NEWS RELEASE
BUREAU OF LABOR STATISTICS
U. S. DEPARTMENT OF LABOR

For release 10:00 a.m. (ET) Thursday, August 28, 2025 USDL-25-1325

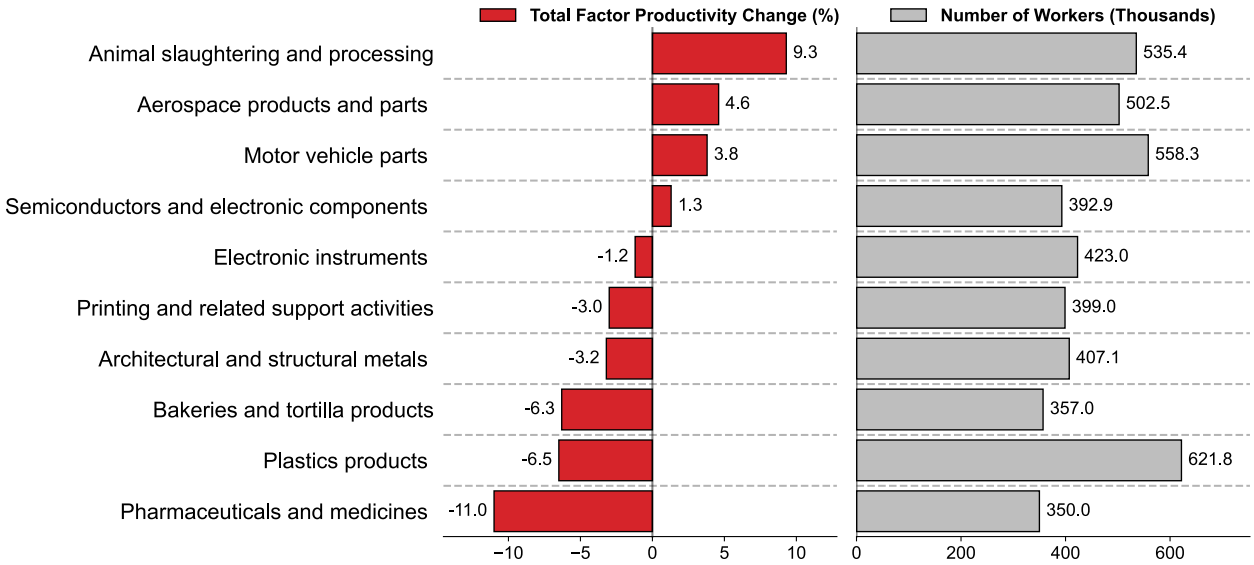
Technical information: (202) 691-5606 • productivity@bls.gov • www.bls.gov/productivity
Media contact: (202) 691-5902 • PressOffice@bls.gov

TOTAL FACTOR PRODUCTIVITY FOR DETAILED INDUSTRIES – 2022

Total factor productivity–defined as output per unit of combined inputs–fell in 66 of the 86 4-digit NAICS manufacturing industries in 2022, the U.S. Bureau of Labor Statistics reported today. Among durable manufacturing industries, 38 of 51 had total factor productivity declines led by an 11.9-percent decline in the HVAC and commercial refrigeration equipment industry. Total factor productivity declined in 28 of 35 nondurable manufacturing industries led by a 15.9-percent decline in paints, coatings, and adhesives.

Four of the ten largest 4-digit NAICS manufacturing industries (those with employment over 350,000 workers) experienced increasing total factor productivity in 2022: animal slaughtering and processing (+9.3 percent), aerospace products and parts (+4.6 percent), motor vehicle parts (+3.8 percent), and semiconductors and electronic components (+1.3 percent). (See chart 1.) Output rose in 6 of these 10 industries led by a 9.4-percent increase in motor vehicle parts. Combined inputs (capital, hours worked, materials, energy, and purchased services) declined in two of these industries: animal slaughtering and processing (-3.2 percent) and aerospace products and parts (-0.6 percent). (See table 1.)

Chart 1. Total factor productivity in largest manufacturing industries, 2022



Six of the 20 industries with rising total factor productivity in 2022 had increases of more than 7.0 percent:

- Glass and glass products (+13.1 percent)
- Leather and hide tanning and finishing (+10.2 percent)
- Apparel knitting mills (+9.4 percent)
- Animal slaughtering and processing (+9.3 percent)
- Communications equipment (+8.3 percent)
- Resin, rubber, and artificial fibers (+7.7 percent)

Eight industries posted total factor productivity declines of more than 10.0 percent:

- Paints, coatings, and adhesives (-15.9 percent)
- Agricultural chemicals (-14.8 percent)
- HVAC and commercial refrigeration equipment (-11.9 percent)
- Spring and wire products (-11.8 percent)
- Pharmaceuticals and medicines (-11.0 percent)
- Electrical equipment (-10.7 percent)
- Boilers, tanks, and shipping containers (-10.7 percent)
- Iron and steel mills and ferroalloys (-10.6 percent)

Total Factor Productivity: Definition and Concepts

Changes in total factor productivity show the relationship between changes in real output and the combined inputs used to produce that output. These combined inputs include hours worked, capital, and intermediate inputs (energy, materials, and purchased services).

Measures of total factor productivity capture a variety of factors that influence economic growth that are not specifically accounted for among measured inputs, including technological change, returns to scale, enhancements in managerial and staff skills, changes in the organization of production, and other efficiency improvements. Total factor productivity reflects these factors. See the technical note for more information.

Components of Total Factor Productivity Growth: Output and Combined Inputs

Output increased in 42 of 86 manufacturing industries in 2022, compared to 65 industries in 2021. (See chart 2.) Among the industries that posted gains, output increased by 15.0 percent or more in the following seven industries in 2022:

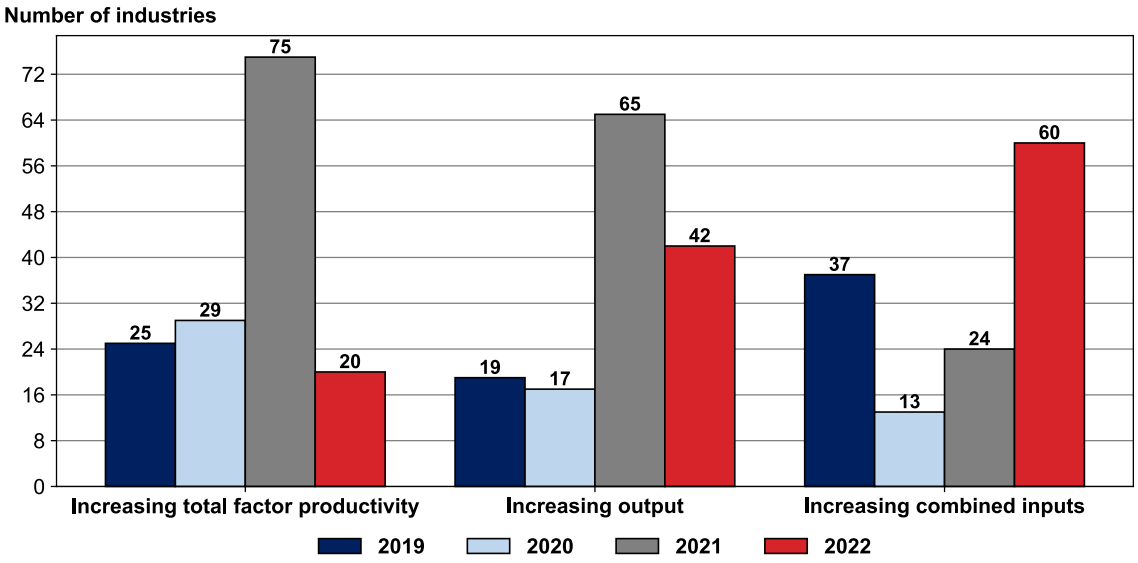
- Other electrical equipment and components (+24.6 percent)
- Apparel knitting mills (+22.7 percent)
- Railroad rolling stock (+20.5 percent)
- Steel products from purchased steel (+19.0 percent)
- Communications equipment (+18.2 percent)
- Motor vehicles (+17.3 percent)
- Glass and glass products (+15.1 percent)

Combined inputs of capital, labor, and intermediate inputs rose in 60 of 86 manufacturing industries in 2022, compared to 24 in 2021. Seventy-two industries saw increases in hours worked. Intermediate inputs grew in 57 industries. Capital also increased in 41 of the industries reported.

Of the industries with rising combined inputs in 2022, six had gains of more than 11.0 percent:

- Steel products from purchased steel (+22.4 percent)
- Other electrical equipment and components (+16.6 percent)
- Railroad rolling stock (+13.9 percent)
- Accessories and other apparel (+12.8 percent)
- Apparel knitting mills (+12.2 percent)
- Motor vehicles (+11.3 percent)

Chart 2. Number of manufacturing industries with increases in total factor productivity, output, and combined inputs, 2019-22



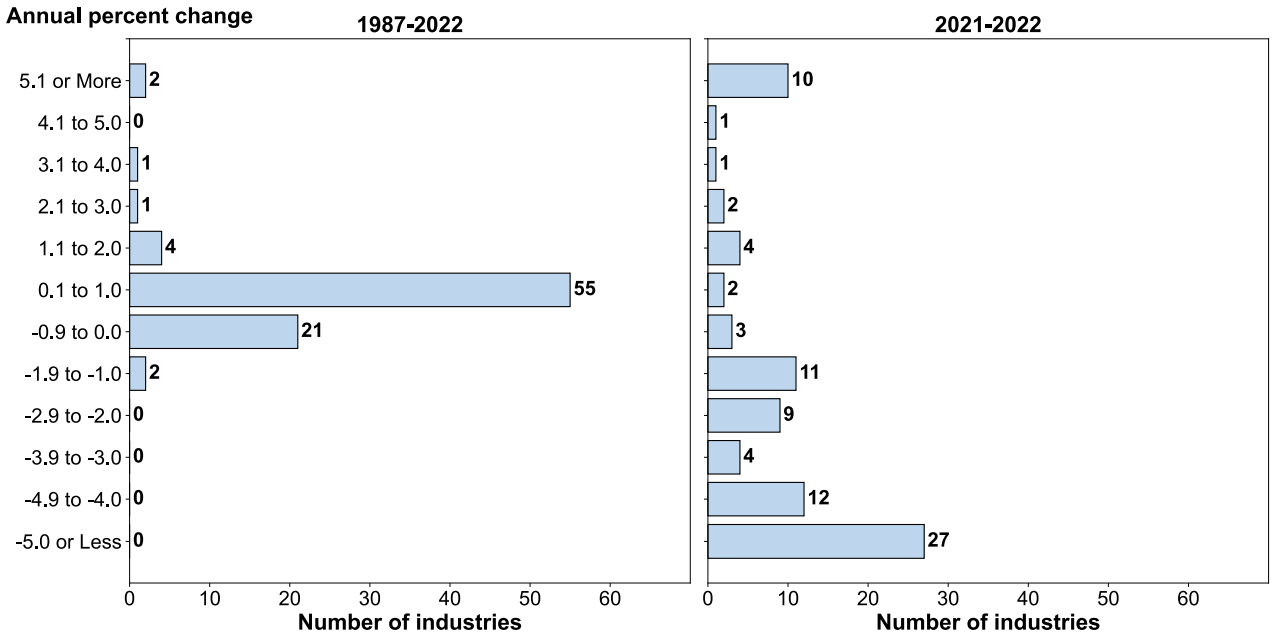
Trends in Total Factor Productivity for Selected Time Periods

Both year-to-year movements and long-term trends in industry total factor productivity may reflect cyclical changes in the economy. This was particularly true in 2022 due to economic volatility induced by the COVID-19 pandemic. While long-term annual percent changes in total factor productivity are affected by economic conditions such as the pandemic, these historical trends are nevertheless more reliable indicators of industry performance.

More industries saw total factor productivity growth over the long term than the short term, a reversal from 2021. Over the long-term period from 1987 to 2022, total factor productivity grew in 63 out of 86 manufacturing industries, compared to 20 from 2021 to 2022. (See tables 1 and 2.) Annual rates of change in total factor productivity for all but four manufacturing industries ranged between -2.0 percent and +2.0 percent per year over the long term. (See chart 3.) In contrast, total factor productivity decreased by 2.0 percent or more in 52 industries in 2022.

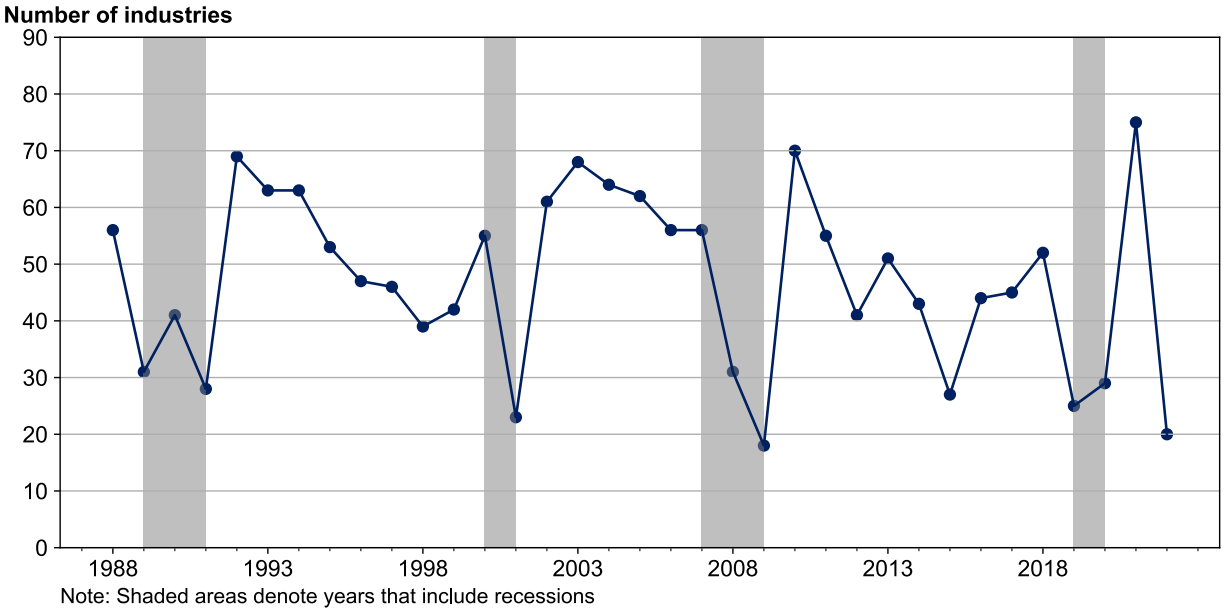
Although the distribution of total factor productivity growth for all the manufacturing industries may change significantly annually, 55 out of 86 industries are clustered between an increase of 0.1 percent and 1.0 percent in the long run.

Chart 3. Distribution of total factor productivity growth for all manufacturing industries, 1987-2022 and 2021-2022



Between 1987 and 2022, the number of manufacturing industries with growth in total factor productivity was highest in 1992, 2003, 2010, and 2021. These were years of economic growth following recessions. In contrast, relatively few manufacturing industries saw total factor productivity growth in the recession years of 1991, 2001, 2009, and 2020. (See chart 4.)

Chart 4. Number of manufacturing industries with increases in total factor productivity, 1988-2022



Annual percent changes in total factor productivity by industry for periods between 1987 and 2022 are provided in table 3. Seventy manufacturing industries had total factor productivity growth from 2000 to 2007, the most of any period. The 1990 to 2000 period recorded the highest number of industries with growth in output (76) and combined inputs (70).

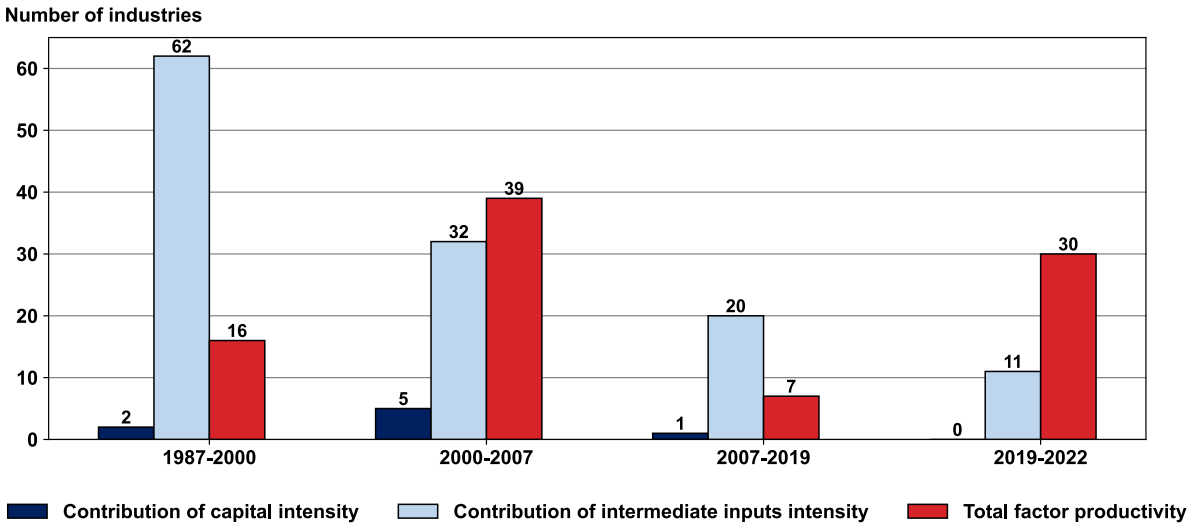
Total Factor Productivity as a Source of Labor Productivity Growth

Total factor productivity measures differ from the BLS labor productivity measures because they compare output to the combined inputs of hours worked, capital, and intermediate inputs. Labor productivity relates output only to hours worked. Mathematically, an industry's labor productivity is equal to total factor productivity plus the effects of factor substitutions, also known as the contributions of capital intensity and of intermediate inputs intensity. The contribution of capital intensity to labor productivity refers to the change that is directly attributed to the use of capital relative to labor hours. Similarly, the contribution of intermediate inputs intensity refers to the change that is directly attributed to the use of purchased inputs relative to labor hours.

Seventy-nine of the 86 manufacturing industries posted gains in labor productivity from 1987 to 2022. Among these industries, substitution of intermediate inputs for labor was the leading source of labor productivity growth. (See table 4.) Growth in the contribution of intermediate inputs intensity occurs when firms purchase a greater share of materials instead of using their own labor. Contribution of intermediate inputs intensity may also rise when firms substitute contracted labor for payroll labor.

Chart 5 illustrates sources of labor productivity growth for four selected periods between 1987 and 2022. For the majority of industries with labor productivity growth between 1987 and 2000, the contribution of intermediate inputs intensity was the greatest source of such growth. During the three successive time periods (2000-2007, 2007-2019, and 2019-2022), fewer industries experienced labor productivity growth that was primarily caused by contribution of intermediate inputs intensity. Total factor productivity's influence receded from 2007 to 2019, but this trend has since reversed. From 2019 to 2022, the majority of manufacturing industries owed labor productivity gains to total factor productivity.

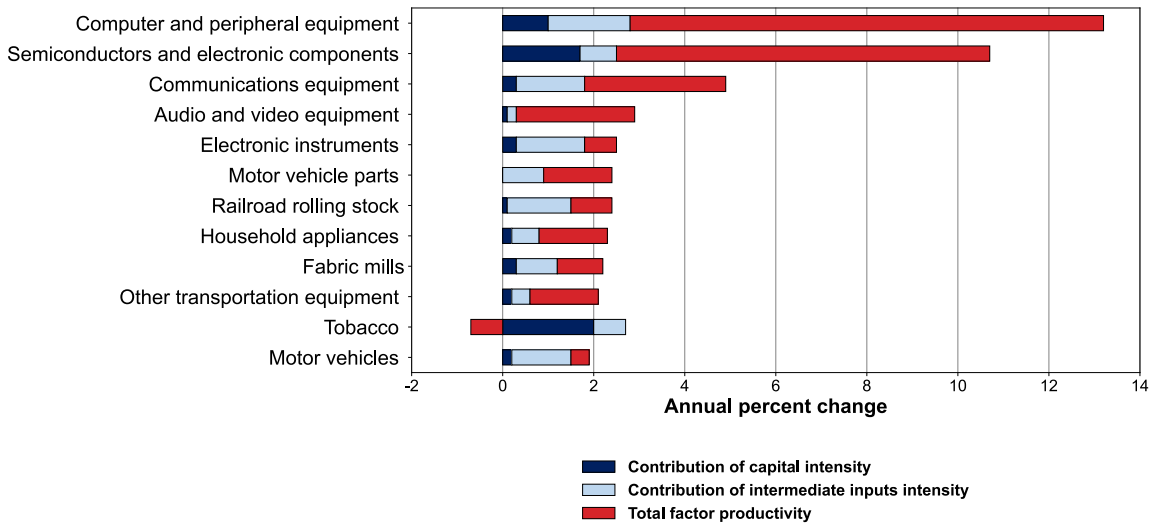
Chart 5. Greatest sources of labor productivity growth for manufacturing industries with increasing labor productivity, selected periods



Note: Chart only includes industries with a single largest source of labor productivity growth. Instances where the greatest source of labor productivity growth are equal among two or more sources are not pictured.

There were 12 manufacturing industries with labor productivity growth of at least 2.0 percent per year from 1987 to 2022. (See chart 6.) Of these 12 industries, total factor productivity was the dominant source of labor productivity growth in 8, including 4 industries that manufacture computers and electronic products (computer and peripheral equipment, semiconductors and electronic components, communications equipment, and audio and video equipment). Uniquely, the tobacco industry's labor productivity growth was fueled by the contribution of capital intensity.

Chart 6. Sources of labor productivity growth for manufacturing industries with greatest growth in labor productivity, 1987-2022



Additional Information

Measures of output and combined inputs for this release incorporate data from the 2022 Economic Census (Geographic area statistics) which were released in December 2024. In years without an Economic Census, total factor productivity measures for detailed manufacturing industries are based on data from annual economic surveys produced by the U.S. Census Bureau. These annual surveys are generally published approximately 1 year after the end of the calendar year being measured. Because of the longer publication schedule of the Economic Census, the 2022 total factor productivity data for detailed industries is being published with a 1-year lag behind BLS's standard publication schedule.

Durable manufacturing industries are those which produce durable goods. These are defined as tangible products that can be stored or inventoried and that have an average life of at least 3 years, including vehicles, appliances, and computers. Durable goods manufacturing industries are classified by the North American Industry Classification System (NAICS) under the codes beginning with 321, 327, 331, 332, 333, 334, 335, 336, 337, and 339.

Nondurable manufacturing industries are those which produce nondurable goods. These are defined as tangible products that can be stored or inventoried and that have an average life of less than 3 years, including food products, chemicals, and apparel. Nondurable goods manufacturing industries are classified by NAICS under the codes beginning with 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, and 326.

Access https://www.bls.gov/productivity/tables/total-factor-productivity-manufacturing-and-transportation-detailed-industries.xlsx for:

- Additional industries and sectors, including air transportation and line-haul railroads
- Detailed data series: indexes of total factor productivity and related measures; rates of change; and levels of industry employment, hours worked, sectoral output, and labor compensation

Subscribe to productivity news releases on the BLS website at https://public.govdelivery.com/accounts/USDOLBLS/subscriber/new.

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

Technical Note

Total Factor Productivity: Total factor productivity measures are derived by dividing an index of real industry output by an index of the combined inputs of labor, capital, and intermediate inputs. The total factor productivity indexes do not measure the specific contributions of capital, labor, and intermediate inputs. Rather, they reflect the joint influences on economic growth of a number of factors that are not specifically accounted for on the input side, including technological change, returns to scale, improved skills of the workforce, better management techniques, or other efficiency improvements.

Output: Industry output is measured as annual sectoral output, the total value, in real terms, of goods and services produced for sale outside the industry. Industry value of production is derived by adjusting industry shipments for changes in inventories and subtracting intra-industry transfers and resales. For most manufacturing industries, real output is measured by deflating nominal value of production, but for some industries physical quantities of output are measured.

Output measures are constructed using data primarily from the economic censuses and annual surveys of the Bureau of the Census, U.S. Department of Commerce, together with information on price changes chiefly from the Bureau of Labor Statistics (BLS).

Combined Inputs: The index of combined inputs is a Törnqvist index of separate quantity indexes of capital, labor, and intermediate inputs (including fuels, electricity, materials, and purchased services). The annual growth rates of the various inputs are aggregated using their relative cost shares as weights. The labor weight is based on labor compensation, including fringe benefits. The weight for intermediate inputs is based on the total cost of materials, fuels, electricity, and purchased services. The capital weight is based on total capital cost, which is calculated as the value of sectoral production minus the costs of labor compensation and intermediate inputs.

Capital Input: Capital input reflects the flow of services derived from the stock of physical assets. Capital services are estimated by calculating productive capital stocks and are assumed to be proportional to changes in these capital stocks for each asset. The capital index is a Törnqvist index of separate quantity indexes of equipment, structures, inventories, and land.

Physical capital is composed of 24 categories of equipment, 10 categories of structures, 3 categories of inventories, and land. Measures of total capital services for each industry are estimated by aggregating the capital stocks of individual asset types. Estimates of investment by asset type for each industry are derived using annual capital expenditures for detailed industries from the economic censuses and annual surveys of the Bureau of the Census. Additional annual investment data comes from the fixed asset accounts from the Bureau of Economic Analysis (BEA).

Annual investment data is supplemented with the 1997 benchmark capital flow table from the BEA as well as the 2008, 2012, and 2017 Annual Capital Expenditures Surveys from the Bureau of the Census. Price changes are removed from the annual investment data before calculating stocks. Price deflators for each asset category are constructed by combining detailed price indexes (mostly BLS Producer Price Indexes) with weights that reflect each industry's use of individual asset commodities.

The capital stocks for the different assets are combined using weights based on estimated annual rental prices for each asset type, averaged between two time periods. Each rental price reflects the nominal rate of return to all assets within the industry and the rates of economic depreciation and revaluation of the specific asset. Rental prices are adjusted for the effects of taxes.

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 the 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 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.

Intermediate Inputs: The index of intermediate inputs is a Törnqvist index of separate quantities of materials, purchased services, fuels, and electricity consumed by each industry. Except for electricity consumed by manufacturing industries, for which direct quantity data are available, quantities are derived by deflating current dollar values with appropriate price deflators.

Nominal values of materials, fuels and electricity, along with quantities of electricity consumed by each industry are obtained from economic censuses and annual surveys of the Bureau of the Census. To avoid double counting, an adjustment is made to the materials estimates to exclude the value of intra-industry commodity transfers. Purchased business services are estimated using annual industry data and benchmark input-output tables from BEA.

Constant dollar materials consumed are derived by dividing annual current dollar industry purchases by a weighted price deflator for each industry. Aggregate materials deflators are constructed for each industry by combining producer price indexes and import price indexes from BLS for detailed commodities. The deflators are combined using weights based on detailed commodity data from the BEA benchmark input-output tables. Aggregate price indexes to deflate purchased business services are constructed in a similar manner using consumer price indexes (CPIs), PPIs, and deflators developed by BEA. The value of fuels consumed by each industry is deflated with a weighted price deflator based on PPIs for individual fuel categories; the weights reflect fuel expenditures by industry from the Energy Information Administration (EIA), U.S. Department of Energy.

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.

Contributions to Labor Productivity:

> **Contribution of Capital Intensity:** Capital intensity is the ratio of capital services to hours worked in the production process. Multiplying the change in capital intensity times capital's share of combined inputs yields the contribution of capital intensity.

Contribution of Intermediate Inputs Intensity: Intermediate inputs intensity is the ratio of intermediate inputs to hours worked in the production process. Multiplying the change in intermediate inputs intensity times intermediate inputs' share of combined inputs yields the contribution of intermediate inputs intensity.

When positive, both the contribution of capital intensity and the contribution of intermediate inputs intensity represent sources of labor productivity growth. These statistics represent factor substitution in the production process. In other words, positive change in the contribution of capital intensity indicates that labor productivity growth is being achieved in part through the substitution of capital for labor. Likewise, positive change in the contribution of intermediate inputs intensity indicates that labor productivity growth is being achieved in part through the substitution of intermediate inputs for labor.

Over a given time period, the average logarithmic growth rate of labor productivity will equal the sum of the average logarithmic growth rates of the contribution of capital intensity, the contribution of intermediate inputs intensity, and total factor productivity. However, because both output and input data are expressed annually, average annual (as opposed to logarithmic) rates of change are calculated. Therefore, the sum of growth rates of total factor productivity, the contribution of capital intensity, and the contribution of intermediate inputs intensity may not precisely equal the rate of change of labor productivity.

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.

Table 1. Recent total factor productivity and related data

Industry	2017 NAICS code	2022 Employment (thousands)	Percent change, 2021-2022					
			Total factor productivity	Output	Combined inputs	Hours worked	Capital	Intermediate inputs
Manufacturing								
Animal food	3111	76.6	-7.5	-0.5	7.5	10.3	1.3	9.5
Grain and oilseed milling	3112	63.8	1.7	6.4	4.6	3.2	0.9	5.7
Sugar and confectionery products	3113	83.0	-1.0	-2.4	-1.4	4.4	0.0	-3.3
Fruit and vegetable preserving and specialty	3114	177.5	2.0	1.9	-0.1	-3.0	-1.9	1.5
Dairy products	3115	162.2	-1.4	0.6	2.0	1.9	-0.4	2.6
Animal slaughtering and processing	3116	535.4	9.3	5.8	-3.2	-2.4	1.7	-5.0
Seafood product preparation and packaging	3117	33.9	-9.8	-8.9	1.0	-14.8	0.3	4.9
Bakeries and tortilla products	3118	357.0	-6.3	-2.6	3.9	2.4	0.1	5.9
Other food products	3119	256.7	-4.5	-1.8	2.9	8.8	0.5	2.8
Beverages	3121	329.4	-1.3	0.3	1.6	11.7	-0.1	-0.1
Tobacco	3122	11.1	-5.8	-8.6	-3.0	2.7	-2.2	-7.0
Fiber, yarn, and thread mills	3131	26.2	-8.3	-12.6	-4.7	-2.7	-5.0	-5.2
Fabric mills	3132	48.5	-4.6	-8.3	-3.9	-0.1	-3.1	-5.3
Textile and fabric finishing mills	3133	25.8	-9.6	-16.7	-7.8	-2.3	-4.4	-9.5
Textile furnishings mills	3141	48.1	-0.1	-5.4	-5.3	-0.7	-1.2	-8.3
Other textile product mills	3149	70.1	-5.2	-12.8	-8.1	4.7	-5.1	-14.9
Apparel knitting mills	3151	7.7	9.4	22.7	12.2	-3.2	-5.6	24.0
Cut and sew apparel	3152	93.3	1.4	-0.4	-1.8	12.1	-4.1	-8.2
Accessories and other apparel	3159	17.0	-6.8	5.1	12.8	27.0	-2.4	6.7
Leather and hide tanning and finishing	3161	4.3	10.2	-0.8	-9.9	-6.1	-3.8	-10.9
Footwear	3162	12.2	-3.7	-7.8	-4.2	5.0	-5.9	-9.2
Other leather products	3169	14.7	-1.2	2.7	3.9	0.3	-0.3	9.8
Sawmills and wood preservation	3211	99.3	-1.5	8.3	9.9	2.4	4.0	16.2
Plywood and engineered wood products	3212	85.6	-2.5	2.9	5.5	4.8	2.0	8.1
Other wood products	3219	265.0	-5.4	-2.7	2.8	0.6	3.2	3.5
Pulp, paper, and paperboard mills	3221	88.7	-4.2	-5.1	-1.0	0.8	-1.7	-0.9
Converted paper products	3222	274.6	-1.8	-3.1	-1.4	2.7	1.0	-3.3
Printing and related support activities	3231	399.0	-3.0	-1.3	1.8	0.8	-2.5	3.8
Petroleum and coal products	3241	106.8	-2.6	3.9	6.7	1.0	-2.9	9.1
Basic chemicals	3251	151.8	-4.0	0.1	4.2	5.9	-0.5	7.0
Resin, rubber, and artificial fibers	3252	98.2	7.7	9.9	2.0	7.4	1.9	1.3
Agricultural chemicals	3253	37.5	-14.8	-14.5	0.4	-0.5	-3.9	5.5
Pharmaceuticals and medicines	3254	350.0	-11.0	-7.3	4.1	1.6	2.8	9.2
Paints, coatings, and adhesives	3255	68.4	-15.9	-7.9	9.5	9.0	3.9	12.6
Soaps, cleaning compounds, and toiletries	3256	127.7	-6.9	-7.0	-0.2	7.3	-0.6	-1.6
Other chemical products and preparations	3259	83.4	-0.3	2.8	3.1	9.0	0.3	2.8
Plastics products	3261	621.8	-6.5	-3.9	2.8	3.9	1.3	3.1
Rubber products	3262	136.7	-9.1	-2.3	7.5	3.5	5.2	10.0
Clay products and refractories	3271	43.0	-4.5	-2.6	1.9	15.5	-2.3	-3.6
Glass and glass products	3272	86.2	13.1	15.1	1.8	1.3	-1.5	3.0
Cement and concrete products	3273	203.9	-2.0	1.4	3.5	6.2	-0.6	4.2
Lime and gypsum products	3274	15.9	2.6	4.8	2.1	5.6	1.1	1.9
Other nonmetallic mineral products	3279	82.0	-4.5	-6.0	-1.5	2.0	2.4	-5.0
Iron and steel mills and ferroalloys	3311	83.1	-10.6	-1.8	9.9	5.0	0.3	16.4
Steel products from purchased steel	3312	57.2	-2.8	19.0	22.4	6.5	4.5	33.2
Alumina and aluminum production	3313	60.0	-4.0	4.1	8.4	4.5	0.2	12.9
Other nonferrous metal production	3314	60.1	-7.0	0.2	7.7	8.1	1.5	11.9
Foundries	3315	108.5	-4.4	3.6	8.4	3.6	-2.3	14.3

Table 1. Recent total factor productivity and related data — Continued

Industry	2017 NAICS code	2022 Employment (thousands)	Percent change, 2021-2022					
			Total factor productivity	Output	Combined inputs	Hours worked	Capital	Intermediate inputs
Forging and stamping	3321	93.4	-9.6	-10.4	-0.9	-1.1	-0.8	-0.9
Cutlery and handtools	3322	37.8	-2.2	-3.3	-1.2	0.6	0.2	-2.9
Architectural and structural metals	3323	407.1	-3.2	7.4	10.9	3.5	4.2	17.4
Boilers, tanks, and shipping containers	3324	91.5	-10.7	-5.9	5.3	6.2	1.5	6.4
Hardware	3325	24.9	-4.7	-6.0	-1.4	2.4	-2.3	-2.5
Spring and wire products	3326	41.4	-11.8	-9.3	2.8	1.0	-1.2	5.1
Machine shops and threaded products	3327	349.4	0.6	7.5	6.8	6.8	1.4	9.1
Coating, engraving, and heat treating metals	3328	129.6	-0.9	-4.7	-3.9	-1.9	0.0	-6.8
Other fabricated metal products	3329	280.9	-2.5	0.8	3.3	4.9	-0.2	4.4
Agriculture, construction, and mining machinery	3331	216.9	-1.5	3.1	4.6	10.3	0.2	4.7
Industrial machinery	3332	134.0	-5.1	-3.6	1.5	8.0	-1.2	-1.4
Commercial and service industry machinery	3333	90.3	0.7	3.9	3.2	4.7	-1.0	3.7
HVAC and commercial refrigeration equipment	3334	143.8	-11.9	-5.5	7.3	2.3	2.9	11.3
Metalworking machinery	3335	163.0	-6.3	-4.8	1.6	2.5	-1.1	1.9
Turbine and power transmission equipment	3336	88.7	5.4	10.3	4.6	5.9	-1.3	5.6
Other general purpose machinery	3339	285.3	-4.2	0.5	4.9	10.4	1.0	3.8
Computer and peripheral equipment	3341	117.9	-5.6	-0.4	5.6	0.5	-4.1	7.5
Communications equipment	3342	86.4	8.3	18.2	9.1	4.4	-3.2	14.4
Audio and video equipment	3343	19.9	-1.7	0.6	2.4	0.6	1.6	3.1
Semiconductors and electronic components	3344	392.9	1.3	5.2	3.8	5.0	-1.8	5.1
Electronic instruments	3345	423.0	-1.2	1.3	2.5	2.2	1.2	3.4
Magnetic media manufacturing and reproducing	3346	12.6	-4.9	-9.3	-4.6	2.4	-7.1	-6.9
Electric lighting equipment	3351	40.2	-2.5	2.5	5.1	-2.5	1.5	10.0
Household appliances	3352	69.2	-9.0	-13.4	-4.8	0.7	-0.6	-8.3
Electrical equipment	3353	143.7	-10.7	-7.5	3.6	2.6	0.0	5.3
Other electrical equipment and components	3359	156.1	6.9	24.6	16.6	6.1	1.8	28.3
Motor vehicles	3361	282.3	5.4	17.3	11.3	18.6	5.9	11.5
Motor vehicle bodies and trailers	3362	174.8	-4.3	2.5	7.1	1.8	6.5	8.5
Motor vehicle parts	3363	558.3	3.8	9.4	5.4	3.2	-2.9	6.7
Aerospace products and parts	3364	502.5	4.6	3.9	-0.6	5.3	-3.7	-3.2
Railroad rolling stock	3365	20.3	5.8	20.5	13.9	5.5	1.1	18.0
Ship and boat building	3366	153.4	-3.3	5.1	8.6	4.2	4.2	13.2
Other transportation equipment	3369	42.4	-1.2	-9.4	-8.3	11.2	-0.9	-15.9
Household and institutional furniture	3371	263.0	2.4	7.6	5.2	1.5	0.9	8.6
Office furniture and fixtures	3372	106.0	-2.8	0.2	3.1	4.0	1.0	3.4
Other furniture related products	3379	36.5	-2.2	-6.1	-4.1	-3.2	0.5	-5.9
Medical equipment and supplies	3391	342.4	-1.5	-0.2	1.3	4.7	1.1	-0.8
Other miscellaneous manufacturing	3399	339.4	-6.8	-8.9	-2.2	3.4	-1.5	-5.2

Table 2. Long run total factor productivity and related data

Industry	2017 NAICS code	Annual percent change, 1987-2022					
		Total factor productivity	Output	Combined inputs	Hours worked	Capital	Intermediate inputs
Manufacturing							
Animal food	3111	-0.1	1.5	1.6	0.6	1.7	1.7
Grain and oilseed milling	3112	0.3	1.2	0.9	-0.6	0.3	1.2
Sugar and confectionery products	3113	0.2	0.5	0.4	-0.1	0.7	0.3
Fruit and vegetable preserving and specialty	3114	0.3	0.9	0.5	0.0	0.6	0.6
Dairy products	3115	0.2	1.3	1.1	0.1	1.4	1.2
Animal slaughtering and processing	3116	0.7	1.6	0.9	1.0	2.0	0.6
Seafood product preparation and packaging	3117	0.2	-0.3	-0.5	-1.3	0.8	-0.6
Bakeries and tortilla products	3118	-0.7	0.3	1.0	0.2	0.8	1.5
Other food products	3119	0.1	2.0	1.8	2.3	1.3	2.0
Beverages	3121	0.5	1.0	0.6	1.1	0.6	0.4
Tobacco	3122	-0.7	-2.9	-2.2	-4.8	-2.3	-1.1
Fiber, yarn, and thread mills	3131	0.6	-2.9	-3.5	-3.7	-2.8	-3.4
Fabric mills	3132	1.0	-3.0	-3.9	-5.0	-2.6	-3.7
Textile and fabric finishing mills	3133	-0.3	-3.8	-3.5	-4.2	-2.6	-3.3
Textile furnishings mills	3141	0.1	-2.4	-2.5	-2.6	-1.1	-3.0
Other textile product mills	3149	0.4	-0.9	-1.3	-1.6	0.1	-1.4
Apparel knitting mills	3151	0.4	-6.4	-6.8	-7.2	-3.2	-6.7
Cut and sew apparel	3152	-0.5	-5.9	-5.4	-6.1	-2.8	-5.9
Accessories and other apparel	3159	-1.6	-5.3	-3.8	-2.4	-2.3	-4.5
Leather and hide tanning and finishing	3161	1.0	-2.7	-3.7	-4.1	-2.4	-3.7
Footwear	3162	-0.3	-4.9	-4.6	-5.7	-3.3	-4.3
Other leather products	3169	0.7	-2.6	-3.2	-3.5	-1.7	-3.2
Sawmills and wood preservation	3211	0.9	0.4	-0.4	-1.3	-0.8	0.0
Plywood and engineered wood products	3212	-0.2	-0.2	0.0	-0.5	0.2	0.5
Other wood products	3219	-0.1	0.0	0.1	-0.8	0.6	0.5
Pulp, paper, and paperboard mills	3221	0.6	-1.0	-1.6	-2.6	-1.3	-1.4
Converted paper products	3222	0.0	-0.4	-0.4	-1.0	0.5	-0.5
Printing and related support activities	3231	0.2	-1.0	-1.1	-2.0	-0.3	-0.9
Petroleum and coal products	3241	0.3	1.0	0.6	-0.9	0.6	0.8
Basic chemicals	3251	0.1	0.5	0.5	-1.3	0.4	1.0
Resin, rubber, and artificial fibers	3252	0.4	0.3	-0.1	-1.2	0.5	-0.1
Agricultural chemicals	3253	0.9	0.1	-0.7	-0.9	0.0	-1.2
Pharmaceuticals and medicines	3254	-1.1	0.9	2.0	1.9	3.5	0.5
Paints, coatings, and adhesives	3255	-0.5	-0.3	0.2	-0.4	0.2	0.3
Soaps, cleaning compounds, and toiletries	3256	0.0	0.5	0.5	0.1	1.2	-0.1
Other chemical products and preparations	3259	0.4	0.1	-0.4	-1.6	0.0	-0.1
Plastics products	3261	0.3	1.2	0.9	0.2	1.8	0.9
Rubber products	3262	0.4	0.2	-0.2	-1.3	0.2	0.3
Clay products and refractories	3271	0.4	-1.3	-1.7	-2.1	-1.5	-1.5
Glass and glass products	3272	0.8	0.3	-0.5	-1.4	-0.5	0.0
Cement and concrete products	3273	-0.1	0.3	0.4	0.3	-0.2	0.6
Lime and gypsum products	3274	-0.5	-0.2	0.3	-1.2	0.5	0.7
Other nonmetallic mineral products	3279	0.6	0.9	0.2	0.0	-0.1	0.6
Iron and steel mills and ferroalloys	3311	0.6	-0.3	-0.8	-2.1	-2.0	0.0
Steel products from purchased steel	3312	0.1	0.3	0.1	-0.5	-1.3	0.7
Alumina and aluminum production	3313	1.1	-0.2	-1.2	-1.6	-0.8	-1.1
Other nonferrous metal production	3314	0.8	-0.6	-1.3	-1.6	-0.3	-1.7
Foundries	3315	0.3	-0.7	-1.0	-1.9	-0.9	-0.3

Table 2. Long run total factor productivity and related data — Continued

Industry	2017 NAICS code	Annual percent change, 1987-2022					
		Total factor productivity	Output	Combined inputs	Hours worked	Capital	Intermediate inputs
Forging and stamping	3321	0.4	0.1	-0.3	-1.3	0.8	0.0
Cutlery and handtools	3322	0.3	-1.0	-1.3	-1.9	-0.8	-1.0
Architectural and structural metals	3323	-0.1	0.9	1.1	0.3	0.8	1.6
Boilers, tanks, and shipping containers	3324	0.0	0.0	0.0	-0.4	-0.2	0.2
Hardware	3325	-0.5	-2.0	-1.6	-2.4	-1.1	-1.3
Spring and wire products	3326	0.2	-0.7	-0.9	-1.9	0.0	-0.5
Machine shops and threaded products	3327	0.9	2.0	1.1	0.4	1.7	1.7
Coating, engraving, and heat treating metals	3328	1.0	1.6	0.6	-0.3	0.9	1.1
Other fabricated metal products	3329	-0.3	-0.1	0.2	-0.5	0.2	0.7
Agriculture, construction, and mining machinery	3331	0.3	1.5	1.2	0.0	0.2	1.9
Industrial machinery	3332	0.3	0.6	0.3	-0.1	0.7	0.5
Commercial and service industry machinery	3333	0.2	0.0	-0.2	-1.3	-0.5	0.4
HVAC and commercial refrigeration equipment	3334	0.1	0.4	0.3	-0.2	0.7	0.4
Metalworking machinery	3335	0.8	0.2	-0.5	-1.5	-0.2	0.4
Turbine and power transmission equipment	3336	0.4	0.8	0.4	-0.5	0.1	1.0
Other general purpose machinery	3339	0.1	0.9	0.8	-0.3	0.4	1.6
Computer and peripheral equipment	3341	10.4	8.9	-1.4	-4.1	-0.6	-0.9
Communications equipment	3342	3.1	2.0	-1.1	-2.8	0.3	-0.6
Audio and video equipment	3343	2.6	0.1	-2.5	-2.7	-1.6	-2.4
Semiconductors and electronic components	3344	8.2	9.7	1.4	-1.2	3.6	1.2
Electronic instruments	3345	0.7	1.2	0.5	-1.3	0.2	2.0
Magnetic media manufacturing and reproducing	3346	0.4	-3.4	-3.8	-2.8	-2.1	-4.9
Electric lighting equipment	3351	0.5	-0.3	-0.9	-2.0	-0.2	-0.5
Household appliances	3352	1.5	0.3	-1.2	-1.9	-0.8	-1.0
Electrical equipment	3353	0.0	-0.5	-0.5	-1.7	-0.9	0.4
Other electrical equipment and components	3359	0.7	0.6	-0.2	-0.9	-0.2	0.2
Motor vehicles	3361	0.4	1.9	1.4	-0.1	1.1	1.7
Motor vehicle bodies and trailers	3362	-0.4	2.0	2.4	0.5	1.8	3.0
Motor vehicle parts	3363	1.5	2.2	0.7	-0.3	-0.1	1.2
Aerospace products and parts	3364	0.0	-0.4	-0.3	-1.4	0.3	0.3
Railroad rolling stock	3365	0.9	2.0	1.1	-0.4	-0.1	1.9
Ship and boat building	3366	0.6	1.1	0.5	-0.6	0.2	1.4
Other transportation equipment	3369	1.5	2.9	1.4	0.8	2.2	1.3
Household and institutional furniture	3371	0.5	-0.4	-0.9	-1.5	0.0	-0.7
Office furniture and fixtures	3372	-0.1	-0.4	-0.3	-1.2	0.5	-0.1
Other furniture related products	3379	0.3	0.6	0.2	-0.8	0.0	0.8
Medical equipment and supplies	3391	0.5	2.6	2.1	0.8	3.2	2.3
Other miscellaneous manufacturing	3399	0.4	-0.2	-0.6	-0.9	0.2	-0.5

Table 3. Total factor productivity in selected periods

Industry	2017 NAICS code	Annual percent change					
		1987-2022	1987-1990	1990-2000	2000-2007	2007-2019	2019-2022
Manufacturing							
Animal food	3111	-0.1	0.9	0.0	1.8	-1.5	-0.5
Grain and oilseed milling	3112	0.3	0.1	0.5	0.0	0.0	1.7
Sugar and confectionery products	3113	0.2	0.2	1.6	0.2	-1.5	2.0
Fruit and vegetable preserving and specialty	3114	0.3	-1.7	0.9	0.9	-0.4	2.0
Dairy products	3115	0.2	-0.9	0.1	1.1	-0.1	0.4
Animal slaughtering and processing	3116	0.7	0.1	1.1	1.6	-0.4	2.3
Seafood product preparation and packaging	3117	0.2	-1.4	1.0	1.9	-0.1	-3.0
Bakeries and tortilla products	3118	-0.7	-3.6	0.2	0.6	-1.6	0.2
Other food products	3119	0.1	0.1	0.2	1.5	-0.7	0.2
Beverages	3121	0.5	1.0	0.4	2.1	-0.6	0.3
Tobacco	3122	-0.7	1.6	1.2	-1.0	-2.5	-1.0
Fiber, yarn, and thread mills	3131	0.6	1.3	0.4	4.2	-0.4	-3.3
Fabric mills	3132	1.0	0.8	1.3	3.6	-0.6	0.6
Textile and fabric finishing mills	3133	-0.3	0.6	0.7	0.5	-0.5	-5.5
Textile furnishings mills	3141	0.1	0.0	0.2	0.7	-1.3	3.9
Other textile product mills	3149	0.4	0.1	-0.2	1.9	0.4	-0.2
Apparel knitting mills	3151	0.4	0.5	-0.3	-1.5	1.0	5.3
Cut and sew apparel	3152	-0.5	-1.2	-0.6	-1.4	-0.3	2.3
Accessories and other apparel	3159	-1.6	1.0	-3.0	-1.9	-1.3	-0.2
Leather and hide tanning and finishing	3161	1.0	-4.1	1.8	-3.9	3.9	4.3
Footwear	3162	-0.3	-1.4	-0.3	0.0	-0.2	-0.4
Other leather products	3169	0.7	0.3	-2.0	3.0	0.7	4.8
Sawmills and wood preservation	3211	0.9	1.5	-0.1	1.8	0.8	1.7
Plywood and engineered wood products	3212	-0.2	-0.8	-0.2	1.0	0.3	-4.7
Other wood products	3219	-0.1	-0.6	-0.7	0.6	0.0	0.5
Pulp, paper, and paperboard mills	3221	0.6	-1.2	1.0	2.1	0.3	-0.8
Converted paper products	3222	0.0	0.3	0.1	0.9	-0.8	0.1
Printing and related support activities	3231	0.2	0.1	-0.3	1.0	0.2	-0.5
Petroleum and coal products	3241	0.3	-1.9	2.5	-2.0	-0.3	3.6
Basic chemicals	3251	0.1	-0.3	-2.0	3.6	-0.6	1.8
Resin, rubber, and artificial fibers	3252	0.4	-1.5	0.8	2.4	-1.1	2.2
Agricultural chemicals	3253	0.9	1.2	1.1	4.2	-1.0	-0.3
Pharmaceuticals and medicines	3254	-1.1	-1.9	-1.9	0.4	-0.8	-2.8
Paints, coatings, and adhesives	3255	-0.5	-2.1	-0.4	2.0	-1.0	-3.4
Soaps, cleaning compounds, and toiletries	3256	0.0	-1.1	-0.1	4.8	-1.3	-4.4
Other chemical products and preparations	3259	0.4	-1.2	1.4	0.6	-0.7	3.1
Plastics products	3261	0.3	-0.1	1.1	1.2	-0.3	-1.2
Rubber products	3262	0.4	1.1	1.2	0.8	-0.3	-1.2
Clay products and refractories	3271	0.4	1.4	1.3	-0.1	-0.6	1.0
Glass and glass products	3272	0.8	0.4	2.0	1.0	-0.4	1.5
Cement and concrete products	3273	-0.1	1.2	0.5	0.0	-1.4	1.5
Lime and gypsum products	3274	-0.5	-1.4	-0.7	0.9	-1.5	1.7
Other nonmetallic mineral products	3279	0.6	-0.2	0.9	2.5	-0.3	-0.4
Iron and steel mills and ferroalloys	3311	0.6	1.3	1.7	1.2	1.0	-6.5
Steel products from purchased steel	3312	0.1	1.4	0.9	0.5	-0.9	-0.4
Alumina and aluminum production	3313	1.1	0.3	-0.3	2.5	1.7	0.1
Other nonferrous metal production	3314	0.8	-4.2	2.9	-3.0	2.0	3.0
Foundries	3315	0.3	0.0	1.0	1.1	-0.3	-1.1

Table 3. Total factor productivity in selected periods — Continued

Industry	2017 NAICS code	Annual percent change					
		1987-2022	1987-1990	1990-2000	2000-2007	2007-2019	2019-2022
Forging and stamping	3321	0.4	-0.4	0.0	4.3	-0.4	-3.5
Cutlery and handtools	3322	0.3	-1.1	0.1	0.8	0.2	1.8
Architectural and structural metals	3323	-0.1	-1.0	-0.5	1.8	-0.7	-0.2
Boilers, tanks, and shipping containers	3324	0.0	0.7	1.1	0.7	-0.9	-2.0
Hardware	3325	-0.5	-2.1	0.2	-0.6	-0.6	-0.5
Spring and wire products	3326	0.2	0.5	0.9	1.7	-0.9	-1.3
Machine shops and threaded products	3327	0.9	1.4	1.6	1.7	-0.6	2.1
Coating, engraving, and heat treating metals	3328	1.0	1.4	0.4	3.4	-0.1	1.1
Other fabricated metal products	3329	-0.3	-1.5	-0.5	1.9	-1.5	1.5
Agriculture, construction, and mining machinery	3331	0.3	2.6	-0.6	2.0	-0.9	1.9
Industrial machinery	3332	0.3	0.4	0.9	1.7	-0.4	-2.4
Commercial and service industry machinery	3333	0.2	0.9	-0.6	-0.3	0.3	2.8
HVAC and commercial refrigeration equipment	3334	0.1	-0.1	0.6	1.8	-0.3	-3.7
Metalworking machinery	3335	0.8	0.3	0.2	2.5	0.1	2.2
Turbine and power transmission equipment	3336	0.4	-0.5	0.4	0.0	0.3	2.2
Other general purpose machinery	3339	0.1	0.5	-0.1	2.1	-0.9	-0.4
Computer and peripheral equipment	3341	10.4	6.9	19.5	18.1	2.4	1.8
Communications equipment	3342	3.1	3.5	5.4	5.0	0.1	3.6
Audio and video equipment	3343	2.6	4.4	2.1	3.1	1.7	4.9
Semiconductors and electronic components	3344	8.2	6.3	19.9	6.6	1.1	6.6
Electronic instruments	3345	0.7	1.7	0.3	1.2	0.5	0.8
Magnetic media manufacturing and reproducing	3346	0.4	0.3	1.7	2.2	-1.6	0.1
Electric lighting equipment	3351	0.5	-1.4	0.7	1.4	0.1	1.9
Household appliances	3352	1.5	0.2	2.1	3.4	0.4	0.6
Electrical equipment	3353	0.0	0.9	0.5	1.1	-1.0	-1.2
Other electrical equipment and components	3359	0.7	-1.1	1.3	0.4	0.1	4.0
Motor vehicles	3361	0.4	0.3	-0.3	3.0	-0.7	2.0
Motor vehicle bodies and trailers	3362	-0.4	-2.2	0.3	0.1	-0.6	-1.7
Motor vehicle parts	3363	1.5	-0.7	2.2	2.0	0.7	3.6
Aerospace products and parts	3364	0.0	-1.5	-0.1	2.4	-0.4	-2.1
Railroad rolling stock	3365	0.9	1.0	2.0	-1.6	0.6	4.4
Ship and boat building	3366	0.6	0.3	-0.2	-0.7	1.8	1.8
Other transportation equipment	3369	1.5	-1.4	2.5	5.5	-1.0	1.9
Household and institutional furniture	3371	0.5	-0.1	0.4	0.9	-0.2	3.1
Office furniture and fixtures	3372	-0.1	-2.4	1.4	0.6	-0.3	-3.2
Other furniture related products	3379	0.3	0.0	0.8	1.2	-0.1	-1.3
Medical equipment and supplies	3391	0.5	2.0	0.5	1.5	-0.6	1.6
Other miscellaneous manufacturing	3399	0.4	1.0	0.5	1.2	-0.4	0.3

Table 4. Contributions to labor productivity

Industry	2017 NAICS code	Annual percent change, 1987-2022			
		Labor productivity	Contribution of capital intensity	Contribution of intermediate inputs intensity	Total factor productivity
Manufacturing					
Animal food	3111	0.9	0.2	0.8	-0.1
Grain and oilseed milling	3112	1.8	0.2	1.2	0.3
Sugar and confectionery products	3113	0.7	0.3	0.3	0.2
Fruit and vegetable preserving and specialty	3114	0.9	0.2	0.4	0.3
Dairy products	3115	1.1	0.2	0.8	0.2
Animal slaughtering and processing	3116	0.6	0.2	-0.2	0.7
Seafood product preparation and packaging	3117	1.0	0.3	0.5	0.2
Bakeries and tortilla products	3118	0.0	0.1	0.6	-0.7
Other food products	3119	-0.4	-0.3	-0.2	0.1
Beverages	3121	-0.1	-0.3	-0.3	0.5
Tobacco	3122	2.0	2.0	0.7	-0.7
Fiber, yarn, and thread mills	3131	0.9	0.0	0.3	0.6
Fabric mills	3132	2.1	0.3	0.9	1.0
Textile and fabric finishing mills	3133	0.4	0.2	0.6	-0.3
Textile furnishings mills	3141	0.2	0.3	-0.2	0.1
Other textile product mills	3149	0.8	0.1	0.2	0.4
Apparel knitting mills	3151	0.9	0.3	0.1	0.4
Cut and sew apparel	3152	0.2	0.6	0.0	-0.5
Accessories and other apparel	3159	-3.0	0.0	-1.3	-1.6
Leather and hide tanning and finishing	3161	1.4	0.1	0.3	1.0
Footwear	3162	0.9	0.4	0.8	-0.3
Other leather products	3169	0.9	0.0	0.2	0.7
Sawmills and wood preservation	3211	1.8	-0.1	1.0	0.9
Plywood and engineered wood products	3212	0.2	-0.2	0.6	-0.2
Other wood products	3219	0.8	0.1	0.8	-0.1
Pulp, paper, and paperboard mills	3221	1.7	0.4	0.7	0.6
Converted paper products	3222	0.6	0.3	0.3	0.0
Printing and related support activities	3231	1.0	0.3	0.5	0.2
Petroleum and coal products	3241	1.9	0.2	1.4	0.3
Basic chemicals	3251	1.9	0.4	1.4	0.1
Resin, rubber, and artificial fibers	3252	1.4	0.3	0.7	0.4
Agricultural chemicals	3253	1.1	0.4	-0.1	0.9
Pharmaceuticals and medicines	3254	-1.0	0.4	-0.3	-1.1
Paints, coatings, and adhesives	3255	0.1	0.1	0.5	-0.5
Soaps, cleaning compounds, and toiletries	3256	0.4	0.5	-0.1	0.0
Other chemical products and preparations	3259	1.7	0.4	0.9	0.4
Plastics products	3261	1.0	0.2	0.4	0.3
Rubber products	3262	1.5	0.2	0.9	0.4
Clay products and refractories	3271	0.7	0.1	0.3	0.4
Glass and glass products	3272	1.8	0.2	0.7	0.8
Cement and concrete products	3273	0.0	0.0	0.2	-0.1
Lime and gypsum products	3274	1.0	0.4	1.1	-0.5
Other nonmetallic mineral products	3279	0.8	-0.1	0.3	0.6
Iron and steel mills and ferroalloys	3311	1.9	-0.1	1.4	0.6
Steel products from purchased steel	3312	0.8	-0.2	0.8	0.1
Alumina and aluminum production	3313	1.5	0.1	0.3	1.1
Other nonferrous metal production	3314	1.1	0.2	0.1	0.8
Foundries	3315	1.2	0.1	0.8	0.3

Table 4. Contributions to labor productivity — Continued

Industry	2017 NAICS code	Annual percent change, 1987-2022			
		Labor productivity	Contribution of capital intensity	Contribution of intermediate inputs intensity	Total factor productivity
Forging and stamping	3321	1.4	0.2	0.8	0.4
Cutlery and handtools	3322	0.9	0.2	0.4	0.3
Architectural and structural metals	3323	0.6	0.0	0.7	-0.1
Boilers, tanks, and shipping containers	3324	0.5	0.0	0.4	0.0
Hardware	3325	0.4	0.3	0.6	-0.5
Spring and wire products	3326	1.2	0.3	0.7	0.2
Machine shops and threaded products	3327	1.6	0.2	0.5	0.9
Coating, engraving, and heat treating metals	3328	1.9	0.1	0.8	1.0
Other fabricated metal products	3329	0.4	0.1	0.6	-0.3
Agriculture, construction, and mining machinery	3331	1.5	0.0	1.2	0.3
Industrial machinery	3332	0.7	0.0	0.4	0.3
Commercial and service industry machinery	3333	1.3	0.2	1.0	0.2
HVAC and commercial refrigeration equipment	3334	0.6	0.1	0.4	0.1
Metalworking machinery	3335	1.8	0.1	0.9	0.8
Turbine and power transmission equipment	3336	1.3	0.2	0.8	0.4
Other general purpose machinery	3339	1.2	0.0	1.1	0.1
Computer and peripheral equipment	3341	13.6	1.0	1.8	10.4
Communications equipment	3342	5.0	0.3	1.5	3.1
Audio and video equipment	3343	2.9	0.1	0.2	2.6
Semiconductors and electronic components	3344	11.0	1.7	0.8	8.2
Electronic instruments	3345	2.5	0.3	1.5	0.7
Magnetic media manufacturing and reproducing	3346	-0.6	0.2	-1.2	0.4
Electric lighting equipment	3351	1.7	0.3	0.9	0.5
Household appliances	3352	2.2	0.2	0.6	1.5
Electrical equipment	3353	1.2	0.2	1.0	0.0
Other electrical equipment and components	3359	1.4	0.0	0.7	0.7
Motor vehicles	3361	2.0	0.2	1.3	0.4
Motor vehicle bodies and trailers	3362	1.5	0.0	1.9	-0.4
Motor vehicle parts	3363	2.5	0.0	0.9	1.5
Aerospace products and parts	3364	1.1	0.3	0.8	0.0
Railroad rolling stock	3365	2.4	0.1	1.4	0.9
Ship and boat building	3366	1.7	0.1	1.1	0.6
Other transportation equipment	3369	2.1	0.2	0.4	1.5
Household and institutional furniture	3371	1.1	0.1	0.4	0.5
Office furniture and fixtures	3372	0.8	0.3	0.5	-0.1
Other furniture related products	3379	1.4	0.1	0.9	0.3
Medical equipment and supplies	3391	1.8	0.7	0.6	0.5
Other miscellaneous manufacturing	3399	0.7	0.2	0.2	0.4