

News

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PRODUCTIVITY BY INDUSTRY: WHOLESALE TRADE, RETAIL TRADE, AND FOOD SERVICES AND DRINKING PLACES, 2003

The Bureau of Labor Statistics of the U.S. Department of Labor reported today on labor productivity changes for wholesale trade, retail trade, and food services and drinking places. In 2003, labor productivity—defined as output per hour—rose 3.4 percent for wholesale trade, 5.1 percent for retail trade, and 3.3 percent for food services and drinking places. In both the retail and wholesale trade sectors, output increased in 2003 while hours declined. In food services and drinking places, both output and hours increased in 2003.

From 1987 to 2003, labor productivity in the wholesale trade sector rose an average of 3.5 percent per year. Output increased 4.0 percent per year, and hours increased 0.5 percent per year. Labor productivity in retail trade increased 2.9 percent per year, while output increased 3.9 percent, and hours increased 0.9 percent per year. In food services and drinking places, labor productivity increased at an average annual rate of 0.8 percent between 1987-2003, as output increased 2.4 percent and hours grew 1.6 percent per year.

Labor compensation and unit labor costs are not reported in this release because data to develop these measures for 2003 are not yet available. Industry productivity and cost measures are produced and published as source data become available. Measures for industries in other sectors have been published in separate releases and can be accessed online at http://www.bls.gov/schedule/archives/all_nr.htm.

2002-03 change

Labor productivity grew in 15 of the 18 durable and nondurable wholesale trade industries measured in 2003. Eight of the nine durable goods and seven of the nine nondurable goods wholesale industries had productivity increases. Among the durable goods wholesale industries, the highest productivity increases occurred for electrical goods (NAICS 4236) and commercial equipment (NAICS 4234), with output per hour increases of 8.1 percent and 7.8 percent, respectively. Two other durable wholesale industries, furniture and furnishing (NAICS 4232) and lumber and construction supplies (NAICS 4233), had output per hour increases in 2003 nearly as high, with gains of 7.6 percent and 7.4 percent, respectively. Among the nondurable wholesale trade industries, druggists' goods (NAICS 4242) had the highest productivity increase (11.5 percent), followed by miscellaneous nondurable goods (NAICS 4249) with an increase of 6.4 percent. Output increased in 11 of the 18 wholesale trade industries in 2003, while hours declined in 14 industries. Labor productivity declined 2.6 percent for wholesale electronic markets and agents and brokers (NAICS 425), reflecting a 2.2 percent increase in output with a 4.9 percent increase in hours in 2003.

Labor productivity rose in 23 of the 27 retail trade industries in 2003. The highest increases were 25.3 percent in electronics and appliance stores (NAICS 443) and 15.8 percent in electronic shopping and mail-order houses (NAICS 4541). Productivity grew in five of the six largest retail trade industries, those with more than 1,000,000 employees. Output grew in 22 of the 27 retail industries, and all but two of these industries experienced productivity increases. Hours declined in 17 retail industries, 15 of which experienced productivity increases.

Labor productivity increased 3.3 percent in food services and drinking places in 2003. All four of the industries in this subsector had productivity gains. The largest productivity gain occurred for drinking places (NAICS 7224) —5.4 percent. The two large industries in this group, full-service restaurants (NAICS 7221) and limited-service eating places (NAICS 7222), experienced productivity gains of 3.4 percent and 3.5 percent, respectively.

Long-term trends

Labor productivity increased in 16 of the 18 durable and nondurable industries in the wholesale trade sector from 1987 to 2003. Output per hour rose most rapidly in commercial equipment wholesalers (NAICS 4234) and in electric goods wholesalers (NAICS 4236), advancing at average annual rates of 13.4 percent per year and 9.3 percent per year, respectively. Output rose in all but two durable and nondurable wholesale industries, petroleum (NAICS 4247) and metal and minerals (NAICS 4235), while hours declined in five industries. Productivity rose 4.5 percent per year in wholesale electronic markets and agents and brokers (NAICS 425) from 1987 to 2003, reflecting average gains in output and hours of 6.2 percent and 1.6 percent, respectively.

Output per hour increased in all but 1 of the 27 retail trade industries from 1987 to 2003. Labor productivity rose at a rapid 14.0 percent per year, on average, in electronics and appliance stores (NAICS 443) and 12.5 percent in electronic shopping and mail order houses (NAICS 4541). Output increased in 26 of the 27 retail industries, while hours increased in 21 industries. Among the six largest retail industries, other general merchandise stores (NAICS 4529) had the greatest average productivity gains between 1987 and 2003, 7.9 percent per year on average, followed by clothing stores, where output per hour increased 4.7 percent per year.

All three of the food services industries had average annual growth in labor productivity of 1.0 percent or less. Labor productivity in drinking places declined 1.0 percent per year from 1987 to 2003, as output declined 0.7 percent per year and hours increased 0.3 percent.

Technical note

The data in this news release replace the wholesale trade, retail trade, and food services and drinking places series published in conjunction with the news release Productivity and Costs: Wholesale Trade, Retail Trade and Food Services and Drinking Places, 2002 (released December 30, 2003). Data for 2003 should be considered preliminary. Due to periodic revision of source data, all measures are subject to revision. For this data release, a change in the methodology for estimating the self employed and unpaid family workers has caused minor revisions to the indexes of employment, hours, and labor productivity for most industries in retail trade, wholesale trade, and food services and drinking places.

Data in this news release are based on the North American Industry Classification System (NAICS). The NAICS differs from the Standard Industry Classification (SIC) which it replaced, in that it uses a more systematic production-oriented approach to categorize economic units and has a greater emphasis on emerging industries and service-producing industries. In contrast to the SIC system, NAICS classifies auxiliary establishments providing services such as transportation and warehousing; accounting, bookkeeping, and payroll services; and general management, into specialized industries rather than including them in the manufacturing, trade, or service industries they support.

Productivity measurement

The industry labor productivity measures describe the relationship between output and the labor time involved in its production. They show the changes from period to period in the amount of goods and services produced per hour. Industry output is measured as “sectoral output”, the total value of goods or services leaving the industry. Industry output measures are sometimes constructed from data on the actual physical quantities of goods produced in an industry, but more often are derived from the value of the goods or services produced, adjusted for price change. For industries in retail trade, wholesale trade, and food services and drinking places, real output indexes are developed by dividing industry sales at the greatest level of detail possible by appropriate price indexes.

The indexes of industry output used in measuring labor productivity and unit labor costs are, wherever possible, calculated with a Tornqvist formula. This formula aggregates the growth rates of the various industry products or services between two periods using the products’ shares in industry value of production, averaged over two periods, as weights. The Tornqvist formula yields the ratio of output in a given year to that in the previous year. Ratios for successive years are chained together to form an output index.

Industry output indexes are prepared from basic data published by various public and private agencies, using the greatest level of detail available. Data from the Bureau of the Census, U.S. Department of Commerce, are used extensively in developing the output

series. The Census of Retail Trade, the Census of Wholesale Trade, and the Census of Accommodation and Food Services provide detailed product data that were used to construct benchmark indexes for the industries in this report. The Census Bureau also publishes annual industry sales data for the years 1992 forward classified according to the North American Industry Classification System. Data prior to 1992 were classified according to the Standard Industrial Classification (SIC) system. Conversion ratios based on 1997 Census data were used to convert these sales data from SIC to NAICS.

The industry labor input measures represent the hours paid to all workers in the industry and are developed mainly from basic data compiled by BLS. Data from the Current Employment Statistics (CES) survey, a monthly establishment survey conducted by BLS, are supplemented with data from the Current Population Survey (CPS), a monthly household survey conducted by the Bureau of the Census for BLS. Data on employment and average weekly hours are used to construct measures of total hours for different categories of workers. For manufacturing and mining industries, hours of production and nonproduction employees are combined. For the trade, transportation, and service industries, where self-employed are important, estimates of the hours of partners, proprietors, and unpaid family workers are added to hours of supervisory and nonsupervisory employees. Hours for different types of workers are treated as homogenous and are directly aggregated. The indexes of hours are developed by dividing the aggregate hours for each year by the base-period aggregate.

Although the labor productivity measures relate output to hours of employees or all persons engaged in an industry, they do not measure the specific contribution of labor, capital, or any other factor of production. Rather, they reflect the joint effects of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and effort of the workforce.

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

Productivity data for the NAICS industries in this news release can be obtained in several ways: by visiting the Labor Productivity and Costs web site (<http://www.bls.gov/lpc/home.htm>); by sending a request by e-mail (dipsweb@bls.gov); or by calling the Division of Industry Productivity Studies (202-691-5618). Historical SIC-based industry data are available on the BLS web site or by request. Productivity and related series for 3- and 4-digit SIC industries are available through 2000, but will no longer be updated.

Table 1. Annual percent change in output per hour and related series: retail trade, wholesale trade, and food services and drinking places industries, 1987-03 and 2002-03

NAICS code	Industry	2003 Employment (thousands)	Annual percent change, 1987-03			Annual percent change, 2002-03		
			Output per hour	Output	Hours	Output per hour	Output	Hours
Wholesale Trade								
42	Wholesale trade	5826	3.5	4.0	0.5	3.4	2.1	-1.3
423	Durable goods	3063	4.9	5.2	0.3	4.8	2.9	-1.8
4231	Motor vehicles and parts	360	3.4	3.6	0.2	4.2	3.8	-0.3
4232	Furniture and furnishings	117	2.0	2.3	0.3	7.6	2.3	-4.9
4233	Lumber and construction supplies	237	0.2	1.6	1.4	7.4	10.2	2.6
4234	Commercial equipment	673	13.4	14.0	0.6	7.8	7.0	-0.7
4235	Metals and minerals	121	-0.2	-0.2	-0.1	0.1	-5.3	-5.4
4236	Electric goods	355	9.3	9.2	-0.2	8.1	4.0	-3.8
4237	Hardware and plumbing	237	1.9	2.6	0.7	3.2	-0.4	-3.5
4238	Machinery and supplies	670	2.1	2.0	-0.1	4.9	1.8	-3.0
4239	Miscellaneous durable goods	293	2.1	2.6	0.4	-3.4	-3.6	-0.3
424	Nondurable goods	2106	1.4	1.8	0.4	3.4	1.2	-2.2
4241	Paper and paper products	158	2.3	2.3	0.0	3.4	-0.7	-4.0
4242	Druggists' goods	215	3.9	6.9	2.9	11.5	9.5	-1.8
4243	Apparel and piece goods	162	0.8	1.2	0.3	-9.3	-5.8	3.9
4244	Grocery and related products	714	1.5	2.4	1.0	3.0	1.1	-1.8
4245	Farm product raw materials	80	3.1	0.2	-2.8	0.3	1.5	1.2
4246	Chemicals	135	0.0	1.0	1.0	-1.0	-2.7	-1.7
4247	Petroleum	110	1.7	-0.7	-2.4	1.8	0.2	-1.6
4248	Alcoholic beverages	138	1.1	2.3	1.1	1.0	4.7	3.7
4249	Miscellaneous nondurable goods	395	0.3	0.3	0.0	6.4	-1.4	-7.3
425	Electronic markets and agents and brokers	657	4.5	6.2	1.6	-2.6	2.2	4.9
42511	Business to business electronic markets	70	9.3	8.2	-1.0	29.1	5.0	-18.7
42512	Wholesale trade agents and brokers	587	2.8	4.8	2.0	-7.5	0.1	8.2
Retail Trade								
44, 45	Retail trade	15866	2.9	3.9	0.9	5.1	4.5	-0.6
441	Motor vehicle and parts dealers	1975	1.7	3.0	1.3	1.6	3.1	1.5
4411	Automobile dealers	1319	1.2	2.7	1.5	-0.4	1.6	2.1
4412	Other motor vehicle dealers	158	3.8	6.3	2.4	14.8	26.7	10.4
4413	Auto parts, accessories, and tire stores	497	3.1	3.6	0.5	6.3	4.0	-2.2
442	Furniture and home furnishings stores	597	3.5	4.5	1.0	7.9	7.0	-0.9
4421	Furniture stores	304	3.4	4.1	0.7	5.3	3.8	-1.4
4422	Home furnishings stores	293	3.7	5.0	1.3	11.1	10.8	-0.3
443	Electronics and appliance stores	544	14.0	15.5	1.3	25.3	18.7	-5.3
444	Building material and garden supply stores	1242	3.0	5.1	2.0	6.4	9.3	2.7
4441	Building material and supplies dealers	1077	3.0	5.4	2.3	6.6	9.1	2.4
4442	Lawn and garden equipment and supplies stores	165	3.2	3.5	0.4	5.6	10.8	4.9
445	Food and beverage stores	2953	0.2	0.6	0.3	3.9	1.7	-2.1
4451	Grocery stores	2517	0.2	0.6	0.4	2.7	1.5	-1.2
4452	Specialty food stores	279	-0.2	0.1	0.2	13.9	6.9	-6.2
4453	Beer, wine and liquor stores	158	1.6	0.3	-1.3	11.6	2.1	-8.5
446	Health and personal care stores	981	2.5	3.9	1.3	7.0	4.4	-2.4
447	Gasoline stations	905	2.2	1.6	-0.6	-0.5	-1.7	-1.2
448	Clothing and clothing accessories stores	1391	4.6	4.7	0.1	6.1	6.8	0.7
4481	Clothing stores	1003	4.7	5.0	0.3	5.7	6.6	0.9
4482	Shoe stores	188	4.1	2.7	-1.4	4.0	3.3	-0.7
4483	Jewelry, luggage, and leather goods stores	200	4.2	4.9	0.7	9.5	10.6	1.0
451	Sporting goods, hobby, book, and music stores	727	3.6	5.2	1.5	-0.7	0.4	1.2
4511	Sporting goods and musical instrument stores	490	4.3	5.6	1.3	0.0	2.0	2.1

Table 1. Annual percent change in output per hour and related series: retail trade, wholesale trade, and food services and drinking places industries, 1987-03 and 2002-03-- Continued

NAICS code	Industry	2003 Employment (thousands)	Annual percent change, 1987-03			Annual percent change, 2002-03		
			Output per hour	Output	Hours	Output per hour	Output	Hours
4512	Book, periodical, and music stores	238	2.1	4.2	2.1	-1.9	-2.7	-0.8
452	General merchandise stores	2827	3.9	5.5	1.5	5.0	5.6	0.5
4521	Department stores	1621	1.3	2.9	1.6	3.3	-1.3	-4.4
4529	Other general merchandise stores	1206	7.9	9.4	1.3	4.9	12.2	7.0
453	Miscellaneous store retailers	1112	3.7	5.1	1.3	4.1	2.2	-1.8
4531	Florists	139	3.1	1.9	-1.2	8.7	7.9	-0.7
4532	Office supplies, stationery and gift stores	462	5.7	6.8	1.0	3.2	3.4	0.1
4533	Used merchandise stores	166	3.2	7.5	4.2	2.2	9.6	7.2
4539	Other miscellaneous store retailers	346	1.8	3.9	2.0	7.4	-1.4	-8.2
454	Nonstore retailers	613	8.9	9.0	0.0	15.4	9.4	-5.2
4541	Electronic shopping and mail-order houses	247	12.5	16.6	3.6	15.8	13.8	-1.7
4542	Vending machine operators	64	1.8	-0.1	-1.9	11.0	-4.8	-14.2
4543	Direct selling establishments	302	3.4	1.6	-1.8	9.5	3.1	-5.8
Food Services and Drinking Places								
722	Food services and drinking places	8791	0.8	2.4	1.6	3.3	4.9	1.5
7221	Full-service restaurants	4189	0.9	2.7	1.8	3.4	6.3	2.7
7222	Limited-service eating places	3690	1.0	2.6	1.6	3.5	5.3	1.8
7223	Special food services	518	0.0	1.8	1.7	2.7	-1.6	-4.2
7224	Drinking places, alcoholic beverages	395	-1.0	-0.7	0.3	5.4	-0.8	-5.9

Industry employment may not sum to aggregate levels due to rounding.