based on the Consumer Price Index Retroactive 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.