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PRODUCTIVITY AND COSTS BY INDUSTRY
 SELECTED SERVICE-PROVIDING INDUSTRIES – 2020

Labor productivity fell in 13 of 29 selected service-providing industries in 2020, the U.S. Bureau of Labor Statistics reported today. In 2019 labor productivity decreased in 14 of 29 industries. The economic downturn in 2020 resulted in output declines in 21 industries and hours worked declines in 24 industries. More than twice as many industries experienced decreases in 2020 compared to 2019, when output fell in 8 industries and hours worked fell in 10 industries.

Chart 1. Largest changes in productivity in selected service-providing industries, 2020

Output Percent Change

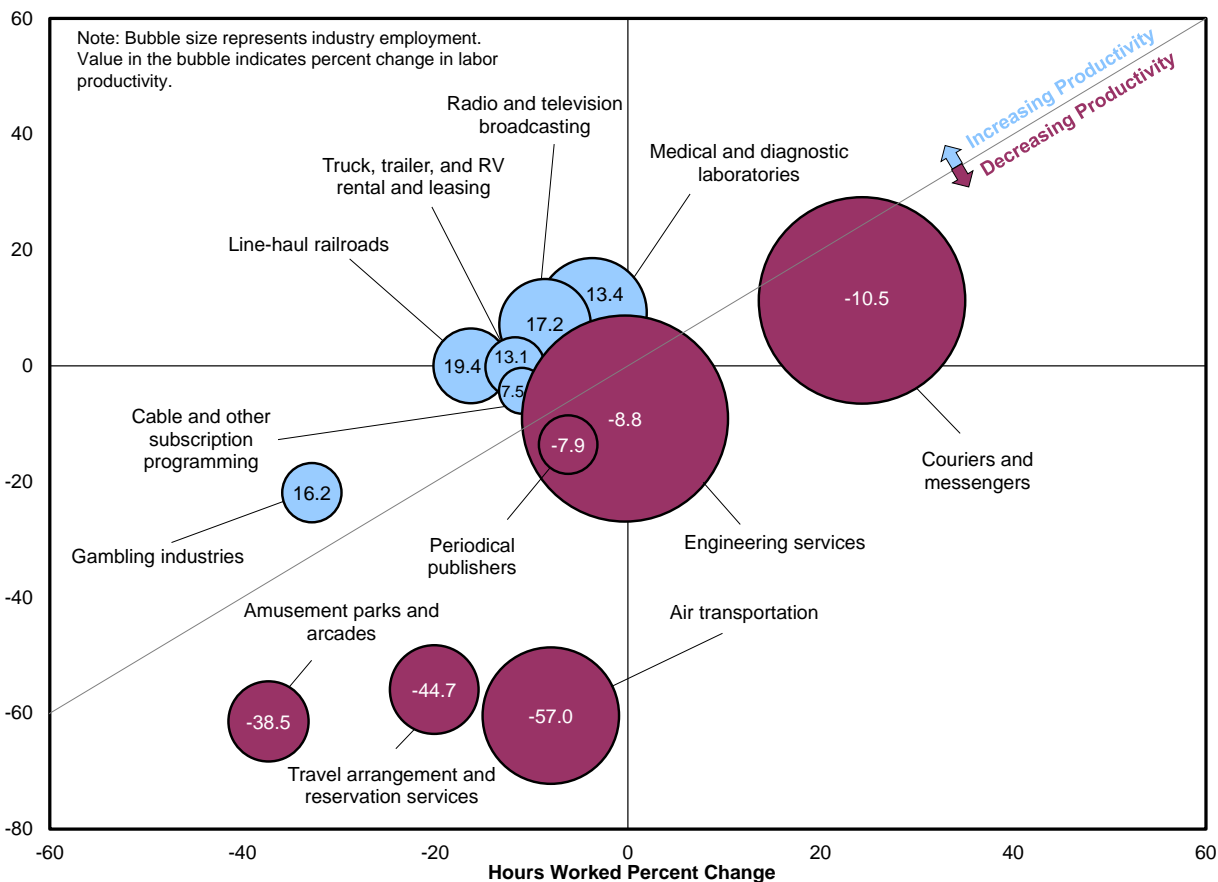


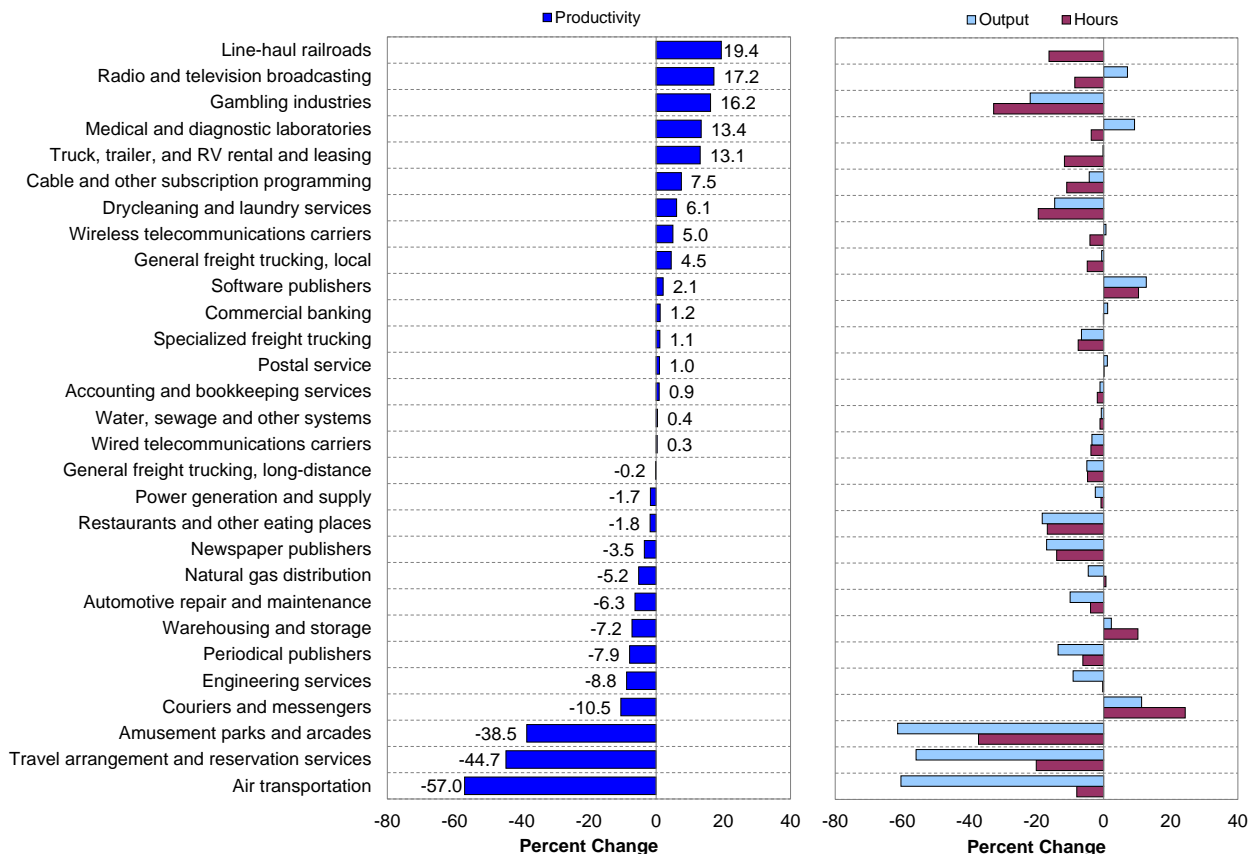
Chart 1 shows the changes in output and hours worked for industries with the largest changes in productivity. Industries below the diagonal line exhibited declining productivity. Productivity declined in the couriers and messengers industry as output grew at a slower rate than hours worked. In all other industries shown in Chart 1 with declining productivity, output declined at a faster rate than hours worked.

Industries above the diagonal line had productivity growth. In 2 of the 12 industries shown, output grew while hours worked declined. This was the case in radio and television broadcasting, the industry that recorded the second-largest growth in productivity, as well as medical and diagnostic laboratories. Although line-haul railroads showed the greatest growth in productivity, this was the result of a decline in hours worked that exceeded a drop in output.

Trends in Labor Productivity in 2020

- Labor productivity fell in 13 of 29 industries in 2020. (See chart 2.)
- There were 3 industries where productivity fell more than 38 percent: Air transportation (-57.0 percent), travel arrangement and reservation services (-44.7 percent), and amusement parks and arcades (-38.5 percent). In all 3 of those industries, output fell more than 55 percent.
- Productivity increased in 5 industries where declines in hours worked exceeded the decrease in output. In all of those industries, output fell more than 10 percent.
- Hours worked fell in 24 of the 29 industries.
- Hours worked decreased in 14 out of the 16 industries which recorded increases in productivity. Of these, the largest declines in hours worked were in gambling industries (-32.8 percent), drycleaning and laundry services (-19.5 percent), and line-haul railroads (-16.3 percent); the other 11 industries had hours worked declines of 11.7 percent or less.

Chart 2. Labor productivity growth in selected service-providing industries, 2020

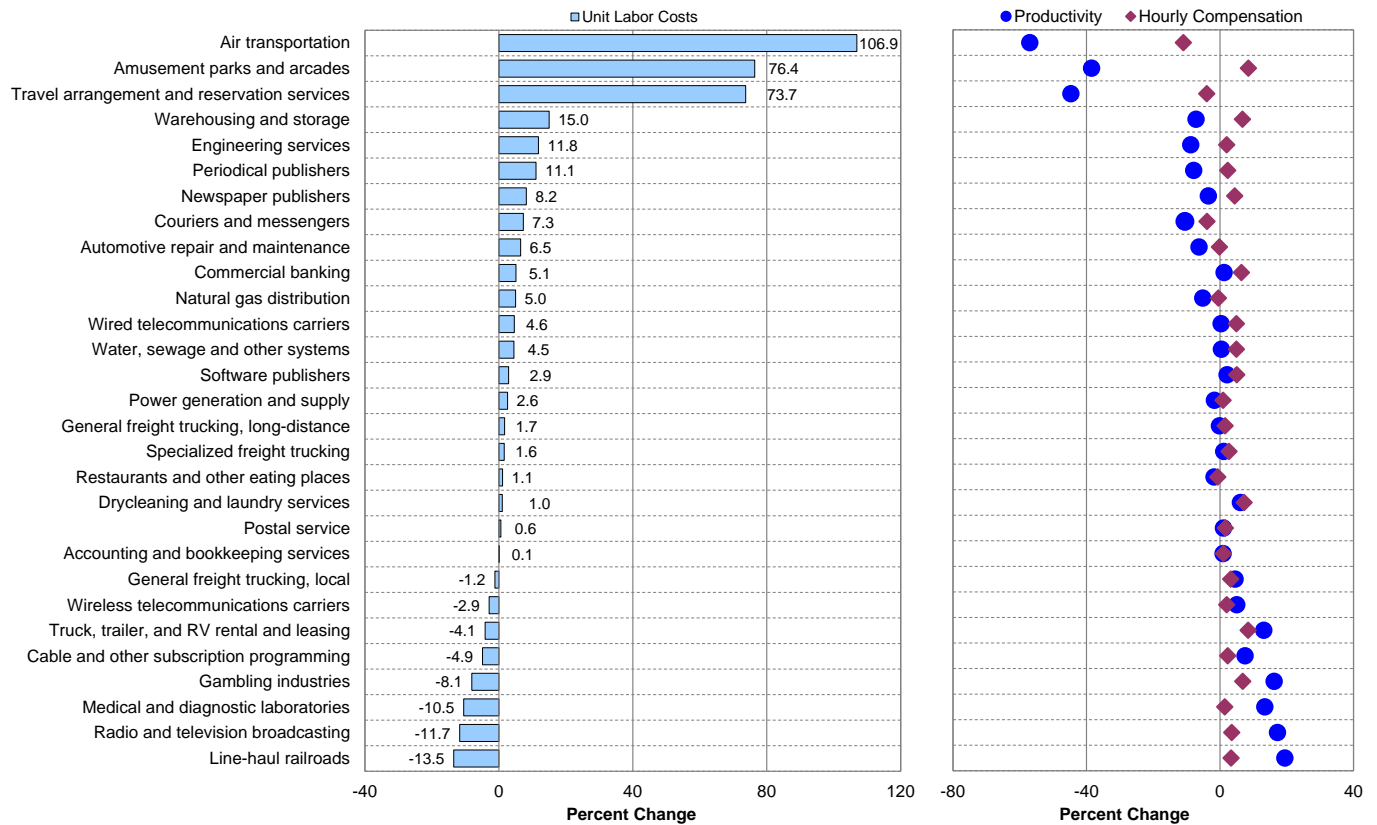


Unit labor costs increased in 21 industries in 2020. Productivity fell in 13 of the industries with a rise in unit labor costs. Changes in labor productivity counter the impact of changes in hourly compensation on unit labor costs facing employers. In all 8 industries where both unit labor costs and productivity increased, hourly compensation also increased and by a faster rate than productivity.

Trends in Unit Labor Costs in 2020

- The largest increases in unit labor costs were in air transportation (106.9 percent), amusement parks and arcades (76.4 percent), and travel arrangement and reservation services (73.7 percent). Productivity fell by more than 38 percent in all 3 of those industries. (See chart 3.)
- Unit labor costs rose alongside a drop in productivity in 13 industries. Of the 16 industries where productivity went up, unit labor costs increased in half and decreased in the other half. There were no industries where both unit labor costs and productivity declined.
- Hourly compensation rose in 23 of the 29 industries measured.

Chart 3. Unit labor costs, productivity, and hourly compensation costs in selected service-providing industries, 2020



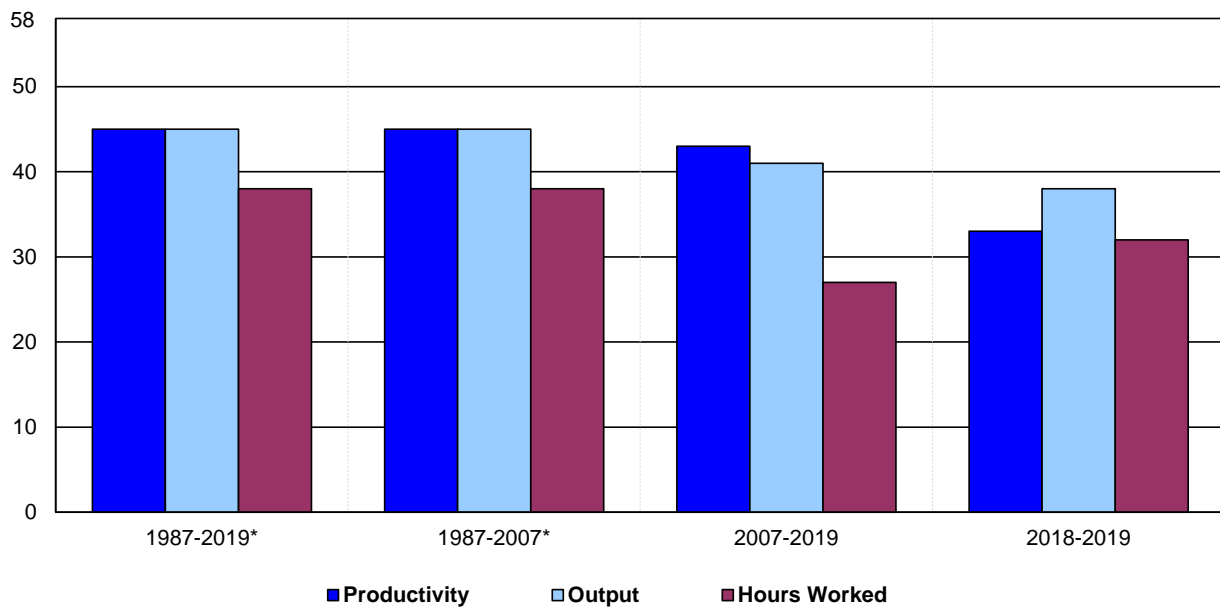
Long term productivity rose in 45 out of 58 service-providing industries. For the majority of industries studied, this period extends from 1987 to 2019, the latest year for which data are available for all 58 selected service-providing industries published on the BLS website. None of the rates in this section incorporate data for 2020. Chart 4 displays the number of industries with increases in productivity, output, and hours worked for selected time periods through 2019.

Trends in Long Term Productivity

- Median long term productivity growth for all 58 industries was approximately 1.4 percent per year.
- Output increased over the long term in 45 industries while hours worked increased in 38 industries.
- Productivity increased in 43 of the 58 industries in the period from 2007 to 2019 that began with a severe recession. During this period, only 41 industries had increases in output and 27 experienced growth in hours worked.

Chart 4. Number of selected service-providing industries with increases in labor productivity, output, and hours worked

Number of Industries



* Note: Measures for 44 industries begin in 1987 while measures for 14 additional industries begin in later years.

Additional Information

The productivity and costs measures in this release incorporate data from the Census Bureau's Service Annual Survey (December 2020) and Nonemployer Statistics (May 2020). Accordingly, the labor productivity and output series for all industries have been revised for 2019 and earlier years.

The COVID-19 pandemic did not impact the availability of source data used to construct productivity measures in this release. Data source providers continued to collect and publish high quality industry data for 2020. Additional information can be found on the BLS website at www.bls.gov/covid19/effects-of-covid-19-pandemic-on-productivity-and-costs-statistics.htm#Industry-Productivity.

The following NAICS codes are included in Table 1 but not counted in the short-term count of 29 selected industries because they are duplicate codes or aggregates for which full underlying coverage is published: 22, 221, 484, 4841, 4911, 4931, 511, 5111, 515, 5173, 54121, 722, 722511, and 722513,4,5.

The following NAICS codes are included in Table 2 but not counted in the long-term count of 58 selected industries because they are duplicate codes or aggregates for which full underlying coverage is published: 22, 221, 484, 4841, 4842, 491, 493, 4931, 511, 5111, 515, 5151, 5173, 5412, 54121, 5615, 6215, 6221,3, 7131, 72, 721, 7211, 722, 72251, 8121, and 8123.

Access the productivity data dashboard at www.bls.gov/lpc/lpc_by_industry_dashboard.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, nominal value of production, and labor compensation
- Additional years and long-term data

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Technical Note

Labor Productivity: Labor productivity describes the relationship between real 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 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 and real output per hour (labor productivity). Increases in hourly compensation increase unit labor costs; increases in labor productivity offset compensation increases and reduce unit labor costs.

Output: Real 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.

Industry output measures are constructed primarily using data from the economic censuses and annual surveys of the U.S. Census Bureau, U.S. Department of Commerce, together with information on price changes from BLS. Other data sources include: the Energy Information Administration, U.S. Department of Energy; the Bureau of Transportation Statistics, U.S. Department of Transportation; the U.S. Postal Service; the Postal Rate Commission; and the Federal Deposit Insurance Corporation. Data from the Quarterly Service Survey from the Census Bureau are used to construct preliminary output measures for 2020 for some industries. Data from both the Census Bureau's Quarterly Service Survey and Monthly Retail Trade Survey are used to construct preliminary output measures for 2020 for some industries.

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 self-employed and unpaid family worker data to estimate industry employment. Hours worked estimates are derived using CES and CPS employment, CES data on the average weekly hours paid of production workers, CPS data on hours of nonproduction, self-employed, and unpaid family workers, and ratios of hours worked to hours paid based on data from 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. Additional sources of employment and hours data for certain service industries include the Association of American Railroads, the U.S. Department of Transportation, and the U.S. Postal Service. 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 economic censuses and annual surveys of the Census Bureau, U.S. Department of Commerce. The estimates for 2020 are constructed using data from the BLS Quarterly Census of Employment and Wages (QCEW).

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

Industry	2017 NAICS code	2020 Employment (thousands)	Percent change, 2019-2020				
			Labor productivity	Unit labor costs	Output	Hours worked	Labor compensation
Utilities							
Utilities.....	22	542.0	-2.3	3.2	-2.8	-0.5	0.3
Utilities.....	221	542.0	-2.3	3.2	-2.8	-0.5	0.3
Power generation and supply.....	2211	380.8	-1.7	2.6	-2.5	-0.8	0.1
Natural gas distribution.....	2212	109.2	-5.2	5.0	-4.6	0.7	0.2
Water, sewage and other systems.....	2213	52.0	0.4	4.5	-0.7	-1.1	3.8
Transportation and Warehousing							
Air transportation.....	481	460.5	-57.0	106.9	-60.4	-8.0	-18.1
Line-haul railroads.....	482111	137.9	19.4	-13.5	0.0	-16.3	-13.5
Truck transportation.....	484	1,689.3	0.6	1.5	-5.0	-5.6	-3.6
General freight trucking.....	4841	1,222.5	0.7	1.2	-4.1	-4.8	-3.0
General freight trucking, local.....	48411	333.9	4.5	-1.2	-0.6	-4.9	-1.8
General freight trucking, long-distance.....	48412	888.6	-0.2	1.7	-5.0	-4.8	-3.4
Specialized freight trucking.....	4842	466.8	1.1	1.6	-6.6	-7.6	-5.1
Postal service ¹	491	602.1	1.0	0.6	1.1	0.1	1.7
Postal service ¹	4911	602.1	1.0	0.6	1.1	0.1	1.7
Couriers and messengers.....	492	1,055.2	-10.5	7.3	11.3	24.3	19.4
Warehousing and storage.....	493	1,355.5	-7.2	15.0	2.3	10.2	17.6
Warehousing and storage.....	4931	1,355.5	-7.2	15.0	2.3	10.2	17.6
Information							
Publishing.....	511	798.5	3.9	3.9	7.0	3.0	11.2
Newspaper, book, and directory publishers.....	5111	298.0	-4.8	9.9	-13.2	-8.9	-4.6
Newspaper publishers.....	51111	120.9	-3.5	8.2	-17.0	-14.0	-10.2
Periodical publishers.....	51112	84.4	-7.9	11.1	-13.6	-6.2	-4.0
Software publishers.....	5112	500.5	2.1	2.9	12.7	10.4	15.9
Broadcasting, except Internet.....	515	258.2	10.2	-6.7	0.1	-9.2	-6.6
Radio and television broadcasting.....	5151	206.6	17.2	-11.7	7.1	-8.6	-5.4
Cable and other subscription programming.....	5152	51.6	7.5	-4.9	-4.3	-11.0	-9.0
Wired and wireless telecommunications carriers.....	5173	607.6	2.0	2.1	-1.8	-3.8	0.2
Wired telecommunications carriers.....	517311	503.0	0.3	4.6	-3.5	-3.8	0.9
Wireless telecommunications carriers.....	517312	104.6	5.0	-2.9	0.7	-4.1	-2.2
Finance and Insurance							
Commercial banking.....	52211	1,382.9	1.2	5.1	1.2	-0.1	6.4
Real Estate and Rental and Leasing							
Truck, trailer, and RV rental and leasing.....	53212	87.2	13.1	-4.1	-0.2	-11.7	-4.3
Professional and Technical Services							
Accounting and bookkeeping services.....	5412	1,148.4	0.9	0.1	-1.1	-1.9	-1.0
Accounting and bookkeeping services.....	54121	1,148.4	0.9	0.1	-1.1	-1.9	-1.0
Engineering services.....	54133	1,050.8	-8.8	11.8	-9.1	-0.3	1.7
Administrative and Waste Services							
Travel arrangement and reservation services.....	5615	194.2	-44.7	73.7	-55.9	-20.1	-23.3
Health Care and Social Assistance							
Medical and diagnostic laboratories.....	6215	293.6	13.4	-10.5	9.2	-3.7	-2.3
Arts, Entertainment, and Recreation							
Amusement parks and arcades.....	7131	158.6	-38.5	76.4	-61.4	-37.3	-31.9
Gambling industries.....	7132	86.6	16.2	-8.1	-21.9	-32.8	-28.2
Accommodation and Food Services							
Food services and drinking places.....	722	10,209.3	-4.7	4.5	-22.0	-18.1	-18.6
Restaurants and other eating places.....	72251	9,316.0	-1.8	1.1	-18.3	-16.8	-17.4
Full-service restaurants.....	722511	4,350.5	-8.2	5.2	-30.8	-24.6	-27.2
Limited-service eating places.....	722513,4,5	4,965.5	1.3	3.5	-7.4	-8.6	-4.2

See footnotes at end of table.

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

Industry	2017 NAICS code	2020 Employment (thousands)	Percent change, 2019-2020				
			Labor productivity	Unit labor costs	Output	Hours worked	Labor compensation
Other Services							
Automotive repair and maintenance.....	8111	1,093.8	-6.3	6.5	-10.0	-3.9	-4.1
Drycleaning and laundry services.....	8123	253.9	6.1	1.0	-14.6	-19.5	-13.7

¹ For NAICS industries 491 and 4911, average annual percent changes are for the fiscal year ending in September.

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

Industry	2017 NAICS code	2019 Employment (thousands)	Average annual percent change, 1987-2019				
			Labor productivity	Unit labor costs	Output	Hours worked	Labor compensation
Utilities							
Utilities.....	22	549.4	2.2	1.5	1.4	-0.7	2.9
Utilities.....	221	549.4	2.2	1.5	1.4	-0.7	2.9
Power generation and supply.....	2211	386.0	2.9	0.8	1.9	-0.9	2.7
Natural gas distribution.....	2212	110.1	1.2	3.0	0.3	-0.9	3.3
Water, sewage and other systems.....	2213	53.3	-1.7	4.8	0.7	2.4	5.5
Transportation and Warehousing							
Air transportation.....	481	494.4	3.0	1.0	2.8	-0.2	3.8
Line-haul railroads.....	482111	158.8	3.4	-0.4	1.7	-1.7	1.3
Truck transportation ¹	484	1,763.5	0.8	1.0	2.2	1.4	3.3
General freight trucking ¹	4841	1,271.5	1.3	1.1	2.5	1.3	3.6
General freight trucking, local ¹	48411	341.2	2.8	0.1	4.0	1.2	4.1
General freight trucking, long-distance.....	48412	930.3	1.3	0.6	2.4	1.0	3.0
Specialized freight trucking ²	4842	492.0	1.0	1.8	2.2	1.2	4.1
Used household and office goods moving.....	48421	100.9	-0.8	2.8	-0.3	0.5	2.5
Other specialized trucking, local ²	48422	246.8	0.6	2.2	2.2	1.7	4.5
Other specialized trucking, long-distance ²	48423	144.3	1.9	1.2	3.6	1.7	4.8
Postal service ³	491	607.2	0.0	3.2	-0.7	-0.6	2.5
Postal service ³	4911	607.2	0.0	3.2	-0.7	-0.6	2.5
Couriers and messengers.....	492	883.6	-2.3	3.5	0.7	3.1	4.2
Warehousing and storage ¹	493	1,238.8	1.3	0.5	5.7	4.4	6.2
Warehousing and storage ¹	4931	1,238.8	1.3	0.5	5.7	4.4	6.2
General warehousing and storage ¹	49311	1,106.8	2.3	-0.2	7.0	4.6	6.8
Refrigerated warehousing and storage ¹	49312	67.2	0.5	1.1	3.6	3.0	4.7
Information							
Publishing.....	511	795.8	4.3	1.3	4.0	-0.3	5.3
Newspaper, book, and directory publishers.....	5111	329.8	0.2	3.9	-2.8	-2.9	1.0
Newspaper publishers.....	51111	145.1	-0.5	3.8	-4.3	-3.9	-0.6
Periodical publishers.....	51112	90.2	-0.1	4.4	-1.8	-1.7	2.6
Book publishers.....	51113	59.8	-0.1	4.5	-1.1	-1.0	3.3
Software publishers.....	5112	466.0	10.7	-5.2	17.5	6.1	11.3
Motion picture and video exhibition.....	51213	149.0	1.1	2.4	1.5	0.4	4.0
Broadcasting, except Internet.....	515	278.0	3.0	1.4	3.0	0.0	4.4
Radio and television broadcasting.....	5151	222.0	2.2	1.4	1.9	-0.3	3.4
Radio broadcasting.....	51511	84.9	3.6	1.2	2.4	-1.2	3.6
Cable and other subscription programming.....	5152	56.0	4.9	2.5	6.2	1.2	8.9
Wired and wireless telecommunications carriers.....	5173	631.4	6.6	-2.6	5.7	-0.9	2.9
Wired telecommunications carriers.....	517311	523.7	3.8	-0.2	2.4	-1.4	2.2
Wireless telecommunications carriers.....	517312	107.7	12.0	-6.7	17.6	5.0	9.7
Finance and Insurance							
Commercial banking.....	52211	1,392.8	2.8	2.2	2.7	-0.1	4.9
Real Estate and Rental and Leasing							
Passenger car rental.....	532111	128.4	2.0	1.7	3.0	1.0	4.8
Truck, trailer, and RV rental and leasing.....	53212	91.4	2.2	1.1	3.2	1.0	4.4
Video tape and disc rental.....	532282	7.3	5.6	-0.8	-3.6	-8.7	-4.4
Professional and Technical Services							
Accounting and bookkeeping services ⁴	5412	1,186.3	2.0	1.7	2.7	0.7	4.4
Accounting and bookkeeping services ⁴	54121	1,186.3	2.0	1.7	2.7	0.7	4.4
Offices of certified public accountants ⁴	541211	505.4	2.1	2.0	3.1	1.1	5.2
Tax preparation services.....	541213	137.7	0.6	2.4	1.9	1.4	4.4
Other accounting services ⁴	541219	366.2	3.3	-0.4	3.4	0.1	2.9
Architectural services.....	54131	216.0	1.5	1.8	2.7	1.2	4.5
Engineering services.....	54133	1,047.4	1.0	2.8	2.7	1.7	5.6
Advertising agencies.....	54181	227.6	2.0	1.8	2.6	0.6	4.5

See footnotes at end of table.

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

Industry	2017 NAICS code	2019 Employment (thousands)	Average annual percent change, 1987-2019				
			Labor productivity	Unit labor costs	Output	Hours worked	Labor compensation
Photography studios, portrait.....	541921	52.3	1.4	1.2	1.6	0.2	2.8
Veterinary services ⁵	54194	418.7	-1.2	4.7	1.5	2.7	6.2
Administrative and Waste Services							
Employment placement and executive search ⁶	56131	299.8	4.2	0.0	5.1	0.9	5.2
Travel arrangement and reservation services ⁴	5615	248.1	7.1	-2.0	5.1	-1.8	3.0
Travel agencies.....	56151	107.3	7.4	-2.1	6.1	-1.2	3.9
Janitorial services.....	56172	1,374.1	2.6	0.9	4.1	1.5	5.0
Health Care and Social Assistance							
Medical and diagnostic laboratories ⁶	6215	298.7	2.1	0.6	5.0	2.9	5.7
Medical laboratories ⁶	621511	211.5	2.0	0.5	5.0	2.9	5.5
Diagnostic imaging centers ⁶	621512	87.2	2.2	0.9	5.1	2.8	6.0
Hospitals, except psychiatric and substance abuse hospitals ⁷	6221,3	5,001.7	0.3	3.2	1.8	1.5	5.1
Arts, Entertainment, and Recreation							
Amusement parks and arcades ⁸	7131	228.0	0.7	4.6	0.4	-0.3	5.1
Amusement and theme parks.....	71311	195.4	0.1	4.1	1.8	1.7	5.9
Gambling industries ⁴	7132	124.9	2.2	2.0	1.7	-0.4	3.8
Golf courses and country clubs ²	71391	386.5	-1.1	4.2	-0.1	1.0	4.1
Fitness and recreational sports centers ²	71394	707.4	3.7	-0.2	4.3	0.6	4.1
Bowling centers.....	71395	71.8	0.6	2.6	-0.8	-1.4	1.8
Accommodation and Food Services							
Accommodation and food services.....	72	14,407.4	0.8	2.7	2.4	1.6	5.1
Accommodation.....	721	2,116.0	1.9	1.9	2.7	0.8	4.6
Traveler accommodation.....	7211	2,024.2	1.9	1.8	2.8	0.8	4.7
Hotels and motels, except casino hotels.....	72111	1,698.2	1.3	2.6	2.1	0.8	4.7
Food services and drinking places.....	722	12,291.4	0.5	3.0	2.2	1.7	5.3
Special food services.....	7223	873.8	1.0	1.7	2.4	1.3	4.1
Drinking places, alcoholic beverages.....	7224	417.2	-0.5	3.3	-0.1	0.4	3.2
Restaurants and other eating places.....	72251	11,000.4	0.5	3.2	2.4	1.8	5.6
Full-service restaurants.....	722511	5,573.4	0.7	3.5	2.4	1.7	5.9
Limited-service eating places.....	722513,4,5	5,427.0	0.4	2.8	2.4	2.0	5.3
Other Services							
Automotive repair and maintenance.....	8111	1,163.3	1.2	2.1	1.6	0.4	3.7
Reupholstery and furniture repair.....	81142	22.4	-1.5	4.3	-3.0	-1.5	1.2
Personal care services.....	8121	1,314.9	2.2	1.7	3.5	1.2	5.2
Hair, nail, and skin care services.....	81211	1,079.3	2.1	1.7	3.1	1.0	4.9
Funeral homes and funeral services.....	81221	112.3	-0.4	4.1	-0.5	-0.1	3.5
Drycleaning and laundry services.....	8123	305.9	1.9	1.6	1.0	-0.8	2.6
Coin-operated laundries and drycleaners.....	81231	42.9	2.2	2.2	0.3	-1.9	2.5
Drycleaning and laundry services (except coin-operated) . . .	81232	129.2	0.7	2.2	-1.3	-2.0	0.9
Linen and uniform supply.....	81233	133.8	2.1	1.0	3.1	0.9	4.1
Photofinishing.....	81292	9.1	2.0	2.4	-4.8	-6.7	-2.6

¹ For NAICS industries 484, 4841, 48411, 493, 4931, 49311, and 49312, average annual percent changes are for 1992-2019.

² For NAICS industries 4842, 48422, 48423, 71391, and 71394, average annual percent changes are for 2002-2019.

³ For NAICS industries 491 and 4911, average annual percent changes are for the fiscal year ending in September.

⁴ For NAICS industries 5412, 54121, 541211, 541219, 5615, and 7132, average annual percent changes are for 1997-2019.

⁵ For NAICS industry 54194, average annual percent changes are for 2004-2019.

⁶ For NAICS industries 56131, 6215, 621511, and 621512, average annual percent changes are for 1994-2019.

⁷ For NAICS industry 6221,3, average annual percent changes are for 1993-2018. Employment is for 2018.

⁸ For NAICS industry 7131, average annual percent changes are for 2007-2019.