

# News

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## PRODUCTIVITY AND COSTS

Fourth Quarter and Annual Averages 1990 for  
Business, Nonfarm Business, and Manufacturing  
and 1990 Annual Averages for  
Nonfinancial Corporations

The Bureau of Labor Statistics of the U.S. Department of Labor today reported revised productivity results--as measured by output per hour of all persons--for the fourth quarter and annual averages for 1990. The percentage changes, based on the latest information available, were:

	Fourth quarter	Annual averages 1989-1990
Business sector.....	-0.3	-0.6
Nonfarm business sector.....	0.3	-0.8
Manufacturing.....	-1.6	3.0
Durable goods manufacturing.....	-3.2	3.6
Non durable goods manufacturing...	2.0	2.3

The 1989-90 productivity declines in business and nonfarm business were the second consecutive annual declines. Following the pattern of recent years, productivity performed better in manufacturing than in these two larger sectors.

Fourth-quarter measures are summarized in table A and appear in detail in tables 1 through 5. Annual changes in productivity and related measures appear in tables B through D.

## THIRD-TO-FOURTH QUARTER CHANGES, 1990

### Business

Productivity decreased at a 0.3 percent annual rate during the fourth quarter of 1990 in the business sector, as output declined 2.4 percent and hours of all persons engaged in the sector fell 2.2 percent (seasonally adjusted annual rates). The decline in productivity was the second in the year, and the decline in hours was the second in a row. During the third quarter of 1990, business productivity had increased 0.9 percent, as output grew slowly and hours declined (table 1).

Table A. Productivity and costs: Revised fourth-quarter 1990 measures  
(Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change from preceding quarter						
Business	-0.3	-2.4	-2.2	3.6	-3.2	3.8
Nonfarm business	0.3	-2.6	-2.8	4.0	-2.8	3.7
Manufacturing	-1.6	-8.3	-6.8	4.7	-2.1	6.4
Durable	-3.2	12.4	-9.5	5.0	-1.8	8.6
Nondurable	2.0	-0.9	-2.8	4.7	-2.1	2.7
Percent change from same quarter a year ago						
Business	0.1	0.2	0.0	4.5	-1.7	4.4
Nonfarm business	0.0	0.1	0.1	4.4	-1.8	4.4
Manufacturing	2.9	0.2	-2.6	3.9	-2.2	1.0
Durable	3.8	-0.1	-3.8	3.9	-2.2	0.1
Nondurable	1.7	0.7	-1.0	4.2	-1.9	2.5

Hourly compensation increased at a 3.6 percent annual rate during the fourth quarter of 1990, compared with a 4.6 percent increase during the third quarter. This measure includes wages and salaries, supplements, employer contributions to employee-benefit plans, and taxes. Unit labor costs, which reflect changes in hourly compensation and productivity, increased at a 3.8 percent annual rate during the fourth quarter, compared with a 3.7 percent increase one quarter earlier.

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), fell 3.2 percent in the fourth quarter, compared with a 2.1 percent decline in the third quarter. This measure has declined in 7 of the last 8 quarters.

The implicit price deflator for business output, which reflects changes unit labor costs and unit nonlabor payments, increased 1.9 percent in the fourth quarter. This was the smallest quarterly increase in this measure price change for the goods and services which comprise the output of the business sector since a 1.7 percent increase occurred in the first quarter 1988.

### **Nonfarm business**

Productivity increased 0.3 percent in the nonfarm business sector during the fourth quarter of 1990, as output fell 2.6 percent and hours of all persons--employees, proprietors, and unpaid family workers--decreased 2.8 percent. During the third quarter, nonfarm productivity had increased 0.6 percent (table 2). As in the more comprehensive business sector, the drop in hours was the second in succession.

Hourly compensation rose 4.0 percent in the fourth quarter, but declined 2.8 percent when the increase in the CPI-U was taken into account. The index of real hourly compensation in the fourth quarter stood at 100.1 (1982=100), lower than at any point since the third quarter of 1982 when the index level was 99.7. Unit labor costs increased at a 3.7 percent annual rate, compared with a 4.1 percent rise during the third quarter.

The implicit price deflator for nonfarm business output rose 2.4 percent in the fourth quarter, compared with a 3.6 percent increase one quarter earlier. As in the business sector, this was the smallest price gain since the first quarter of 1988.

### **Manufacturing**

Manufacturing productivity decreased in the fourth quarter as output and hours were reduced substantially. Productivity declined at a 1.6 percent annual rate as output fell 8.3 percent and hours of all persons decreased 6.8 percent. This was the largest quarterly decrease in output since the fourth quarter of 1981 (when it fell 12.7 percent) and the largest decline in hours since the fourth quarter of 1982 (when an 8.6 percent decline was recorded). During the third quarter, productivity rose 5.4 percent, output rose 3.5 percent, and hours declined 1.7 percent (table 3).

Hourly compensation of manufacturing workers increased 4.7 percent during the fourth quarter, but fell 2.1 percent when the increase in consumer prices was taken into account. Unit labor costs rose at a 6.4 percent annual rate in the fourth quarter of 1990, reversing a 1.3 percent decrease during the third quarter. This was the largest increase in unit labor costs since the first quarter of 1982, when they rose 8.3 percent.

The 1.6 percent productivity decline in total manufacturing was the result of a 3.2 percent decline in the productivity of durable goods production and a 2.0 percent increase for nondurable goods. There were large declines in both output (12.7 percent) and hours (9.5 percent) for durables. There were smaller declines in nondurables--0.9 percent for output and 2.8 percent for hours.

# ANNUAL CHANGES, 1989-1990

## Nonfinancial corporations

The Bureau of Labor Statistics also reported annual productivity and related indexes for nonfinancial corporations for 1990. Productivity decreased 1.0 percent, as output slipped 0.1 percent and hours increased 0.9 percent during the year. This was the second consecutive year nonfinancial corporate productivity declined. Hourly compensation rose 3.3 percent in 1990 but fell 2.0 percent when the increase in the CPI-U was taken into account. Unit labor costs rose 4.3 percent, unit nonlabor costs rose 5.5 percent, and unit profits declined 7.7 percent. Annual changes from 1981 to 1990 are shown in table B.

Table B. Nonfinancial corporations: Annual changes in productivity and related measures, 1981-1990

Measure	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Productivity.....	0.6	0.4	2.7	2.4	1.6	2.3	2.4	1.4	-1.6	-1.0
Output.....	1.6	-3.0	4.7	9.1	4.0	2.7	5.3	5.0	1.1	-0.1
Hours.....	1.0	-3.4	1.9	6.6	2.3	0.3	2.9	3.5	2.8	0.9
Hourly comp.....	9.3	7.3	3.2	3.7	4.0	4.8	3.2	4.0	3.3	3.3
Real hourly comp...	-0.9	1.1	0.0	-0.6	0.4	2.9	-0.4	-0.1	-1.5	-2.0
Unit labor costs...	8.7	6.9	0.4	1.3	2.4	2.5	0.8	2.6	5.0	4.3
Unit nonlabor cost.	16.4	10.9	-1.2	-0.4	1.2	3.4	-0.3	2.8	5.9	5.5
Total unit costs...	10.7	8.0	0.0	0.8	2.1	2.7	0.5	2.6	5.3	4.7
Unit profit.....	15.2	-20.0	41.4	23.1	-2.6	-7.5	9.1	3.0	-10.4	-7.7
Implicit price def.	11.0	5.7	2.6	2.8	1.6	1.7	1.2	2.7	3.7	3.6

## Revised fourth-quarter and 1990 annual measures

Previous and revised productivity and cost measures for the fourth quarter and full year 1990 are compared in table C for the business, nonfarm business, and manufacturing sectors. In all sectors, measures of real hourly compensation were affected by revised seasonal adjustment factors for consumer prices beginning in 1986. Annual measures are virtually unchanged from those released on February 4, based on information then available.

Table C. Previous and current productivity and related measures  
Fourth quarter and annual averages, 1990  
(Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change, third to fourth quarter 1990						
Business:						
Previous	-0.5	-2.5	-2.1	3.4	-3.1	3.9
Current	-0.3	-2.4	-2.2	3.6	-3.2	3.8
Nonfarm business:						
Previous	0.1	-2.7	-2.7	3.8	-2.7	3.7
Current	0.3	-2.6	-2.8	4.0	-2.8	3.7
Manufacturing:						
Previous	-2.4	-8.6	-6.4	3.7	-2.7	6.3
Current	-1.6	-8.3	-6.8	4.7	-2.1	6.4
Percent change, 1989 - 1990						
Business:						
Previous	-0.6	0.3	0.9	3.6	-1.7	4.3
Current	-0.6	0.3	0.9	3.6	-1.7	4.3
Nonfarm business:						
Previous	-0.8	0.2	1.1	3.5	-1.8	4.3
Current	-0.8	0.2	1.0	3.5	-1.8	4.3
Manufacturing:						
Previous	3.0	0.8	-2.1	3.3	-2.0	0.3
Current	3.0	0.9	-2.1	3.3	-2.0	0.3

Revised output measures for the manufacturing sector for 1977-1988 were published by the Bureau of Economic Analysis of the U.S. Department of Commerce in the January 1991 issue of **The Survey of Current Business**. Table D shows annual changes in productivity and related measures based on this new information. Manufacturing productivity grew in each year of the past decade and posted particularly strong gains--between 4.4 and 6.0 percent--during the 6-year period ended in 1988. Appendix table 1 contains the measures for total manufacturing and for durable and nondurable goods manufacturing, back to 1977 indexed to 1982. At some point in the future, the Department of Commerce plans to develop revisions for years prior to 1977. As this work is completed, revised productivity and cost measures will be published here in **Productivity and Costs**.

Table D. Manufacturing: Revised annual changes in productivity and related measures, 1981-1990

Measure	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Manufacturing:</b>										
Productivity.....	1.3	2.2	5.0	4.7	4.4	4.6	5.0	6.0	3.3	3.0
Output.....	0.7	-6.5	6.2	11.6	3.6	3.1	5.8	9.2	3.6	0.9
Hours.....	-0.6	-8.5	1.2	6.6	-0.8	-1.4	0.7	3.0	0.3	-2.1
Hourly comp.....	9.7	8.9	2.6	3.3	4.9	4.5	2.3	3.3	3.9	3.3
Real hourly comp.	-0.6	2.6	-0.6	-1.0	1.3	2.6	-1.3	-0.8	-0.9	-2.0
Unit labor costs	8.3	6.6	-2.3	-1.4	0.6	0.0	-2.5	-2.5	0.6	0.3
Implicit price def.	9.9	5.5	1.3	1.2	-1.2	2.3	-1.0	-0.4	n.a.	n.a.

n.a. - Not available.

**Next release date**

The next issue of **Productivity and Costs** is scheduled for release at 10:00 AM EDT, Monday, May 6, 1991, and will contain first quarter 1991 measures for business, nonfarm business, and manufacturing.

#### TECHNICAL NOTES

**Labor Input:** The primary source of hours and employment data is the BLS Current Employment Statistics (CES) program, which provides monthly survey data on total employment and average weekly hours of production and nonsupervisory workers in nonagricultural establishments. Nonproduction and supervisory worker hours are developed by BLS from supplementary sources. Jobs rather than persons are counted. Weekly hours are adjusted to the hours at work definition using the BLS Hours at Work survey, conducted for this purpose.

Data from the BLS Current Population Survey (CPS) are used for farm labor; in the nonfarm sector, the National Income and Product Accounts (NIPA) prepared by the Bureau of Economic Analysis of the Department of Commerce and the CPS are used to measure labor input for government enterprises, proprietors, and unpaid family workers.

**Output:** Business sector output is equal to gross national product (GNP) in constant 1982 dollars, less the rest-of-the-world sector, general government, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, and the statistical discrepancy in computing the NIPA. Corresponding exclusions are also made in labor inputs. Business output was about 81 percent of GNP in 1989. Nonfarm business, which also excludes farming, was about 79 percent of GNP in 1989.

Total manufacturing measures are computed by summing series prepared for the durable and nondurable goods sectors. Durables include the following 2-digit SIC industries: Primary metals; fabricated metal products; nonelectrical machinery; electrical machinery; transportation equipment; instruments; lumber and lumber products; furniture and fixtures; stone, clay, and glass products; and miscellaneous manufactures. Nondurables include: Textile mill products, apparel products, leather and leather products, printing and publishing, chemicals and chemical products, petroleum products, rubber and plastic products, food, and tobacco products. Manufacturing accounted for about 22 percent of GNP in 1989.

Nonfinancial corporate output is equal to GNP in constant 1982 dollars, less the rest-of-the-world sector, general government, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, unincorporated business, the output of corporations engaged in banking, finance, stock and commodity trading, and credit and insurance agencies, and the statistical discrepancy in computing the NIPA. Nonfinancial corporations accounted for about 60 percent of GNP in 1989.

**Productivity:** These productivity measures describe the relationship between real 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. Although these measures relate output to hours at work of all persons engaged in a sector, 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 work force.

Table 1. Business sector: Productivity, hourly compensation, unit labor cost, and prices, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost	Unit non-labor payments (3)	Implicit price deflator (4)
Indexes 1982=100								
1989	I	113.0	135.6	120.0	131.8	r104.4	116.7	130.9
	II	113.0	135.9	120.2	132.7	103.5	117.4	133.3
	III	112.6	136.1	120.9	133.1	r103.0	118.2	133.9
	IV	111.9	135.5	121.0	133.8	r102.5	119.5	134.5
	ANNUAL	112.6	135.8	120.5	132.9	103.4	117.9	133.1
1990	I	111.7	136.0	121.7	135.3	r101.8	121.1	135.5
	II	111.9	136.4	121.9	137.0	r102.2	122.5	137.0
	III	112.1	136.5	121.8	138.6	101.7	123.6	137.8
	IV	r112.1	135.7	121.1	139.8	r100.8	124.8	137.3
	ANNUAL	111.9	136.1	121.6	137.7	101.7	123.0	136.9
Percent change from previous quarter at annual rate (5)								
1989	I	-0.5	3.5	4.0	3.3	r-1.6	3.8	1.9
	II	0.1	0.9	0.8	2.6	r-3.3	2.5	7.7
	III	-1.6	0.6	2.2	1.1	r-2.0	2.8	1.8
	IV	-2.3	-1.8	0.4	2.2	-1.8	4.6	1.7
	ANNUAL	-0.5	2.1	2.6	3.3	-1.5	3.8	4.1
1990	I	-0.9	1.4	2.3	4.5	r-2.7	5.4	3.1
	II	0.6	1.2	0.5	5.4	r1.4	4.7	4.5
	III	0.9	0.5	-0.4	4.6	r-2.1	3.7	2.4
	IV	r-0.3	r-2.4	r-2.2	r3.6	r-3.2	r3.8	r-1.6
	ANNUAL	-0.6	0.3	0.9	3.6	-1.7	4.3	2.8
Percent change from corresponding quarter of previous year								
1989	I	-0.2	3.4	3.6	4.4	-0.4	4.6	4.0
	II	0.1	2.5	2.3	3.7	-1.4	3.6	5.5
	III	-0.9	1.7	2.7	2.6	-2.0	3.5	4.0
	IV	-1.1	0.8	1.9	2.3	-2.2	3.4	3.2
	ANNUAL	-0.5	2.1	2.6	3.3	-1.5	3.8	4.1
1990	I	-1.2	0.3	1.4	2.6	-2.5	3.8	3.6
	II	-1.0	0.3	1.4	3.3	-1.3	4.4	2.8
	III	-0.4	0.3	0.7	4.2	r-1.3	4.6	2.9
	IV	0.1	r0.2	r0.0	4.5	-1.7	4.4	2.1
	ANNUAL	-0.6	0.3	0.9	3.6	-1.7	4.3	2.8

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

Table 2. Nonfarm business sector: Productivity, hourly compensation, unit labor cost, and prices, seasonally adjusted

Year and quarter	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost	Unit non-labor payments (3)	Implicit price deflator (4)
Indexes 1982=100								
1989	I	112.1	136.4	121.7	131.0	r103.8	116.9	131.0
	II	112.0	136.8	122.2	131.6	r102.7	117.5	134.0
	III	111.7	137.1	122.7	132.1	102.3	118.3	134.8
	IV	111.0	136.3	122.8	132.9	101.9	119.7	135.4
	ANNUAL	111.7	136.7	122.3	131.9	102.7	118.1	133.8
1990	I	110.7	136.8	123.7	134.2	r101.0	121.3	135.7
	II	110.7	137.2	123.9	135.8	r101.3	122.7	137.5
	III	110.9	137.4	123.9	137.4	100.8	123.9	138.3
	IV	r111.0	r136.5	123.0	138.7	100.1	125.0	138.3
	ANNUAL	110.8	137.0	123.6	136.5	100.8	123.2	137.4
Percent change from previous quarter at annual rate (5)								
1989	I	-2.7	1.2	4.0	3.3	r-1.6	6.1	-3.3
	II	-0.3	1.3	1.6	1.7	r-4.2	2.0	9.3
	III	-1.0	0.6	1.6	1.6	r-1.5	2.6	2.6
	IV	-2.5	-2.1	0.5	2.3	-1.6	5.0	1.7
	ANNUAL	-0.7	2.0	2.7	3.2	-1.5	3.9	3.9
1990	I	-1.3	1.4	2.8	3.9	r-3.2	5.3	1.0
	II	0.3	1.2	0.9	5.0	r1.0	4.7	5.2
	III	0.6	0.4	-0.2	4.7	r-2.0	4.1	2.6
	IV	r0.3	r-2.6	r-2.8	r4.0	r-2.8	3.7	r0.1
	ANNUAL	-0.8	0.2	r1.0	3.5	-1.8	4.3	2.7
Percent change from corresponding quarter of previous year								
1989	I	-0.1	3.6	3.7	4.4	-0.4	4.5	3.3
	II	0.0	2.6	2.6	3.5	-1.6	3.6	5.3
	III	-1.0	1.7	2.7	2.6	-2.0	3.6	4.7
	IV	-1.6	0.3	1.9	2.2	-2.2	3.9	2.5
	ANNUAL	-0.7	2.0	2.7	3.2	-1.5	3.9	3.9
1990	I	-1.3	0.3	1.6	2.4	r-2.6	3.7	3.6
	II	-1.1	0.3	1.4	3.2	r-1.3	4.4	2.6
	III	-0.7	0.2	1.0	4.0	-1.5	4.8	2.6
	IV	r0.0	0.1	r0.1	r4.4	-1.8	4.4	2.2
	ANNUAL	-0.8	0.2	r1.0	3.5	-1.8	4.3	2.7

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

Table 3. Manufacturing sector: Productivity, hourly compensation, and unit labor cost, seasonally adjusted

Year and quarter		Output per hour of all persons	Output (6)	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost
Indexes 1982=100							
1989	I	137.0	151.2	110.4	126.7	r100.3	92.5
	II	138.3	152.1	110.0	127.1	99.1	91.9
	III	137.9	151.5	109.9	128.2	r99.2	92.9
	IV	138.8	151.0	108.8	128.9	r98.8	92.9
	ANNUAL	138.0	151.5	109.8	127.7	99.4	92.6
1990	I	140.5	151.7	108.0	129.7	r97.6	92.3
	II	141.5	153.3	108.3	131.2	97.8	92.7
	III	143.4	154.7	107.9	132.5	97.2	92.4
	IV	r142.8	r151.4	r106.0	r134.0	r96.6	93.8
	ANNUAL	142.1	r152.8	107.5	131.9	97.4	92.8
Percent change from previous quarter at annual rate (5)							
1989	I	2.7	3.1	0.3	5.2	r0.3	2.4
	II	3.9	2.4	-1.4	1.3	r-4.6	-2.5
	III	-1.0	-1.4	-0.4	3.6	r0.4	4.6
	IV	2.5	-1.3	-3.7	2.4	-1.6	-0.1
	ANNUAL	3.3	3.6	0.3	3.9	-0.9	0.6
1990	I	4.9	1.8	-2.9	2.3	r-4.8	-2.5
	II	3.1	4.3	1.2	4.7	r0.8	1.6
	III	5.4	3.5	-1.7	4.0	r-2.7	-1.3
	IV	r-1.6	r-8.3	r-6.8	r4.7	r-2.1	r6.4
	ANNUAL	3.0	r0.9	-2.1	3.3	-2.0	0.3
Percent change from corresponding quarter of previous year							
1989	I	4.9	6.7	1.8	4.6	-0.2	-0.3
	II	4.1	4.9	0.8	4.1	r-1.0	0.0
	III	2.0	2.4	0.4	3.7	-0.9	1.7
	IV	2.0	0.7	-1.3	3.1	-1.4	1.1
	ANNUAL	3.3	3.6	0.3	3.9	-0.9	0.6
1990	I	2.6	0.4	-2.1	2.4	-2.7	-0.2
	II	2.4	0.8	-1.5	3.2	-1.3	0.9
	III	4.0	2.1	-1.8	3.3	-2.1	-0.6
	IV	r2.9	r0.2	r-2.6	r3.9	r-2.2	1.0
	ANNUAL	3.0	r0.9	-2.1	3.3	-2.0	0.3

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

Table 4. Durable manufacturing sector: Productivity, hourly compensation, and unit labor cost, seasonally adjusted

Year and quarter		Output per hour of all persons	Output (6)	Hours of all persons	Compensation per hour(1)	Real compensation per hour(2)	Unit labor cost
Indexes 1982=100							
1989	I	149.5	167.5	112.0	125.3	99.2	83.8
	II	152.0	168.6	110.9	125.7	r98.1	82.7
	III	152.0	167.9	110.5	127.0	r98.3	83.6
	IV	152.0	166.2	109.3	127.6	r97.8	84.0
	ANNUAL	151.4	167.5	110.7	126.4	98.4	83.5
1990	I	153.8	166.8	108.5	128.1	r96.4	83.3
	II	156.2	169.8	108.7	129.5	r96.6	82.9
	III	159.1	171.6	107.9	131.0	96.1	82.3
	IV	r157.8	r166.0	r105.2	r132.6	r95.6	r84.0
	ANNUAL	r156.8	168.6	107.5	r130.4	r96.3	83.1
Percent change from previous quarter at annual rate(5)							
1989	I	2.1	2.2	0.1	6.2	r1.2	4.1
	II	6.9	2.8	-3.8	1.2	r-4.6	-5.3
	III	-0.2	-1.7	-1.5	4.3	r1.1	4.5
	IV	0.0	-4.1	-4.1	1.8	-2.1	1.8
	ANNUAL	4.1	4.1	0.0	4.1	-0.7	0.0
1990	I	4.8	1.6	-3.1	1.5	r-5.5	-3.1
	II	6.6	7.3	0.7	4.4	r0.5	-2.0
	III	7.5	4.3	-3.0	4.6	r-2.1	-2.7
	IV	r-3.2	r-12.4	r-9.5	r5.0	r-1.8	r8.6
	ANNUAL	3.6	0.6	-2.9	3.1	r-2.1	r-0.4
Percent change from corresponding quarter of previous year							
1989	I	5.7	8.6	2.8	4.0	-0.7	-1.6
	II	5.2	5.8	0.6	4.4	-0.8	-0.8
	III	3.2	2.7	-0.4	4.4	-0.3	1.1
	IV	2.1	-0.2	-2.3	3.4	-1.1	1.2
	ANNUAL	4.1	4.1	0.0	4.1	-0.7	0.0
1990	I	2.8	-0.4	-3.1	2.2	r-2.8	-0.6
	II	2.7	0.7	-2.0	3.0	r-1.5	0.3
	III	4.7	2.2	-2.4	3.1	r-2.3	-1.5
	IV	3.8	r-0.1	r-3.8	r3.9	r-2.2	r0.1
	ANNUAL	3.6	0.6	-2.9	3.1	r-2.1	r-0.4

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

Table 5. Nondurable manufacturing sector: Productivity, hourly compensation, and unit labor cost, seasonally adjusted

Year and quarter		Output per hour of all persons	Output (6)	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost
Indexes 1982=100							
1989	I	119.8	129.5	108.1	128.5	r101.8	107.3
	II	119.6	130.1	108.7	129.1	100.7	107.9
	III	119.0	129.7	109.0	130.0	100.6	109.2
	IV	121.1	130.9	108.1	131.1	100.5	108.3
	ANNUAL	119.8	130.0	108.5	129.6	100.9	108.2
1990	I	122.6	131.6	107.4	132.2	r99.6	107.9
	II	121.8	131.4	107.9	134.0	99.9	109.9
	III	122.5	132.1	107.9	135.1	99.1	110.3
	IV	r123.1	r131.8	r107.1	136.6	r98.5	r111.0
	ANNUAL	r122.6	r131.8	107.5	134.5	99.3	r109.8
Percent change from previous quarter at annual rate (5)							
1989	I	3.9	4.7	0.7	3.6	r-1.3	-0.3
	II	-0.5	1.8	2.3	1.9	r-4.0	2.4
	III	-2.1	-1.0	1.1	2.6	r-0.6	4.8
	IV	7.1	3.7	-3.2	3.4	r-0.5	-3.4
	ANNUAL	2.0	2.8	0.8	3.7	-1.1	1.6
1990	I	5.2	2.3	-2.7	3.6	r-3.5	-1.5
	II	-2.4	-0.6	1.8	5.4	r1.4	8.0
	III	2.2	2.1	0.0	3.3	r-3.3	1.1
	IV	r2.0	r-0.9	r-2.8	4.7	r-2.1	r2.7
	ANNUAL	r2.3	r1.3	-0.9	3.8	-1.5	r1.5
Percent change from corresponding quarter of previous year							
1989	I	3.3	3.6	0.3	5.2	0.4	1.9
	II	2.3	3.5	1.2	3.6	-1.5	1.3
	III	0.3	1.8	1.5	2.9	-1.7	2.6
	IV	2.1	2.3	0.2	2.9	-1.6	0.8
	ANNUAL	2.0	2.8	0.8	3.7	-1.1	1.6
1990	I	2.3	1.7	-0.7	2.9	-2.2	0.5
	II	1.9	1.1	-0.8	3.7	r-0.8	1.9
	III	2.9	1.9	-1.1	3.9	r-1.5	1.0
	IV	r1.7	r0.7	r-1.0	4.2	-1.9	r2.5
	ANNUAL	r2.3	r1.3	-0.9	3.8	-1.5	r1.5

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

Table 6. Nonfinancial corporations: Productivity, hourly compensation, unit labor cost, unit profits, and prices, seasonally adjusted

Year and quarter	Output per all-employee hour	Output	Employee hours	Hourly compensation (1)	Real hourly compensation (2)	Unit labor cost	Unit non-labor cost (7)	Total unit cost (8)	Unit profits (9)	Implicit price deflator (4)
Indexes 1982=100										
1989 I	111.9	136.2	121.7	128.3	r101.6	114.6	108.0	112.7	162.3	115.9
II	111.6	136.4	122.2	128.8	100.5	115.4	110.6	114.1	162.9	117.1
III	111.8	137.1	122.7	129.3	r100.1	115.7	113.3	115.0	159.3	117.8
IV	110.5	135.9	123.0	130.0	r99.6	117.6	115.2	117.0	147.2	118.9
ANNUAL	111.6	136.4	122.2	129.3	100.6	115.8	111.8	114.7	157.9	117.4
1990 I	110.1	136.0	123.5	130.9	r98.5	118.9	116.2	118.1	147.6	120.0
II	110.6	136.9	123.8	133.0	r99.2	120.2	116.2	119.1	153.9	121.3
III	110.3	136.6	123.9	134.4	98.6	121.9	118.6	120.9	143.1	122.3
IV	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ANNUAL	110.5	136.3	123.3	133.6	98.6	120.9	117.9	120.0	145.8	121.7
Percent change from previous quarter at annual rate(5)										
1989 I	-3.6	-0.1	3.6	4.6	r-0.4	8.4	2.6	6.8	-32.5	2.4
II	-1.1	0.6	1.7	1.8	r-4.1	2.8	9.9	4.7	1.5	4.4
III	0.6	2.1	1.5	1.6	r-1.5	1.0	10.2	3.5	-8.5	2.4
IV	-4.6	-3.6	1.1	1.9	-2.0	6.9	6.9	6.9	-27.1	3.6
ANNUAL	-1.6	1.1	2.8	3.3	-1.5	5.0	5.9	5.3	-10.4	3.7
1990 I	-1.5	0.2	1.8	2.8	r-4.3	4.4	3.3	4.1	1.2	3.9
II	1.9	2.8	0.9	6.6	r2.6	4.6	0.2	3.4	18.2	4.5
III	-1.0	-0.8	0.2	4.4	r-2.3	5.5	8.3	6.3	-25.3	3.4
IV	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ANNUAL	-1.0	-0.1	0.9	3.3	-2.0	4.3	5.5	4.7	-7.7	3.6
Percent change from corresponding quarter of previous year										
1989 I	-1.5	2.3	3.8	4.4	-0.4	6.0	3.6	5.3	-8.1	4.0
II	-1.7	1.4	3.1	3.5	r-1.5	5.3	5.7	5.4	-8.5	4.0
III	-1.4	1.3	2.7	2.7	-1.9	4.1	6.9	4.9	-7.0	3.8
IV	-2.2	-0.3	2.0	2.5	-2.0	4.8	7.4	5.5	-17.8	3.2
ANNUAL	-1.6	1.1	2.8	3.3	-1.5	5.0	5.9	5.3	-10.4	3.7
1990 I	-1.7	-0.2	1.5	2.0	-3.0	3.8	7.6	4.8	-9.0	3.6
II	-1.0	0.4	1.3	3.2	r-1.3	4.2	5.1	4.4	-5.5	3.6
III	-1.3	-0.4	1.0	3.9	r-1.5	5.3	4.6	5.1	-10.2	3.8
IV	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
ANNUAL	-1.0	-0.1	0.9	3.3	-2.0	4.3	5.5	4.7	-7.7	3.6

See footnotes following table 6.  
r=revised

March 6, 1991  
Source: Bureau of Labor Statistics

**SOURCE:** Output data from the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Compensation and hours data from the Bureau of Labor Statistics, U.S. Department of Labor, and the Bureau of Economic Analysis.

**RELIABILITY:** Productivity and cost measures are regularly revised as more complete information becomes available. The measures are first published 30 days after the close of the reference period; revisions appear 30 days later, and third revisions after an additional 60 days. In the business sector, the probability is 0.95 that the third publication (third revision) of a quarterly index of output per hour of all persons will differ from the initial value by between -1.8 and +2.1 index points. This interval is based on the performance of this measure between the second quarter of 1976 and the third quarter of 1989.

#### Footnotes, Tables 1-6

- (1) Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Except for nonfinancial corporations, where there are no self-employed, data also include an estimate of wages, salaries, and supplemental payments for the self-employed.
- (2) Compensation per hour adjusted for changes in the Consumer Price Index for All Urban Consumers.
- (3) Unit nonlabor payments include profits, capital consumption allowances, interest, rental income of persons, and indirect taxes.
- (4) Current dollar gross product divided by constant dollar gross product.
- (5) Quarterly changes: Percent change compounded at annual rate from the original data rather than index numbers. Annual changes: Percent change between annual average levels.
- (6) Quarterly manufacturing output measures are based on the index of industrial production prepared monthly by the Board of Governors of the Federal Reserve adjusted by BLS to annual manufacturing output levels (gross product originating) from the National Income and Product Accounts prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce.
- (7) Unit nonlabor cost includes capital consumption allowances, interest, rental income of persons, and indirect taxes. For nonfinancial corporations, rental income of persons is zero by definition.
- (8) Total unit cost is the sum of labor and nonlabor costs.
- (9) Unit profits include corporate profits with inventory valuation and capital consumption adjustments.

Appendix Table 1. Manufacturing sector: Productivity, hourly compensation, and unit labor cost  
Indexes 1982=100

Year	Output per hour of all persons	Output (6)	Hours of all persons	Compensa- tion per hour (1)	Real compensa- tion per hour (2)	Unit labor cost
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Manufacturing, total:						
1977	96.5	104.7	108.6	62.9	100.2	65.2
1978	96.8	109.5	113.1	68.2	101.0	70.5
1979	97.3	112.2	115.3	74.8	99.5	76.9
1980	96.6	106.2	109.9	83.7	98.0	86.7
1981	97.9	106.9	109.3	91.8	97.5	93.8
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	105.0	106.2	101.2	102.6	99.4	97.7
1984	110.0	118.6	107.8	105.9	98.4	96.3
1985	114.8	122.8	107.0	111.1	99.7	96.8
1986	120.0	126.6	105.4	116.2	102.3	96.8
1987	126.1	133.9	106.2	118.9	101.0	94.3
1988	133.6	146.2	109.4	122.9	100.2	92.0
1989	138.0	151.5	109.8	127.7	99.4	92.6
1990	142.1	152.8	107.5	131.9	97.4	92.8
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Durable goods manufacturing:						
1977	101.6	111.3	109.4	63.2	100.6	62.1
1978	100.8	116.8	115.9	68.1	100.8	67.6
1979	100.0	119.5	119.5	74.7	99.2	74.7
1980	100.3	112.7	112.4	83.9	98.2	83.7
1981	101.1	112.7	111.5	92.1	97.7	91.1
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	105.2	105.9	100.6	102.2	99.0	97.1
1984	112.9	123.8	109.6	105.2	97.7	93.2
1985	118.8	130.1	109.5	110.3	98.9	92.9
1986	124.9	133.2	106.7	115.8	102.0	92.8
1987	134.1	142.7	106.5	118.4	100.6	88.3
1988	145.4	160.9	110.6	121.4	99.0	83.5
1989	151.4	167.5	110.7	126.4	98.4	83.5
1990	156.8	168.6	107.5	130.4	96.3	83.1
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Nondurable goods manufacturing:						
1977	89.5	96.1	107.3	62.3	99.2	69.6
1978	91.4	99.7	109.1	67.9	100.5	74.3
1979	93.7	102.5	109.4	74.4	98.9	79.4
1980	91.6	97.5	106.5	82.9	97.0	90.4
1981	93.5	99.2	106.1	90.8	96.4	97.1
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	104.7	106.7	101.9	103.4	100.2	98.8
1984	106.1	111.6	105.2	106.6	99.0	100.5
1985	109.4	113.1	103.4	111.9	100.4	102.3
1986	113.6	117.8	103.7	116.4	102.5	102.5
1987	115.3	122.1	105.9	119.6	101.6	103.7
1988	117.5	126.5	107.7	125.0	102.0	106.4
1989	119.8	130.0	108.5	129.6	100.9	108.2
1990	122.6	131.8	107.5	134.5	99.3	109.8
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See footnotes following table 6.

March 6, 1991  
Source: Bureau of Labor

Statistics