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Technical information: (202) 691-5606 • Productivity@bls.gov • www.bls.gov/productivity

Media contact: (202) 691-5902 • PressOffice@bls.gov

PRODUCTIVITY AND COSTS
 Third Quarter 2024, Preliminary

Nonfarm business sector labor productivity increased 2.2 percent in the third quarter of 2024, the U.S. Bureau of Labor Statistics reported today, as output increased 3.5 percent and hours worked increased 1.2 percent. (All quarterly percent changes in this release are seasonally adjusted annualized rates.) From the same quarter a year ago, nonfarm business sector labor productivity increased 2.0 percent in the third quarter of 2024. (See chart 1 and table A1.)

Chart 1. Labor productivity, nonfarm business, 2020Q1 – 2024Q3

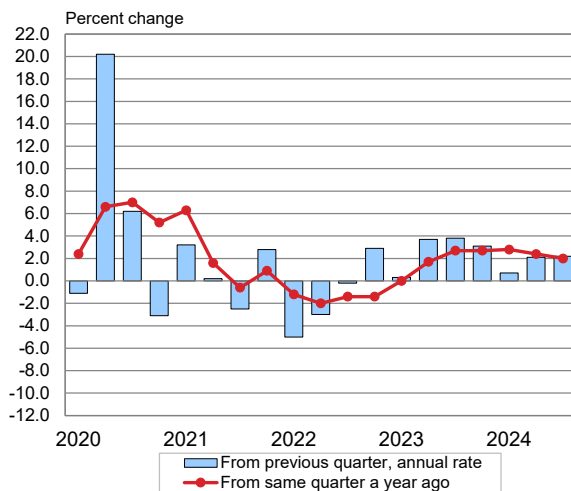
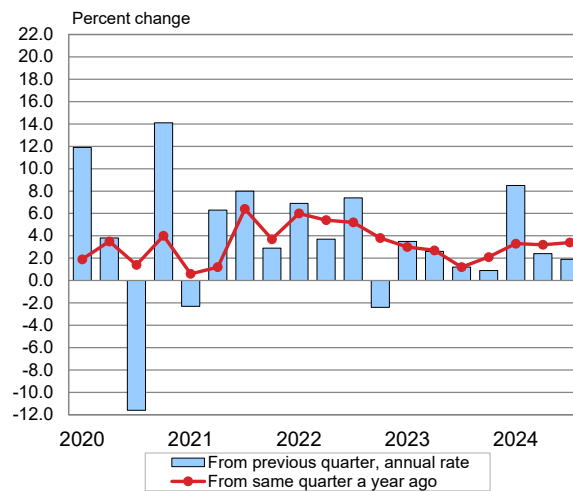


Chart 2. Unit labor costs, nonfarm business, 2020Q1 – 2024Q3



Unit labor costs in the nonfarm business sector increased 1.9 percent in the third quarter of 2024, reflecting a 4.2-percent increase in hourly compensation and a 2.2-percent increase in productivity. Unit labor costs increased 3.4 percent over the last four quarters. (See chart 2 and tables A1 and 2.)

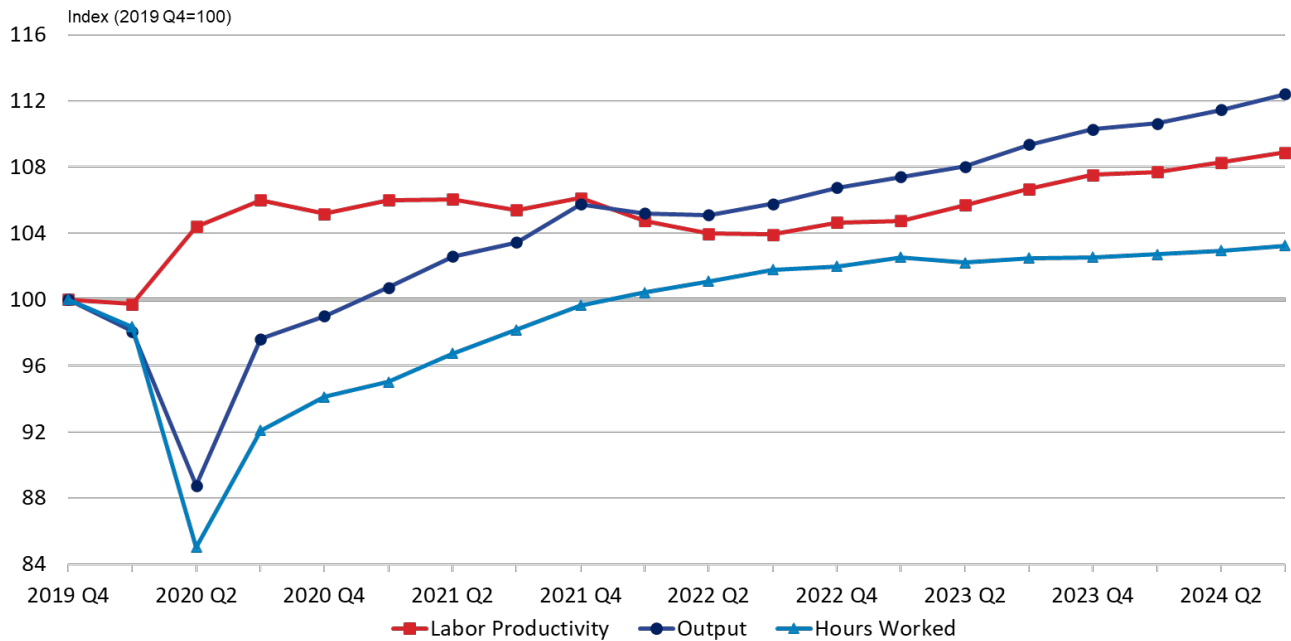
BLS calculates unit labor costs as the ratio of hourly compensation to labor productivity. Increases in hourly compensation tend to increase unit labor costs and increases in productivity tend to reduce them. Real hourly compensation, which takes into account consumer prices, increased 3.0 percent in the third quarter of 2024, and increased 2.8 percent over the last four quarters.

Historical Revisions

Data in this release reflect the 2024 Annual Update of the National Income and Product Accounts (NIPA) released by the Bureau of Economic Analysis of the U.S. Department of Commerce on September 26, 2024. See “Revised measures” section on page 2.

Labor productivity, or output per hour, is calculated by dividing an index of real output by an index of hours worked by all workers, including employees, proprietors, and unpaid family workers. During the current business cycle, starting in the fourth quarter of 2019, labor productivity has grown at an annualized rate of 1.8 percent, reflecting a 2.5-percent rate of growth in output and a 0.7-percent rate of growth in hours worked. (See chart 3.) The 1.8-percent annualized rate of productivity growth in the current business cycle thus far is higher than the 1.5 percent rate of the previous business cycle from the fourth quarter of 2007 through the fourth quarter of 2019, and below the long-term rate of 2.1 percent since the first quarter of 1947.

Chart 3. Labor Productivity, Output, and Hours Worked index series, nonfarm business, 2019 Q4 – 2024 Q3



Manufacturing sector labor productivity increased 1.0 percent in the third quarter of 2024, as output decreased 0.2 percent and hours worked decreased 1.2 percent. In the durable manufacturing sector, productivity increased 0.8 percent, reflecting a 2.6-percent decrease in output and a 3.4-percent decrease in hours worked. Nondurable manufacturing sector productivity decreased 0.3 percent, as output increased 2.3 percent and hours worked increased 2.6 percent. Total manufacturing sector productivity increased 0.7 percent from the same quarter a year ago. (See tables A1, 3, 4, and 5.)

Unit labor costs in the total manufacturing sector increased 5.3 percent in the third quarter of 2024, reflecting a 6.4-percent increase in hourly compensation and a 1.0-percent increase in productivity. Manufacturing unit labor costs increased 5.7 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

Measures of output for the business, nonfarm business, and nonfinancial corporate sectors, and measures of compensation for all sectors, incorporate revised National Income and Product Accounts (NIPA) data released on September 26, 2024, by the Bureau of Economic Analysis (BEA), U.S. Department of

Commerce. As a result, all measures incorporating output, including labor productivity and unit labor costs, were revised back to 2019 for the business, nonfarm business, and nonfinancial corporate sectors. Source data on output and compensation released by BEA on October 30, 2024, are reflected in data for the third quarter of 2024. Regular updates of source data on manufacturing output released in September and October by the Board of Governors of the Federal Reserve System are reflected in data for the first three quarters of 2024; there were no historical revisions to manufacturing output.

Hours worked and related measures for the business and nonfarm business sectors were subject to revision back to 2018 due to revised NIPA data on government enterprises employment and on the proportion of industry compensation paid to employees of nonprofit institutions. Hours worked and related measures for the nonfinancial corporate sector were also subject to revision back to 2018 due to the incorporation of revised NIPA data on the proportion of industry compensation paid to employees of corporations.

Chart 4 shows previously published and revised indexes of nonfarm business sector labor productivity covering the period of revision from the first quarter of 2018 to the second quarter of 2024. Overall, output and productivity were revised up, and the nonfarm business labor productivity index now outpaces the previously published index. The annualized productivity growth rate during the revision period was revised up from a rate of 1.7 percent to a rate of 1.9 percent. These revisions are also reflected in the 0.2-percentage point upward revision to the nonfarm business labor productivity growth rate during the current business cycle, from a previously published rate of 1.6 percent to a revised rate of 1.8 percent. (See chart 4.)

Chart 4. Labor productivity, before and after historical revision, nonfarm business sector, 2017Q4 - 2024Q2

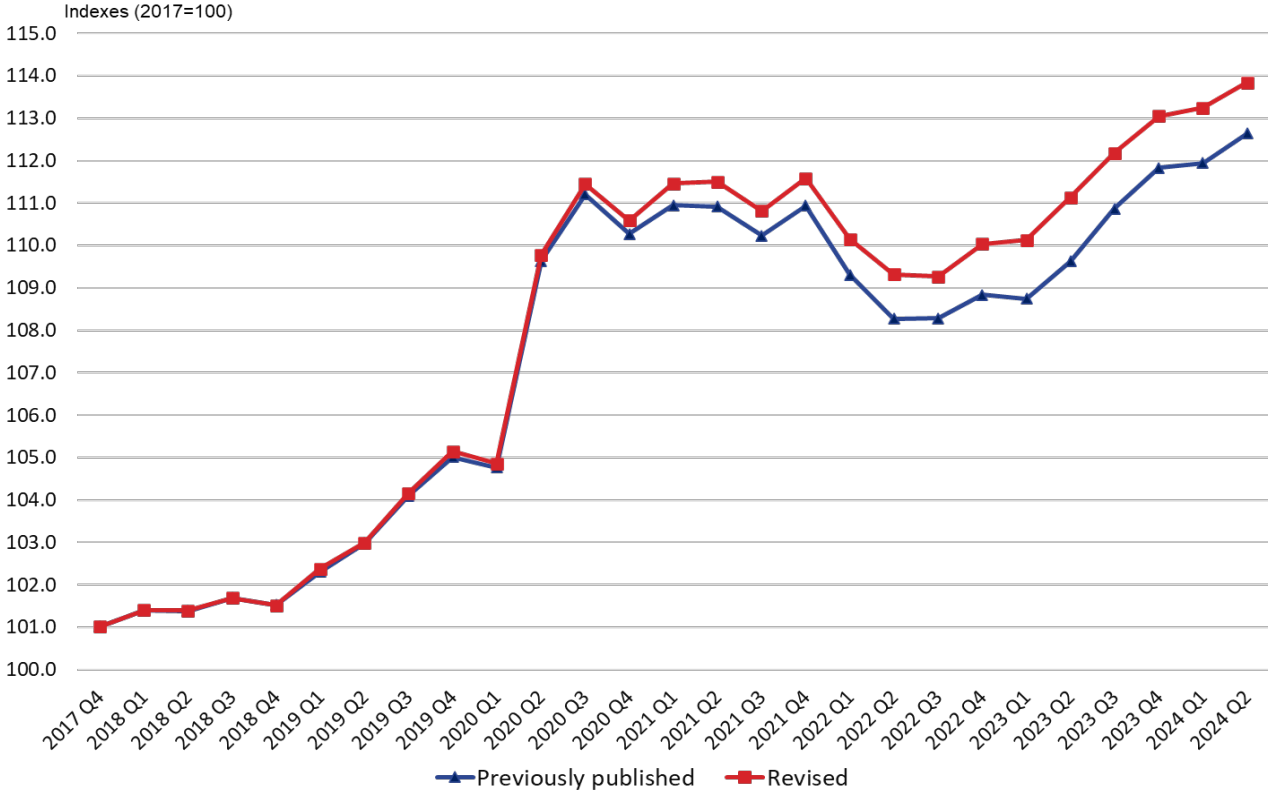


Table B1 presents revised and previous labor productivity and related measures for the nonfarm business, business, and manufacturing sectors for the second quarter of 2024. Table A2 presents these measures for the nonfinancial corporate sector.

Nonfarm business sector productivity in the **second quarter of 2024** was revised down 0.4 percentage point to an increase of 2.1 percent. The revision comes from 0.5-percentage point and 0.1-percentage point downward revisions to output and hours worked, respectively. Second-quarter unit labor costs were revised up 2.0 percentage points to an increase of 2.4 percent, reflecting a 1.6-percentage point upward revision to hourly compensation and the 0.4-percentage point downward revision to productivity. Real hourly compensation in the second quarter of 2024 was also revised upward by 1.6 percentage points, to an increase of 1.7 percent. (See table B1.)

Manufacturing sector productivity was revised down 1.0 percentage point to an increase of 0.3 percent in the **second quarter of 2024**, reflecting a 0.9-percentage point downward revision to output and a 0.1-percentage point upward revision to hours worked. Productivity was revised down 1.2 percentage points in the durable manufacturing sector and revised down 0.6 percentage point in the nondurable manufacturing sector. In the second quarter of 2024, total manufacturing unit labor costs increased 5.8 percent rather than 3.6 percent as previously reported, reflecting a 1.3-percentage point upward revision to hourly compensation as well as the 1.0-percentage point downward revision to productivity. (See table B1.)

Nonfinancial corporate sector productivity increased 3.1 percent in the **second quarter of 2024**, rather than the previously published estimate of a 0.3-percent decrease. This revision results from a 3.3-percentage point upward revision to output and a 0.1-percentage point downward revision to hours worked. Unit labor costs in the nonfinancial corporate sector were revised down 1.8 percentage points to an increase of 1.3 percent in the second quarter of 2024, as hourly compensation was revised up 1.7 percentage points and productivity was revised up 3.4 percentage points. (See table A2.) Historical revisions to output and hours in the nonfinancial corporate sector resulted in a 0.5-percentage point upward revision to the annualized labor productivity growth rate during the current business cycle to 2.4 percent, just above the long-term rate of 2.3 percent since the start of 1947.

Annual averages

Table C1 presents annual data for the nonfarm business, total manufacturing, and nonfinancial corporate sectors from 2021 to 2023. Annual average percent changes compare average annual indexes from one year to the next.

Annual average productivity in the **nonfarm business sector** was revised up along with output in each of the last 3 years. Productivity was revised up 0.2 percentage point to a 1.6-percent increase in 2023, was revised up 0.4 percentage point to a decrease of 1.5 percent in 2022 and was revised up 0.3 percentage point to an increase of 2.0 percent in 2021. Unit labor costs were revised down 0.6 percentage point in both 2023 and 2022 and were revised down 0.2 percentage point in 2021. (See table C1.)

From 2021 to 2023, annual average **manufacturing sector** productivity, output, and hours worked were not revised. In both 2023 and 2022, unit labor costs were revised down 0.4 percentage point, and were revised up 0.2 percentage point in 2021. (See table C1.)

In the **nonfinancial corporate sector**, productivity was revised down 1.4 percentage points to a 0.0 percent change in 2023. This stemmed from a 1.3-percentage point downward revision to output, and a 0.1-percentage point downward revision to hours worked. Unit labor costs were revised up 0.8 percentage point to an increase of 4.1 percent, reflecting a 0.6-percentage point downward revision to hourly compensation and the 1.4 percentage point downward revision to productivity. In both 2022 and 2021, nonfinancial corporate sector labor productivity was revised up by 0.9 percentage point and 0.7 percentage point, respectively, reflecting upward revisions to output. (See tables C1 and 6.)

Quarterly and annual data for all sectors for recent years appear in tables 1-6. Full historical annual and quarterly measures can be found at www.bls.gov/productivity/tables/.

The revised Productivity and Costs news release for third-quarter 2024 is scheduled to be released on Tuesday, December 10, 2024, at 8:30 a.m. (ET).

Table A1. Labor productivity growth and related measures - preliminary third-quarter 2024
(percent change from previous quarter at annual rate and from same quarter a year ago)

Sector	Percent change from:	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	Previous quarter	2.2	3.5	1.2	4.2	3.0	1.9
	A year ago	2.0	2.8	0.7	5.5	2.8	3.4
Business	Previous quarter	1.7	3.2	1.6	3.8	2.6	2.1
	A year ago	2.0	2.8	0.8	5.4	2.7	3.4
Manufacturing	Previous quarter	1.0	-0.2	-1.2	6.4	5.1	5.3
	A year ago	0.7	-0.2	-0.9	6.4	3.6	5.7
Durable manufacturing	Previous quarter	0.8	-2.6	-3.4	7.4	6.1	6.5
	A year ago	0.2	-1.3	-1.5	7.3	4.6	7.1
Nondurable manufacturing	Previous quarter	-0.3	2.3	2.6	5.0	3.7	5.3
	A year ago	0.8	0.8	0.1	4.7	2.0	3.9

Table A2. Labor productivity growth and related measures - revised and previously published second-quarter 2024
(percent change from previous quarter at annual rate)

Sector		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfinancial corporate	Revised	3.1	4.7	1.5	4.5	1.7	1.3
	Previously published	-0.3	1.4	1.6	2.8	0.0	3.1

Table B1. Labor productivity growth and related measures - revised and previously published second-quarter 2024
(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	2.1	3.0	0.9	4.6	1.7	2.4
	Previously published	2.5	3.5	1.0	3.0	0.1	0.4
Business	Revised	2.2	3.3	1.0	4.5	1.6	2.2
	Previously published	2.2	3.4	1.1	2.9	0.0	0.6
Manufacturing	Revised	0.3	1.5	1.2	6.2	3.3	5.8
	Previously published	1.3	2.4	1.1	4.9	2.0	3.6
Durable manufacturing	Revised	-0.8	0.6	1.4	5.5	2.6	6.4
	Previously published	0.4	1.7	1.3	4.4	1.6	4.0
Nondurable manufacturing	Revised	1.7	2.5	0.8	7.5	4.6	5.7
	Previously published	2.3	3.2	0.9	5.9	2.9	3.5

Table C1. Labor productivity growth and related measures - revised and previous annual average changes: 2021-2023

Sector	Year		Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfarm business	2023	Revised	1.6	2.9	1.2	3.9	-0.2	2.2
		Previously published	1.4	2.6	1.2	4.2	0.1	2.8
	2022	Revised	-1.5	2.5	4.1	3.5	-4.2	5.1
		Previously published	-1.9	2.1	4.0	3.7	-4.1	5.7
	2021	Revised	2.0	7.6	5.4	5.1	0.2	3.0
		Previously published	1.7	7.2	5.5	4.9	0.1	3.2
Nonfinancial corporate	2023	Revised	0.0	1.5	1.4	4.1	0.0	4.1
		Previously published	1.4	2.8	1.5	4.7	0.5	3.3
	2022	Revised	-0.1	4.1	4.2	4.1	-3.7	4.1
Previously published		-1.0	3.1	4.2	4.1	-3.7	5.2	
2021	Revised	4.4	9.7	5.1	4.9	0.1	0.5	
	Previously published	3.7	9.0	5.1	4.7	-0.1	1.0	
Manufacturing	2023	Revised	-0.5	-0.4	0.1	4.5	0.4	5.1
		Previously published	-0.5	-0.4	0.1	4.9	0.8	5.5
	2022	Revised	-1.3	2.7	4.0	3.2	-4.5	4.6
Previously published		-1.3	2.7	4.0	3.6	-4.2	5.0	
2021	Revised	1.6	4.9	3.2	2.6	-2.2	0.9	
	Previously published	1.6	4.9	3.2	2.3	-2.4	0.7	

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 and hours paid to wage and salary workers in nonfarm establishments, counting a person who is employed by two or more establishments at each place of employment. As of the February 3, 2023 Employment Situation release, the CES program has updated the national nonfarm payroll series to the 2022 North American Industry Classification System (NAICS). The BLS Major Sector Productivity program will be remaining on a NAICS 2017 basis for the time being by converting NAICS 2022 data from CES back to a NAICS 2017 basis using ratios published on the CES website and based on the Quarterly Census of Employment and Wages (QCEW). Hours of paid time off are removed from hours paid 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, hours of paid time off are removed using a combination of NCS and Hours at Work survey data. Off-the-clock hours are added, yielding hours worked, using data from the Current Population Survey (CPS).

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/productivity/tables/total-economy-hours-employment.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 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 2023. Nonfarm business, which excludes farming, accounted for about 76 percent of GDP in 2023.

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 intrasectoral 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; 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 51 percent of the value of GDP in 2023.

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 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 2017=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 productivity web site, <https://www.bls.gov/productivity/data.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 methods see the Handbook of Methods at www.bls.gov/pub/hom/msp/home.htm.

If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor payments (3)	Value-added output price deflator (4)

Percent change from previous quarter at annual rate (5)								
2024 III	1.7	3.2	1.6	3.8	2.6	2.1	-0.2	1.1
II	2.2	3.3 r	1.0 r	4.5 r	1.6 r	2.2 r	2.2 r	2.2 r
I	0.9 r	1.4 r	0.5	9.3 r	5.3 r	8.4 r	-4.7 r	2.2 r
2023 ANNUAL	1.7 r	2.9 r	1.2	3.9 r	-0.2 r	2.2 r	4.9 r	3.4 r
2023 IV	3.3 r	3.4 r	0.1	4.3 r	1.5 r	1.0 r	0.6 r	0.8 r
III	3.7 r	4.9 r	1.1	5.1 r	1.5 r	1.3 r	4.6 r	2.8
II	3.6 r	2.5 r	-1.0	6.0 r	2.9 r	2.3 r	0.2 r	1.3 r
I	0.2 r	2.5 r	2.2	3.8 r	0.0 r	3.5 r	3.8 r	3.7 r
2022 ANNUAL	-1.4 r	2.5 r	3.9	3.7 r	-4.1 r	5.2 r	11.6 r	8.0 r
2022 IV	3.2 r	3.7 r	0.4	0.8 r	-3.2 r	-2.4 r	11.4 r	3.6 r
III	-0.1 r	2.6 r	2.7	7.2 r	1.8 r	7.3 r	0.7 r	4.3 r
II	-2.7 r	-0.4 r	2.4	1.0 r	-8.3 r	3.9 r	20.1 r	10.9 r
I	-5.4 r	-2.1 r	3.5 r	1.4 r	-7.2 r	7.2 r	13.0 r	9.7 r

Percent change from corresponding quarter of previous year								
2024 III	2.0	2.8	0.8	5.4	2.7	3.4	-0.5	1.6
II	2.5 r	3.2 r	0.7	5.8 r	2.5 r	3.2 r	0.6 r	2.0 r
I	2.9	3.0 r	0.2	6.1 r	2.8 r	3.2 r	0.1 r	1.8 r
2023 ANNUAL	1.7 r	2.9 r	1.2	3.9 r	-0.2 r	2.2 r	4.9 r	3.4 r
2023 IV	2.7	3.3	0.6	4.8 r	1.5 r	2.0 r	2.3 r	2.1 r
III	2.7 r	3.4 r	0.7	3.9 r	0.3 r	1.2 r	4.9 r	2.9 r
II	1.7 r	2.8 r	1.1	4.4 r	0.4 r	2.6 r	3.9 r	3.2 r
I	0.1 r	2.1 r	1.9	3.2 r	-2.5 r	3.0 r	8.8 r	5.6 r
2022 ANNUAL	-1.4 r	2.5 r	3.9	3.7 r	-4.1 r	5.2 r	11.6 r	8.0 r
2022 IV	-1.3 r	0.9 r	2.3 r	2.5 r	-4.3	3.9 r	11.1 r	7.1 r
III	-1.4 r	2.2 r	3.6	3.9 r	-4.1 r	5.3 r	11.9 r	8.2 r
II	-1.8 r	2.4 r	4.4 r	3.5 r	-4.7 r	5.5 r	13.1 r	8.8 r
I	-1.0 r	4.4 r	5.5	5.0 r	-2.9 r	6.1 r	10.3 r	7.9 r

Indexes 2017=100								
2024 III	114.6	121.5	106.1	139.8	108.7	122.0	127.1	124.2
II	114.1 r	120.6 r	105.7 r	138.5 r	108.0 r	121.3 r	127.1 r	123.9 r
I	113.5 r	119.6 r	105.4 r	137.0 r	107.6 r	120.7 r	126.4 r	123.2 r
2023 ANNUAL	111.7 r	117.6 r	105.2 r	131.5 r	105.5 r	117.7 r	127.1 r	121.8 r
2023 IV	113.3 r	119.2 r	105.3 r	133.9 r	106.2 r	118.3 r	128.0 r	122.5 r
III	112.4 r	118.2 r	105.2 r	132.6 r	105.8 r	118.0 r	127.8 r	122.3 r
II	111.3 r	116.8 r	104.9 r	130.9 r	105.4 r	117.6 r	126.3 r	121.4 r
I	110.3 r	116.1 r	105.2 r	129.0 r	104.7 r	116.9 r	126.3 r	121.0 r
2022 ANNUAL	109.9 r	114.3 r	104.0 r	126.5 r	105.7 r	115.2 r	121.1 r	117.8 r
2022 IV	110.3 r	115.4 r	104.6 r	127.8 r	104.7 r	115.9 r	125.1 r	119.9 r
III	109.4 r	114.3 r	104.5 r	127.6 r	105.5 r	116.6 r	121.7 r	118.9 r
II	109.4 r	113.6 r	103.8 r	125.4 r	105.1 r	114.6 r	121.5 r	117.6 r
I	110.2 r	113.7 r	103.2 r	125.1 r	107.3 r	113.5 r	116.1 r	114.6 r

See footnotes following Table 6.
r=revised

November 7, 2024
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor payments (3)	Value-added output price deflator (4)

Percent change from previous quarter at annual rate (5)								
2024 III	2.2	3.5	1.2	4.2	3.0	1.9	-0.4	0.9
II	2.1 r	3.0 r	0.9 r	4.6 r	1.7 r	2.4 r	2.2 r	2.3 r
I	0.7 r	1.3 r	0.6	9.3 r	5.3 r	8.5 r	-4.3 r	2.6 r
2023 ANNUAL	1.6 r	2.9 r	1.2	3.9 r	-0.2 r	2.2 r	5.3 r	3.6 r
2023 IV	3.1 r	3.4 r	0.2	4.1 r	1.4 r	0.9 r	1.7 r	1.3 r
III	3.8 r	5.0 r	1.1	5.1 r	1.6 r	1.2 r	5.2 r	3.0
II	3.7 r	2.4 r	-1.3	6.4 r	3.3 r	2.6 r	1.1 r	1.9 r
I	0.3 r	2.5 r	2.1	3.8 r	0.1 r	3.5 r	4.5 r	4.0 r
2022 ANNUAL	-1.5 r	2.5 r	4.1 r	3.5 r	-4.2 r	5.1 r	11.2 r	7.7 r
2022 IV	2.9 r	3.7 r	0.8	0.4 r	-3.5 r	-2.4 r	11.4 r	3.5
III	-0.2 r	2.6 r	2.8	7.2 r	1.8 r	7.4 r	0.3 r	4.2 r
II	-3.0 r	-0.3 r	2.7	0.7 r	-8.6 r	3.7 r	19.2 r	10.3 r
I	-5.0 r	-2.0 r	3.2 r	1.5 r	-7.1 r	6.9 r	12.1 r	9.1 r

Percent change from corresponding quarter of previous year								
2024 III	2.0	2.8	0.7	5.5	2.8	3.4	-0.3	1.7
II	2.4 r	3.2 r	0.7	5.7 r	2.5 r	3.2 r	1.1 r	2.3
I	2.8 r	3.0 r	0.2	6.2 r	2.9 r	3.3 r	0.9 r	2.2 r
2023 ANNUAL	1.6 r	2.9 r	1.2	3.9 r	-0.2 r	2.2 r	5.3 r	3.6 r
2023 IV	2.7	3.3	0.6	4.8 r	1.6 r	2.1 r	3.1 r	2.5 r
III	2.7 r	3.4 r	0.7	3.9 r	0.3 r	1.2 r	5.5 r	3.1 r
II	1.7 r	2.8 r	1.1	4.4 r	0.4 r	2.7 r	4.3 r	3.4 r
I	0.0 r	2.1 r	2.1	3.0 r	-2.7 r	3.0 r	8.6 r	5.5 r
2022 ANNUAL	-1.5 r	2.5 r	4.1 r	3.5 r	-4.2 r	5.1 r	11.2 r	7.7 r
2022 IV	-1.4 r	1.0 r	2.4 r	2.4 r	-4.4	3.8 r	10.5 r	6.8 r
III	-1.4 r	2.3 r	3.7	3.8 r	-4.2 r	5.2 r	11.7 r	8.0 r
II	-2.0 r	2.5 r	4.5	3.3 r	-4.9 r	5.4 r	12.9 r	8.6 r
I	-1.2 r	4.4 r	5.7 r	4.8 r	-3.1 r	6.0 r	9.8 r	7.6 r

Indexes 2017=100								
2024 III	114.5	121.6	106.3	139.6	108.6	122.0	127.0	124.2
II	113.8 r	120.6 r	105.9 r	138.2 r	107.8 r	121.4 r	127.2 r	123.9 r
I	113.3 r	119.7 r	105.7 r	136.7 r	107.4 r	120.7 r	126.5 r	123.2 r
2023 ANNUAL	111.5 r	117.7 r	105.5 r	131.3 r	105.3 r	117.7 r	126.6 r	121.6 r
2023 IV	113.1 r	119.3 r	105.5 r	133.7 r	106.0 r	118.2 r	127.9 r	122.4 r
III	112.2 r	118.3 r	105.5 r	132.3 r	105.7 r	118.0 r	127.4 r	122.1 r
II	111.1 r	116.9 r	105.2 r	130.7 r	105.3 r	117.6 r	125.8 r	121.2 r
I	110.1 r	116.2 r	105.5 r	128.7 r	104.4 r	116.9 r	125.4 r	120.6 r
2022 ANNUAL	109.7 r	114.4 r	104.2 r	126.3 r	105.5 r	115.1 r	120.2 r	117.3 r
2022 IV	110.0 r	115.5 r	105.0 r	127.5 r	104.4 r	115.9 r	124.0 r	119.4 r
III	109.3 r	114.5 r	104.7 r	127.4 r	105.3 r	116.6 r	120.7 r	118.4 r
II	109.3 r	113.7 r	104.0 r	125.2 r	104.9 r	114.5 r	120.6 r	117.2 r
I	110.1 r	113.8 r	103.3 r	125.0 r	107.3 r	113.5 r	115.4 r	114.3 r

See footnotes following Table 6.
r=revised

November 7, 2024
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs

Percent change from previous quarter at annual rate (5)						
2024 III	1.0	-0.2	-1.2	6.4	5.1	5.3
II	0.3 r	1.5 r	1.2 r	6.2 r	3.3 r	5.8 r
I	-0.7	-0.9	-0.2	6.2 r	2.3 r	7.0 r
2023 ANNUAL	-0.5	-0.4	0.1	4.5 r	0.4 r	5.1 r
2023 IV	2.0	-1.3	-3.3	6.7 r	3.9 r	4.6 r
III	-1.0	-0.4	0.6	6.1 r	2.6 r	7.2 r
II	2.7	0.3	-2.4	8.8 r	5.6 r	5.9 r
I	-0.3	0.5	0.8	2.6 r	-1.1 r	2.9 r
2022 ANNUAL	-1.3	2.7	4.0	3.2 r	-4.5 r	4.6 r
2022 IV	-2.3	-3.2	-0.9	1.1 r	-2.8	3.4 r
III	-3.3	0.2	3.7	7.4 r	1.9 r	11.0 r
II	0.6	2.7	2.1	1.9 r	-7.4 r	1.3 r
I	-2.8	2.7	5.6	1.3 r	-7.3 r	4.2 r

Percent change from corresponding quarter of previous year						
2024 III	0.7	-0.2	-0.9	6.4	3.6	5.7
II	0.2 r	-0.3 r	-0.4	6.3 r	3.0 r	6.1 r
I	0.7	-0.6	-1.3	6.9 r	3.6 r	6.2 r
2023 ANNUAL	-0.5	-0.4	0.1	4.5 r	0.4 r	5.1 r
2023 IV	0.9	-0.3	-1.1	6.0 r	2.7 r	5.1 r
III	-0.2	-0.7	-0.5	4.6 r	1.0 r	4.8 r
II	-0.8	-0.6	0.3	4.9 r	0.9 r	5.8 r
I	-1.3	0.0	1.4	3.2 r	-2.4 r	4.6 r
2022 ANNUAL	-1.3	2.7	4.0	3.2 r	-4.5 r	4.6 r
2022 IV	-1.9	0.6	2.6	2.9 r	-4.0 r	4.9 r
III	-1.7	2.7	4.5	4.5 r	-3.6 r	6.3 r
II	-1.4	3.3	4.8	2.3 r	-5.9 r	3.7 r
I	-0.4	4.2	4.5	3.2 r	-4.6 r	3.5 r

Indexes 2017=100						
2024 III	98.8	99.6	100.8	132.9	103.4	134.5
II	98.6 r	99.7 r	101.1 r	130.9 r	102.1 r	132.8 r
I	98.5 r	99.3 r	100.8	128.9 r	101.3 r	130.9 r
2023 ANNUAL	98.2	99.8	101.6	123.9 r	99.3 r	126.1 r
2023 IV	98.7	99.5	100.9	127.0 r	100.7 r	128.7 r
III	98.2	99.8	101.7	124.9 r	99.8 r	127.3 r
II	98.4	99.9	101.6	123.1 r	99.1 r	125.1 r
I	97.8	99.9	102.2	120.5 r	97.8 r	123.3 r
2022 ANNUAL	98.8	100.2	101.4	118.5 r	98.9 r	120.0 r
2022 IV	97.8	99.7	102.0	119.8 r	98.1 r	122.4 r
III	98.4	100.6	102.2	119.4 r	98.8 r	121.4 r
II	99.2	100.5	101.3	117.3 r	98.3 r	118.3 r
I	99.1	99.8	100.8	116.8 r	100.2 r	117.9 r

See footnotes following Table 6.
r=revised

November 7, 2024
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs

Percent change from previous quarter at annual rate (5)						
2024 III	0.8	-2.6	-3.4	7.4	6.1	6.5
II	-0.8 r	0.6 r	1.4 r	5.5 r	2.6 r	6.4 r
I	0.8 r	0.0 r	-0.8	8.0 r	4.0 r	7.1 r
2023 ANNUAL	-1.1	0.2	1.3	4.5 r	0.3 r	5.6 r
2023 IV	0.0	-3.0	-3.0	8.5 r	5.6 r	8.5 r
III	-3.5	-0.1	3.5	4.4 r	0.9 r	8.2 r
II	4.4	1.8	-2.5	10.6 r	7.3 r	5.9 r
I	-2.4	-0.4	2.1	2.7 r	-1.1 r	5.2 r
2022 ANNUAL	-1.3	3.3	4.7	2.3 r	-5.4 r	3.6 r
2022 IV	-2.2	-2.4	-0.1	-0.4 r	-4.3 r	1.9 r
III	-3.1	1.9	5.1	7.3	1.9	10.7
II	2.2	5.4	3.2	2.5 r	-6.9 r	0.3 r
I	-2.9	4.4	7.6	-1.0 r	-9.4 r	1.9 r

Percent change from corresponding quarter of previous year						
2024 III	0.2	-1.3	-1.5	7.3	4.6	7.1
II	-0.9 r	-0.6 r	0.3 r	6.6 r	3.3 r	7.5 r
I	0.4	-0.3 r	-0.7	7.8 r	4.4 r	7.4 r
2023 ANNUAL	-1.1	0.2	1.3	4.5 r	0.3 r	5.6 r
2023 IV	-0.4	-0.4	0.0	6.5 r	3.1 r	6.9 r
III	-1.0	-0.3	0.7	4.2 r	0.6 r	5.3 r
II	-0.9	0.2	1.1	4.9 r	0.9 r	5.9 r
I	-1.4	1.1	2.5	3.0 r	-2.7 r	4.5 r
2022 ANNUAL	-1.3	3.3	4.7	2.3 r	-5.4 r	3.6 r
2022 IV	-1.5	2.3	3.9	2.0 r	-4.8 r	3.6 r
III	-0.9	4.3	5.3	4.3 r	-3.7 r	5.2 r
II	-0.7	4.5	5.2	0.6 r	-7.4 r	1.3 r
I	-2.2	2.3	4.5	2.1 r	-5.6 r	4.3 r

Indexes 2017=100						
2024 III	95.9	96.9	101.0	133.6	103.9	139.3
II	95.7 r	97.5 r	101.9 r	131.2 r	102.4 r	137.1 r
I	95.9 r	97.4 r	101.5	129.5 r	101.7 r	135.0 r
2023 ANNUAL	95.9	97.8	102.1	123.6 r	99.1 r	129.0 r
2023 IV	95.7	97.4	101.8	127.0 r	100.7 r	132.7 r
III	95.7	98.1	102.5	124.5 r	99.4 r	130.0 r
II	96.6	98.1	101.6	123.1 r	99.2 r	127.5 r
I	95.5	97.7	102.3	120.1 r	97.4 r	125.7 r
2022 ANNUAL	96.9	97.7	100.8	118.3 r	98.8 r	122.1 r
2022 IV	96.1	97.8	101.7	119.3 r	97.7 r	124.1 r
III	96.7	98.4	101.8	119.4 r	98.7 r	123.5 r
II	97.4	97.9	100.5	117.3 r	98.3 r	120.4 r
I	96.9	96.7	99.7	116.6 r	100.1 r	120.3 r

See footnotes following Table 6.
r=revised

November 7, 2024
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs

Percent change from previous quarter at annual rate (5)						
2024 III	-0.3	2.3	2.6	5.0	3.7	5.3
II	1.7 r	2.5 r	0.8 r	7.5 r	4.6 r	5.7 r
I	-2.7	-1.7 r	1.0	3.0 r	-0.8 r	5.8 r
2023 ANNUAL	0.8	-0.9	-1.7	4.4 r	0.2 r	3.5 r
2023 IV	4.5	0.3	-4.0	3.3 r	0.6 r	-1.1 r
III	3.6	-0.7	-4.1	8.7 r	5.1 r	5.0 r
II	1.0	-1.2	-2.3	5.4 r	2.3 r	4.3 r
I	2.9	1.3	-1.5	2.2 r	-1.5 r	-0.6 r
2022 ANNUAL	-1.3	1.6	3.0	4.9 r	-2.9 r	6.3 r
2022 IV	-1.7	-4.0	-2.3	3.8 r	-0.2 r	5.6 r
III	-2.7	-1.4	1.3	7.2 r	1.8 r	10.1 r
II	-0.3	0.0	0.3	0.6 r	-8.6 r	0.9 r
I	-1.5	0.8	2.4	5.4 r	-3.5 r	7.0 r

Percent change from corresponding quarter of previous year						
2024 III	0.8	0.8	0.1	4.7	2.0	3.9
II	1.7 r	0.1 r	-1.6	5.6 r	2.3 r	3.8 r
I	1.6	-0.8	-2.4	5.1 r	1.8 r	3.5 r
2023 ANNUAL	0.8	-0.9	-1.7	4.4 r	0.2 r	3.5 r
2023 IV	3.0	-0.1	-3.0	4.9 r	1.6 r	1.8 r
III	1.4	-1.2	-2.5	5.0 r	1.4 r	3.5 r
II	-0.2	-1.3	-1.2	4.6 r	0.6 r	4.8 r
I	-0.5	-1.0	-0.5	3.4 r	-2.2 r	3.9 r
2022 ANNUAL	-1.3	1.6	3.0	4.9 r	-2.9 r	6.3 r
2022 IV	-1.6	-1.1	0.4	4.2 r	-2.7 r	5.9 r
III	-2.3	0.9	3.3	4.6 r	-3.4 r	7.1 r
II	-2.2	1.7	4.0	5.4 r	-3.0 r	7.8 r
I	0.6	5.2	4.5	5.3 r	-2.7 r	4.6 r

Indexes 2017=100						
2024 III	100.8	101.2	100.4	131.5	102.3	130.4
II	100.9 r	100.7 r	99.8 r	129.9 r	101.4 r	128.8 r
I	100.5 r	100.0 r	99.6	127.6 r	100.2 r	127.0 r
2023 ANNUAL	99.9	100.6	100.7	124.2 r	99.6 r	124.4 r
2023 IV	101.2	100.5	99.3	126.6 r	100.4 r	125.2 r
III	100.0	100.4	100.3	125.6 r	100.3 r	125.6 r
II	99.2	100.6	101.4	123.0 r	99.1 r	124.0 r
I	98.9	100.9	102.0	121.4 r	98.5 r	122.7 r
2022 ANNUAL	99.1	101.5	102.5	119.0 r	99.4 r	120.2 r
2022 IV	98.2	100.5	102.4	120.7 r	98.9 r	122.9 r
III	98.7	101.6	103.0	119.6 r	98.9 r	121.3 r
II	99.3	101.9	102.6	117.6 r	98.5 r	118.4 r
I	99.4	101.9	102.5	117.4 r	100.7 r	118.1 r

See footnotes following Table 6.
r=revised

November 7, 2024
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Value-added output price deflator (4)	Unit nonlabor costs (6)	Unit combined input costs (7)	Unit profits (8)

Percent change from previous quarter at annual rate (5)										
2024 II	3.1 r	4.7 r	1.5 r	4.5 r	1.7 r	1.3 r	1.4	-5.7 r	-0.9 r	12.7 r
I	5.7 r	6.4 r	0.6	11.6 r	7.5 r	5.5 r	0.0	6.0 r	5.7 r	-22.2 r
2023 ANNUAL	0.0 r	1.5 r	1.4 r	4.1 r	0.0 r	4.1 r	3.5 r	-0.3 r	2.7 r	7.3 r
2023 IV	5.8 r	6.0 r	0.2	4.1 r	1.4 r	-1.6 r	1.3 r	-2.0 r	-1.7 r	15.9 r
III	2.1 r	2.9 r	0.8	4.1 r	0.7 r	2.0 r	3.5 r	-1.6 r	0.9 r	16.9 r
II	3.1 r	2.5 r	-0.6 r	5.9 r	2.8 r	2.7 r	1.9 r	-2.5 r	1.1 r	6.0
I	-3.0 r	-0.6 r	2.4	5.7 r	1.8 r	8.9 r	4.2 r	-1.5 r	5.5 r	-1.6 r
2022 ANNUAL	-0.1 r	4.1 r	4.2	4.1	-3.7	4.1 r	7.4 r	15.1 r	7.4 r	7.1 r
2022 IV	-2.0 r	-1.4 r	0.6	0.2 r	-3.7 r	2.2 r	2.3 r	1.7 r	2.0 r	3.7 r
III	0.9 r	4.6 r	3.7	6.1 r	0.8 r	5.2	4.1 r	0.2 r	3.5 r	6.9 r
II	-1.0 r	1.9 r	2.9	1.8 r	-7.6 r	2.9 r	9.9 r	9.3 r	4.9 r	38.1 r
I	0.8 r	3.9 r	3.0	2.8 r	-5.9 r	2.0 r	8.8 r	33.7 r	10.9 r	-1.1 r

Percent change from corresponding quarter of previous year										
2024 II	4.2 r	5.0 r	0.8	6.0 r	2.8 r	1.8 r	1.6 r	-0.9 r	0.9 r	4.4 r
I	4.2 r	4.5 r	0.3	6.4 r	3.1 r	2.1 r	1.7 r	-0.1 r	1.4 r	2.8 r
2023 ANNUAL	0.0 r	1.5 r	1.4 r	4.1 r	0.0 r	4.1 r	3.5 r	-0.3 r	2.7 r	7.3 r
2023 IV	2.0 r	2.7 r	0.7	5.0	1.7	2.9 r	2.7 r	-1.9 r	1.4 r	9.0 r
III	0.0 r	0.8 r	0.8	3.9 r	0.4 r	3.9 r	3.0 r	-1.0 r	2.3 r	6.0 r
II	-0.3 r	1.2 r	1.5	4.4 r	0.4 r	4.7 r	3.1 r	-0.6 r	3.0 r	3.7 r
I	-1.3 r	1.1 r	2.4	3.4 r	-2.2 r	4.8 r	5.1 r	2.3 r	4.0 r	10.8 r
2022 ANNUAL	-0.1 r	4.1 r	4.2	4.1	-3.7	4.1 r	7.4 r	15.1 r	7.4 r	7.1 r
2022 IV	-0.3 r	2.2 r	2.5	2.7 r	-4.2 r	3.0 r	6.2 r	10.5 r	5.3 r	10.9 r
III	-0.2 r	4.1 r	4.3	3.8 r	-4.2 r	4.0 r	7.5 r	15.3 r	7.3 r	8.5 r
II	-0.3 r	4.3 r	4.5	4.4 r	-3.9 r	4.7 r	8.2	20.8 r	9.4 r	3.2 r
I	0.5 r	6.0 r	5.4	5.6 r	-2.4 r	5.0 r	7.6 r	14.5 r	7.8 r	6.1 r

Indexes 2017=100										
2024 II	115.9 r	123.5 r	106.6 r	139.6 r	108.9 r	120.5 r	123.9 r	108.9 r	116.7 r	172.4 r
I	115.0 r	122.1 r	106.2 r	138.1 r	108.5 r	120.0 r	123.5 r	110.5 r	116.9 r	167.3 r
2023 ANNUAL	111.7 r	118.3 r	106.0 r	132.1 r	105.9 r	118.3 r	122.5 r	109.7 r	115.5 r	169.5 r
2023 IV	113.4 r	120.2 r	106.0 r	134.3 r	106.6 r	118.4 r	123.5 r	108.9 r	115.3 r	178.2 r
III	111.8 r	118.5 r	106.0 r	133.0 r	106.2 r	118.9 r	123.1 r	109.5 r	115.8 r	171.7 r
II	111.3 r	117.6 r	105.7 r	131.7 r	106.0 r	118.3 r	122.0 r	109.9 r	115.6 r	165.1 r
I	110.4 r	116.9 r	105.9 r	129.8 r	105.3 r	117.5 r	121.4 r	110.6 r	115.3 r	162.7 r
2022 ANNUAL	111.7 r	116.6 r	104.5 r	126.9 r	106.0 r	113.7 r	118.4 r	110.1 r	112.5 r	157.9 r
2022 IV	111.3 r	117.1 r	105.3 r	128.0 r	104.8 r	115.1 r	120.2 r	111.1 r	113.8 r	163.4 r
III	111.8 r	117.5 r	105.1 r	128.0 r	105.8 r	114.4 r	119.5 r	110.6 r	113.2 r	161.9 r
II	111.6 r	116.2 r	104.2 r	126.1 r	105.6 r	113.0 r	118.3 r	110.5 r	112.2 r	159.2 r
I	111.8 r	115.7 r	103.4 r	125.5 r	107.7 r	112.2 r	115.5 r	108.1 r	110.9 r	146.9 r

See footnotes following Table 6.
r=revised

November 7, 2024
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.

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 second quarter of 2024. For more about revisions to labor productivity growth see “Revisions to BLS quarterly labor productivity estimates: How large are they?” at www.bls.gov/opub/mlr/2022/article/revisions-to-bls-quarterly-labor-productivity-estimates-how-large-are-they.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 1978-2023 is based on the Consumer Price Index Retroactive series (CPI-URS).
- (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.