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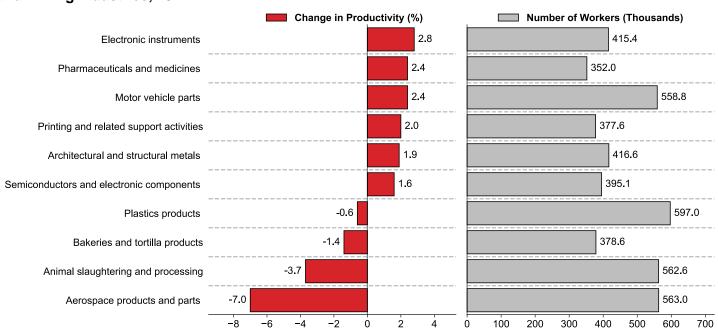
PRODUCTIVITY AND COSTS BY INDUSTRY

MANUFACTURING AND MINING INDUSTRIES – 2024

Labor productivity decreased in 52 of the 86 four-digit NAICS manufacturing industries in 2024, the U.S. Bureau of Labor Statistics reported today. Among durable manufacturing industries, 22 of 51 had productivity increases in 2024, led by a gain of 17.2 percent in the household appliances industry. Productivity rose in 11 of 35 nondurable goods manufacturing industries, led by a 12.5-percent gain in fiber, yarn, and thread mills. Productivity fell in 4 of the 5 mining industries in 2024 with the greatest decrease occurring in the metal ore mining industry (-10.6 percent). (See table 1.) Among industries with more than 350,000 workers, aerospace products and parts had the largest productivity decline in 2024 (-7.0 percent) while electronic instruments recorded the highest productivity gain (2.8 percent). (See chart 1.)

Hours worked decreased in 50 of the 86 four-digit manufacturing industries in 2024. Electric lighting equipment recorded the greatest decline in hours worked (-21.2 percent). Hours worked decreased in three of five mining industries. Eleven of the 91 mining and manufacturing industries increased both output and hours worked in 2024. Six of these eleven industries had declining labor productivity.

Chart 1. Productivity change in the largest (by number of workers) four-digit NAICS manufacturing and mining industries, 2024



Labor Productivity Trends in Three-Digit NAICS Industries, 2024

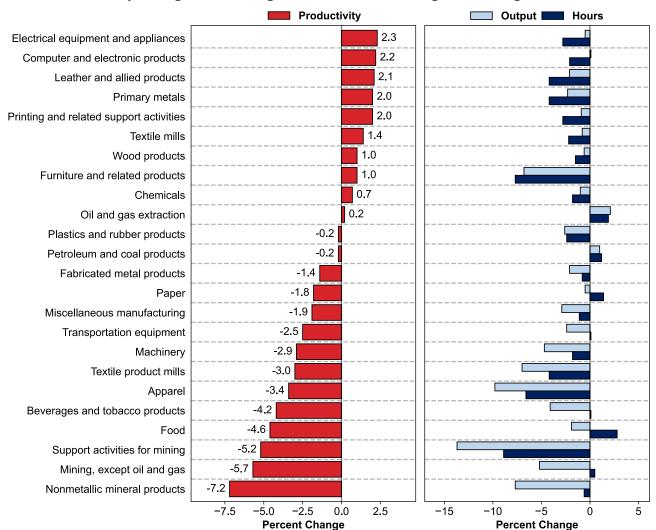
Manufacturing

- Labor productivity declined in 12 of the 21 three-digit NAICS manufacturing industries in 2024. Among the 9 industries with productivity gains, 8 recorded declines in both output and hours worked. (See chart 2.)
- Output decreased in 19 industries. Twelve of these industries had an output decline of more than 2.0 percent.
- Computer and electronic products was the only manufacturing industry that had growth in both productivity (+2.2 percent) and output (+0.1 percent).
- Nonmetallic mineral products had the largest productivity decline (-7.2 percent).

Mining

- Labor productivity declined in 2 of the 3 three-digit NAICS mining industries in 2024.
- Oil and gas extraction had a productivity gain of 0.2 percent due to a 2.1-percent increase in output and a 1.9-percent increase in hours worked.
- Productivity fell 5.7 percent in mining (except oil and gas), the most among mining industries. Hours worked rose in this industry (+0.5 percent) while output fell (-5.2 percent).

Chart 2. Productivity change in three-digit NAICS manufacturing and mining industries, 2024



Trends in Unit Labor Costs in 2024

Unit labor costs reflect the total labor costs required to produce a unit of output. Unit labor costs increase when hourly compensation growth exceeds productivity growth.

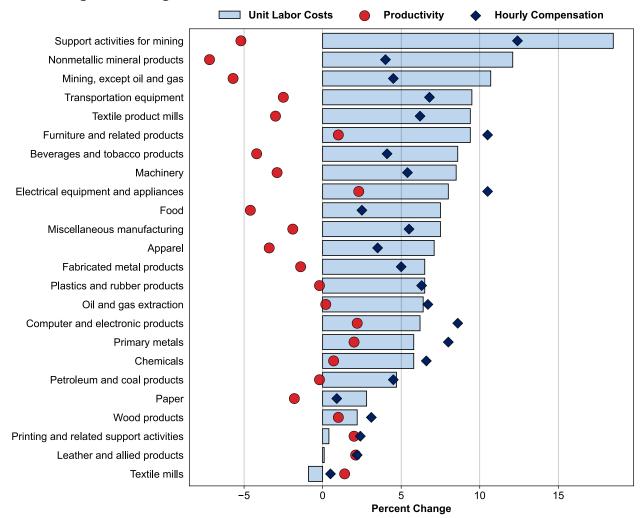
Manufacturing

- In manufacturing, unit labor costs increased in 20 of the 21 three-digit NAICS industries in 2024, at an average rate of 6.1 percent. (See chart 3.) The four industries with the largest growth in unit labor costs were nonmetallic mineral products (+12.1 percent), transportation equipment (+9.5 percent), textile product mills (+9.4 percent), and furniture and related products (+9.4 percent). All four industries had declining output but increased labor compensation.
- Unit labor costs increased in 73 out of the 86 four-digit NAICS manufacturing industries. Labor compensation increased in 66 manufacturing industries in 2024. (See table 1.)

Mining

• Unit labor costs increased in each of the three-digit NAICS mining industries. The greatest growth in unit labor costs occurred in support activities for mining (+18.5 percent). This industry also had the largest increase in hourly compensation (+12.4 percent).

Chart 3. Unit labor costs, productivity, and hourly compensation in three-digit NAICS manufacturing and mining industries, 2024



2019 to 2024 Trends

Productivity increased in 35 of the 86 four-digit NAICS manufacturing industries from 2019 to 2024. Over this period, 2 of the 5 four-digit NAICS mining industries experienced productivity growth. Note that the annual percent changes for periods of more than one year are annualized average rates of change over the entire period, or a compound annual growth rate. (See table 3.)

Manufacturing

- The two industries with the greatest gains in productivity from 2019 to 2024 were audio and video equipment (+11.2 percent per year) and apparel knitting mills (+8.6 percent). The largest productivity decline occurred in tobacco manufacturing (-9.0 percent).
- Output decreased in over three-quarters of the four-digit NAICS manufacturing industries from 2019 to 2024. Audio and video equipment manufacturing was the industry with the greatest output growth (+8.6 percent per year) while the largest declines occurred in textile and fabric finishing mills and office furniture and fixtures (-8.2 percent in both industries).
- Hours worked fell in 53 out of 86 four-digit NAICS manufacturing industries from 2019 to 2024. Apparel knitting mills recorded the largest drop in hours worked (-10.5 percent per year). Two manufacturing industries had growth in hours worked of more than 4.0 percent per year over this period: beverages (+4.8 percent) and motor vehicles (+4.7 percent).

Mining

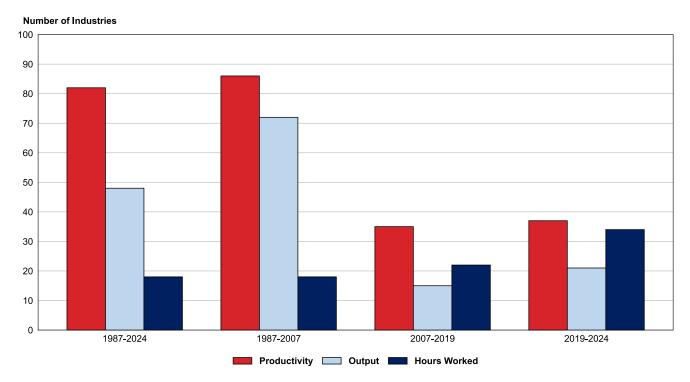
- The greatest productivity growth among mining industries from 2019 to 2024 occurred in oil and gas extraction (+5.3 percent per year).
- Output increased from 2019 to 2024 in two mining industries. The greater increase in output occurred in oil and gas extraction at 1.8 percent per year. Coal mining had the largest decline in output (-6.7 percent per year) from 2019 to 2024.
- In 2024, hours worked remained below pre-pandemic levels in 4 out of the 5 four-digit NAICS mining industries. The largest decline in hours worked occurred in support activities for mining which decreased by 5.4 percent per year from 2019 to 2024. Metal ore mining was the only mining industry to increase hours worked (+0.6 percent per year).

Long-Term Trends in Labor Productivity

Chart 4 displays the number of four-digit NAICS manufacturing and mining industries with increases in productivity, output, and hours worked for selected time periods through 2024.

- Over the entire **1987-2024** period, labor productivity rose in 82 of the 91 manufacturing and mining industries. Output rose in 48 industries while hours worked increased in only 18. (See table 2.) In the 18 industries where hours worked increased, they rose at a slow pace of 0.7 percent per year (on average).
- During the **2007-2019** period, productivity increased in 35 industries. Of these industries, only five had simultaneous growth in output and hours worked. Oil and gas extraction had the greatest growth in output over this period (+7.0 percent per year).
- In the most recent **2019-2024** period, productivity increased in 37 industries. Hours worked grew in 34 industries, the greatest number for any selected time period. Beverages had the highest annual growth in hours worked from 2019 to 2024 (+4.8 percent). Audio and video equipment manufacturing had the highest annual growth in productivity (+11.2 percent) and output (+8.6 percent) of all 91 manufacturing and mining industries.

Chart 4. Number of manufacturing and mining industries with increases in labor productivity, output, and hours worked



Long-Term Trends in Unit Labor Costs

- From **1987 to 2024**, unit labor costs increased in 81 of the 86 four-digit NAICS manufacturing industries and in all five mining industries. (See table 2.)
- In the **2007 to 2019** time period, unit labor costs increased in 82 out of 86 manufacturing industries and in 3 of the 5 mining industries. From 2007 to 2019, unit labor costs rose the most in the resin, rubber, and artificial fibers industry (+5.0 percent per year).
- From **2019 to 2024**, unit labor costs increased in 81 out of 86 manufacturing industries and in 4 of the 5 mining industries. Over this period, unit labor costs rose the most in the office furniture and fixtures industry (+10.9 percent).

The computer and peripheral equipment industry recorded the largest productivity gain (+12.9 percent per year) as well as the largest unit labor costs decline (-10.1 percent) during the 1987-2024 period. However, from 2007 to 2019, labor productivity fell (-0.4 percent) as did unit labor costs (-0.4 percent). For the 2019-2024 period, both labor productivity (+3.3 percent) and unit labor costs (+3.3 percent) grew in computer and peripheral equipment manufacturing.

Additional Information

Manufacturing industry output measures for 2022 and earlier years are constructed primarily using data from the economic censuses and annual surveys of the U.S. Census Bureau together with data on price changes primarily from BLS. Manufacturing industry output for 2023 and 2024 is estimated based on historical relationships between BLS sectoral output, BLS price indexes, and data on industrial production from the Federal Reserve Board.

Mining industry output measures are constructed primarily using data from the U.S. Energy Information Administration and the U.S. Geological Survey's Mineral Commodity Summaries and Mineral Yearbooks. The data from the U.S. Energy Information Administration are usually revised on a monthly schedule while the U.S. Geological Survey's publications are released annually.

Access productivity data at www.bls.gov/productivity/tables/labor-productivity-detailed-industries.xlsx for:

- Additional industries and sectors
- Detailed data series: indexes of productivity and related measures; rates of change; and levels of industry employment, hours worked, sectoral output, and labor compensation

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Technical Note

Labor Productivity: Labor productivity describes the relationship between output and the labor hours involved in its production. These measures show the changes from period to period in the amount of goods and services produced per hour worked. Although the labor productivity measures relate real output in an industry to hours worked of all persons in that industry, they do not measure the specific contribution of labor to growth in output. Rather, they reflect the joint effects of many influences, including: changes in technology; capital investment; utilization of capacity, energy, and materials; the use of purchased services inputs, including contract employment services; the organization of production; the characteristics and effort of the workforce; and managerial skill.

Unit Labor Costs: Unit labor costs represent the cost of labor required to produce one unit of output. The unit labor cost indexes are computed by dividing an index of nominal industry labor compensation by an index of real industry output. Unit labor costs also describe the relationship between compensation per hour worked (hourly compensation) and real output per hour worked (labor productivity). When hourly compensation growth outpaces productivity, unit labor costs increase. Alternatively, when productivity growth exceeds hourly compensation, unit labor costs decrease.

Output: Industry output is measured as an annual-weighted index of the changes in the various products (in real terms) provided for sale outside the industry. Real industry output is usually derived by deflating nominal sales or values of production using BLS price indexes, but for some industries it is measured by physical quantities of output. Output is the measure of what is produced by an industry, derived by adjusting shipments for changes in inventories and removing intra-industry transactions. Industry output measures are constructed primarily using data from the economic censuses and annual surveys of the Census Bureau, U.S. Department of Commerce, together with data on price changes primarily from BLS. Data from the Bureau of Economic Analysis at the U.S. Department of Commerce is used in part to construct intra-industry transactions. Other data sources include the Energy Information Administration at the U.S. Department of Energy and the U.S. Geological Survey at the U.S. Department of the Interior. Manufacturing industry output for 2023 and 2024 is estimated based on historical relationships between BLS sectoral output, BLS price indexes, and data on industrial production from the Federal Reserve Board.

Labor Hours: Labor hours are measured as annual hours worked by all employed persons in an industry. Data on industry employment and hours come primarily from the BLS Current Employment Statistics (CES) survey and Current Population Survey (CPS). CES data on the number of total and production worker jobs held by wage and salary workers in nonfarm establishments are supplemented with CPS data on self-employed and unpaid family workers to estimate industry employment. Hours worked estimates are derived using CES and CPS employment, CES data on the average weekly hours paid of all employees, CPS data on hours of self-employed and unpaid family workers, and ratios of hours worked to hours paid based on data from both the CPS and the National Compensation Survey (NCS). For some industries, employment and hours data are supplemented or further disaggregated using data from the BLS Quarterly Census of Employment and Wages (QCEW), the Census Bureau, or other sources. Hours worked are estimated separately for different types of workers and then are directly aggregated; no adjustments for labor composition are made.

Labor Compensation: Labor compensation, defined as payroll plus supplemental payments, is a measure of the cost to the employer of securing the services of labor. Payroll includes salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind. Supplemental payments include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation, such as the employer portion of private health insurance and pension plans. Industry compensation measures are constructed primarily using data from the BLS QCEW and the economic censuses of the Census Bureau at the U.S. Department of Commerce.

Annual Percent Change: The annual percent change is the change in a series from one year to the next as a percent of the series-value in the previous year. Over a period of more than one year, the annual percent change is the compound annual growth rate in an index series, or an annualized average growth rate. Because the change of an index series varies from year to year, the annual percent change for a long time period reflects the constant rate that can be applied to each year in a period, from the start to the end, that would give the same total result. It is calculated as (Ending Value/Starting Value) $^{(1)}$ Number of Years) $^{(1)}$ 1.

Table 1. Recent labor productivity, unit labor costs, and related data

	2017	2024		F	Percent change, 2023-2024				
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor costs	Output	Hours worked	Labor compen- sation	Hourly compen- sation	
Mining									
Mining	21	597.2	4.9	4.5	0.6	-4.2	5.1	9.7	
Oil and gas extraction	211	123.2	0.2	6.4	2.1	1.9	8.6	6.7	
Oil and gas extraction		123.2	0.2	6.4	2.1	1.9	8.6	6.7	
•					-5.2				
Mining, except oil and gas Coal mining		193.5 42.5	-5.7 -6.6	10.7 12.6	-11.6	0.5 -5.4	4.9 -0.5	4.5 5.1	
Metal ore mining		45.9	-10.6	10.9	-2.1	9.5	8.5	-0.9	
Nonmetallic mineral mining and quarrying	2123	105.1	-2.8	9.6	-3.3	-0.5	6.0	6.5	
Support activities for mining	213	280.5	-5.2	18.5	-13.7	-8.9	2.3	12.4	
Support activities for mining	2131	280.5	-5.2	18.5	-13.7	-8.9	2.3	12.4	
Nondurable Manufacturing									
Food	311	1,826.6	-4.6	7.5	-1.9	2.8	5.4	2.5	
Animal food		76.2	-3.1	8.5	-1.7	1.5	6.7	5.1	
Grain and oilseed milling	3112	67.6	-11.3	6.0	-1.7	10.8	4.2	-5.9	
Sugar and confectionery products		88.1	-5.0	7.9	-1.9	3.2	5.9	2.6	
Fruit and vegetable preserving and specialty		174.1	-7.8	4.9	-1.4	6.9	3.4	-3.4	
Dairy products Animal slaughtering and processing	3115 3116	171.4 562.6	-6.7 -3.7	11.2 5.1	-3.7 -1.2	3.2 2.6	7.1 3.8	3.8 1.1	
Seafood product preparation and packaging		32.8	-3. <i>1</i> -7.1	-4.4	-1.2	6.4	-5.5	-11.2	
Bakeries and tortilla products	3118	378.6	-1.4	8.2	-1.0	0.5	7.2	6.7	
Other food products	3119	275.2	-4.0	10.8	-3.1	1.0	7.5	6.4	
Beverages and tobacco products	312	352.9	-4.2	8.6	-4.1	0.1	4.2	4.1	
Beverages	3121	340.6	-2.1	7.0	-2.5	-0.3	4.4	4.7	
Tobacco	3122	12.3	-19.5	9.9	-8.0	14.3	1.2	-11.4	
Textile mills	313	93.5	1.4	-0.9	-0.8	-2.2	-1.7	0.5	
Fiber, yarn, and thread mills	3131	20.8	12.5	-4.5	2.4	-8.9	-2.2	7.4	
Fabric mills	3132	46.3	1.7	3.5	-1.9	-3.5	1.5	5.2	
Textile and fabric finishing mills	3133	26.4	-7.0	-6.8	-0.5	7.0	-7.3	-13.3	
Textile product mills		108.3	-3.0	9.4	-7.0	-4.2	1.8	6.2	
Textile furnishings mills	3141	42.6	-1.9	10.2	-7.5	-5.8	1.9	8.2	
Other textile product mills		65.7	-3.5	8.6	-6.4	-3.0	1.6	4.8	
Apparel		102.7	-3.4	7.1	-9.8	-6.6	-3.4	3.5	
Apparel knitting mills	3151	6.1	7.0	-0.4	-11.2	-17.0	-11.5	6.6	
Cut and sew apparel Accessories and other apparel	3152 3159	81.0 15.6	-3.8 -5.4	8.6 5.0	-9.6 -10.0	-6.0 -4.9	-1.8 -5.5	4.4 -0.7	
• •									
Leather and allied products Leather and hide tanning and finishing	316 3161	28.1 3.8	2.1 2.2	0.1 -1.6	-2.1 -2.4	-4.2 -4.5	-2.0 -4.0	2.2 0.6	
Footwear		11.9	-0.4	7.0	-1.7	-1.3	5.1	6.5	
Other leather products	3169	12.4	4.6	-4.9	-2.3	-6.5	-7.1	-0.6	
Paper	322	355.7	-1.8	2.8	-0.5	1.4	2.3	0.9	
Pulp, paper, and paperboard mills		85.4	-0.2	-1.1	0.2	0.4	-0.9	-1.3	
Converted paper products	3222	270.3	-2.6	4.9	-0.9	1.7	3.9	2.1	
Printing and related support activities	323	377.6	2.0	0.4	-0.9	-2.8	-0.5	2.4	
Printing and related support activities	3231	377.6	2.0	0.4	-0.9	-2.8	-0.5	2.4	
Petroleum and coal products	324	110.0	-0.2	4.7	1.0	1.2	5.8	4.5	
Petroleum and coal products	3241	110.0	-0.2	4.7	1.0	1.2	5.8	4.5	
Chemicals	325	905.7	0.7	5.8	-1.0	-1.8	4.7	6.6	
Basic chemicals	3251	155.0	-2.5	8.9	-3.8	-1.3	4.8	6.2	
Resin, rubber, and artificial fibers	3252	96.0	0.2	1.2	0.9	0.6	2.0	1.4	
Agricultural chemicals		39.9	-6.5	-2.9	-0.2	6.8	-3.0	-9.2	
Pharmaceuticals and medicines	3254	352.0	2.4	4.7	1.2	-1.2	5.9	7.2	

Table 1. Recent labor productivity, unit labor costs, and related data — Continued

Paints, coatings, and adhesives	2017 NAICS code 3255 3256 3259 326 3261 3262 321 3211 3212 3219 327 3271 3272 3273	2024 Employment (thousands) 65.1 116.7 81.0 729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2 43.3	Labor productivity -3.6 9.1 2.5 -0.2 -0.6 1.6 1.0 1.4 -0.7 1.5 -7.2	Unit labor costs 8.5 8.6 1.9 6.5 6.3 7.4 2.2 1.1 2.6 2.3	-2.7 0.0 -1.6 -2.6 -2.3 -3.9 -0.6 -2.9 -1.9 0.9	Hours worked 0.9 -8.4 -4.0 -2.4 -1.7 -5.4 -1.5 -4.2 -1.2 -0.5	Labor compensation 5.5 8.6 0.3 3.7 3.8 3.2 1.5 -1.8 0.7	Hourly compensation 4.6 18.5 4.5 6.3 5.7 9.1 3.1 2.5 1.9
Paints, coatings, and adhesives	3255 3256 3259 326 3261 3262 321 3211 3212 3219 327 3271 3272	(thousands) 65.1 116.7 81.0 729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2	-3.6 9.1 2.5 -0.2 -0.6 1.6	costs 8.5 8.6 1.9 6.5 6.3 7.4 2.2 1.1 2.6 2.3	-2.7 0.0 -1.6 -2.6 -2.3 -3.9 -0.6 -2.9 -1.9	0.9 -8.4 -4.0 -2.4 -1.7 -5.4 -1.5 -4.2 -1.2	sation 5.5 8.6 0.3 3.7 3.8 3.2	sation 4.6 18.5 4.5 6.3 5.7 9.1 3.1 2.5
Soaps, cleaning compounds, and toiletries Other chemical products and preparations Plastics and rubber products Plastics products Rubber products Durable Manufacturing Wood products Sawmills and wood preservation Plywood and engineered wood products Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3255 3256 3259 326 3261 3262 321 3211 3212 3219 327 3271 3272	65.1 116.7 81.0 729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2	-3.6 9.1 2.5 -0.2 -0.6 1.6 1.0 1.4 -0.7 1.5	8.5 8.6 1.9 6.5 6.3 7.4 2.2 1.1 2.6 2.3	0.0 -1.6 -2.6 -2.3 -3.9 -0.6 -2.9 -1.9	0.9 -8.4 -4.0 -2.4 -1.7 -5.4 -1.5 -4.2 -1.2	5.5 8.6 0.3 3.7 3.8 3.2	4.6 18.5 4.5 6.3 5.7 9.1
Soaps, cleaning compounds, and toiletries Other chemical products and preparations Plastics and rubber products Plastics products Rubber products Durable Manufacturing Wood products Sawmills and wood preservation Plywood and engineered wood products Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3256 3259 326 3261 3262 321 3211 3212 3219 327 3271 3272	116.7 81.0 729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2	9.1 2.5 -0.2 -0.6 1.6 1.0 1.4 -0.7 1.5	8.6 1.9 6.5 6.3 7.4 2.2 1.1 2.6 2.3	0.0 -1.6 -2.6 -2.3 -3.9 -0.6 -2.9 -1.9	-8.4 -4.0 -2.4 -1.7 -5.4 -1.5 -4.2 -1.2	8.6 0.3 3.7 3.8 3.2	18.5 4.5 6.3 5.7 9.1 3.1 2.5
Other chemical products and preparations. Plastics and rubber products	3259 326 3261 3262 321 3211 3212 3219 327 3271 3272	81.0 729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2	9.1 2.5 -0.2 -0.6 1.6 1.0 1.4 -0.7 1.5	8.6 1.9 6.5 6.3 7.4 2.2 1.1 2.6 2.3	-1.6 -2.6 -2.3 -3.9 -0.6 -2.9 -1.9	-4.0 -2.4 -1.7 -5.4 -1.5 -4.2 -1.2	8.6 0.3 3.7 3.8 3.2	4.5 6.3 5.7 9.1 3.1 2.5
Plastics and rubber products	326 3261 3262 321 3211 3212 3219 327 3271 3272	729.9 597.0 132.9 446.6 101.8 82.4 262.4 440.2	-0.2 -0.6 1.6 1.0 1.4 -0.7 1.5	6.5 6.3 7.4 2.2 1.1 2.6 2.3	-2.6 -2.3 -3.9 -0.6 -2.9 -1.9	-2.4 -1.7 -5.4 -1.5 -4.2 -1.2	3.7 3.8 3.2 1.5 -1.8	6.3 5.7 9.1 3.1 2.5
Plastics products. Rubber products. Durable Manufacturing Wood products Sawmills and wood preservation Plywood and engineered wood products Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3261 3262 321 3211 3212 3219 327 3271 3272	597.0 132.9 446.6 101.8 82.4 262.4 440.2	-0.6 1.6 1.0 1.4 -0.7 1.5	6.3 7.4 2.2 1.1 2.6 2.3	-2.3 -3.9 -0.6 -2.9 -1.9	-1.7 -5.4 -1.5 -4.2 -1.2	3.8 3.2 1.5 -1.8	5.7 9.1 3.1 2.5
Plastics products. Rubber products. Durable Manufacturing Wood products Sawmills and wood preservation Plywood and engineered wood products Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3261 3262 321 3211 3212 3219 327 3271 3272	597.0 132.9 446.6 101.8 82.4 262.4 440.2	-0.6 1.6 1.0 1.4 -0.7 1.5	6.3 7.4 2.2 1.1 2.6 2.3	-2.3 -3.9 -0.6 -2.9 -1.9	-1.7 -5.4 -1.5 -4.2 -1.2	3.8 3.2 1.5 -1.8	5.7 9.1 3.1 2.5
Durable Manufacturing Wood products	3262 321 3211 3212 3219 327 3271 3272	132.9 446.6 101.8 82.4 262.4 440.2	1.0 1.4 -0.7 1.5	7.4 2.2 1.1 2.6 2.3	-3.9 -0.6 -2.9 -1.9	-5.4 -1.5 -4.2 -1.2	3.2 1.5 -1.8	9.1 3.1 2.5
Durable Manufacturing Wood products	321 3211 3212 3219 327 3271 3272	446.6 101.8 82.4 262.4 440.2	1.0 1.4 -0.7 1.5	2.2 1.1 2.6 2.3	-0.6 -2.9 -1.9	-1.5 -4.2 -1.2	1.5 -1.8	3.1 2.5
Wood products	3211 3212 3219 327 3271 3272	101.8 82.4 262.4 440.2	1.4 -0.7 1.5	1.1 2.6 2.3	-2.9 -1.9	-4.2 -1.2	-1.8	2.5
Sawmills and wood preservation	3211 3212 3219 327 3271 3272	101.8 82.4 262.4 440.2	1.4 -0.7 1.5	1.1 2.6 2.3	-2.9 -1.9	-4.2 -1.2	-1.8	2.5
Plywood and engineered wood products Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3212 3219 327 3271 3272	82.4 262.4 440.2	-0.7 1.5	2.6 2.3	-1.9	-1.2		
Other wood products Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	3219 327 3271 3272	262.4 440.2	1.5	2.3			0.7	1.9
Nonmetallic mineral products Clay products and refractories Glass and glass products Cement and concrete products	327 3271 3272	440.2			0.9	-0.5		
Clay products and refractories	3271 3272		-7.2	404	l l	1	3.3	3.8
Clay products and refractories	3271 3272			12.1	-7.7	-0.6	3.4	4.0
Glass and glass products Cement and concrete products			-8.6	6.9	-5.2	3.7	1.3	-2.3
Cement and concrete products	3273	84.1	2.5	1.0	-2.8	-5.2	-1.8	3.5
•		210.0	-12.8	22.7	-13.5	-0.9	6.1	7.0
	3274	17.0	-5.0	11.0	-3.0	2.2	7.6	5.4
Other nonmetallic mineral products	3279	85.8	-3.2	3.6	-1.1	2.2	2.4	0.3
Primary metals	331	373.5	2.0	5.8	-2.3	-4.2	3.4	8.0
Iron and steel mills and ferroalloys	3311	85.7	-1.2	6.2	-3.2	-2.0	2.8	4.9
Steel products from purchased steel	3312	60.1	0.0	6.9	-3.8	-3.7	2.8	6.9
Alumina and aluminum production	3313	59.0	4.3	3.7	0.4	-3.8	4.1	8.1
Other nonferrous metal production	3314	62.7	3.5	7.7	-1.0	-4.4	6.6	11.5
Foundries	3315	106.0	4.4	4.6	-2.3	-6.4	2.2	9.2
Fabricated metal products	332	1,458.0	-1.4	6.5	-2.1	-0.8	4.2	5.0
Forging and stamping	3321	90.8	-3.6	5.0	-2.1	1.4	2.7	1.2
Cutlery and handtools	3322	35.0	3.0	2.9	-1.8	-4.6	1.0	5.9
Architectural and structural metals	3323	416.6	1.9	2.9	3.3	1.4	6.3	4.8
Boilers, tanks, and shipping containers	3324	97.7	-2.7	10.9	-2.6	0.1	8.0	7.9
Hardware	3325	23.1	-4.9	5.9	-4.7	0.2	0.9	0.7
Spring and wire products	3326	39.5	-6.7	3.2	-4.0	3.0	-0.9	-3.8
Machine shops and threaded products	3327	343.0	-2.4	10.6	-7.9	-5.6	1.9	8.0
Coating, engraving, and heat treating metals	3328	129.6	-4.7	10.3	-6.8	-2.2	2.8	5.1
Other fabricated metal products	3329	282.7	-5.1	8.9	-3.4	1.7	5.2	3.4
Machinery	333	1,131.5	-2.9	8.5	-4.7	-1.8	3.4	5.4
Agriculture, construction, and mining machinery	3331	218.3	-6.5	8.2	-8.6	-2.3	-1.2	1.2
Industrial machinery	3332	136.0	-3.7	12.1	-6.0	-2.4	5.4	8.0
Commercial and service industry machinery	3333	89.4	5.3	1.4	1.2	-3.9	2.6	6.8
HVAC and commercial refrigeration equipment	3334	147.6	-2.1	3.2	1.9	4.1	5.1	1.0
Metalworking machinery	3335	157.1	-0.3	5.8	-5.0	-4.7	0.5	5.4
Turbine and power transmission equipment	3336	92.9	-5.4	11.6	-3.4	2.1	7.8	5.5
Other general purpose machinery	3339	290.2	-2.6	10.8	-5.6	-3.1	4.5	7.9
Computer and electronic products	334	1,034.4	2.2	6.2	0.1	-2.1	6.3	8.6
Computer and peripheral equipment	3341	110.7	1.4	7.0	-0.3	-1.6	6.7	8.5
Communications equipment	3342	83.0	3.5	-4.5	4.0	0.5	-0.7	-1.2
Audio and video equipment	3343	19.3	-1.1	-3.3	2.7	3.8	-0.8	-4.4
Semiconductors and electronic components	3344	395.1	1.6	18.5	0.4	-1.2	18.9	20.4
Electronic instruments	3345	415.4	2.8	1.5	-1.1	-3.7	0.4	4.3
Magnetic media manufacturing and reproducing	3346	10.9	3.5	-3.5	-0.7	-4.1	-4.2	-0.1
Electrical equipment and appliances	335	415.1	2.3	8.0	-0.5	-2.8	7.4	10.5
Electric lighting equipment	3351	34.9	5.9	17.4	-16.5	-21.2	-2.0	24.3
Household appliances	3352	60.1	17.2	7.3	-4.4	-18.4	2.6	25.8
Electrical equipment	3353	153.6	-1.9	7.8	1.9	3.9	9.8	5.7
Other electrical equipment and components	3359	166.5	0.1	6.2	2.3	2.2	8.7	6.3

Table 1. Recent labor productivity, unit labor costs, and related data — Continued

	2017	2024		2024				
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor costs	Output	Hours worked	Labor compen- sation	Hourly compen- sation
Transportation equipment	336	1,809.6	-2.5	9.5	-2.4	0.1	6.9	6.8
Motor vehicles	3361	302.6	-5.0	12.4	-2.4	2.7	9.6	6.8
Motor vehicle bodies and trailers	3362	165.8	-2.8	11.8	-7.3	-4.5	3.7	8.6
Motor vehicle parts	3363	558.8	2.4	3.9	-0.8	-3.2	3.0	6.4
Aerospace products and parts	3364	563.0	-7.0	13.4	-2.8	4.6	10.2	5.4
Railroad rolling stock	3365	23.6	-3.5	5.4	2.6	6.4	8.2	1.7
Ship and boat building	3366	152.7	-1.0	7.2	-4.2	-3.2	2.6	6.0
Other transportation equipment	3369	43.1	6.7	-1.4	3.6	-3.0	2.2	5.3
Furniture and related products	337	365.8	1.0	9.4	-6.8	-7.7	2.0	10.5
Household and institutional furniture	3371	235.7	1.2	7.4	-5.5	-6.6	1.4	8.7
Office furniture and fixtures	3372	102.1	-2.2	16.1	-9.8	-7.8	4.7	13.6
Other furniture related products	3379	28.0	13.3	-1.2	-4.5	-15.7	-5.6	11.9
Miscellaneous manufacturing	339	661.7	-1.9	7.5	-2.9	-1.1	4.4	5.5
Medical equipment and supplies	3391	333.3	-4.9	8.5	-3.3	1.7	5.0	3.2
Other miscellaneous manufacturing	3399	328.4	1.6	6.0	-2.4	-3.9	3.5	7.7

Table 2. Long run labor productivity, unit labor costs, and related data

	2017	2024	Annual percent change, 1987-2024					
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor costs	Output	Hours worked	Labor compen- sation	Hourly compen- sation
Mining								
Mining	21	597.2	1.9	1.9	1.6	-0.3	3.5	3.8
Oil and gas extraction	211	123.2	3.3	1.5	2.0	-1.3	3.5	4.8
Oil and gas extraction	2111	123.2	3.3	1.5	2.0	-1.3	3.5	4.8
Mining, except oil and gas	212	193.5	0.8	2.3	-0.3	-1.1	2.0	3.1
Coal mining	2121	42.5	1.0	1.9	-2.2	-3.2	-0.4	2.9
Metal ore mining	2122	45.9	-0.5	3.9	0.2	0.7	4.2	3.4
Nonmetallic mineral mining and quarrying	2123	105.1	1.0	2.5	0.8	-0.2	3.4	3.6
Support activities for mining	213	280.5	1.6	2.7	2.7	1.0	5.5	4.4
Support activities for mining	2131	280.5	1.6	2.7	2.7	1.0	5.5	4.4
Nondurable Manufacturing								
Food	311	1,826.6	0.4	2.5	1.0	0.6	3.5	2.9
Animal food	3111	76.2	1.0	2.7	1.4	0.4	4.1	3.7
Grain and oilseed milling	3112	67.6	1.4	1.5	1.0	-0.4	2.5	2.9
Sugar and confectionery products	3113	88.1	0.6	2.7	0.4	-0.2	3.1	3.3
Fruit and vegetable preserving and specialty	3114	174.1	0.7	2.2	0.7	0.0	2.9	2.9
Dairy products	3115	171.4	0.7	2.6	1.0	0.3	3.7	3.3
Animal slaughtering and processing	3116	562.6	0.4	2.4	1.4	1.0	3.9	2.8
Seafood product preparation and packaging	3117	32.8	0.9	3.0	-0.3	-1.3	2.7	4.0
Bakeries and tortilla products	3118	378.6	-0.1	2.5	0.2	0.3	2.6	2.4
Other food products	3119	275.2	-0.5	3.2	1.7	2.3	4.9	2.6
Beverages and tobacco products	312	352.9	-1.1	3.5	-0.5	0.6	3.0	2.4
Beverages	3121	340.6	-0.2	2.7	0.9	1.1	3.7	2.5
Tobacco	3122	12.3	1.1	2.3	-3.1	-4.2	-0.9	3.4
Textile mills	313	93.5	1.7	0.9	-3.0	-4.6	-2.1	2.7
Fiber, yarn, and thread mills	3131	20.8	1.5	0.7	-2.9	-4.3	-2.2	2.2
Fabric mills	3132	46.3	2.2	1.2	-3.0	-5.1	-1.9	3.4
Textile and fabric finishing mills	3133	26.4	0.3	1.5	-3.7	-4.0	-2.3	1.8
Textile product mills	314	108.3	0.2	2.9	-2.2	-2.4	0.7	3.1
Textile furnishings mills	3141	42.6	0.2	2.8	-2.8	-3.0	-0.1	2.9
Other textile product mills	3149	65.7	0.7	2.8	-1.2	-1.9	1.6	3.5
Apparel	315	102.7	0.0	1.9	-6.0	-6.0	-4.2	1.9
Apparel knitting mills	3151	6.1	0.9	1.6	-6.7	-7.5	-5.2	2.5
Cut and sew apparel	3152	81.0	0.3	1.8	-5.9	-6.2	-4.2	2.1
Accessories and other apparel	3159	15.6	-3.0	3.1	-5.5	-2.6	-2.6	0.0
Leather and allied products	316	28.1	1.2	1.9	-3.4	-4.5	-1.5	3.1
Leather and hide tanning and finishing	3161	3.8	1.4	1.1	-2.6	-3.9	-1.5	2.5
Footwear	3162	11.9	0.7	2.5	-4.7	-5.3	-2.3	3.2
Other leather products	3169	12.4	1.0	2.0	-2.5	-3.5	-0.5	3.1
Paper	322	355.7	0.9	2.1	-0.7	-1.5	1.4	3.0
Pulp, paper, and paperboard mills	3221	85.4	1.6	1.5	-1.1	-2.6	0.3	3.1
Converted paper products	3222	270.3	0.3	2.8	-0.7	-1.0	2.1	3.2
Printing and related support activities	323	377.6	0.9	1.7	-1.1	-2.1	0.5	2.6
Printing and related support activities	3231	377.6	0.9	1.7	-1.1	-2.1	0.5	2.6
Petroleum and coal products	324	110.0	1.9	2.7	0.9	-1.0	3.7	4.7
Petroleum and coal products	3241	110.0	1.9	2.7	0.9	-1.0	3.7	4.7
Chemicals	325	905.7	0.7	2.7	0.5	-0.2	3.2	3.4
Basic chemicals	3251	155.0	1.6	2.7	0.5	-0.2 -1.2	2.5	3.7
Resin, rubber, and artificial fibers	3252	96.0	1.4	2.0	0.4	-1.2	2.4	3.6
Agricultural chemicals	3253	39.9	0.8	2.4	0.1	-0.7	2.6	3.3
		1	-0.9	1	l	1.8	5.3	

Table 2. Long run labor productivity, unit labor costs, and related data — Continued

	2017	2024		1	al percent	change, 19		
Industry	NAICS	Employment	Labor	Unit	_	Hours	Labor	Hourly
,	code	(thousands)	productivity	labor	Output	worked	compen-	compen-
		,	p. 22.2	costs			sation	sation
Paints, coatings, and adhesives	3255	65.1	-0.1	3.4	-0.5	-0.5	2.8	3.3
Soaps, cleaning compounds, and toiletries	3256	116.7	0.6	2.1	0.5	-0.1	2.6	2.7
Other chemical products and preparations	3259	81.0	1.6	1.5	-0.1	-1.6	1.5	3.1
Plastics and rubber products	326	729.9	1.0	2.0	0.8	-0.2	2.9	3.1
Plastics products	3261	597.0	0.9	2.2	1.0	0.1	3.2	3.1
Rubber products	3262	132.9	1.5	1.7	0.1	-1.4	1.8	3.2
·								
Durable Manufacturing								
Wood products	321	446.6	0.7	2.5	-0.1	-0.8	2.4	3.3
Sawmills and wood preservation	3211	101.8	1.6	1.6	0.3	-1.3	2.0	3.3
Plywood and engineered wood products	3212	82.4	0.1	2.7	-0.5	-0.6	2.1	2.7
Other wood products	3219	262.4	0.5	2.9	-0.2	-0.7	2.7	3.4
Nonmetallic mineral products	327	440.2	0.4	2.5	-0.1	-0.5	2.4	2.9
Clay products and refractories	3271	43.3	0.5	2.4	-1.7	-2.2	0.6	2.9
Glass and glass products	3272	84.1	1.7	1.2	0.2	-1.5	1.4	2.9
Cement and concrete products	3273	210.0	-0.5	3.2	-0.2	0.3	3.1	2.7
Lime and gypsum products	3274	17.0	0.5	3.6	-0.3	-0.9	3.2	4.1
Other nonmetallic mineral products	3279	85.8	0.4	2.4	0.7	0.3	3.1	2.8
Primary metals	331	373.5	1.4	1.7	-0.3	-1.7	1.3	3.1
Iron and steel mills and ferroalloys	3311	85.7	1.8	1.0	-0.3	-2.0	0.7	2.8
Steel products from purchased steel	3312	60.1	0.6	2.7	0.2	-0.5	2.8	3.3
Alumina and aluminum production	3313	59.0	1.4	1.8	-0.3	-1.6	1.6	3.3
Other nonferrous metal production	3314	62.7	1.0	2.7	-0.5	-1.5	2.2	3.8
Foundries	3315	106.0	1.1	1.8	-0.9	-2.0	0.9	3.0
Fabricated metal products	332	1,458.0	0.7	2.3	0.4	-0.3	2.7	3.0
Forging and stamping	3321	90.8	1.1	1.6	-0.2	-1.3	1.4	2.7
Cutlery and handtools	3322	35.0	0.8	1.5	-1.1	-1.9	0.4	2.3
Architectural and structural metals	3323	416.6	0.5	2.8	1.0	0.5	3.8	3.4
Boilers, tanks, and shipping containers	3324	97.7	0.1	2.4	-0.3	-0.4	2.1	2.5
Hardware	3325	23.1	0.2	1.9	-2.2	-2.4	-0.3	2.2
Spring and wire products	3326	39.5	1.0	2.1	-0.8	-1.8	1.2	3.1
Machine shops and threaded products	3327	343.0	1.5	1.8	1.6	0.2	3.4	3.3
Coating, engraving, and heat treating metals	3328	129.6	1.5	1.7	1.2	-0.3	2.9	3.2
Other fabricated metal products	3329	282.7	0.1	2.4	-0.2	-0.4	2.2	2.6
Machinery	333	1,131.5	1.1	1.9	0.5	-0.6	2.4	3.0
Agriculture, construction, and mining machinery	3331	218.3	1.1	1.7	1.1	0.0	2.8	2.8
Industrial machinery	3332	136.0	0.4	2.2	0.2	-0.2	2.4	2.6
Commercial and service industry machinery	3333	89.4	1.4	1.4	0.0	-1.4	1.5	2.9
HVAC and commercial refrigeration equipment	3334	147.6	0.4	2.3	0.3	-0.2	2.6	2.7
Metalworking machinery	3335	157.1	1.4	1.4	-0.1	-1.6	1.3	2.9
Turbine and power transmission equipment	3336	92.9	1.1	1.6	0.7	-0.5	2.3	2.7
Other general purpose machinery	3339	290.2	1.1	2.5	0.7	-0.4	3.2	3.6
Computer and electronic products	334	1,034.4	7.4	-3.7	5.3	-1.9	1.4	3.4
Computer and peripheral equipment	3341	110.7	12.9	-10.1	8.4	-4.0	-2.5	1.6
Communications equipment	3342	83.0	5.0	-1.6	2.1	-2.8	0.4	3.3
Audio and video equipment	3343	19.3	2.9	0.5	0.2	-2.6	0.7	3.4
Semiconductors and electronic components	3344	395.1	10.4	-6.3	9.2	-1.1	2.4	3.5
Electronic instruments	3345	415.4	2.4	1.1	1.0	-1.4	2.1	3.5
Magnetic media manufacturing and reproducing	3346	10.9	-0.2	-0.2	-3.3	-3.1	-3.5	-0.5
Electrical equipment and appliances	335	415.1	1.5	2.0	0.1	-1.4	2.0	3.5
Electric lighting equipment	3351	34.9	1.7	2.1	-0.9	-2.5	1.2	3.8
Household appliances	3352	60.1	2.5	0.3	0.1	-2.4	0.3	2.8
Electrical equipment	3353	153.6	0.9	2.4	-0.5	-1.3	1.9	3.3 3.6
Other electrical equipment and components			1.1	2.4	0.5	-0.7	2.9	

Table 2. Long run labor productivity, unit labor costs, and related data — Continued

	2017	2024		Annu	al percent	change, 19	87-2024	
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor costs	Output	Hours worked	Labor compen- sation	Hourly compen- sation
Transportation equipment	336	1,809.6	1.9	0.7	1.4	-0.4	2.1	2.6
Motor vehicles	3361	302.6	1.8	0.5	1.9	0.1	2.4	2.3
Motor vehicle bodies and trailers	3362	165.8	1.0	2.9	1.4	0.4	4.3	3.9
Motor vehicle parts	3363	558.8	2.5	-0.6	2.3	-0.3	1.7	1.9
Aerospace products and parts	3364	563.0	0.7	2.3	-0.3	-1.1	1.9	3.0
Railroad rolling stock	3365	23.6	1.9	1.9	1.8	0.0	3.7	3.8
Ship and boat building	3366	152.7	1.5	1.9	0.9	-0.6	2.9	3.4
Other transportation equipment	3369	43.1	2.2	0.3	2.7	0.5	3.1	2.5
Furniture and related products	337	365.8	0.9	2.5	-0.8	-1.7	1.7	3.4
Household and institutional furniture	3371	235.7	0.9	2.4	-0.9	-1.8	1.5	3.3
Office furniture and fixtures	3372	102.1	0.4	2.9	-0.9	-1.4	2.0	3.4
Other furniture related products	3379	28.0	1.9	1.4	0.2	-1.6	1.6	3.3
Miscellaneous manufacturing	339	661.7	1.1	2.0	1.0	-0.1	3.0	3.1
Medical equipment and supplies	3391	333.3	1.5	1.9	2.4	0.8	4.3	3.4
Other miscellaneous manufacturing	3399	328.4	0.6	2.1	-0.3	-0.9	1.7	2.7

Table 3. Labor productivity, unit labor costs, and related data, 2019-2024

	2017	2024 Annual percent change, 2019-2024						
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor	Output	Hours worked	Labor compen-	Hourly compen-
			12. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	costs			sation	sation
Mining								
3	0.4	507.0			4.0	0.0	0.0	4.0
Mining	21	597.2	5.1	-0.3	1.0	-3.9	0.8	4.8
Oil and gas extraction	211	123.2	5.3	-1.6	1.8	-3.3	0.2	3.6
Oil and gas extraction	2111	123.2	5.3	-1.6	1.8	-3.3	0.2	3.6
Mining, except oil and gas	212	193.5	-1.0	6.4	-2.4	-1.4	3.8	5.3
Coal mining	2121	42.5	-2.0	7.7	-6.7	-4.8	0.4	5.5
Metal ore mining	2122	45.9	-3.0	7.9	-2.4	0.6	5.3	4.7
Nonmetallic mineral mining and quarrying	2123	105.1	0.8	4.8	0.2	-0.6	4.9	5.6
Support activities for mining	213	280.5	0.0	5.2	-5.4	-5.4	-0.5	5.2
Support activities for mining	2131	280.5	0.0	5.2	-5.4	-5.4	-0.5	5.2
Nondurable Manufacturing								
Food	311	1,826.6	-1.1	6.5	0.0	1.1	6.5	5.3
Animal food	3111	76.2	-1.8	7.7	-0.2	1.6	7.5	5.8
Grain and oilseed milling	3112	67.6	-1.5	3.4	1.5	3.1	4.9	1.8
Sugar and confectionery products	3113	88.1	-2.1	7.4	-0.7	1.5	6.7	5.2
Fruit and vegetable preserving and specialty	3114	174.1	0.3	4.6	0.1	-0.1	4.7	4.8
Dairy products	3115	171.4	-2.8	6.9	-0.2	2.7	6.6	3.9
Animal slaughtering and processing	3116	562.6	-0.1	6.0	0.2	0.3	6.2	5.9
Seafood product preparation and packaging	3117	32.8 378.6	-1.7	4.9	-3.7	-2.0	1.0	3.1 5.4
Bakeries and tortilla products Other food products	3118 3119	275.2	-1.0 -3.4	6.5 9.5	-0.3 -0.4	0.7 3.1	6.1 9.1	5.4
Beverages and tobacco products	312	352.9	-6.5	8.5	-2.0	4.8	6.3	1.5
Beverages	3121	340.6	-4.9	7.1	-0.4	4.8	6.7	1.8
Tobacco	3122	12.3	-9.0	7.0	-5.9	3.4	0.7	-2.6
Textile mills	313	93.5	-0.3	5.6	-5.4	-5.2	-0.1	5.3
Fiber, yarn, and thread mills	3131	20.8	1.2	5.5	-6.3	-7.5	-1.1	6.8
Fabric mills	3132	46.3	1.2	6.1	-3.8	-5.0	2.0	7.3
Textile and fabric finishing mills	3133	26.4	-5.0	5.4	-8.2	-3.3	-3.2	0.2
Textile product mills	314	108.3	-0.9	6.9	-5.0	-4.1	1.6	6.0
Textile furnishings mills	3141	42.6	1.5	5.6	-4.4	-5.8	0.9	7.1
Other textile product mills	3149	65.7	-3.0	8.4	-5.7	-2.9	2.2	5.2
Apparel	315	102.7	1.2	3.7	-3.9	-5.0	-0.4	4.9
Apparel knitting mills	3151	6.1	8.6	-0.3	-2.8	-10.5	-3.1	8.3
Cut and sew apparel	3152	81.0	1.2	3.9	-4.4	-5.6	-0.7	5.2
Accessories and other apparel	3159	15.6	-2.4	5.8	-0.9	1.6	4.9	3.3
Leather and allied products	316	28.1	0.7	1.4	-0.8	-1.6	0.6	2.2
Leather and hide tanning and finishing	3161	3.8	2.3	2.7	-1.5	-3.7	1.1	5.0
Footwear	3162	11.9	-4.0	3.8	-5.3	-1.3	-1.8	-0.4
Other leather products	3169	12.4	5.2	-1.3	4.1	-1.1	2.8	3.9
Paper	322	355.7	-2.5	5.7	-3.0	-0.5	2.6	3.1
Pulp, paper, and paperboard mills	3221	85.4	-1.5	4.5	-3.9	-2.4	0.4	2.9
Converted paper products	3222	270.3	-2.5	6.1	-2.3	0.3	3.7	3.4
Printing and related support activities	323	377.6	0.2	4.7	-3.6	-3.8	0.9	4.9
Printing and related support activities	323 3231	377.6	0.2	4.7	-3.6	-3.8	0.9	4.9
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Petroleum and coal products	324	110.0	1.4	4.2	-0.5	-1.9	3.7	5.7
Petroleum and coal products	3241	110.0	1.4	4.2	-0.5	-1.9	3.7	5.7
Chemicals	325	905.7	-0.9	6.1	-0.3	0.6	5.8	5.1
Basic chemicals	3251	155.0	1.0	4.6	0.4	-0.6	5.0	5.7
Resin, rubber, and artificial fibers	3252	96.0	0.9	2.2	0.6	-0.3	2.9	3.2
Agricultural chemicals	3253	39.9	-3.9	3.2	-1.7	2.4	1.5	-0.8
Pharmaceuticals and medicines	3254	352.0	-1.5	8.2	0.3	1.8	8.5	6.6

Table 3. Labor productivity, unit labor costs, and related data, 2019-2024 — Continued

	2017	2024		Annu	al percent	change, 20	19-2024				
Industry	NAICS	Employment	Labor	Unit		Hours	Labor	Hourly			
,	code	(thousands)	productivity	labor	Output	worked	compen-	compen-			
		,	productivity	costs			sation	sation			
Paints, coatings, and adhesives	3255	65.1	-2.7	9.2	-2.4	0.4	6.6	6.3			
Soaps, cleaning compounds, and toiletries	3256	116.7	-3.9	7.5	-3.4	0.6	3.8	3.2			
Other chemical products and preparations	3259	81.0	0.4	3.5	-0.4	-0.8	3.1	3.9			
Plastics and rubber products	326	729.9	-1.3	6.1	-1.8	-0.5	4.2	4.8			
Plastics products	3261	597.0	-1.4	6.2	-1.7	-0.3	4.2	4.6			
Rubber products	3262	132.9	-0.6	5.8	-2.2	-1.6	3.5	5.2			
Tubber products	3202	102.9	-0.0	3.0	-2.2	-1.0	5.5	5.2			
Durable Manufacturing											
Wood products	321	446.6	-0.2	5.8	-0.7	-0.5	5.0	5.6			
Sawmills and wood preservation	3211	101.8	3.3	2.2	1.7	-1.5	4.0	5.6			
Plywood and engineered wood products	3212	82.4	-4.1	8.1	-3.3	0.8	4.5	3.7			
Other wood products	3219	262.4	0.1	6.1	-0.5	-0.6	5.6	6.2			
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Nonmetallic mineral products	327	440.2	-1.8	7.0	-1.8	0.0	5.1	5.0			
Clay products and refractories	3271	43.3	-0.9	7.2	-3.8	-2.9	3.2	6.3			
Glass and glass products	3272	84.1	0.6	3.3	-0.9	-1.5	2.3	3.9			
Cement and concrete products	3273	210.0	-2.8	9.2	-2.5	0.3	6.5	6.1			
Lime and gypsum products	3274	17.0	-0.4	6.2	1.3	1.7	7.6	5.8			
Other nonmetallic mineral products	3279	85.8	-3.4	6.4	-1.4	2.1	4.9	2.8			
Primary metals	331	373.5	-1.8	7.4	-3.6	-1.8	3.6	5.5			
Iron and steel mills and ferroalloys	3311	85.7	-4.4	9.7	-6.0	-1.6	3.2	4.9			
Steel products from purchased steel	3312	60.1	0.7	7.7	-0.1	-0.8	7.6	8.5			
Alumina and aluminum production	3313	59.0	-0.2	5.0	-1.8	-1.6	3.1	4.7			
Other nonferrous metal production	3314	62.7	0.3	5.1	-0.9	-1.1	4.2	5.4			
Foundries	3315	106.0	-0.8	5.9	-3.8	-3.0	1.9	5.1			
Fabricated metal products	332	1,458.0	-0.7	6.0	-1.7	-1.0	4.2	5.2			
Forging and stamping	3321	90.8	-5.3	7.4	-7.0	-1.9	-0.1	1.8			
Cutlery and handtools	3322	35.0	-0.9	1.6	-1.3	-0.4	0.2	0.6			
Architectural and structural metals	3323	416.6	0.8	6.8	1.2	0.4	8.0	7.6			
Boilers, tanks, and shipping containers	3324	97.7	-4.3	8.4	-5.1	-0.8	2.9	3.7			
Hardware	3325	23.1	-1.8	6.2	-3.7	-1.9	2.2	4.3			
Spring and wire products	3326	39.5	-2.1	6.3	-4.1	-2.1	1.9	4.1			
Machine shops and threaded products	3327	343.0	1.0	4.8	-1.8	-2.7	2.9	5.8			
Coating, engraving, and heat treating metals	3328	129.6	-0.5	6.2	-3.5	-3.0	2.5	5.7			
Other fabricated metal products	3329	282.7	-1.5	5.3	-1.1	0.4	4.1	3.7			
Machinery	333	1,131.5	-1.8	6.6	-2.3	-0.5	4.1	4.7			
Agriculture, construction, and mining machinery	3331	218.3	-2.5	6.4	-3.1	-0.6	3.1	3.8			
Industrial machinery	3332	136.0	-5.5	7.6	-3.5	2.2	3.9	1.6			
Commercial and service industry machinery	3333	89.4	4.4	3.1	2.6	-1.7	5.8	7.7			
HVAC and commercial refrigeration equipment	3334	147.6	-3.8	7.7	-2.2	1.7	5.3	3.6			
Metalworking machinery	3335	157.1	1.3	3.8	-3.0	-4.2	0.7	5.1			
Turbine and power transmission equipment	3336	92.9	0.3	7.0	-1.1	-1.5	5.8	7.3			
Other general purpose machinery	3339	290.2	-2.9	7.8	-2.8	0.1	4.8	4.7			
Computer and electronic products	334	1,034.4	1.9	3.2	1.1	-0.8	4.4	5.2			
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Computer and peripheral equipment Communications equipment	3341 3342	110.7	3.3 3.3	3.3 -4.2	-0.7 3.9	-3.9 0.6	2.6 -0.4	6.8 -1.0			
Audio and video equipment	3342	83.0 19.3	3.3 11.2	-4.2 -4.2	3.9 8.6	-2.4	-0.4 4.0	-1.0 6.5			
Semiconductors and electronic components	3344	395.1	3.2	3.5	3.5	0.3	7.2	6.8			
Electronic instruments	3345	415.4	0.2	4.8	-1.0	-1.2	3.8	5.0			
Magnetic media manufacturing and reproducing	3346	10.9	6.4	-4.7	2.4	-3.8	-2.4	1.4			
Electrical equipment and appliances	335	415.1	0.5	6.0	0.6	0.1	6.6	6.5			
Electric lighting equipment	3351	34.9	2.9	5.1	-4.1	-6.8	0.8	8.1			
Household appliances	3352	60.1	-0.2	4.0	-2.6	-2.4	1.3	3.7			
Electrical equipment	3353	153.6	-3.1	9.5	-1.6	1.6	7.7	6.1			
Other electrical equipment and components	3359	166.5	2.5	4.4	4.1	1.5	8.6	7.0			

Table 3. Labor productivity, unit labor costs, and related data, 2019-2024 — Continued

	2017	2024	Annual percent change, 2019-2024					
Industry	NAICS code	Employment (thousands)	Labor productivity	Unit labor costs	Output	Hours worked	Labor compen- sation	Hourly compen- sation
Transportation equipment	336	1,809.6	-0.5	4.3	0.1	0.6	4.4	3.8
Motor vehicles	3361	302.6	-2.6	3.6	2.0	4.7	5.7	1.0
Motor vehicle bodies and trailers	3362	165.8	-1.8	6.8	-2.2	-0.5	4.4	4.9
Motor vehicle parts	3363	558.8	2.6	0.6	1.2	-1.3	1.9	3.2
Aerospace products and parts	3364	563.0	-4.9	10.2	-4.2	0.8	5.6	4.8
Railroad rolling stock	3365	23.6	-1.0	8.4	-1.3	-0.3	6.9	7.3
Ship and boat building	3366	152.7	0.7	4.1	1.3	0.6	5.4	4.8
Other transportation equipment	3369	43.1	-4.6	3.7	-1.6	3.1	2.0	-1.1
Furniture and related products	337	365.8	-1.3	7.6	-4.4	-3.1	2.9	6.2
Household and institutional furniture	3371	235.7	0.6	6.3	-2.1	-2.7	4.1	6.9
Office furniture and fixtures	3372	102.1	-4.7	10.9	-8.2	-3.6	1.9	5.7
Other furniture related products	3379	28.0	1.9	3.1	-3.3	-5.1	-0.3	5.0
Miscellaneous manufacturing	339	661.7	-1.3	5.7	-1.5	-0.2	4.1	4.3
Medical equipment and supplies	3391	333.3	-1.1	6.2	-0.7	0.5	5.4	4.9
Other miscellaneous manufacturing	3399	328.4	-1.7	4.9	-2.7	-0.9	2.1	3.1