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PRODUCTIVITY AND COSTS
 Second Quarter 2022, Revised

Nonfarm business sector labor productivity decreased 4.1 percent in the second quarter of 2022, the U.S. Bureau of Labor Statistics reported today, as output decreased 1.4 percent and hours worked increased 2.7 percent. (All quarterly percent changes in this release are seasonally adjusted annual rates.) The 4.1-percent decrease in labor productivity reported today for the second quarter of 2022 is a 0.5-percentage point upward revision from the preliminary estimate of a 4.6-percent decrease, primarily driven by a 0.7-percentage point upward revision to output. From the same quarter a year ago, nonfarm business sector labor productivity decreased 2.4 percent. This is the largest decline in the series, which begins in the first quarter of 1948. (See chart 1 and table A1.)

Chart 1. Labor productivity, nonfarm business, 2018Q1 – 2022Q2

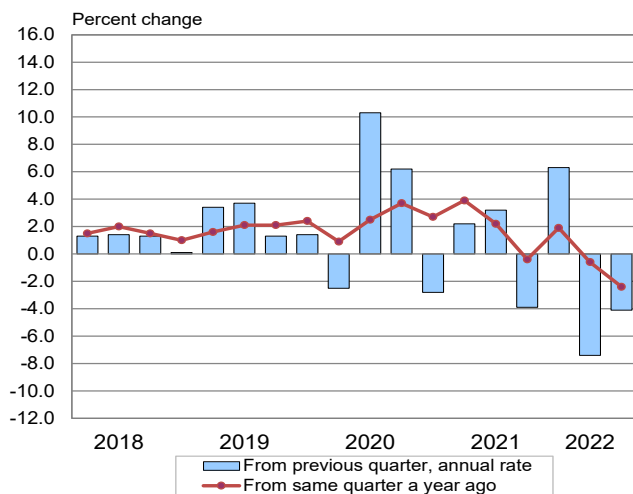
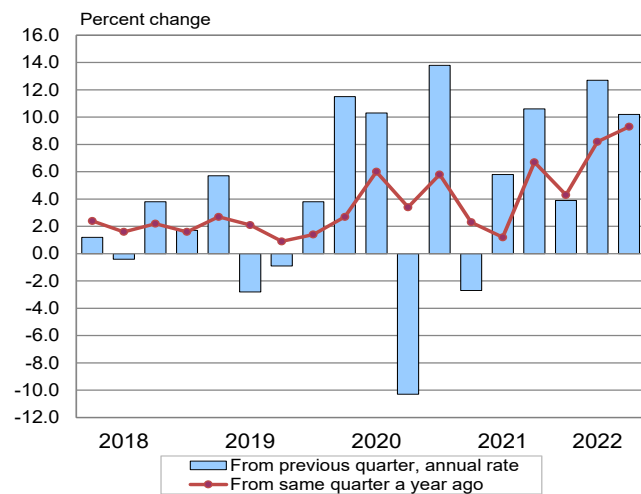


Chart 2. Unit labor costs, nonfarm business, 2018Q1 – 2022Q2

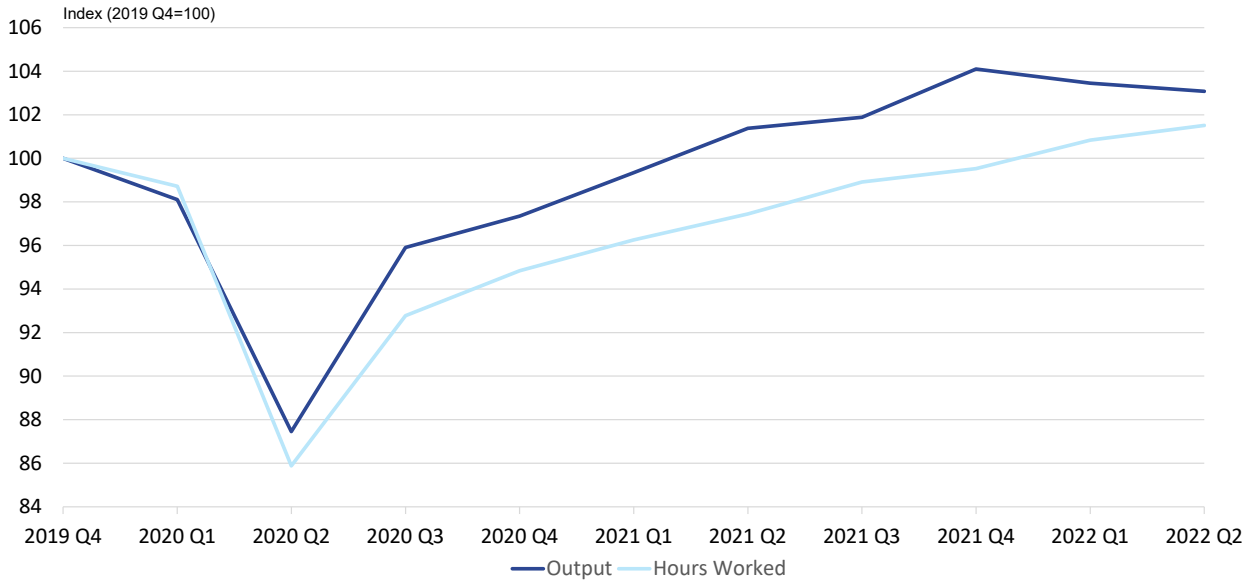


Unit labor costs in the nonfarm business sector increased 10.2 percent in the second quarter of 2022, reflecting a 5.7-percent increase in hourly compensation and a 4.1-percent decrease in productivity. Unit labor costs increased 9.3 percent over the last four quarters. (See chart 2 and tables A1 and 2.) This is the largest four-quarter increase in this measure since a 10.6-percent increase in the first quarter of 1982. 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.

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. The second quarter of 2022 is the second consecutive quarter in which output per hour worked declined; labor productivity fell 7.4 percent in the first quarter of 2022. The productivity declines over these two quarters reduced the average annual productivity growth rate since the fourth quarter of 2019—the last

quarter not affected by the COVID-19 pandemic—to 0.6 percent in the nonfarm business sector. Output and hours worked in the nonfarm business sector are now 3.1 percent and 1.5 percent above their fourth-quarter 2019 levels, respectively. (See chart 3.)

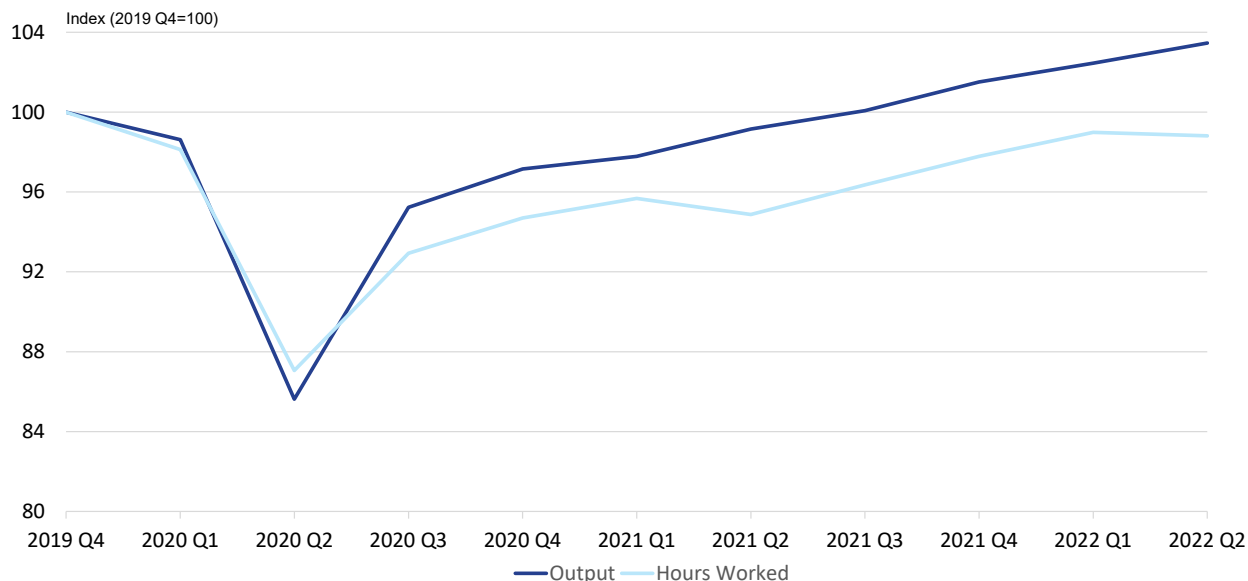
Chart 3. Output and Hours Worked index series, nonfarm business, 2019 Q4 – 2022 Q2



Hourly compensation increased 5.7 percent in the nonfarm business sector in the second quarter of 2022. Real hourly compensation, which takes into account changes in consumer prices, decreased 4.4 percent in the second quarter of 2022, which followed a 4.4-percent decline in the first quarter of 2022. The consumer price series, which is used to estimate real hourly compensation, grew 10.5 percent in the second quarter of 2022, the largest increase since an 11.6-percent increase in the first quarter of 1981 (seasonally adjusted annual rates). See Footnote 2 on page 15 for more information.

Manufacturing sector labor productivity increased 4.7 percent in the second quarter of 2022, as output increased 4.0 percent and hours worked decreased 0.7 percent. In the durable manufacturing sector, productivity increased 4.9 percent, with a 5.3-percent increase in output and a 0.4-percent increase in hours worked. Nondurable manufacturing sector productivity increased 5.2 percent, as output increased 2.7 percent and hours worked decreased 2.4 percent. Total manufacturing sector productivity increased 0.2 percent from the same quarter a year ago. (See tables A1, 3, 4, and 5.)

Chart 4. Output and Hours Worked index series, manufacturing, 2019 Q4 – 2022 Q2



The manufacturing labor productivity index is 4.7 percent higher in second-quarter 2022 than in fourth-quarter 2019, corresponding to an annual labor productivity growth rate of 1.9 percent during that period. Manufacturing sector output is now 3.5 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 1.2 percent below the fourth-quarter 2019 level. (See chart 4.)

Unit labor costs in the total manufacturing sector decreased 0.2 percent in the second quarter of 2022, reflecting a 4.5-percent increase in hourly compensation and a 4.7-percent increase in productivity. Manufacturing unit labor costs increased 4.5 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 7.)

Preliminary measures for the second quarter of 2022 were announced today for the **nonfinancial corporate sector**. Productivity decreased 0.7 percent in the second quarter of 2022 as output increased 1.6 percent and hours worked increased 2.4 percent. Productivity decreased 0.6 percent over the last four quarters. Unit profits of nonfinancial corporations increased at a 40.9-percent annual rate in the second quarter of 2022 and increased 7.5 percent over the last four quarters. (See table 6.)

Revised measures

The measures released today are based on more recent source data than were available for the preliminary report. Table B1 presents previous and revised productivity and related measures for the business, nonfarm business, and manufacturing sectors for the second quarter of 2022.

In the second quarter of 2022, nonfarm business sector productivity decreased 4.1 percent—a 0.5-percentage point upward revision from the preliminary estimate of a 4.6-percent decrease—reflecting a 0.7-percentage point upward revision to output and a 0.1-percentage point upward revision to hours worked. Unit labor costs increased 10.2 percent rather than increasing 10.8 percent as previously reported, reflecting a 0.5-percentage point upward revision to productivity; there was no revision to hourly compensation for the second quarter of 2022.

Manufacturing sector productivity for the second quarter of 2022 was revised down to an increase of 4.7 percent from a previously reported increase of 5.5 percent. This revision stems mainly from durable manufacturing sector productivity, which was revised down 1.2 percentage points to an increase of 4.9 percent; nondurable manufacturing sector productivity had a smaller downward revision of 0.2 percentage point to an increase of 5.2 percent. Total manufacturing unit labor costs decreased 0.2 percent in the second quarter of 2022 rather than decreasing 0.5 percent as previously reported.

Table B2 presents previous and revised productivity and related measures for the business, nonfarm business, manufacturing, and nonfinancial corporate sectors for the first quarter of 2022.

In the first quarter of 2022, nonfarm business sector productivity and unit labor costs were not revised; productivity fell 7.4 percent and unit labor costs increased 12.7 percent. Manufacturing sector productivity was revised down 0.2 percentage point to a decrease of 1.2 percent. As a result, unit labor costs were revised up 0.2 percentage point to an increase of 7.1 percent. In the nonfinancial corporate sector, first-quarter 2022 productivity, unit labor costs, and unit profits were not revised. (See table 6.)

Complete quarterly and annual data series can be found on the Productivity and Costs home page: www.bls.gov/productivity/data-overview.htm.

The preliminary Productivity and Costs news release for third-quarter 2022 is scheduled to be released on Thursday, November 3, 2022 at 8:30 a.m. (ET).

Upcoming Revisions

Data in this release do not reflect the 2022 Annual Update of the National Income and Product Accounts (NIPA) to be released by the Bureau of Economic Analysis of the U.S. Department of Commerce on September 29, 2022. This annual update will be incorporated in our release on November 3, 2022.

Upcoming methodology change

The BLS productivity program will introduce a new methodology for estimating hours worked for its major sector Productivity and Costs news release on November 3, 2022. This new methodology uses all-employee hours data from the BLS Current Employment Statistics (CES) survey as the main source of data. The new methodology for estimating hours worked improves on the current methodology, which uses the CES production and nonsupervisory employee hours data. For more information, see www.bls.gov/productivity/technical-notes/labor-productivity-hours-worked-method-using-ces-all-employee-hours-nov-2022.htm.

Table A1. Labor productivity growth and related measures - revised second-quarter 2022

(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	-4.1	-1.4	2.7	5.7	-4.4	10.2
	A year ago	-2.4	1.7	4.2	6.7	-1.7	9.3
Business	Previous quarter	-3.6	-1.4	2.3	6.1	-4.0	10.1
	A year ago	-2.3	1.6	4.0	6.9	-1.6	9.4
Manufacturing	Previous quarter	4.7	4.0	-0.7	4.5	-5.5	-0.2
	A year ago	0.2	4.4	4.2	4.7	-3.6	4.5
Durable manufacturing	Previous quarter	4.9	5.3	0.4	4.9	-5.1	0.0
	A year ago	1.3	6.0	4.7	3.0	-5.2	1.7
Nondurable manufacturing	Previous quarter	5.2	2.7	-2.4	3.5	-6.4	-1.6
	A year ago	-0.7	2.6	3.3	7.9	-0.6	8.6

Table A2. Labor productivity growth and related measures - preliminary second-quarter 2022

(percent change from previous quarter at annual rate and from same quarter a year ago)

Sector	Percent change from:	Labor productivity	Output	Hours worked	Hourly compensation	Real hourly compensation	Unit labor costs
Nonfinancial corporate	Previous quarter	-0.7	1.6	2.4	5.8	-4.2	6.6
	A year ago	-0.6	3.6	4.2	7.3	-1.2	8.0

Table B1. Labor productivity growth and related measures - revised and previously published second-quarter 2022

(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	-4.1	-1.4	2.7	5.7	-4.4	10.2
	Previously published	-4.6	-2.1	2.6	5.7	-4.4	10.8
Business	Revised	-3.6	-1.4	2.3	6.1	-4.0	10.1
	Previously published	-4.0	-1.9	2.2	6.1	-4.0	10.6
Manufacturing	Revised	4.7	4.0	-0.7	4.5	-5.5	-0.2
	Previously published	5.5	4.3	-1.1	4.9	-5.1	-0.5
Durable manufacturing	Revised	4.9	5.3	0.4	4.9	-5.1	0.0
	Previously published	6.1	6.0	-0.1	5.3	-4.7	-0.7
Nondurable manufacturing	Revised	5.2	2.7	-2.4	3.5	-6.4	-1.6
	Previously published	5.4	2.6	-2.6	4.0	-5.9	-1.3

Table B2. Labor productivity growth and related measures - revised and previously published first-quarter 2022
(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	-7.4	-2.5	5.3	4.4	-4.4	12.7
	Previously published	-7.4	-2.5	5.3	4.4	-4.4	12.7
Business	Revised	-7.7	-2.5	5.6	4.2	-4.6	12.8
	Previously published	-7.7	-2.5	5.6	4.2	-4.6	12.8
Manufacturing	Revised	-1.2	3.8	5.0	5.8	-3.1	7.1
	Previously published	-1.0	3.9	5.0	5.8	-3.1	6.9
Durable manufacturing	Revised	-0.6	5.6	6.2	5.9	-3.0	6.5
	Previously published	-0.4	5.9	6.2	5.9	-3.0	6.3
Nondurable manufacturing	Revised	-1.2	1.8	3.0	5.5	-3.4	6.8
	Previously published	-1.1	2.0	3.0	5.5	-3.4	6.6
Nonfinancial corporate	Revised	-4.6	1.1	5.9	4.3	-4.4	9.3
	Previously published	-4.6	1.1	5.9	4.3	-4.4	9.3

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/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 private households (including owner-occupied housing). Corresponding exclusions also are made in labor hours worked. Business output accounted for about 76 percent of the value of GDP in 2021. Nonfarm business, which excludes farming, accounted for about 75 percent of GDP in 2021.

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 51 percent of the value of GDP in 2021.

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 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)	Implicit price deflator (4)

Percent change from previous quarter at annual rate (5)								
2022 II	-3.6 r	-1.4 r	2.3 r	6.1	-4.0	10.1 r	10.1 r	10.1 r
I	-7.7	-2.5	5.6	4.2	-4.6	12.8	3.9	9.0
2021 ANNUAL	1.9	7.2	5.2	5.8	1.1	3.8	5.5	4.5
2021 IV	6.3	8.9	2.4	10.7	2.6	4.1	12.5	7.5
III	-3.7	1.8	5.7	6.7	0.0	10.8	-0.1	6.2
II	3.4	8.2	4.6	9.6	1.4	6.0	9.1	7.3
I	2.1	8.2	5.9	-0.4	-4.3	-2.5	17.2	5.1
2020 ANNUAL	2.5	-4.2	-6.6	6.9	5.6	4.3	-4.8	0.4
2020 IV	-3.4	6.1	9.8	9.9	7.5	13.8	-13.7	1.6
III	7.3	44.7	34.9	-3.8	-8.2	-10.4	32.5	5.1
II	9.3	-36.8	-42.2	20.8	25.0	10.6	-23.1	-4.6
I	-1.8	-6.8	-5.1	8.6	7.2	10.6	-12.8	0.0

Percent change from corresponding quarter of previous year								
2022 II	-2.3 r	1.6 r	4.0	6.9	-1.6	9.4 r	6.5 r	8.2
I	-0.6	4.0	4.6	7.8	-0.2	8.4	6.2	7.5
2021 ANNUAL	1.9	7.2	5.2	5.8	1.1	3.8	5.5	4.5
2021 IV	2.0	6.7	4.7	6.6	-0.1	4.5	9.5	6.5
III	-0.5	6.0	6.5	6.4	1.1	6.8	2.5	5.0
II	2.3	15.8	13.2	3.6	-1.1	1.3	10.0	4.7
I	3.7	1.2	-2.4	6.2	4.2	2.4	0.7	1.7
2020 ANNUAL	2.5	-4.2	-6.6	6.9	5.6	4.3	-4.8	0.4
2020 IV	2.7	-2.5	-5.0	8.5	7.2	5.7	-6.4	0.5
III	3.9	-3.5	-7.1	7.3	6.0	3.3	-3.3	0.4
II	2.4	-11.3	-13.4	8.4	7.9	5.9	-9.2	-0.6
I	1.0	0.3	-0.7	3.6	1.5	2.6	-0.6	1.2

Indexes 2012=100								
2022 II	110.2 r	126.0 r	114.4 r	144.1 r	113.2 r	130.7 r	115.5 r	124.0 r
I	111.2	126.5	113.7	141.9	114.3	127.6	112.7	121.1
2021 ANNUAL	112.5	124.4	110.6	136.0	115.1	120.9	108.7	115.6
2021 IV	113.5	127.3	112.2	140.5	115.7	123.8	111.7	118.5
III	111.8	124.6	111.5	137.0	115.0	122.6	108.4	116.4
II	112.8	124.1	110.0	134.8	115.0	119.5	108.5	114.6
I	111.9	121.6	108.7	131.7	114.6	117.7	106.1	112.6
2020 ANNUAL	110.4	116.0	105.1	128.6	113.9	116.5	103.1	110.6
2020 IV	111.3	119.3	107.2	131.9	115.8	118.5	102.0	111.3
III	112.3	117.5	104.7	128.8	113.8	114.7	105.8	110.8
II	110.3	107.2	97.2	130.1	116.2	117.9	98.6	109.5
I	107.9	120.2	111.4	124.1	109.9	115.0	105.3	110.8

See footnotes following Table 6.
r=revised

September 1, 2022
Source: Bureau of Labor Statistics

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

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

Percent change from previous quarter at annual rate (5)								
2022 II	-4.1 r	-1.4 r	2.7 r	5.7	-4.4	10.2 r	8.0 r	9.3 r
I	-7.4	-2.5	5.3	4.4	-4.4	12.7	2.1	8.3
2021 ANNUAL	1.9	7.4	5.4	5.6	0.9	3.7	4.6	4.0
2021 IV	6.3	9.0	2.5	10.5	2.4	3.9	13.7	7.8
III	-3.9	2.0	6.2	6.3	-0.4	10.6	-0.4	6.0
II	3.2	8.5	5.1	9.2	1.1	5.8	6.6	6.1
I	2.2	8.4	6.1	-0.6	-4.5	-2.7	16.5	4.6
2020 ANNUAL	2.4	-4.4	-6.7	7.0	5.7	4.5	-4.9	0.4
2020 IV	-2.8	6.2	9.2	10.6	8.2	13.8	-15.3	0.9
III	6.2	44.6	36.2	-4.7	-9.1	-10.3	31.3	4.7
II	10.3	-36.9	-42.7	21.6	25.8	10.3	-21.6	-3.9
I	-2.5	-7.4	-5.0	8.7	7.3	11.5	-13.4	0.2

Percent change from corresponding quarter of previous year								
2022 II	-2.4 r	1.7 r	4.2 r	6.7	-1.7	9.3 r	5.7 r	7.8
I	-0.6	4.1	4.8	7.6	-0.4	8.2	5.3	7.0
2021 ANNUAL	1.9	7.4	5.4	5.6	0.9	3.7	4.6	4.0
2021 IV	1.9	6.9	4.9	6.3	-0.4	4.3	8.9	6.1
III	-0.4	6.2	6.6	6.3	1.0	6.7	1.2	4.4
II	2.2	15.9	13.5	3.4	-1.3	1.2	8.4	4.1
I	3.9	1.3	-2.5	6.2	4.3	2.3	0.4	1.5
2020 ANNUAL	2.4	-4.4	-6.7	7.0	5.7	4.5	-4.9	0.4
2020 IV	2.7	-2.7	-5.2	8.6	7.3	5.8	-6.8	0.4
III	3.7	-3.7	-7.1	7.3	6.0	3.4	-3.3	0.5
II	2.5	-11.5	-13.6	8.7	8.2	6.0	-9.0	-0.4
I	0.9	0.2	-0.7	3.7	1.6	2.7	-0.8	1.2

Indexes 2012=100								
2022 II	109.9 r	125.9 r	114.6 r	144.0 r	113.2	131.1 r	114.3 r	123.8 r
I	111.0	126.4	113.9	142.1	114.4	128.0	112.1	121.1
2021 ANNUAL	112.2	124.2	110.7	136.2	115.2	121.4	108.6	115.8
2021 IV	113.2	127.2	112.4	140.6	115.7	124.2	111.5	118.7
III	111.4	124.5	111.7	137.1	115.0	123.0	108.0	116.5
II	112.6	123.9	110.0	135.0	115.2	119.9	108.1	114.8
I	111.7	121.4	108.7	132.1	114.8	118.3	106.4	113.1
2020 ANNUAL	110.1	115.7	105.1	128.9	114.1	117.1	103.8	111.3
2020 IV	111.1	118.9	107.1	132.2	116.2	119.1	102.4	111.8
III	111.8	117.2	104.8	129.0	113.9	115.3	106.8	111.6
II	110.2	106.9	97.0	130.5	116.7	118.5	99.8	110.3
I	107.5	119.9	111.5	124.3	110.2	115.6	106.0	111.4

See footnotes following Table 6.
r=revised

September 1, 2022
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)						
2022 II	4.7 r	4.0 r	-0.7 r	4.5 r	-5.5 r	-0.2 r
I	-1.2 r	3.8 r	5.0	5.8	-3.1	7.1 r
2021 ANNUAL	2.6	5.8	3.2	4.5	-0.1	1.9
2021 IV	-0.2	5.9	6.1	9.6	1.6	9.8
III	-2.5	3.8	6.4	-0.8	-7.0	1.7
II	9.4	5.7	-3.3	11.3	2.9	1.7
I	-1.5	2.6	4.2	0.2	-3.8	1.7
2020 ANNUAL	0.2	-6.7	-6.8	7.0	5.7	6.8
2020 IV	0.4	8.3	7.8	10.3	7.9	9.8
III	17.8	53.0	29.9	-11.4	-15.4	-24.8
II	-8.3	-43.2	-38.0	27.2	31.5	38.6
I	2.0	-5.4	-7.3	8.0	6.6	5.8

Percent change from corresponding quarter of previous year						
2022 II	0.2 r	4.4 r	4.2 r	4.7 r	-3.6 r	4.5 r
I	1.3	4.8	3.5	6.4	-1.5	5.0
2021 ANNUAL	2.6	5.8	3.2	4.5	-0.1	1.9
2021 IV	1.2	4.5	3.3	4.9	-1.7	3.7
III	1.4	5.1	3.7	5.1	-0.2	3.7
II	6.3	15.8	9.0	2.2	-2.5	-3.9
I	1.7	-0.8	-2.5	5.6	3.7	3.9
2020 ANNUAL	0.2	-6.7	-6.8	7.0	5.7	6.8
2020 IV	2.6	-2.8	-5.3	7.6	6.3	4.9
III	1.9	-5.4	-7.2	6.9	5.6	4.9
II	-2.6	-15.2	-12.9	10.0	9.5	13.0
I	-1.3	-3.2	-1.9	3.7	1.6	5.1

Indexes 2012=100						
2022 II	99.0 r	103.8 r	104.9 r	135.4 r	106.3 r	136.8 r
I	97.8 r	102.8 r	105.1	133.9	107.9	136.9 r
2021 ANNUAL	97.9	100.0	102.1	129.1	109.2	131.8
2021 IV	98.1	101.8	103.8	132.0	108.7	134.6
III	98.2	100.4	102.3	129.0	108.3	131.4
II	98.8	99.5	100.7	129.3	110.3	130.9
I	96.6	98.1	101.6	125.9	109.5	130.3
2020 ANNUAL	95.4	94.5	99.0	123.5	109.3	129.4
2020 IV	97.0	97.5	100.5	125.8	110.5	129.8
III	96.8	95.5	98.7	122.8	108.5	126.8
II	93.0	85.9	92.4	126.6	113.1	136.2
I	95.0	98.9	104.2	119.2	105.6	125.5

See footnotes following Table 6.
r=revised

September 1, 2022
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)						
2022 II	4.9 r	5.3 r	0.4 r	4.9 r	-5.1 r	0.0 r
I	-0.6 r	5.6 r	6.2	5.9	-3.0	6.5 r
2021 ANNUAL	5.1	8.1	2.9	4.1	-0.5	-0.9
2021 IV	2.1	6.5	4.3	10.3	2.2	8.0
III	-1.2	6.7	8.0	-8.2	-14.0	-7.1
II	7.5	1.0	-6.1	13.9	5.4	6.0
I	0.3	6.4	6.1	1.2	-2.8	0.9
2020 ANNUAL	0.1	-8.0	-8.2	7.0	5.7	6.9
2020 IV	2.9	9.1	5.9	12.3	9.9	9.1
III	42.7	93.7	35.7	-15.4	-19.3	-40.7
II	-18.4	-53.1	-42.5	28.9	33.4	58.0
I	-0.5	-8.5	-8.0	7.4	6.0	7.9

Percent change from corresponding quarter of previous year						
2022 II	1.3 r	6.0 r	4.7 r	3.0 r	-5.2 r	1.7 r
I	1.9 r	4.9 r	3.0	5.1	-2.6	3.2 r
2021 ANNUAL	5.1	8.1	2.9	4.1	-0.5	-0.9
2021 IV	2.1	5.1	2.9	3.9	-2.6	1.8
III	2.3	5.7	3.3	4.4	-0.8	2.0
II	12.2	22.7	9.4	2.3	-2.4	-8.8
I	4.7	1.3	-3.2	5.5	3.6	0.8
2020 ANNUAL	0.1	-8.0	-8.2	7.0	5.7	6.9
2020 IV	4.5	-2.4	-6.6	7.1	5.8	2.5
III	3.3	-5.3	-8.3	6.7	5.4	3.3
II	-6.0	-20.1	-15.1	10.8	10.3	17.9
I	-1.6	-4.3	-2.8	4.0	1.8	5.7

Indexes 2012=100						
2022 II	103.5 r	107.2 r	103.6 r	134.8 r	105.9 r	130.2 r
I	102.3 r	105.9 r	103.4	133.2	107.3	130.2 r
2021 ANNUAL	101.8	102.3	100.5	129.3	109.3	127.0
2021 IV	102.5	104.4	101.9	131.3	108.1	128.1
III	101.9	102.8	100.8	128.1	107.5	125.7
II	102.3	101.1	98.9	130.9	111.6	128.0
I	100.4	100.9	100.5	126.7	110.2	126.2
2020 ANNUAL	96.8	94.6	97.7	124.1	109.9	128.2
2020 IV	100.4	99.3	99.0	126.3	111.0	125.9
III	99.6	97.2	97.6	122.7	108.4	123.2
II	91.2	82.4	90.4	128.0	114.3	140.4
I	95.9	99.6	103.8	120.1	106.4	125.2

See footnotes following Table 6.
r=revised

September 1, 2022
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)						
2022 II	5.2 r	2.7 r	-2.4 r	3.5 r	-6.4 r	-1.6 r
I	-1.2 r	1.8 r	3.0	5.5	-3.4	6.8 r
2021 ANNUAL	-0.2	3.5	3.6	5.3	0.6	5.5
2021 IV	-3.5	5.1	9.0	8.7	0.7	12.7
III	-2.9	0.8	3.8	14.1	6.9	17.5
II	9.8	11.2	1.3	7.2	-0.8	-2.3
I	-2.4	-1.3	1.1	-2.2	-6.0	0.2
2020 ANNUAL	-0.4	-4.9	-4.5	7.3	6.0	7.7
2020 IV	-2.9	7.7	10.9	7.0	4.7	10.2
III	-0.9	19.8	21.0	-4.4	-8.8	-3.5
II	-1.0	-30.7	-30.0	26.3	30.6	27.6
I	4.6	-1.8	-6.1	9.5	8.1	4.6

Percent change from corresponding quarter of previous year						
2022 II	-0.7 r	2.6	3.3 r	7.9 r	-0.6 r	8.6
I	0.4	4.7	4.2	8.8	0.8	8.4
2021 ANNUAL	-0.2	3.5	3.6	5.3	0.6	5.5
2021 IV	0.1	3.9	3.8	6.8	0.1	6.7
III	0.3	4.5	4.2	6.4	1.1	6.1
II	0.8	9.1	8.3	1.8	-2.9	1.0
I	-1.8	-3.0	-1.3	6.0	4.1	8.0
2020 ANNUAL	-0.4	-4.9	-4.5	7.3	6.0	7.7
2020 IV	-0.1	-3.2	-3.1	9.1	7.8	9.1
III	-0.1	-5.4	-5.3	7.6	6.3	7.8
II	-0.3	-9.5	-9.2	9.1	8.6	9.5
I	-1.1	-1.5	-0.4	3.6	1.4	4.7

Indexes 2012=100						
2022 II	97.6 r	104.6 r	107.2 r	136.9 r	107.5 r	140.3 r
I	96.3 r	103.9 r	107.8	135.7	109.3	140.8 r
2021 ANNUAL	97.1	101.7	104.8	129.1	109.2	133.1
2021 IV	96.6	103.4	107.0	133.9	110.2	138.6
III	97.5	102.1	104.8	131.1	110.0	134.5
II	98.2	101.9	103.8	126.9	108.2	129.2
I	96.0	99.3	103.4	124.7	108.4	129.9
2020 ANNUAL	97.2	98.3	101.1	122.6	108.6	126.1
2020 IV	96.5	99.6	103.2	125.4	110.1	129.9
III	97.2	97.7	100.5	123.2	108.9	126.7
II	97.5	93.4	95.8	124.7	111.4	127.9
I	97.7	102.4	104.8	117.6	104.2	120.3

See footnotes following Table 6.
r=revised

September 1, 2022
Source: Bureau of Labor Statistics

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

Year and quarter	Labor productivity	Output	Hours worked	Hourly compensation (1)	Real hourly compensation (2)	Unit labor costs	Unit nonlabor costs (6)	Total unit costs (7)	Unit profits (8)	Implicit price deflator (4)
Percent change from previous quarter at annual rate (5)										
2022 II	-0.7	1.6	2.4	5.8	-4.2	6.6	10.5	7.8	40.9	12.2
I	-4.6	1.1	5.9	4.3	-4.4	9.3	26.6	14.3	-2.1	11.7
2021 ANNUAL	4.6	9.7	4.9	5.3	0.6	0.7	4.7	1.9	23.0	4.6
2021 IV	1.1	5.0	3.9	9.8	1.8	8.7	24.0	13.0	-3.7	10.2
III	1.8	6.7	4.8	9.2	2.3	7.2	14.4	9.3	0.4	7.8
II	1.6	5.7	4.1	9.3	1.1	7.6	-14.4	0.7	58.8	7.9
I	3.2	8.9	5.6	-1.8	-5.6	-4.8	18.7	1.6	30.0	5.1
2020 ANNUAL	2.2	-4.2	-6.2	6.9	5.5	4.6	-10.6	-0.2	2.4	0.1
2020 IV	17.1	28.4	9.6	8.4	6.1	-7.4	53.3	6.3	-31.4	-0.2
III	-0.3	31.7	32.1	-5.2	-9.5	-4.9	-21.4	-9.6	206.1	6.2
II	2.7	-39.0	-40.6	23.7	28.0	20.5	-49.3	-6.5	-9.1	-6.8
I	0.7	-3.3	-4.0	7.4	6.0	6.6	4.2	5.8	-35.4	-0.4
Percent change from corresponding quarter of previous year										
2022 II	-0.6	3.6	4.2	7.3	-1.2	8.0	18.7	11.0	7.5	10.5
I	-0.1	4.6	4.7	8.1	0.2	8.2	11.4	9.2	10.7	9.4
2021 ANNUAL	4.6	9.7	4.9	5.3	0.6	0.7	4.7	1.9	23.0	4.6
2021 IV	1.9	6.6	4.6	6.5	-0.2	4.5	9.6	6.0	18.9	7.7
III	5.7	12.1	6.0	6.2	0.9	0.4	15.5	4.4	9.2	5.1
II	5.2	18.1	12.3	2.5	-2.2	-2.5	5.2	-0.4	44.3	4.7
I	5.5	3.0	-2.4	5.7	3.8	0.2	-7.7	-2.3	25.5	1.0
2020 ANNUAL	2.2	-4.2	-6.2	6.9	5.5	4.6	-10.6	-0.2	2.4	0.1
2020 IV	4.8	-0.1	-4.7	8.1	6.8	3.1	-10.7	-1.2	5.4	-0.4
III	1.3	-5.6	-6.8	7.1	5.8	5.8	-20.3	-2.5	18.3	0.1
II	1.5	-11.6	-12.9	8.8	8.4	7.3	-14.2	0.4	-10.0	-0.9
I	1.0	0.4	-0.6	3.7	1.5	2.6	2.1	2.4	-4.9	1.5
Indexes 2012=100										
2022 II	112.3	128.1	114.1	146.0	114.7	130.1	115.0	125.1	137.3	126.8
I	112.5	127.6	113.4	144.0	116.0	128.0	112.2	122.7	126.1	123.2
2021 ANNUAL	113.3	124.7	110.1	137.8	116.5	121.6	100.9	114.7	124.1	116.1
2021 IV	113.8	127.2	111.8	142.5	117.3	125.2	105.7	118.7	126.7	119.9
III	113.5	125.7	110.8	139.2	116.8	122.6	100.2	115.1	127.9	117.0
II	113.0	123.7	109.5	136.1	116.1	120.5	96.9	112.6	127.8	114.8
I	112.6	122.0	108.4	133.1	115.8	118.3	100.7	112.4	113.8	112.6
2020 ANNUAL	108.3	113.7	105.0	130.8	115.8	120.8	96.3	112.6	100.9	111.0
2020 IV	111.7	119.4	106.9	133.7	117.5	119.8	96.5	112.0	106.6	111.2
III	107.4	112.2	104.5	131.1	115.8	122.1	86.7	110.3	117.2	111.3
II	107.4	104.7	97.5	132.8	118.7	123.6	92.1	113.1	88.6	109.6
I	106.7	118.5	111.0	125.9	111.6	118.0	109.1	115.0	90.7	111.6

See footnotes following Table 6.
r=revised

September 1, 2022
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 first quarter of 2022. 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 1978-2021 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.