

For release 10:00 a.m. (EDT) Tuesday, April 28, 2015

USDL-15-0754

Technical information: (202) 691-5618 • dipsweb@bls.gov • www.bls.gov/lpc

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

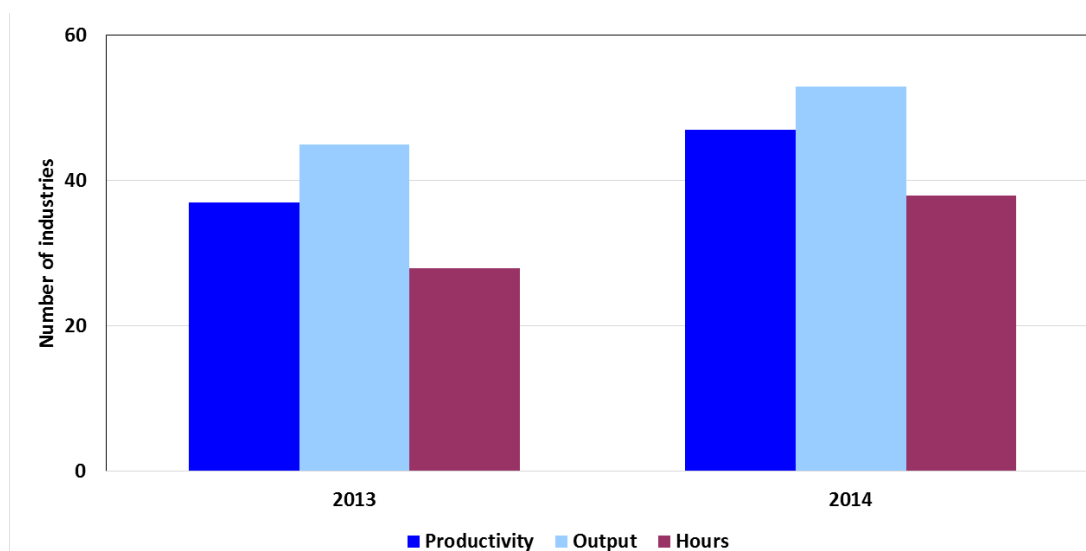
NOTE: BLS reissued this release on June 10, 2015 to correct errors in NAICS 3121, beverages; 312, beverages and tobacco products; 3241, petroleum and coal products; 324, petroleum and coal products; and 3345, electronic instruments. Corrections have been made to tables 1, 2, and 3; no changes were required to the text or charts of the news release.

**PRODUCTIVITY AND COSTS BY INDUSTRY:
MANUFACTURING AND MINING INDUSTRIES, 2014**

Labor productivity – defined as output per hour – rose in about three-quarters of detailed manufacturing and mining industries covered in 2014, the U.S. Bureau of Labor Statistics reported today. This was higher than 2013, when labor productivity rose in about 60 percent of the covered industries. Output and hours also increased in more industries in 2014 than in the previous year. (See chart 1.) **Unit labor costs**, which reflect the total labor costs required to produce a unit of output, declined in 53 percent of manufacturing industries and three out of four mining industries in 2014. Almost two-thirds of industries with productivity increases posted declines in unit labor costs.

Oil and gas extraction recorded the largest increase in labor productivity in 2014, followed by textile and fabric finishing and coating mills, and semiconductors and electronic components. The largest decline in productivity was in glass and glass products. (See table 1.)

Chart 1. Number of manufacturing and mining industries with increases in labor productivity, output, and hours, 2013 and 2014



2014 measures available for selected industries

Labor productivity and related measures are being released through 2014 for a group of 57 detailed manufacturing industries and four detailed mining industries. These measures are based on trends in production and wages. Labor productivity measures for all other detailed manufacturing and mining industries are being released through 2013.

Labor Productivity and Unit Labor Costs, 2014

Manufacturing: Labor productivity increased in 19 of the 21 NAICS 3-digit manufacturing industries in 2014 (see chart 2), as output increased in 19 industries and hours fell in 8 industries (see chart 3). Productivity rose fastest in leather and allied product manufacturing, where output increased slightly while hours declined. Of the 21 industries, 14 registered greater productivity growth or smaller productivity declines than in the previous year.

Chart 2. Percent change in productivity in 3-digit NAICS manufacturing industries, 2014

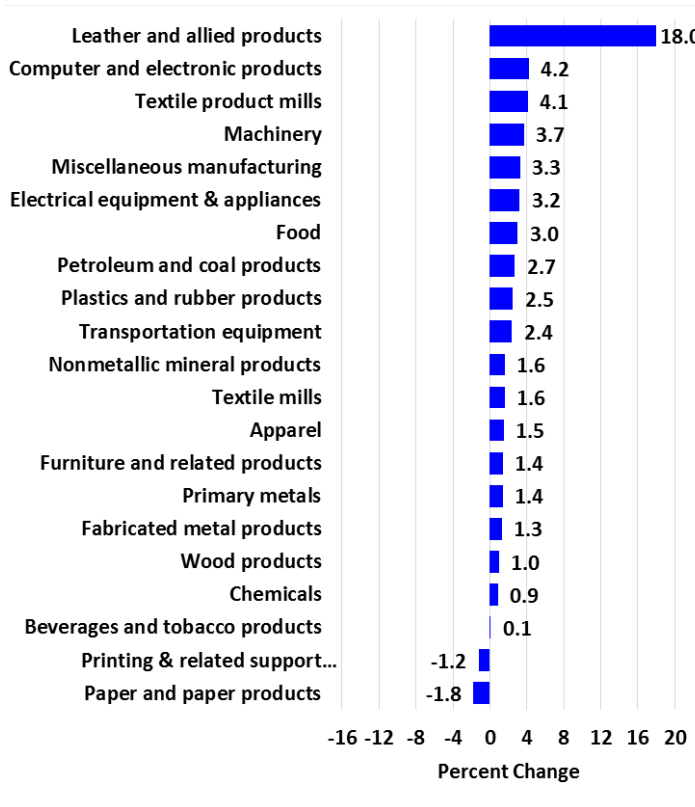


Chart 3. Percent change in output and hours in 3-digit NAICS manufacturing industries, 2014

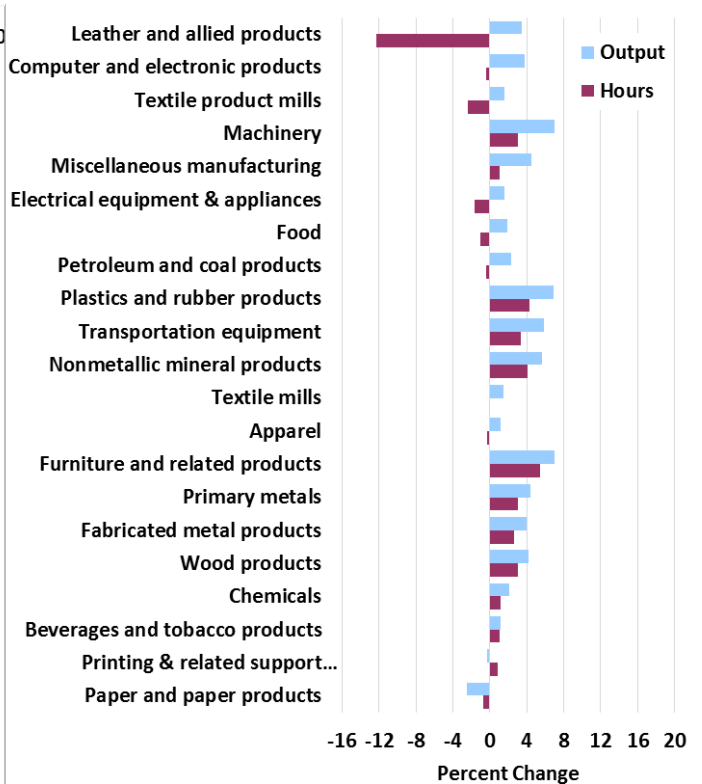


Chart 4 shows the range of productivity and unit labor cost changes for all 21 3-digit manufacturing industries. Unit labor costs fell in 13 industries. All unit labor costs declines occurred in industries where productivity rose. The only two industries where productivity fell, printing and related support activities and paper and paper products, also recorded an increase in unit labor costs. Chart 5 shows the relationship between changes in compensation, output, and unit labor costs.

Chart 4. Percent change in labor productivity and unit labor costs in 3-digit NAICS manufacturing industries, 2014

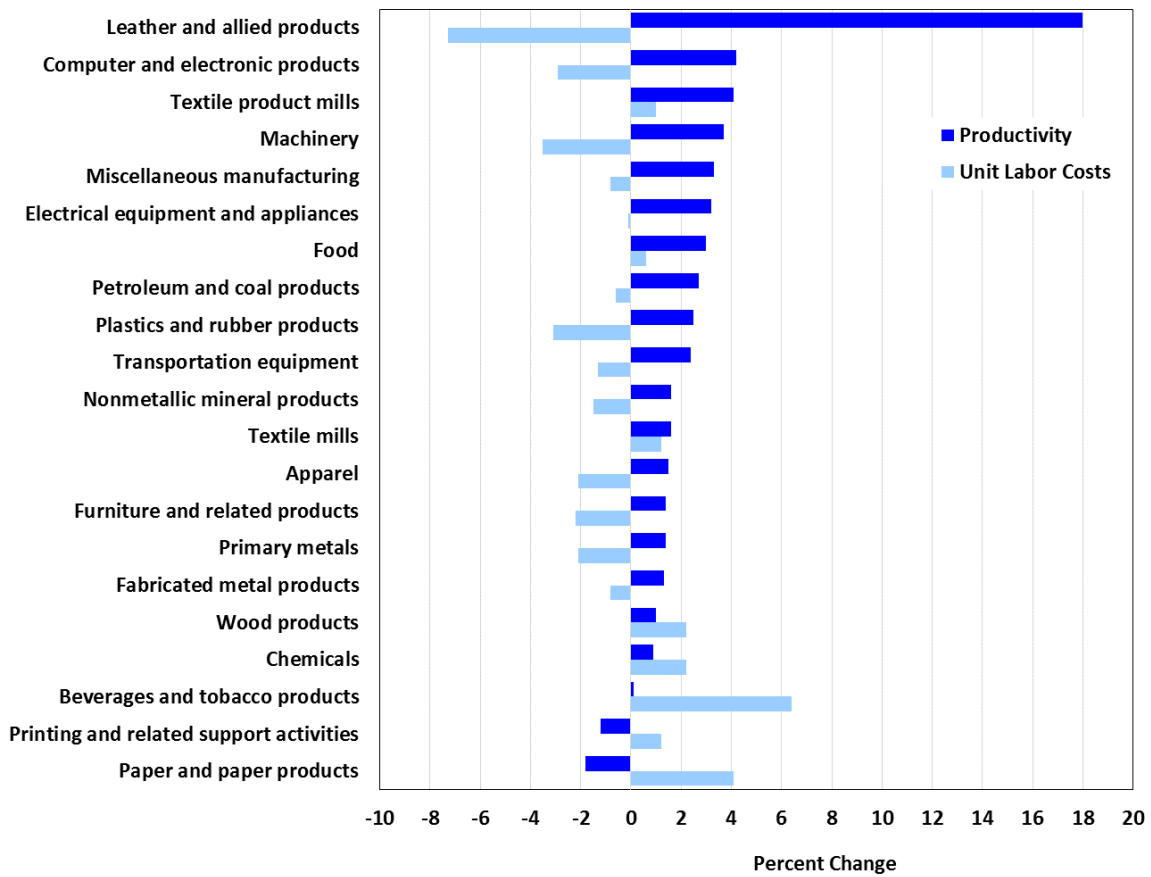
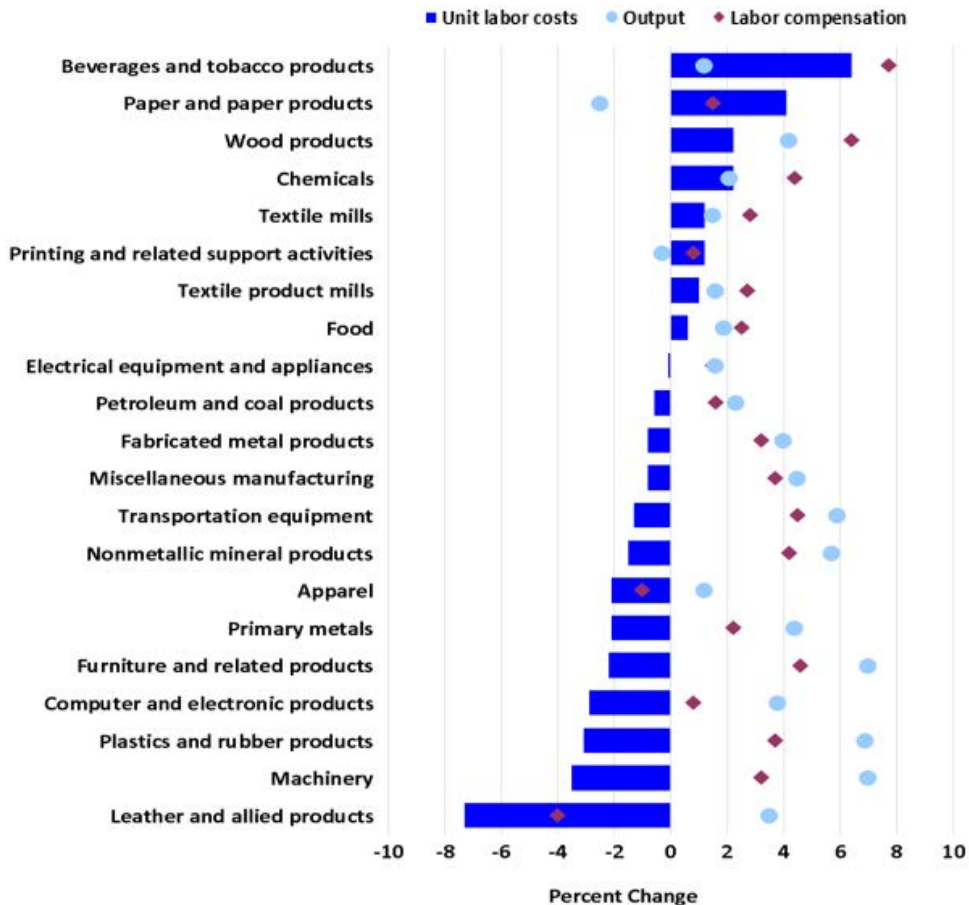


Chart 5. Percent change in labor compensation, output, and unit labor costs in 3-digit NAICS manufacturing industries, 2014



Mining: Labor productivity increased in three of the four NAICS 4-digit mining industries covered in 2014. Oil and gas extraction experienced the largest gain in productivity, spurred by output growth of 13 percent. Only nonmetallic mineral mining and quarrying recorded an increase in hours that was greater than that of output, causing productivity to decline. Productivity growth was less in 2014 than 2013 for each of these four mining industries.

Productivity Trends in Selected Time Periods

Chart 6 displays the number of industries with increases in productivity, output, and hours for selected time periods through 2013, the latest year for which data are available for all 91 NAICS 4-digit manufacturing and mining industries.

During the 1987-2013 period, productivity rose in all but four manufacturing and mining industries, with median productivity growth of approximately 2 percent per year. Productivity growth in this period was associated with rising output in many manufacturing and mining industries, while hours increased in relatively few. In most industries, productivity advanced as output was produced with fewer hours.

Productivity also increased in a majority of industries between 2007 and 2013, despite the fact that the period encompassed a severe recession. However, only one quarter of manufacturing and mining industries saw increases in output, while even fewer experienced growth in hours.

In 2013, productivity rose in about 57 percent of manufacturing and mining industries. Output increased in about two-thirds of the industries, while hours rose in fewer than half the industries.

Chart 6. Number of manufacturing and mining industries with increases in labor productivity, output, and hours, 1987-2013, 2007-2013, and 2012-2013

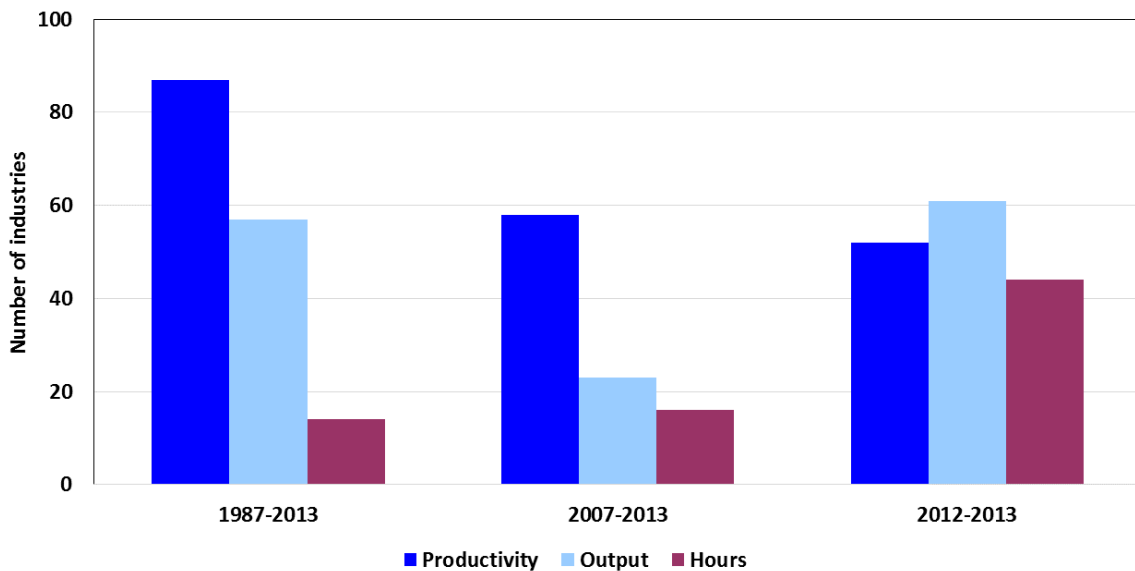
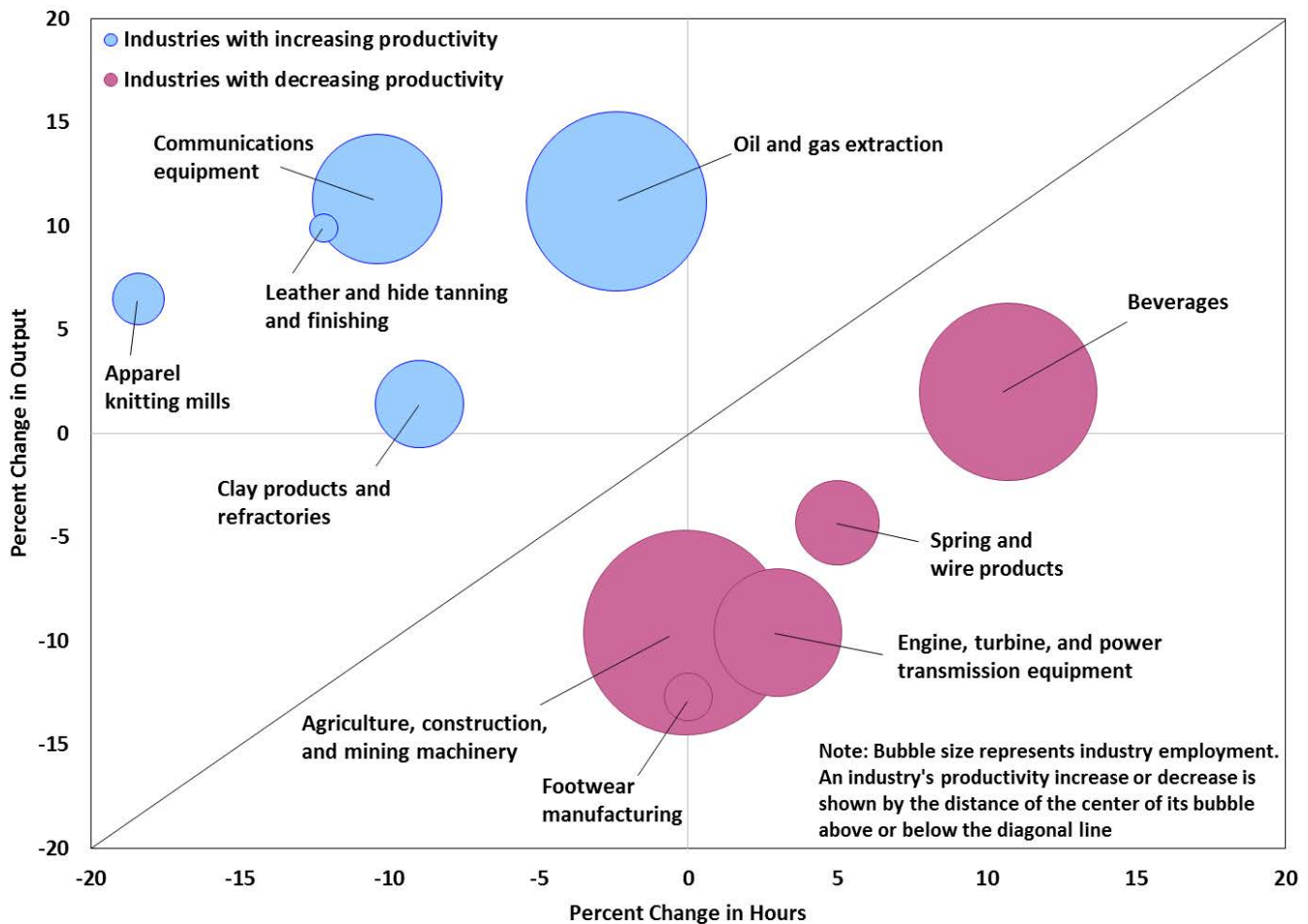


Chart 7 shows the industries with the largest changes in productivity in 2013. Industries above the diagonal line had growth in output that was greater than the percent change in hours, and thus positive productivity growth. The largest increases in productivity in 2013 occurred in industries with large employment, such as oil and gas extraction and communications equipment, as well as industries with less employment, such as apparel knitting mills. In contrast, industries below the diagonal line exhibited declining productivity as hours increased or held steady and in most cases output declined.

Chart 7. Percent changes in output and hours in 4-digit NAICS manufacturing and mining industries with the largest change in productivity, 2013



Additional Information

This release updates productivity measures to 2014 for all 21 NAICS 3-digit and for 57 of the 86 NAICS 4-digit manufacturing industries. Additionally, productivity measures for all 86 NAICS 4-digit manufacturing industries have been updated through 2013. Output estimates for 2014 are based on trends in industrial production from the Federal Reserve Board and on trends from the manufacturers' shipments, inventories, and orders (M3) survey from the U.S. Census Bureau, along with data on price changes from BLS. Labor compensation in 2014 is based on trends in industry wages from the BLS Quarterly Census of Employment and Wages (QCEW). Data in this release for 2013 and 2014 are preliminary and subject to revision.

For the first time, the industries included in this news release are classified according to the 2012 NAICS. Indexes have been rebased from 2002=100 to 2007=100 starting with this release. While the rates of change reported by BLS in this release are rounded to one decimal place, all percent changes are calculated using index numbers rounded to three decimal places.

Year-to-year movements in industry productivity may be erratic, particularly in smaller industries. The annual measures based on sample data may differ from measures generated by a census of establishments in the industry. Annual changes in an industry's output and use of labor may reflect cyclical changes in the economy as well as long-term trends. As a result, long-term productivity trends tend to be more reliable indicators of industry performance than year-to-year changes.

Want to know more?

Find more detailed data at www.bls.gov/lpc for:

- Additional industries and sectors
- Additional data series: indexes of productivity and related measures; rates of change; and levels of industry employment, hours, nominal value of production, and labor compensation.
- Additional years and long term data

Questions?

Additional information can be obtained by calling the Division of Industry Productivity Studies (202-691-5618) or by sending an e-mail to dipsweb@bls.gov. Information in this report will be made available to sensory-impaired individuals upon request. Voice phone: 202-691-5618; TDD message referral phone number: 1-800-877-8339.

Subscribe to Newsletter

Customers can subscribe to the industry productivity program's news releases on the BLS website at <https://subscriptions.bls.gov/accounts/USDOLBLS/subscriber/new>.

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; managerial skill; in addition to the characteristics and effort of the workforce.

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 lower unit labor costs.

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. Industry output reflects sectoral value of production, 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. New with this update, data from the Bureau of Economic Analysis, U.S. Department of Commerce, is utilized in part to construct intra-industry transactions. Advance industry output for 2014 is constructed with data on industrial production from the Federal Reserve and manufacturers' shipments, inventories, and orders from the Census Bureau. Other data sources include the Energy Information Administration, U.S. Department of Energy; and the U.S. Geological Survey, U.S. Department of Interior.

Labor Hours: Labor hours reflect 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. 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 2014 are constructed using data from the BLS Quarterly Census of Employment and Wages (QCEW).

Table 1. Percent change in output per hour, unit labor costs, and related data, 2013-2014

Industry	NAICS code	2014 Employment (thousands)	Percent change, 2013-2014				
			Output per hour	Output	Hours	Labor compensation	Unit labor costs
Mining							
Mining.....	21	866.6	3.9	11.6	7.5	8.1	-3.1
Oil and gas extraction.....	211	201.9	11.5	13.4	1.7	6.4	-6.1
Oil and gas extraction.....	2111	201.9	11.5	13.4	1.7	6.4	-6.1
Mining, except oil and gas.....	212	212.0	1.2	4.7	3.5	1.4	-3.2
Coal mining.....	2121	76.7	5.4	6.7	1.2	-2.0	-8.2
Metal ore mining.....	2122	44.2	0.5	1.5	1.0	-0.7	-2.1
Nonmetallic mineral mining and quarrying.....	2123	91.1	-1.3	5.5	6.9	7.7	2.1
Manufacturing							
Food.....	311	1,505.9	3.0	1.9	-1.0	2.5	0.6
Grain and oilseed milling.....	3112	58.4	6.9	0.3	-6.1	-0.2	-0.5
Fruit and vegetable preserving and specialty.....	3114	169.6	2.4	3.0	0.5	0.5	-2.4
Dairy products.....	3115	133.8	5.5	3.0	-2.4	1.3	-1.6
Animal slaughtering and processing.....	3116	480.9	-0.8	-1.4	-0.6	2.0	3.5
Bakeries and tortilla manufacturing.....	3118	311.9	4.7	3.3	-1.4	1.7	-1.5
Other food products.....	3119	189.4	1.5	-0.5	-1.9	6.4	6.9
Beverages and tobacco products.....	312	215.5	0.1	1.2	1.1	7.7	6.4
Beverages.....	3121	201.9	3.2	4.8	1.6	9.2	4.2
Tobacco and tobacco products.....	3122	13.6	0.9	-4.8	-5.7	-2.8	2.1
Textile mills.....	313	123.7	1.6	1.5	0.0	2.8	1.2
Fiber, yarn, and thread mills.....	3131	29.2	-2.1	0.9	3.0	3.1	2.2
Fabric mills.....	3132	61.2	-1.9	2.3	4.3	3.9	1.6
Textile and fabric finishing and coating mills.....	3133	33.3	10.8	0.4	-9.4	0.6	0.2
Textile product mills.....	314	120.4	4.1	1.6	-2.4	2.7	1.0
Textile furnishings mills.....	3141	54.1	0.5	0.1	-0.4	2.5	2.4
Other textile product mills.....	3149	66.3	7.6	3.2	-4.1	2.8	-0.4
Apparel.....	315	160.1	1.5	1.2	-0.3	-1.0	-2.1
Leather and allied products.....	316	30.2	18.0	3.5	-12.3	-4.0	-7.3
Wood products.....	321	392.5	1.0	4.2	3.1	6.4	2.2
Sawmills and wood preservation.....	3211	98.3	2.0	3.8	1.7	7.0	3.1
Plywood and engineered wood products.....	3212	72.3	-5.7	1.9	8.0	7.8	5.8
Other wood products.....	3219	221.9	2.9	5.1	2.2	5.7	0.5
Paper and paper products.....	322	373.4	-1.8	-2.5	-0.7	1.5	4.1
Pulp, paper, and paperboard mills.....	3221	105.1	-1.7	-3.4	-1.7	1.4	4.9
Converted paper products.....	3222	268.3	-1.4	-1.6	-0.2	1.6	3.3
Printing and related support activities.....	323	482.9	-1.2	-0.3	0.9	0.8	1.2
Printing and related support activities.....	3231	482.9	-1.2	-0.3	0.9	0.8	1.2
Petroleum and coal products.....	324	111.6	2.7	2.3	-0.4	1.6	-0.7
Petroleum and coal products.....	3241	111.6	2.7	2.3	-0.4	1.6	-0.7
Chemicals.....	325	815.4	0.9	2.1	1.2	4.4	2.2
Basic chemicals.....	3251	147.5	-4.1	0.3	4.5	3.9	3.6
Agricultural chemicals.....	3253	37.2	-4.6	0.7	5.5	4.7	4.0
Pharmaceuticals and medicines.....	3254	282.4	4.5	1.0	-3.4	6.3	5.2
Paints, coatings, and adhesives.....	3255	60.3	-4.8	-0.2	4.9	6.4	6.6
Plastics and rubber products.....	326	678.6	2.5	6.9	4.3	3.7	-3.1
Plastics products.....	3261	544.5	2.7	6.9	4.0	3.4	-3.3
Rubber products.....	3262	134.1	1.6	7.2	5.5	4.8	-2.3
Nonmetallic mineral products.....	327	400.5	1.6	5.7	4.1	4.2	-1.5
Clay products and refractories.....	3271	47.6	4.7	1.6	-2.9	1.7	0.1
Glass and glass products.....	3272	91.7	-7.0	8.7	16.8	2.7	-5.5
Cement and concrete products.....	3273	173.8	4.3	4.4	0.1	4.1	-0.3
Lime and gypsum products.....	3274	14.5	3.6	9.5	5.7	13.6	3.7
Other nonmetallic mineral products.....	3279	72.9	2.1	5.9	3.7	5.2	-0.6

Table 1. Percent change in output per hour, unit labor costs, and related data, 2013-2014 — Continued

Industry	NAICS code	2014 Employment (thousands)	Percent change, 2013-2014				
			Output per hour	Output	Hours	Labor compensation	Unit labor costs
Primary metals.....	331	404.7	1.4	4.4	3.0	2.2	-2.1
Alumina and aluminum production.....	3313	59.8	-0.8	2.0	2.9	4.6	2.5
Foundries.....	3315	127.3	3.0	9.9	6.7	2.1	-7.0
Fabricated metal products.....	332	1,496.9	1.3	4.0	2.6	3.2	-0.8
Forging and stamping.....	3321	100.7	6.8	9.1	2.1	4.8	-3.9
Cutlery and hand tools.....	3322	38.8	5.0	-4.4	-9.0	2.9	7.7
Architectural and structural metals.....	3323	373.6	0.9	3.9	3.0	5.3	1.3
Spring and wire products.....	3326	44.6	1.6	9.5	7.8	1.2	-7.6
Machine shops and threaded products.....	3327	387.0	1.6	4.8	3.1	3.1	-1.6
Coating, engraving, and heat treating metals.....	3328	143.3	1.6	0.7	-0.8	2.2	1.4
Other fabricated metal products.....	3329	284.7	1.9	4.9	3.0	0.2	-4.5
Machinery.....	333	1,134.6	3.7	7.0	3.1	3.2	-3.5
Agriculture, construction, and mining machinery.....	3331	255.8	7.7	9.2	1.3	2.2	-6.4
Industrial machinery.....	3332	109.2	5.6	8.5	2.7	3.2	-4.9
HVAC and commercial refrigeration equipment.....	3334	128.7	0.8	5.2	4.4	2.9	-2.1
Metalworking machinery.....	3335	184.0	4.5	7.3	2.7	1.9	-5.0
Computer and electronic products.....	334	1,055.6	4.2	3.8	-0.4	0.8	-2.9
Semiconductors and electronic components.....	3344	368.6	9.8	8.0	-1.6	2.2	-5.4
Electronic instruments.....	3345	390.5	8.2	5.9	-2.1	-0.7	-6.3
Electrical equipment and appliances.....	335	376.7	3.2	1.6	-1.6	1.5	-0.1
Electric lighting equipment.....	3351	46.8	4.4	1.0	-3.2	1.5	0.6
Household appliances.....	3352	59.6	9.4	7.1	-2.0	2.1	-4.7
Electrical equipment.....	3353	144.6	1.1	0.3	-0.9	0.1	-0.1
Other electrical equipment and components.....	3359	125.7	2.9	1.2	-1.7	2.5	1.3
Transportation equipment.....	336	1,576.5	2.4	5.9	3.4	4.5	-1.3
Motor vehicles.....	3361	199.5	-3.3	8.5	12.3	7.8	-0.7
Motor vehicle parts.....	3363	539.2	1.9	6.1	4.0	6.7	0.6
Aerospace products and parts.....	3364	496.3	3.3	2.1	-1.2	1.9	-0.2
Ship and boat building.....	3366	139.8	6.7	11.4	4.4	3.6	-7.0
Other transportation equipment.....	3369	34.2	5.4	8.8	3.2	-2.0	-9.9
Furniture and related products.....	337	402.8	1.4	7.0	5.5	4.6	-2.2
Household and institutional furniture.....	3371	259.7	2.8	11.4	8.4	5.9	-4.9
Miscellaneous manufacturing.....	339	640.9	3.3	4.5	1.1	3.7	-0.8
Medical equipment and supplies.....	3391	318.4	4.2	6.2	1.9	4.7	-1.3

Table 2. Percent change in output per hour, unit labor costs, and related data, 2012-2013

Industry	NAICS code	2013 Employment (thousands)	Percent change, 2012-2013				
			Output per hour	Output	Hours	Labor compensation	Unit labor costs
Mining							
Mining.....	21	827.3	9.0	8.7	-0.3	2.5	-5.6
Oil and gas extraction.....	211	195.6	14.0	11.2	-2.4	2.7	-7.6
Oil and gas extraction.....	2111	195.6	14.0	11.2	-2.4	2.7	-7.6
Mining, except oil and gas.....	212	209.9	6.4	0.6	-5.5	-3.0	-3.6
Coal mining.....	2121	78.1	7.7	-3.0	-9.9	-8.3	-5.4
Metal ore mining.....	2122	44.5	8.3	1.4	-6.4	0.7	-0.7
Nonmetallic mineral mining and quarrying.....	2123	87.3	4.8	4.5	-0.3	1.8	-2.6
Support activities for mining.....	213	421.8	-1.8	1.3	3.2	5.3	3.9
Support activities for mining.....	2131	421.8	-1.8	1.3	3.2	5.3	3.9
Manufacturing							
Food.....	311	1,522.9	1.7	1.7	0.0	2.1	0.4
Animal food.....	3111	59.2	0.9	1.7	0.8	3.0	1.2
Grain and oilseed milling.....	3112	60.3	3.9	3.2	-0.7	0.9	-2.2
Sugar and confectionery products.....	3113	73.2	-1.5	4.9	6.6	3.9	-1.0
Fruit and vegetable preserving and specialty.....	3114	170.5	7.1	2.3	-4.4	0.4	-1.9
Dairy products.....	3115	135.0	0.7	-0.4	-1.1	1.5	1.9
Animal slaughtering and processing.....	3116	483.4	1.6	1.4	-0.1	2.5	1.0
Seafood product preparation and packaging.....	3117	38.8	7.4	5.2	-2.1	2.1	-2.9
Bakeries and tortilla manufacturing.....	3118	318.4	0.1	0.7	0.6	0.1	-0.6
Other food products.....	3119	184.1	-0.8	2.1	3.0	5.3	3.1
Beverages and tobacco products.....	312	204.9	-7.6	1.7	10.1	6.4	4.6
Beverages.....	3121	190.7	-7.8	2.0	10.7	8.2	6.0
Tobacco and tobacco products.....	3122	14.2	-1.3	0.7	2.0	-4.5	-5.1
Textile mills.....	313	123.6	8.2	3.5	-4.3	3.6	0.1
Fiber, yarn, and thread mills.....	3131	28.2	7.8	5.1	-2.4	4.4	-0.7
Fabric mills.....	3132	58.2	6.6	1.8	-4.5	4.2	2.3
Textile and fabric finishing and coating mills.....	3133	37.2	10.6	4.4	-5.6	2.1	-2.2
Textile product mills.....	314	128.1	6.5	2.8	-3.4	3.1	0.2
Textile furnishings mills.....	3141	56.2	3.7	1.6	-2.1	3.5	1.9
Other textile product mills.....	3149	71.9	9.6	4.6	-4.5	2.7	-1.8
Apparel.....	315	163.0	-0.7	-3.2	-2.6	-1.9	1.4
Apparel knitting mills.....	3151	16.3	30.5	6.5	-18.4	-2.9	-8.8
Cut and sew apparel.....	3152	136.8	-4.6	-4.9	-0.4	-2.3	2.8
Accessories and other apparel.....	3159	9.9	-3.3	-1.9	1.5	2.9	4.9
Leather and allied products.....	316	34.1	4.3	-2.4	-6.4	2.4	4.9
Leather and hide tanning and finishing.....	3161	5.0	25.2	9.9	-12.2	1.4	-7.7
Footwear.....	3162	13.9	-12.7	-12.7	0.0	3.7	18.8
Other leather products.....	3169	15.2	10.4	-0.4	-9.9	1.1	1.6
Wood products.....	321	375.7	-1.1	4.5	5.6	7.2	2.6
Sawmills and wood preservation.....	3211	93.3	-3.4	3.3	6.9	7.6	4.1
Plywood and engineered wood products.....	3212	68.0	2.8	7.3	4.3	11.3	3.8
Other wood products.....	3219	214.4	-0.4	4.9	5.4	5.5	0.6
Paper and paper products.....	322	380.2	0.9	1.4	0.4	2.0	0.6
Pulp, paper, and paperboard mills.....	3221	108.8	-0.1	0.4	0.5	1.5	1.1
Converted paper products.....	3222	271.4	0.4	0.8	0.4	2.3	1.5
Printing and related support activities.....	323	473.9	1.7	0.6	-1.2	0.2	-0.3
Printing and related support activities.....	3231	473.9	1.7	0.6	-1.2	0.2	-0.3
Petroleum and coal products.....	324	110.7	6.0	2.8	-3.0	3.4	0.6
Petroleum and coal products.....	3241	110.7	6.0	2.8	-3.0	3.4	0.6
Chemicals.....	325	797.3	-1.1	0.2	1.3	3.3	3.1
Basic chemicals.....	3251	142.6	2.5	2.1	-0.5	0.5	-1.5
Resin, rubber, and artificial fibers.....	3252	92.3	-1.1	-0.8	0.2	1.5	2.4

Table 2. Percent change in output per hour, unit labor costs, and related data, 2012-2013 — Continued

Industry	NAICS code	2013 Employment (thousands)	Percent change, 2012-2013				
			Output per hour	Output	Hours	Labor compensation	Unit labor costs
Agricultural chemicals.....	3253	38.8	3.4	16.1	12.2	7.1	-7.8
Pharmaceuticals and medicines.....	3254	276.7	-6.1	-4.2	2.1	7.1	11.7
Paints, coatings, and adhesives.....	3255	58.5	-4.2	4.4	9.0	4.2	-0.2
Soaps, cleaning compounds, and toiletries.....	3256	104.9	3.4	-1.4	-4.6	2.9	4.4
Other chemical products and preparations.....	3259	83.5	-3.8	-3.4	0.3	-3.4	0.1
Plastics and rubber products.....	326	660.9	-0.6	1.6	2.3	3.3	1.7
Plastics products.....	3261	530.0	-0.5	2.6	3.2	3.1	0.5
Rubber products.....	3262	130.9	-1.5	-2.5	-1.1	4.0	6.6
Nonmetallic mineral products.....	327	391.4	3.9	3.6	-0.3	4.0	0.4
Clay products and refractories.....	3271	46.5	11.4	1.4	-9.0	2.5	1.1
Glass and glass products.....	3272	89.1	1.2	0.1	-1.1	2.3	2.1
Cement and concrete products.....	3273	169.8	3.5	3.2	-0.2	3.9	0.6
Lime and gypsum products.....	3274	13.9	6.6	4.0	-2.4	7.3	3.2
Other nonmetallic mineral products.....	3279	72.1	1.6	9.3	7.5	6.7	-2.3
Primary metals.....	331	399.7	5.6	3.6	-1.8	0.5	-3.0
Iron and steel mills and ferroalloy production.....	3311	92.7	7.3	3.5	-3.5	0.1	-3.3
Steel products from purchased steel.....	3312	60.3	-0.9	-0.2	0.7	-1.3	-1.1
Alumina and aluminum production.....	3313	58.5	10.0	7.1	-2.7	5.2	-1.8
Other nonferrous metal production.....	3314	62.5	3.1	4.1	1.0	-1.2	-5.1
Foundries.....	3315	125.7	3.4	0.4	-2.8	0.2	-0.3
Fabricated metal products.....	332	1,462.8	-1.5	0.8	2.4	2.8	2.0
Forging and stamping.....	3321	98.9	1.7	1.1	-0.6	2.1	0.9
Cutlery and hand tools.....	3322	42.2	-1.8	-2.3	-0.5	-0.4	2.0
Architectural and structural metals.....	3323	353.6	-0.5	2.4	3.0	5.0	2.5
Boilers, tanks, and shipping containers.....	3324	97.8	-3.9	-0.6	3.5	3.3	3.9
Hardware.....	3325	23.6	6.7	6.7	0.0	6.5	-0.1
Spring and wire products.....	3326	43.1	-8.9	-4.3	5.0	-0.5	4.0
Machine shops and threaded products.....	3327	380.3	0.0	1.3	1.3	2.9	1.5
Coating, engraving, and heat treating metals.....	3328	142.0	-3.1	1.3	4.6	2.2	0.9
Other fabricated metal products.....	3329	281.3	-3.2	-0.6	2.8	1.1	1.6
Machinery.....	333	1,114.6	-4.2	-4.9	-0.7	2.0	7.2
Agriculture, construction, and mining machinery.....	3331	252.4	-9.6	-9.6	-0.1	0.6	11.3
Industrial machinery.....	3332	108.1	-1.1	0.0	1.1	3.4	3.4
Commercial and service industry machinery.....	3333	86.9	1.4	-2.1	-3.4	1.9	4.0
HVAC and commercial refrigeration equipment.....	3334	127.6	3.6	0.5	-3.1	1.9	1.4
Metalworking machinery.....	3335	183.8	0.9	-1.1	-2.0	2.0	3.1
Turbine and power transmission equipment.....	3336	98.5	-12.3	-9.6	3.0	-3.0	7.3
Other general purpose machinery.....	3339	257.3	-2.0	-2.4	-0.5	4.3	6.9
Computer and electronic products.....	334	1,071.2	-1.9	-4.1	-2.2	-1.2	3.0
Computer and peripheral equipment.....	3341	158.8	-6.5	-4.1	2.6	-20.2	-16.8
Communications equipment.....	3342	101.1	24.3	11.3	-10.4	14.0	2.4
Audio and video equipment.....	3343	19.4	7.0	4.8	-2.1	1.8	-2.8
Semiconductors and electronic components.....	3344	376.7	-6.8	-9.9	-3.3	1.0	12.1
Electronic instruments.....	3345	395.8	-3.8	-3.9	-0.2	-3.7	0.2
Magnetic media manufacturing and reproduction.....	3346	19.4	-0.2	-11.2	-11.0	-4.7	7.4
Electrical equipment and appliances.....	335	377.7	-2.2	-0.1	2.2	1.7	1.8
Electric lighting equipment.....	3351	48.0	-1.8	-0.1	1.7	-1.3	-1.2
Household appliances.....	3352	57.7	3.1	3.5	0.3	1.3	-2.1
Electrical equipment.....	3353	145.1	-2.4	-1.5	1.0	1.9	3.4
Other electrical equipment and components.....	3359	126.9	-4.9	-0.4	4.7	2.6	3.0
Transportation equipment.....	336	1,516.2	1.8	4.2	2.4	4.9	0.7
Motor vehicles.....	3361	181.7	1.6	6.5	4.8	7.3	0.8
Motor vehicle bodies and trailers.....	3362	135.5	4.1	8.3	4.1	9.1	0.7
Motor vehicle parts.....	3363	511.5	0.3	5.0	4.7	7.0	1.9
Aerospace products and parts.....	3364	498.0	3.8	2.3	-1.5	3.9	1.6
Railroad rolling stock.....	3365	25.1	6.1	14.1	7.6	0.6	-11.8

Table 2. Percent change in output per hour, unit labor costs, and related data, 2012-2013 — Continued

Industry	NAICS code	2013 Employment (thousands)	Percent change, 2012-2013				
			Output per hour	Output	Hours	Labor compensation	Unit labor costs
Ship and boat building.....	3366	132.1	0.5	4.5	4.1	1.0	-3.4
Other transportation equipment.....	3369	32.3	-1.6	-4.4	-2.9	-6.3	-1.9
Furniture and related products.....	337	386.5	1.0	3.4	2.4	5.1	1.6
Household and institutional furniture.....	3371	246.1	3.0	5.0	2.0	6.9	1.8
Office furniture and fixtures.....	3372	105.2	-0.8	1.2	2.0	2.3	1.0
Other furniture-related products.....	3379	35.2	-3.3	3.4	6.9	5.4	1.9
Miscellaneous manufacturing.....	339	635.9	1.7	2.9	1.2	4.0	1.1
Medical equipment and supplies.....	3391	316.6	3.1	2.5	-0.6	3.5	0.9
Other miscellaneous manufacturing.....	3399	319.3	0.3	3.5	3.1	4.9	1.4

Table 3. Average annual percent change in output per hour, unit labor costs, and related data, 1987-2013

Industry	NAICS code	Average annual percent change, 1987-2013				
		Output per hour	Output	Hours	Labor compensation	Unit labor costs
Mining						
Mining.....	21	-0.2	0.7	0.9	5.2	4.5
Oil and gas extraction.....	211	0.6	0.6	0.1	5.6	5.0
Oil and gas extraction.....	2111	0.6	0.6	0.1	5.6	5.0
Mining, except oil and gas.....	212	1.4	0.2	-1.2	2.0	1.8
Coal mining.....	2121	1.6	-0.6	-2.1	0.8	1.3
Metal ore mining.....	2122	0.4	1.0	0.6	4.8	3.7
nonmetallic mineral mining and quarrying.....	2123	1.4	0.4	-0.9	2.4	2.0
Support activities for mining.....	213	2.3	5.5	3.1	8.3	2.6
Support activities for mining.....	2131	2.3	5.5	3.1	8.3	2.6
Manufacturing						
Food.....	311	1.2	1.5	0.2	2.9	1.4
Animal food.....	3111	2.1	1.8	-0.4	3.1	1.3
Grain and oilseed milling.....	3112	2.0	1.4	-0.6	2.1	0.7
Sugar and confectionery products.....	3113	1.4	0.5	-0.8	2.1	1.6
Fruit and vegetable preserving and specialty.....	3114	1.4	1.2	-0.3	2.7	1.5
Dairy products.....	3115	1.8	1.5	-0.4	3.1	1.6
Animal slaughtering and processing.....	3116	1.0	1.9	0.9	3.3	1.4
Seafood product preparation and packaging.....	3117	0.9	0.0	-0.9	2.8	2.8
Bakeries and tortilla manufacturing.....	3118	0.4	0.3	-0.1	2.0	1.7
Other food products.....	3119	0.4	2.0	1.5	4.1	2.1
Beverages and tobacco products.....	312	0.5	0.0	-0.5	1.6	1.6
Beverages.....	3121	1.4	1.5	0.1	2.3	0.7
Tobacco and tobacco products.....	3122	2.1	-2.7	-4.7	-1.2	1.6
Textile mills.....	313	3.4	-2.2	-5.5	-2.7	-0.5
Fiber, yarn, and thread mills.....	3131	3.3	-1.9	-5.0	-2.6	-0.8
Fabric mills.....	3132	3.9	-2.5	-6.2	-2.7	-0.2
Textile and fabric finishing and coating mills.....	3133	1.4	-3.1	-4.5	-2.6	0.5
Textile product mills.....	314	0.9	-1.8	-2.7	0.4	2.2
Textile furnishings mills.....	3141	0.6	-2.5	-3.1	-0.5	2.0
Other textile product mills.....	3149	1.8	-0.6	-2.4	1.5	2.1
Apparel.....	315	-0.7	-7.1	-6.4	-5.5	1.7
Apparel knitting mills.....	3151	0.6	-6.7	-7.3	-6.2	0.6
Cut and sew apparel.....	3152	-0.8	-7.1	-6.4	-5.5	1.7
Accessories and other apparel.....	3159	-1.5	-6.8	-5.4	-4.4	2.6
Leather and allied products.....	316	1.1	-4.1	-5.1	-2.9	1.3
Leather and hide tanning and finishing.....	3161	0.9	-2.9	-3.7	-2.9	0.0
Footwear.....	3162	1.6	-5.1	-6.6	-3.5	1.7
Other leather products.....	3169	-0.5	-3.9	-3.5	-2.0	2.0
Wood products.....	321	1.5	-0.1	-1.6	1.3	1.5
Sawmills and wood preservation.....	3211	1.9	0.0	-1.9	0.9	0.9
Plywood and engineered wood products.....	3212	1.4	-0.1	-1.5	1.2	1.3
Other wood products.....	3219	1.1	-0.4	-1.6	1.6	2.1
Paper and paper products.....	322	2.3	0.2	-2.0	1.2	1.0
Pulp, paper, and paperboard mills.....	3221	2.8	-0.4	-3.1	0.5	0.8
Converted paper products.....	3222	1.7	0.3	-1.4	1.8	1.5
Printing and related support activities.....	323	1.4	-0.6	-2.0	0.5	1.1
Printing and related support activities.....	3231	1.4	-0.6	-2.0	0.5	1.1
Petroleum and coal products.....	324	2.3	1.2	-1.1	3.8	2.6
Petroleum and coal products.....	3241	2.3	1.2	-1.1	3.8	2.6
Chemicals.....	325	1.7	1.1	-0.7	2.9	1.8
Basic chemicals.....	3251	2.7	0.8	-1.9	2.1	1.3
Resin, rubber, and artificial fibers.....	3252	2.6	0.7	-1.8	2.0	1.3

Table 3. Average annual percent change in output per hour, unit labor costs, and related data, 1987-2013 — Continued

Industry	NAICS code	Average annual percent change, 1987-2013				
		Output per hour	Output	Hours	Labor compensation	Unit labor costs
Agricultural chemicals.....	3253	2.4	1.5	-0.9	2.5	1.0
Pharmaceuticals and medicines.....	3254	-0.3	1.6	1.9	5.3	3.7
Paints, coatings, and adhesives.....	3255	0.8	-0.4	-1.2	2.1	2.5
Soaps, cleaning compounds, and toiletries.....	3256	2.2	1.6	-0.6	2.4	0.8
Other chemical products and preparations.....	3259	2.3	0.1	-2.1	0.9	0.8
Plastics and rubber products.....	326	2.0	1.4	-0.6	2.5	1.1
Plastics products.....	3261	1.9	1.7	-0.2	2.9	1.2
Rubber products.....	3262	2.2	0.4	-1.8	1.2	0.8
Nonmetallic mineral products.....	327	1.3	0.1	-1.2	1.5	1.4
Clay products and refractories.....	3271	0.9	-1.6	-2.4	-0.3	1.3
Glass and glass products.....	3272	2.6	0.5	-2.1	0.9	0.4
Cement and concrete products.....	3273	0.3	-0.1	-0.4	1.9	2.0
Lime and gypsum products.....	3274	1.2	-0.6	-1.8	2.1	2.8
Other nonmetallic mineral products.....	3279	1.7	1.1	-0.5	2.5	1.4
Primary metals.....	331	2.9	0.9	-2.0	1.1	0.2
Iron and steel mills and ferroalloy production.....	3311	4.0	1.5	-2.4	0.7	-0.8
Steel products from purchased steel.....	3312	0.5	0.3	-0.3	2.2	1.9
Alumina and aluminum production.....	3313	3.0	0.6	-2.3	1.2	0.5
Other nonferrous metal production.....	3314	2.4	0.4	-2.0	2.2	1.8
Foundries.....	3315	2.1	-0.1	-2.1	0.7	0.8
Fabricated metal products.....	332	1.2	1.0	-0.2	2.5	1.5
Forging and stamping.....	3321	2.7	1.6	-1.1	2.0	0.5
Cutlery and hand tools.....	3322	1.2	-1.0	-2.2	0.3	1.4
Architectural and structural metals.....	3323	0.6	0.7	0.2	2.9	2.2
Boilers, tanks, and shipping containers.....	3324	0.9	0.7	-0.2	2.1	1.4
Hardware.....	3325	1.1	-2.6	-3.6	-1.5	1.1
Spring and wire products.....	3326	2.2	-0.2	-2.4	1.1	1.3
Machine shops and threaded products.....	3327	1.9	2.7	0.9	4.0	1.2
Coating, engraving, and heat treating metals.....	3328	2.2	2.4	0.2	3.1	0.6
Other fabricated metal products.....	3329	0.8	0.2	-0.6	2.0	1.7
Machinery.....	333	2.4	1.6	-0.7	2.3	0.6
Agriculture, construction, and mining machinery.....	3331	2.5	3.2	0.7	3.5	0.4
Industrial machinery.....	3332	1.9	0.8	-1.1	1.7	0.9
Commercial and service industry machinery.....	3333	2.1	-0.2	-2.2	0.9	1.1
HVAC and commercial refrigeration equipment.....	3334	2.3	1.2	-1.0	2.2	0.9
Metalworking machinery.....	3335	2.0	0.6	-1.4	1.3	0.7
Turbine and power transmission equipment.....	3336	1.9	1.8	-0.1	1.8	0.0
Other general purpose machinery.....	3339	2.4	1.6	-0.8	3.0	1.3
Computer and electronic products.....	334	10.6	8.0	-2.4	0.8	-6.6
Computer and peripheral equipment.....	3341	18.1	13.5	-3.9	-3.6	-15.0
Communications equipment.....	3342	6.4	3.0	-3.2	1.3	-1.6
Audio and video equipment.....	3343	3.0	-1.4	-4.3	-0.5	1.0
Semiconductors and electronic components.....	3344	15.0	13.1	-1.6	1.0	-10.7
Electronic instruments.....	3345	3.6	1.6	-1.9	1.8	0.1
Magnetic media manufacturing and reproduction.....	3346	0.8	-2.0	-2.8	-1.1	0.9
Electrical equipment and appliances.....	335	2.2	0.0	-2.2	1.0	1.0
Electric lighting equipment.....	3351	1.7	-0.5	-2.2	0.9	1.5
Household appliances.....	3352	3.3	0.0	-3.2	-0.8	-0.8
Electrical equipment.....	3353	1.7	-0.4	-2.0	1.0	1.4
Other electrical equipment and components.....	3359	2.0	0.2	-1.7	1.8	1.6
Transportation equipment.....	336	3.1	1.9	-1.2	1.4	-0.5
Motor vehicles.....	3361	3.8	1.8	-1.9	0.9	-0.9
Motor vehicle bodies and trailers.....	3362	1.5	1.5	0.1	3.5	1.9
Motor vehicle parts.....	3363	3.3	2.7	-0.6	0.9	-1.7
Aerospace products and parts.....	3364	2.7	0.8	-1.9	1.3	0.5

Table 3. Average annual percent change in output per hour, unit labor costs, and related data, 1987-2013 — Continued

Industry	NAICS code	Average annual percent change, 1987-2013				
		Output per hour	Output	Hours	Labor compensation	Unit labor costs
Railroad rolling stock.....	3365	5.7	5.7	0.1	3.7	-1.9
Ship and boat building.....	3366	2.0	0.9	-1.0	2.6	1.7
Other transportation equipment.....	3369	4.0	3.7	-0.3	3.0	-0.7
Furniture and related products.....	337	1.7	-0.2	-1.9	1.2	1.4
Household and institutional furniture.....	3371	1.4	-0.9	-2.2	0.8	1.7
Office furniture and fixtures.....	3372	1.6	0.2	-1.3	1.6	1.3
Other furniture-related products.....	3379	2.5	1.4	-1.0	1.9	0.4
Miscellaneous manufacturing.....	339	2.5	2.1	-0.4	3.5	1.4
Medical equipment and supplies.....	3391	3.1	4.0	0.8	5.0	0.9
Other miscellaneous manufacturing.....	3399	1.6	0.3	-1.3	2.0	1.7