

# News

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## PRODUCTIVITY AND COSTS Second Quarter 1990

The Bureau of Labor Statistics of the U.S. Department of Labor today reported preliminary productivity data--as measured by output per hour of all persons--for the second quarter of 1990. The preliminary seasonally-adjusted annual rates of productivity change in the second quarter were:

- 1.9 percent in the business sector,
- 1.6 percent in the nonfarm business sector,
- 3.7 percent in manufacturing,
- 6.7 percent in durable goods manufacturing, and
- 1.1 percent in nondurable goods manufacturing.

Productivity advanced in business and nonfarm business as output rose while hours decreased. In manufacturing, however, a more rapid productivity increase occurred; although hours were unchanged output increased more than in the business and nonfarm business sectors. All of the manufacturing productivity gain took place among durable goods industries, unlike the previous 2 quarters. Second-quarter measures are summarized in table A and appear in detail in tables 1 through 5.

### Business

Productivity increased at a 1.9 percent annual rate during the second quarter of 1990 in the business sector, as output rose 1.5 percent and hours of all persons engaged in the sector declined 0.4 percent (seasonally adjusted annual rates). This was the first decline in hours since 1986. In the second quarter of 1990, employment rose 0.3 percent and average weekly hours declined 0.7 percent. During the first quarter of 1990, productivity had decreased 1.5 percent (table 1).

**NOTE:** The productivity and cost measures in this release reflect the regular 3-year revisions to the national income and product accounts data announced by the Bureau of Economic Analysis of the U.S. Department of Commerce on July 27. Also, indexes are now based on 1982 as 100. See Revised measures section (page 4), and appendix tables 1-12 (pages 14-25).

**Table A. Productivity and costs: Second-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	1.9	1.5	-0.4	5.9	2.2	4.0
Nonfarm business	1.6	1.5	-0.1	5.6	1.8	3.9
Manufacturing	3.7	3.7	0.0	6.4	2.6	2.6
Durable	6.7	6.3	-0.4	6.8	3.0	0.1
Nondurable	-1.1	-0.6	0.5	5.7	2.0	6.9
Percent change from same quarter a year ago						
Business	-0.8	0.4	1.2	3.4	-1.2	4.2
Nonfarm business	-0.8	0.4	1.2	3.3	-1.3	4.2
Manufacturing	2.5	0.7	-1.8	3.7	-0.9	1.1
Durable	2.9	0.4	-2.4	3.7	-0.9	0.8
Nondurable	2.1	1.1	-1.0	3.7	-0.9	1.6

Hourly compensation increased at a 5.9 percent annual rate during the second quarter of 1990, compared with a 3.8 percent gain during the previous quarter. The second-quarter increase was the largest since 1987. 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 4.0 percent annual rate during the second quarter, compared with a 5.3 percent increase during the first quarter.

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), increased at a 2.2 percent annual rate during the second quarter. During the first quarter, this measure had declined at a 4.0 percent annual rate. The second quarter increase was the first gain in 7 quarters.

The implicit price deflator for business output, which reflects changes in unit labor costs and unit nonlabor payments, increased 4.4 percent in the second quarter, compared with a 4.6 percent rise in the first quarter.

### **Nonfarm business**

Nonfarm productivity posted its first gain in 6 quarters during the April-June period of 1990. Productivity increased 1.6 percent as output rose 1.5 percent and hours of all persons--employees, proprietors, and unpaid family workers--declined 0.1 percent. During the first quarter of 1990, productivity had decreased 1.9 percent in this sector (table 2).

Hourly compensation increased 5.6 percent in the second quarter, or 1.8 percent when the increase in the CPI-U was taken into account. During the first quarter, the comparable changes were 3.2 percent and -4.5 percent, respectively. As in the more comprehensive business sector, the increase in hourly compensation was the greatest since 1987 (when a 6.8 percent increase occurred in the fourth quarter), and the increase in real hourly compensation was the first upward movement in 7 quarters. Unit labor costs increased 3.9 percent during the second quarter, compared with a 5.2 percent rise during the preceding period.

The implicit price deflator for nonfarm business output rose 4.6 percent in the second quarter, compared with a 3.8 percent increase one quarter earlier.

### **Manufacturing**

Productivity increased at a 3.7 percent seasonally adjusted annual rate in manufacturing in the second quarter of 1990, as output increased 3.7 percent and hours of all persons were unchanged. During the first quarter, productivity had increased at a 5.1 percent rate. The productivity increase in manufacturing resulted from opposite movements in durable and nondurable goods industries. Productivity increased rapidly among durable goods manufacturers, but declined in nondurables (tables 4, 5). The increase in durables productivity reflects the large gain in durable output during the second quarter. On the other hand, nondurables goods industries experienced a decline in output coupled with a small rise in hours.

Hourly compensation of all manufacturing workers increased 6.4 percent during the second quarter, compared with a 2.5 percent increase during the first quarter. This was the largest quarterly increase since the first quarter of 1988 (when it rose 6.7 percent). Real hourly compensation rose 2.6 percent in the second quarter when the increase in consumer prices was taken into account. During the first quarter, this measure fell at a 5.2 percent annual rate. Manufacturing real hourly compensation has declined in 10 of the past 14 quarters. Unit labor costs increased at a 2.6 percent annual rate in the second quarter, compared with a 2.5 percent decrease during the first quarter of 1990.

**Table B. Nonfinancial corporations: Previous and current first quarter productivity and related measures (Percent change)**

Measure	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs	Unit profits	Implicit price deflator
Previous	-2.1	0.3	2.4	3.8	-4.0	6.0	-1.5	4.5
Current	-2.2	0.2	2.5	2.1	-5.5	4.4	1.2	3.9

#### Revised measures

The productivity and cost measures in this press release are based on the latest measures of output and compensation available. While the productivity increase in nonfarm business was revised upward for 1988 (from 2.0 percent to 2.2 percent), downward revisions occurred in 1989. The revised measures show productivity declining in each quarter last year; previously, only the first quarter showed a decrease. For the year as a whole, nonfarm productivity declined 0.3 percent. Previously a 0.9 percent increase was reported. See appendix tables 1-6 for quarterly measures.

Revised quarterly and annual output and compensation measures prepared by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce were published on July 27 as part of the regular revision cycle of the national income and product accounts and affect the last 3 years. (For manufacturing, revised output measures will be announced by BEA later this year. Until then, post-1987 manufacturing output will continue to be based on the Federal Reserve Board's Index of Industrial Production.) Annual indexes calculated with 1982 as 100 appear in appendix tables 7-12.

Table B compares previous and current productivity and cost measures in nonfinancial corporations for the first quarter of 1990. These measures, which were released previously on June 4, show a somewhat greater decline in productivity than when preliminary figures were released.

In addition, all of the productivity and cost measures in this release incorporate recent information on seasonal trends in employment and average weekly hours. This new information affected measures beginning with 1985. Printed historical tables containing new quarterly values are available on request from the Bureau of Labor Statistics, Office of Productivity and Technology, Washington, D.C. 20212; or telephone (202) 523-9261.

Complete historical series of productivity and cost measures also are available on the BLS Major Sector Labor and Multifactor Productivity diskette, formatted for use on IBM-compatible microcomputers using LOTUS 1-2-3 for \$38, prepaid. To order, send a check or money order payable to the Bureau of Labor Statistics to: BLS Data Diskettes, 441 G Street NW, Room 2831 A, Washington, D.C. 20212 or call (202) 523-7827. Please specify "Major Sector Labor and Multifactor Productivity Diskette". NOTE: The multifactor productivity measures for 1948 through 1987 on this diskette will be revised later to incorporate the new information now being introduced in the labor productivity measures.

**Next release date**

The next release of productivity and cost measures is scheduled for 10:00 AM EDT, Tuesday, September 4, 1990. Second-quarter measures for nonfinancial corporations will be released at that time.

#### 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. 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 U.S. Department of Commerce and the CPS are used to measure labor input for government enterprises, proprietors, unpaid family workers, and paid employees of private households.

**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 1988. Nonfarm business, which also excludes farming, was about 79 percent of GNP in 1988.

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; non-electrical 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 1988.

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. Non-financial corporations accounted for about 60 percent of GNP in 1988.

**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	r113.3	r135.6	r119.7	r132.2	r104.6	r116.7	r130.8	r121.2
	II	r113.3	r135.9	r120.0	r133.0	r103.7	r117.4	r133.2	r122.5
	III	r112.8	r136.1	r120.6	r133.4	r103.3	r118.2	r133.8	r123.3
	IV	r112.3	r135.5	r120.7	r134.3	r103.0	r119.6	r134.4	r124.3
	ANNUAL	r112.8	r135.8	r120.4	r133.1	r103.5	r118.0	r133.1	r122.8
1990	I	r111.9	r136.0	r121.5	r135.5	r101.9	r121.1	r135.5	r125.8
	II	112.4	136.4	121.4	137.5	102.5	122.3	137.2	127.1
Percent change from previous quarter at annual rate(5)									
1989	I	r0.5	r3.5	r3.0	r2.0	r-3.3	r1.5	r6.3	r3.1
	II	r0.0	r0.9	r0.9	r2.4	r-3.4	r2.5	r7.7	r4.3
	III	r-1.5	r0.6	r2.1	r1.3	r-1.5	r2.8	r1.8	r2.5
	IV	r-2.0	r-1.8	r0.1	r2.6	r-1.4	r4.6	r1.6	r3.5
	ANNUAL	r-0.2	r2.1	2.3	r3.0	r-1.7	r3.2	r5.2	3.9
1990	I	r-1.5	r1.4	r2.9	r3.8	r-4.0	r5.3	r3.3	r4.6
	II	1.9	1.5	-0.4	5.9	2.2	4.0	5.2	4.4
Percent change from corresponding quarter of previous year									
1989	I	r0.1	r3.4	3.3	r4.1	r-0.6	r4.0	r5.1	r4.4
	II	r0.4	r2.5	r2.0	r3.4	r-1.7	r3.0	r6.6	4.2
	III	r-0.6	r1.7	r2.3	r2.4	r-2.2	r2.9	r5.1	3.7
	IV	r-0.7	r0.8	r1.5	r2.1	r-2.4	r2.8	r4.3	r3.4
	ANNUAL	r-0.2	r2.1	2.3	r3.0	r-1.7	r3.2	r5.2	3.9
1990	I	r-1.2	r0.3	1.5	r2.5	r-2.6	r3.8	r3.6	r3.7
	II	-0.8	0.4	1.2	3.4	-1.2	4.2	3.0	3.8

See footnotes following table 6.  
r=revised

August 6, 1990  
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	r112.4	r136.4	r121.4	r131.4	r104.0	r116.9	r121.4
	II	r112.2	r136.8	r121.9	r131.9	r102.9	r117.5	r122.7
	III	r112.0	r137.1	r122.4	r132.5	102.6	r118.3	r123.5
	IV	r111.4	r136.3	r122.4	r133.4	r102.3	r119.8	r124.7
	ANNUAL	r111.9	r136.7	r122.2	r132.1	r102.8	r118.1	r123.0
1990	I	r110.8	r136.8	r123.5	r134.4	r101.1	r121.3	r125.8
	II	111.3	137.3	123.4	136.3	101.6	122.5	127.2
Percent change from previous quarter at annual rate (5)								
1989	I	r-1.7	r1.2	r3.0	r2.0	r-3.3	r3.8	2.8
	II	r-0.5	r1.3	1.7	r1.5	r-4.2	r2.0	4.4
	III	r-0.8	r0.6	r1.5	r1.8	r-1.0	r2.7	r2.6
	IV	r-2.2	r-2.1	r0.1	r2.7	r-1.3	r5.1	r3.9
	ANNUAL	r-0.3	r2.0	2.4	r3.0	r-1.8	r3.3	r3.9
1990	I	r-1.9	r1.4	r3.4	r3.2	r-4.5	r5.2	r3.8
	II	1.6	1.5	-0.1	5.6	1.8	3.9	4.6
Percent change from corresponding quarter of previous year								
1989	I	r0.2	r3.6	r3.4	r4.1	r-0.6	r3.9	r4.4
	II	r0.3	r2.6	r2.3	r3.2	r-1.8	r3.0	r6.4
	III	r-0.6	r1.7	r2.3	r2.4	r-2.2	r3.0	r5.8
	IV	r-1.3	r0.3	1.6	r2.0	r-2.4	r3.4	r3.6
	ANNUAL	r-0.3	r2.0	2.4	r3.0	r-1.8	r3.3	r5.0
1990	I	r-1.4	r0.3	1.7	r2.3	r-2.8	r3.7	r3.6
	II	-0.8	0.4	1.2	3.3	-1.3	4.2	2.8

See footnotes following table 6.  
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August 6, 1990  
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	r130.0	r143.7	r110.5	r126.5	r100.1	r97.3
	II	r130.9	r144.5	r110.4	r126.6	r98.7	r96.7
	III	r130.5	r144.0	r110.4	r127.6	r98.8	r97.8
	IV	r131.3	r143.5	r109.3	r128.4	r98.5	r97.8
	ANNUAL	r130.1	r144.0	r110.6	r126.7	r98.6	r97.4
1990	I	r133.0	r144.2	r108.4	r129.2	r97.2	r97.1
	II	134.2	145.5	108.4	131.2	97.8	97.7
Percent change from previous quarter at annual rate (5)							
1989	I	r2.6	3.1	r0.5	r2.6	r-2.7	r0.0
	II	2.6	2.4	-0.2	r0.1	r-5.6	r-2.5
	III	r-1.4	-1.4	r-0.1	r3.2	r0.3	r4.6
	IV	r2.8	-1.3	r-4.0	r2.7	r-1.3	r-0.1
	ANNUAL	2.0	2.9	0.9	r2.7	r-2.0	r0.7
1990	I	r5.1	r1.8	r-3.1	r2.5	r-5.2	r-2.5
	II	3.7	3.7	0.0	6.4	2.6	2.6
Percent change from corresponding quarter of previous year							
1989	I	2.6	4.9	2.3	r3.4	r-1.3	r0.8
	II	2.6	4.1	1.4	r2.9	r-2.2	r0.2
	III	r1.3	2.1	r0.8	r2.6	r-1.9	r1.3
	IV	1.6	0.7	r-1.0	r2.1	r-2.4	r0.5
	ANNUAL	2.0	2.9	0.9	r2.7	r-2.0	r0.7
1990	I	r2.3	r0.4	-1.9	r2.1	r-3.0	r-0.2
	II	2.5	0.7	-1.8	3.7	-0.9	1.1

See footnotes following table 6.  
r=revised

August 6, 1990  
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	r142.9	r159.7	r111.8	r125.6	r99.4	r87.9
	II	r144.8	r160.8	r111.0	r125.5	r97.9	r86.7
	III	r144.7	r160.2	r110.7	r126.8	r98.2	r87.6
	IV	r144.8	r158.5	r109.4	r127.5	r97.8	r88.0
	ANNUAL	r143.3	r159.8	r111.5	r125.4	r97.6	r87.5
1990	I	r146.6	r159.1	r108.5	r128.0	r96.3	r87.3
	II	149.0	161.6	108.4	130.2	97.0	87.4
Percent change from previous quarter at annual rate(5)							
1989	I	r2.0	2.2	r0.2	r3.6	r-1.7	r1.6
	II	r5.5	2.8	r-2.6	r-0.1	r-5.8	r-5.3
	III	-0.4	-1.7	r-1.2	r4.0	r1.2	r4.5
	IV	0.5	-4.1	-4.6	r2.3	r-1.7	r1.8
	ANNUAL	r2.5	3.1	0.6	r2.9	r-1.8	r0.4
1990	I	r5.0	r1.6	-3.2	r1.7	r-5.9	r-3.1
	II	6.7	6.3	-0.4	6.8	3.0	0.1
Percent change from corresponding quarter of previous year							
1989	I	2.6	5.9	3.2	r3.0	r-1.7	r0.4
	II	r3.3	4.5	1.2	r3.1	r-1.9	r-0.1
	III	2.3	2.3	0.0	r3.3	r-1.3	r1.0
	IV	r1.9	-0.2	r-2.1	r2.5	r-2.0	r0.6
	ANNUAL	r2.5	3.1	0.6	r2.9	r-1.8	r0.4
1990	I	r2.6	r-0.4	-2.9	r2.0	r-3.1	r-0.6
	II	2.9	0.4	-2.4	3.7	-0.9	0.8

See footnotes following table 6.  
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August 6, 1990  
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	r112.6	r122.3	r108.6	r127.9	r101.2	r113.6
	II	r112.2	r122.8	r109.5	r128.2	r100.0	r114.3
	III	r111.4	r122.5	r110.0	r128.8	r99.7	r115.6
	IV	r113.3	r123.7	r109.1	r129.9	r99.6	r114.6
	ANNUAL	r112.3	r122.8	r109.3	r128.6	r100.1	r114.5
1990	I	r114.9	r124.3	r108.3	r131.1	r98.6	r114.2
	II	114.5	124.2	108.4	133.0	99.1	116.1
Percent change from previous quarter at annual rate(5)							
1989	I	r3.7	4.7	r0.9	r0.9	r-4.3	r-2.7
	II	-1.5	1.8	r3.4	r0.8	r-4.9	r2.4
	III	r-2.6	-1.0	r1.7	r2.0	r-0.8	r4.7
	IV	r7.1	3.7	r-3.2	r3.4	r-0.6	r-3.4
	ANNUAL	r1.3	2.7	1.4	r2.4	r-2.3	r1.1
1990	I	5.5	r2.3	r-3.0	r3.9	r-3.9	r-1.5
	II	-1.1	-0.6	0.5	5.7	2.0	6.9
Percent change from corresponding quarter of previous year							
1989	I	r2.4	3.4	1.0	r3.9	r-0.8	r1.5
	II	1.6	3.4	r1.7	r2.4	r-2.6	r0.8
	III	r-0.3	1.8	r2.0	r1.7	r-2.8	r2.0
	IV	r1.6	2.3	0.7	r1.8	r-2.7	r0.2
	ANNUAL	r1.3	2.7	1.4	r2.4	r-2.3	r1.1
1990	I	r2.0	1.7	-0.3	r2.5	r-2.6	r0.5
	II	2.1	1.1	-1.0	3.7	-0.9	1.6

See footnotes following table 6.  
r=revised

August 6, 1990  
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	r112.5	r136.2	r121.1	r128.9	r102.0	r114.6	r108.0	r112.7	r162.3	r115.9
	II	r112.1	r136.4	r121.7	r129.4	r100.9	r115.4	r110.6	r114.1	r162.9	r117.1
	III	r112.3	r137.1	r122.1	r130.0	r100.7	r115.7	r113.3	r115.0	r159.3	r117.8
	IV	r111.1	r135.9	r122.3	r130.7	r100.2	r117.6	r115.2	r117.0	r147.2	r118.9
	ANNUAL	r111.9	r136.4	r121.9	r129.6	r100.9	r115.8	r111.8	r114.7	r157.9	r117.4
1990	I	r110.5	r136.0	r123.0	r131.4	r98.8	r118.9	r116.2	r118.1	r147.6	r120.0
----- Percent change from previous quarter at annual rate(5) -----											
1989	I	r-2.5	r-0.1	r2.4	r3.3	r-2.0	r5.9	r9.5	r6.8	r-32.5	r2.4
	II	r-1.4	r0.6	r2.0	r1.4	r-4.3	r2.8	r9.9	r4.7	r1.5	r4.4
	III	r0.8	r2.1	r1.3	r1.8	r-1.0	r1.0	r10.2	r3.5	r-8.5	r2.4
	IV	r-4.2	r-3.6	r0.7	r2.4	r-1.6	r6.9	r6.9	r6.9	r-27.1	r3.6
	ANNUAL	r-1.3	r1.1	2.5	r3.0	r-1.7	r4.4	r7.7	5.3	r-10.4	r3.7
1990	I	r-2.2	r0.2	r2.5	r2.1	r-5.5	r4.4	r3.3	r4.1	r1.2	r3.9
----- Percent change from corresponding quarter of previous year -----											
1989	I	r-1.1	r2.3	3.4	r4.1	r-0.6	r5.3	r5.3	r5.3	r-8.1	4.0
	II	r-1.4	r1.4	2.8	r3.3	r-1.8	r4.7	r7.4	5.4	r-8.5	4.0
	III	r-1.0	r1.3	2.3	r2.5	r-2.1	r3.5	r8.7	r4.9	r-7.0	r3.8
	IV	r-1.8	r-0.3	1.6	r2.2	r-2.2	r4.1	r9.2	5.5	r-17.8	3.2
	ANNUAL	r-1.3	r1.1	2.5	r3.0	r-1.7	r4.4	r7.7	5.3	r-10.4	r3.7
1990	I	r-1.8	r-0.2	1.6	r1.9	r-3.1	r3.8	r7.6	r4.8	r-9.0	r3.6

See footnotes following table 6.  
r=revised

August 6, 1990  
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 1988.

#### 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.  
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								
1987	I	109.6	123.5	112.7	121.7	104.9	111.0	119.4
	II	110.5	125.4	113.5	122.2	104.2	110.6	122.6
	III	111.3	127.2	114.3	123.5	104.2	111.0	124.5
	IV	112.0	129.4	115.5	125.6	105.0	112.1	123.2
	ANNUAL	110.7	126.4	114.1	123.1	104.6	111.2	122.5
1988	I	113.1	131.2	115.9	126.9	105.3	112.2	124.5
	II	112.8	132.6	117.6	128.6	105.5	114.0	125.0
	III	113.5	133.8	117.9	130.3	105.6	114.8	127.4
	IV	113.1	134.5	118.8	131.5	105.5	116.3	128.8
	ANNUAL	113.0	133.0	117.7	129.1	105.3	114.3	126.5
Percent change from previous quarter at annual rate(5)								
1987	I	0.5	4.3	3.9	2.6	-2.8	2.1	5.3
	II	3.1	6.1	2.9	1.8	-2.7	-1.3	11.2
	III	2.9	5.8	2.8	4.2	0.2	1.2	6.2
	IV	2.7	7.2	4.4	7.0	3.1	4.2	-4.2
	ANNUAL	1.2	4.1	2.9	3.8	0.1	2.6	3.0
1988	I	4.1	5.7	1.5	4.4	1.0	0.3	4.3
	II	-1.2	4.6	5.9	5.2	0.7	6.5	1.7
	III	2.5	3.5	1.0	5.6	0.6	3.1	7.8
	IV	-1.2	2.0	3.3	3.8	-0.5	5.1	4.6
	ANNUAL	2.0	5.3	3.2	4.9	0.7	2.8	3.3
Percent change from corresponding quarter of previous year								
1987	I	-0.3	1.8	2.2	4.2	1.9	4.5	0.0
	II	0.7	3.8	3.1	3.5	-0.3	2.8	3.2
	III	1.8	5.1	3.2	3.4	-0.8	1.6	4.1
	IV	2.3	5.8	3.5	3.9	-0.6	1.5	4.5
	ANNUAL	1.2	4.1	2.9	3.8	0.1	2.6	3.0
1988	I	3.2	6.2	2.9	4.3	0.4	1.1	4.2
	II	2.1	5.8	3.6	5.2	1.2	3.0	1.9
	III	2.0	5.2	3.2	5.5	1.3	3.5	2.3
	IV	1.0	3.9	2.9	4.7	0.4	3.7	4.6
	ANNUAL	2.0	5.3	3.2	4.9	0.7	2.8	3.3

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix 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									
1987	I	108.6	123.8	114.0	121.0	104.3	111.5	120.7	114.4
	II	109.6	125.9	114.8	121.6	103.6	110.9	123.7	114.9
	III	110.3	127.6	115.6	122.9	103.7	111.3	125.5	115.8
	IV	110.9	129.7	116.9	124.9	104.4	112.6	124.1	116.2
	ANNUAL	109.8	126.8	115.4	122.5	104.1	111.6	123.6	115.3
1988	I	112.1	131.6	117.4	126.2	104.7	112.6	125.4	116.6
	II	111.9	133.4	119.2	127.7	104.8	114.1	125.8	117.8
	III	112.7	134.8	119.6	129.4	104.9	114.8	127.4	118.8
	IV	112.8	136.0	120.5	130.8	104.9	115.9	130.6	120.5
	ANNUAL	112.3	134.0	119.3	128.3	104.7	114.3	127.4	118.4
Percent change from previous quarter at annual rate(5)									
1987	I	0.3	4.7	4.4	2.0	-3.3	1.8	6.8	3.4
	II	3.9	6.7	2.8	1.8	-2.7	-2.0	10.1	1.9
	III	2.5	5.6	3.0	4.2	0.2	1.6	6.1	3.1
	IV	2.2	6.9	4.5	6.8	2.9	4.4	-4.4	1.4
	ANNUAL	1.1	4.2	3.1	3.6	0.0	2.5	2.9	2.7
1988	I	4.2	5.9	1.7	4.3	0.8	0.1	4.2	1.4
	II	-0.6	5.6	6.2	5.0	0.6	5.6	1.1	4.1
	III	2.8	4.1	1.3	5.3	0.4	2.5	5.2	3.4
	IV	0.5	3.6	3.1	4.2	-0.1	3.6	10.6	5.9
	ANNUAL	2.2	5.7	3.4	4.8	0.6	2.5	3.1	2.7
Percent change from corresponding quarter of previous year									
1987	I	-0.6	1.8	2.4	3.9	1.7	4.6	0.0	3.0
	II	0.7	3.9	3.3	3.4	-0.5	2.7	3.1	2.9
	III	1.7	5.2	3.4	3.3	-0.9	1.5	4.1	2.4
	IV	2.2	6.0	3.7	3.7	-0.7	1.4	4.5	2.5
	ANNUAL	1.1	4.2	3.1	3.6	0.0	2.5	2.9	2.7
1988	I	3.2	6.3	3.0	4.3	0.3	1.0	3.9	2.0
	II	2.1	6.0	3.8	5.1	1.1	2.9	1.7	2.5
	III	2.1	5.6	3.4	5.3	1.2	3.1	1.5	2.6
	IV	1.7	4.8	3.1	4.7	0.4	2.9	5.2	3.7
	ANNUAL	2.2	5.7	3.4	4.8	0.6	2.5	3.1	2.7

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix 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						
1987	I	123.3	129.2	104.8	119.1	96.7
	II	125.4	131.2	104.7	119.0	94.9
	III	125.9	133.2	105.8	119.5	94.9
	IV	126.1	135.5	107.4	120.4	95.5
	ANNUAL	124.7	132.3	106.1	119.0	95.5
1988	I	126.7	136.9	108.0	122.4	96.6
	II	127.5	138.9	108.9	123.1	96.5
	III	128.8	141.1	109.5	124.3	96.5
	IV	129.2	142.6	110.3	125.7	97.3
	ANNUAL	127.6	139.9	109.6	123.4	96.7
Percent change from previous quarter at annual rate(5)						
1987	I	3.3	3.2	-0.1	2.5	-2.9
	II	7.1	6.6	-0.5	-0.4	-4.8
	III	1.7	6.2	4.4	1.8	-2.0
	IV	0.5	6.9	6.4	2.9	-0.8
	ANNUAL	3.7	4.3	0.6	2.5	-1.1
1988	I	2.1	4.4	2.2	6.7	3.2
	II	2.5	6.0	3.4	2.2	-2.1
	III	4.1	6.4	2.2	4.1	-0.9
	IV	1.3	4.4	3.1	4.8	0.4
	ANNUAL	2.3	5.7	3.3	3.6	-0.5
Percent change from corresponding quarter of previous year						
1987	I	3.0	2.2	-0.8	3.4	1.2
	II	4.5	4.1	-0.4	2.7	-1.1
	III	4.1	5.2	1.1	2.1	-2.1
	IV	3.1	5.7	2.5	1.7	-2.7
	ANNUAL	3.7	4.3	0.6	2.5	-1.1
1988	I	2.8	6.0	3.1	2.7	-1.2
	II	1.7	5.8	4.1	3.4	-0.5
	III	2.3	5.9	3.5	4.0	-0.2
	IV	2.5	5.3	2.7	4.4	0.1
	ANNUAL	2.3	5.7	3.3	3.6	-0.5

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics



Appendix 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 -----							
1987	I	134.9	141.5	105.0	119.4	88.5	
	II	137.5	143.6	104.5	118.9	86.5	
	III	137.6	145.3	105.6	119.2	86.7	
	IV	138.3	149.0	107.7	119.8	86.6	
	ANNUAL	136.2	144.9	106.4	118.5	87.0	
1988	I	139.3	150.8	108.3	121.9	87.5	
	II	140.3	154.0	109.8	121.7	86.8	
	III	141.4	156.6	110.7	122.8	86.8	
	IV	142.2	158.9	111.7	124.4	87.5	
	ANNUAL	139.9	155.1	110.9	121.9	87.1	
----- Percent change from previous quarter at annual rate (5) -----							
1987	I	4.2	3.0	-1.2	3.1	-2.3	-1.1
	II	8.0	6.0	-1.9	-1.8	-6.1	-9.1
	III	0.3	4.8	4.5	1.3	-2.6	1.0
	IV	2.1	10.5	8.2	1.9	-1.8	-0.2
	ANNUAL	4.4	4.0	-0.4	2.4	-1.2	-1.9
1988	I	2.8	5.1	2.3	7.2	3.7	4.3
	II	2.9	8.5	5.5	-0.7	-4.9	-3.5
	III	3.3	6.9	3.5	3.5	-1.4	0.1
	IV	2.2	6.0	3.7	5.6	1.2	3.3
	ANNUAL	2.7	7.0	4.2	2.8	-1.2	0.1
----- Percent change from corresponding quarter of previous year -----							
1987	I	3.9	1.7	-2.1	3.7	1.4	-0.2
	II	5.6	3.8	-1.6	2.8	-1.0	-2.6
	III	4.4	4.4	0.1	2.1	-2.1	-2.2
	IV	3.6	6.0	2.3	1.1	-3.2	-2.4
	ANNUAL	4.4	4.0	-0.4	2.4	-1.2	-1.9
1988	I	3.3	6.6	3.2	2.1	-1.8	-1.1
	II	2.0	7.2	5.1	2.4	-1.4	0.4
	III	2.8	7.7	4.8	2.9	-1.1	0.2
	IV	2.8	6.6	3.7	3.9	-0.4	1.0
	ANNUAL	2.7	7.0	4.2	2.8	-1.2	0.1

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix 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						
1987	I	107.8	112.7	104.5	118.6	110.1
	II	109.3	114.7	105.0	119.3	109.1
	III	110.4	117.1	106.0	120.1	108.8
	IV	109.7	117.5	107.1	121.4	110.6
	ANNUAL	109.3	115.5	105.7	119.9	109.7
1988	I	110.0	118.3	107.6	123.1	111.9
	II	110.4	118.8	107.7	125.1	113.4
	III	111.7	120.4	107.8	126.6	113.3
	IV	111.6	120.9	108.4	127.6	114.4
	ANNUAL	110.9	119.6	107.8	125.6	113.2
Percent change from previous quarter at annual rate (5)						
1987	I	2.0	3.6	1.6	1.7	-3.7
	II	5.9	7.6	1.6	2.3	-2.2
	III	4.2	8.5	4.2	2.7	-1.2
	IV	-2.6	1.2	3.9	4.2	0.4
	ANNUAL	2.8	4.9	2.0	2.9	-0.8
1988	I	1.1	3.1	2.0	5.8	2.3
	II	1.3	1.7	0.4	6.8	2.3
	III	5.0	5.4	0.4	4.8	-0.2
	IV	-0.5	1.7	2.2	3.2	-1.1
	ANNUAL	1.5	3.6	2.1	4.8	0.6
Percent change from corresponding quarter of previous year						
1987	I	1.9	3.2	1.2	3.5	1.2
	II	3.1	4.7	1.5	2.9	-1.0
	III	3.9	6.5	2.5	2.3	-1.8
	IV	2.3	5.2	2.8	2.7	-1.7
	ANNUAL	2.8	4.9	2.0	2.9	-0.8
1988	I	2.1	5.0	2.9	3.8	-0.2
	II	1.0	3.6	2.6	4.9	1.0
	III	1.2	2.8	1.6	5.4	1.2
	IV	1.7	2.9	1.2	5.1	0.8
	ANNUAL	1.5	3.6	2.1	4.8	0.6

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix 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											
1987	I	111.0	125.4	113.0	119.2	102.7	107.4	103.2	106.2	157.5	109.4
	II	112.0	127.6	113.9	119.7	102.0	106.9	102.8	105.8	171.4	109.9
	III	112.8	129.7	115.0	121.0	102.1	107.3	102.4	105.9	181.0	110.6
	IV	112.9	131.3	116.3	122.6	102.5	108.6	102.2	106.8	174.0	111.0
	ANNUAL	112.1	128.5	114.6	120.5	102.4	107.5	102.7	106.2	171.1	110.2
1988	I	113.8	133.2	117.1	123.8	102.7	108.8	102.6	107.1	176.6	111.4
	II	113.7	134.6	118.4	125.3	102.8	110.2	102.9	108.2	178.1	112.6
	III	113.5	135.4	119.3	126.8	102.8	111.8	104.2	109.7	171.4	113.5
	IV	113.2	136.3	120.4	127.9	102.6	113.0	105.6	110.9	179.1	115.2
	ANNUAL	113.4	134.9	119.0	125.8	102.6	111.0	103.8	109.0	176.3	113.2
Percent change from previous quarter at annual rate(5)											
1987	I	2.3	6.9	4.5	1.4	-3.9	-0.9	-3.7	-1.6	11.1	-0.6
	II	3.6	7.0	3.2	1.8	-2.7	-1.7	-1.3	-1.6	40.3	1.7
	III	2.8	7.0	4.0	4.3	0.3	1.5	-1.5	0.6	24.4	2.8
	IV	0.3	4.8	4.4	5.4	1.6	5.0	-0.9	3.4	-14.5	1.4
	ANNUAL	2.5	5.3	2.8	3.3	-0.3	0.8	-0.3	0.5	9.1	1.2
1988	I	3.1	6.0	2.8	3.9	0.5	0.8	1.4	0.9	6.0	1.4
	II	-0.4	4.3	4.7	4.9	0.5	5.3	1.4	4.3	3.4	4.2
	III	-0.7	2.4	3.2	5.0	0.0	5.7	5.2	5.6	-14.2	3.5
	IV	-0.9	2.6	3.5	3.4	-0.9	4.4	5.2	4.6	19.2	5.9
	ANNUAL	1.1	5.0	3.8	4.3	0.2	3.2	1.1	2.6	3.0	2.7
Percent change from corresponding quarter of previous year											
1987	I	1.6	3.0	1.3	3.5	1.3	1.9	1.7	1.9	-2.5	1.4
	II	2.6	5.2	2.5	3.1	-0.8	0.4	1.0	0.6	9.4	1.4
	III	3.3	6.8	3.4	3.1	-1.1	-0.2	-2.0	-0.7	16.2	0.8
	IV	2.3	6.4	4.1	3.2	-1.2	0.9	-1.9	0.2	13.5	1.3
	ANNUAL	2.5	5.3	2.8	3.3	-0.3	0.8	-0.3	0.5	9.1	1.2
1988	I	2.5	6.2	3.6	3.9	-0.1	1.3	-0.6	0.8	12.1	1.8
	II	1.5	5.5	4.0	4.6	0.7	3.1	0.1	2.3	3.9	2.5
	III	0.6	4.4	3.8	4.8	0.6	4.2	1.7	3.5	-5.3	2.6
	IV	0.3	3.8	3.5	4.3	0.0	4.0	3.3	3.8	2.9	3.7
	ANNUAL	1.1	5.0	3.8	4.3	0.2	3.2	1.1	2.6	3.0	2.7

See footnotes following table 6.

August 6, 1990  
 Source: Bureau of Labor Statistics

Appendix table 7. Business sector: Productivity, hourly compensation, unit labor cost, and prices  
Indexes 1982=100

Year	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)
1947	43.7	34.3	78.6	10.5	45.3	24.0	24.0	24.0
1948	45.9	36.3	79.2	11.3	45.4	24.7	27.7	25.7
1949	46.3	35.5	76.6	11.5	46.8	24.9	26.8	25.5
1950	50.2	38.9	77.4	12.4	49.6	24.7	28.6	25.9
1951	52.3	41.6	79.5	13.6	50.5	26.0	30.8	27.6
1952	54.0	42.9	79.5	14.5	52.7	26.8	30.3	27.9
1953	56.0	44.9	80.2	15.5	55.9	27.6	29.2	28.1
1954	56.9	44.1	77.6	16.0	57.3	28.1	29.3	28.5
1955	58.6	47.1	80.4	16.4	59.0	27.9	31.8	29.2
1956	59.4	48.5	81.6	17.5	62.0	29.4	31.6	30.1
1957	61.0	49.0	80.3	18.6	64.0	30.5	32.5	31.2
1958	62.8	48.1	76.6	19.5	65.0	31.0	33.0	31.7
1959	64.9	51.6	79.5	20.3	67.4	31.3	34.3	32.3
1960	66.0	52.5	79.6	21.2	69.2	32.2	34.0	32.8
1961	68.3	53.5	78.4	22.0	71.1	32.3	34.4	32.9
1962	70.8	56.3	79.6	23.1	73.7	32.6	35.6	33.6
1963	73.6	58.9	80.0	24.0	75.5	32.5	36.7	33.9
1964	76.9	62.4	81.2	25.2	78.5	32.8	37.2	34.2
1965	79.2	66.4	83.8	26.2	80.2	33.1	39.1	35.0
1966	81.5	69.8	85.7	28.0	83.5	34.4	39.9	36.2
1967	83.9	71.7	85.4	29.6	85.6	35.3	40.8	37.1
1968	86.4	74.8	86.6	32.1	88.9	37.1	42.3	38.8
1969	86.6	76.8	88.7	34.4	90.4	39.7	43.0	40.8
1970	87.4	76.1	87.1	36.9	91.9	42.3	43.6	42.7
1971	90.2	78.2	86.7	39.3	93.7	43.6	47.4	44.8
1972	92.9	83.1	89.5	41.8	96.5	45.0	49.9	46.6
1973	95.0	88.1	92.7	45.4	98.7	47.8	53.3	49.6
1974	93.2	86.5	92.8	49.9	97.6	53.5	56.1	54.3
1975	95.2	84.7	89.0	54.8	98.3	57.6	64.8	59.9
1976	98.0	89.6	91.5	59.8	101.4	61.0	68.5	63.4
1977	99.8	94.8	95.0	64.6	102.8	64.7	73.4	67.5
1978	100.7	100.3	99.6	70.1	103.8	69.7	78.3	72.5
1979	99.5	102.3	102.8	77.0	102.3	77.4	82.4	79.0
1980	99.2	101.1	101.9	85.1	99.7	85.8	86.9	86.2
1981	100.7	103.2	102.5	93.0	98.8	92.4	98.6	94.4
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.4	104.2	101.8	103.8	100.6	101.4	107.3	103.3
1984	105.0	113.0	107.6	108.1	100.4	103.0	114.8	106.8
1985	107.1	117.7	109.9	112.8	101.2	105.4	118.1	109.5
1986	109.5	121.3	110.8	118.6	104.4	108.4	119.0	111.8
1987	110.7	126.4	114.1	123.1	104.6	111.2	122.5	114.8
1988	113.0	133.0	117.7	129.1	105.3	114.3	126.5	118.2
1989	112.8	135.8	120.4	133.1	103.5	118.0	133.1	122.8

See footnotes following table 6.

August 6, 1990

Source: Bureau of Labor Statistics

Appendix table 8. Nonfarm business sector: Productivity, hourly compensation, unit labor cost, and prices  
Indexes 1982=100

Year	Output per hour of all persons	Output of all persons	Hours of all persons	Compensa- tion per hour (1)	Real compensa- tion per hour (2)	Unit labor cost	Unit non- labor pay- ments (3)	Implicit price deflator (4)
1947	50.8	33.6	66.2	11.4	49.4	22.5	23.3	22.8
1948	52.7	35.5	67.3	12.4	49.6	23.5	26.3	24.4
1949	53.5	34.7	64.7	12.8	51.7	23.8	26.6	24.7
1950	57.0	38.0	66.7	13.5	54.2	23.8	28.2	25.2
1951	58.7	40.9	69.7	14.7	54.7	25.1	29.8	26.6
1952	60.1	42.3	70.4	15.6	56.6	25.9	29.7	27.1
1953	61.4	44.2	72.1	16.4	59.5	26.8	29.3	27.6
1954	62.3	43.3	69.6	17.0	60.9	27.3	29.6	28.0
1955	64.1	46.4	72.4	17.6	63.4	27.5	32.0	28.9
1956	64.5	47.9	74.2	18.7	66.3	29.0	31.8	29.8
1957	65.7	48.5	73.8	19.1	67.8	30.1	32.7	30.9
1958	67.2	47.5	70.7	20.5	68.6	30.6	32.8	31.3
1959	69.4	51.2	73.7	21.4	70.9	30.8	34.7	32.1
1960	70.1	52.0	74.2	22.3	72.8	31.8	34.0	32.5
1961	72.3	53.1	73.3	23.1	74.4	31.9	34.5	32.7
1962	74.7	56.0	74.9	24.0	76.7	32.1	36.0	33.3
1963	77.4	58.6	75.7	24.9	78.4	32.1	37.0	33.7
1964	80.5	62.3	77.4	26.0	81.0	32.3	37.9	34.1
1965	82.6	66.3	80.3	26.9	82.4	32.6	39.5	34.8
1966	84.4	70.0	83.0	28.5	84.9	33.8	40.3	35.8
1967	86.5	71.8	82.9	30.2	87.2	34.9	41.3	36.9
1968	89.1	75.1	84.3	32.6	90.3	36.5	43.0	38.6
1969	88.8	77.1	86.8	34.8	91.4	39.1	43.5	40.5
1970	89.2	76.3	85.5	37.3	92.7	41.8	44.1	42.5
1971	91.9	78.4	85.3	39.7	94.5	43.2	47.8	44.6
1972	94.6	83.4	88.1	42.2	97.4	44.6	49.8	46.3
1973	96.6	88.5	91.6	45.7	99.3	47.3	51.0	48.4
1974	94.8	86.9	91.7	50.2	98.3	53.0	54.4	53.4
1975	96.6	84.9	87.9	55.1	98.9	57.1	63.7	59.2
1976	99.2	90.0	90.7	59.9	101.6	60.4	68.4	62.9
1977	100.9	95.3	94.5	64.7	103.0	64.1	73.5	67.0
1978	101.8	101.0	99.2	70.2	104.0	69.0	77.6	71.7
1979	100.3	102.9	102.6	76.9	102.3	76.7	81.0	78.1
1980	99.9	101.7	101.8	85.1	99.6	85.2	86.8	85.7
1981	100.9	103.4	102.5	93.1	98.9	92.3	97.9	94.0
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	103.0	105.0	102.0	104.0	100.7	101.0	108.8	103.5
1984	105.1	113.7	108.1	108.1	100.4	102.8	114.9	106.6
1985	106.5	118.1	110.9	112.5	100.9	105.6	119.0	109.8
1986	108.6	121.6	111.9	118.2	104.1	108.8	120.0	112.3
1987	109.8	126.8	115.4	122.5	104.1	111.6	123.6	115.3
1988	112.3	134.0	119.3	128.3	104.7	114.3	127.4	118.4
1989	111.9	136.7	122.2	132.1	102.8	118.1	133.7	123.0

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix table 9. 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	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost
1947	40.0	35.6	89.0	10.7	46.3	26.7
1948	42.5	37.6	88.5	11.9	47.7	28.1
1949	44.2	35.7	80.7	12.5	50.5	28.2
1950	46.6	40.6	87.1	13.1	52.5	28.1
1951	48.5	45.4	93.7	14.4	53.6	29.8
1952	49.4	47.0	95.0	15.4	56.0	31.1
1953	50.5	50.4	99.8	16.2	58.6	32.1
1954	51.2	46.7	91.3	17.0	60.9	33.1
1955	53.6	51.6	96.3	17.6	63.4	32.9
1956	53.3	52.1	97.7	18.8	66.5	35.2
1957	54.5	52.4	96.1	19.9	68.3	36.5
1958	54.2	47.8	88.2	20.8	69.4	38.3
1959	56.6	53.3	94.1	21.6	71.5	38.1
1960	56.9	53.4	93.8	22.5	73.2	39.5
1961	58.5	53.5	91.4	23.1	74.6	39.5
1962	61.0	58.0	95.1	24.0	76.7	39.3
1963	65.2	62.6	96.0	24.7	78.0	37.9
1964	68.3	67.0	98.1	25.7	80.2	37.7
1965	70.2	72.9	103.9	26.3	80.5	37.5
1966	71.0	78.5	110.6	27.5	81.9	38.7
1967	71.2	78.2	109.9	29.0	83.7	40.7
1968	73.8	82.3	111.5	31.2	86.5	42.3
1969	74.9	84.6	112.8	33.5	88.1	44.7
1970	75.2	79.9	106.1	35.9	89.3	47.7
1971	79.3	81.2	102.4	38.0	90.7	47.9
1972	82.4	88.4	107.3	39.9	92.2	48.4
1973	86.9	97.9	112.7	43.0	93.5	49.5
1974	84.6	93.2	110.1	47.8	93.6	56.5
1975	86.9	86.3	99.3	53.5	96.0	61.6
1976	90.9	94.6	104.1	58.0	98.3	63.7
1977	93.8	101.6	108.4	63.0	100.4	67.2
1978	95.3	107.7	113.0	68.2	101.0	71.6
1979	95.3	109.8	115.2	74.9	99.6	78.6
1980	95.3	104.8	110.0	83.7	98.0	87.8
1981	97.5	106.5	109.2	91.8	97.5	94.1
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	105.2	106.4	101.2	102.5	99.3	97.5
1984	110.8	119.4	107.7	106.0	98.4	95.6
1985	115.9	124.0	107.0	111.1	99.6	95.9
1986	120.2	126.8	105.5	116.1	102.3	96.6
1987	124.7	132.3	106.1	119.0	101.1	95.5
1988	127.6	139.9	109.6	123.4	100.6	96.7
1989	130.1	144.0	110.6	126.7	98.6	97.4

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix table 10. Durable 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	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost
1947	46.8	38.1	81.4	10.5	45.4	22.4
1948	49.6	40.0	80.6	11.6	46.5	23.4
1949	51.6	36.7	71.2	12.2	49.4	23.6
1950	54.5	43.2	79.3	12.8	51.4	23.5
1951	55.9	50.0	89.5	14.2	52.7	25.4
1952	57.3	52.6	91.7	15.3	55.7	26.7
1953	58.3	57.5	98.6	16.1	58.3	27.7
1954	58.7	51.3	87.3	16.9	60.5	28.7
1955	61.7	57.5	93.2	17.6	63.4	28.5
1956	60.0	57.2	95.3	18.7	66.5	31.2
1957	61.2	57.6	94.1	19.9	68.2	32.5
1958	59.7	49.7	83.2	20.9	69.9	35.1
1959	62.1	56.0	90.2	21.7	72.0	35.0
1960	62.0	55.8	90.0	22.6	73.7	36.5
1961	63.6	55.1	86.7	23.2	75.0	36.5
1962	66.5	60.8	91.4	24.2	77.3	36.3
1963	70.8	65.9	93.1	24.8	78.4	35.1
1964	74.7	71.5	95.8	25.8	80.4	34.6
1965	77.0	79.1	102.8	26.3	80.6	34.2
1966	77.1	86.1	111.7	27.4	81.7	35.6
1967	77.6	86.0	110.8	28.9	83.4	37.2
1968	80.1	90.0	112.4	31.1	86.3	38.8
1969	80.8	92.1	114.0	33.4	87.8	41.3
1970	80.0	84.1	105.1	35.9	89.3	44.8
1971	84.4	84.3	99.8	38.3	91.2	45.3
1972	87.5	92.8	106.1	40.0	92.5	45.8
1973	91.1	104.0	114.2	43.0	93.4	47.2
1974	89.4	100.3	112.2	47.6	93.2	53.3
1975	90.7	89.7	98.9	53.7	96.4	59.2
1976	95.2	98.6	103.5	58.3	98.9	61.2
1977	97.6	106.5	109.2	63.3	100.8	64.9
1978	99.1	114.7	115.8	68.2	100.9	68.8
1979	97.9	116.8	119.3	74.8	99.4	76.4
1980	98.5	110.8	112.4	83.8	98.2	85.1
1981	100.1	111.7	111.5	92.0	97.7	91.9
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	107.0	107.7	100.7	102.1	98.9	95.4
1984	117.5	128.8	109.6	105.2	97.7	89.6
1985	124.3	136.2	109.6	110.2	98.9	88.7
1986	130.4	139.3	106.8	115.7	101.9	88.7
1987	136.2	144.9	106.4	118.5	100.7	87.0
1988	139.9	155.1	110.9	121.9	99.4	87.1
1989	143.3	159.8	111.5	125.4	97.6	87.5

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics

Appendix table 11. Nondurable 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	Compensation per hour (1)	Real compensation per hour (2)	Unit labor cost
1947	32.3	32.3	100.1	11.2	48.5	34.7
1948	34.4	34.4	100.0	12.6	50.4	36.6
1949	36.3	34.2	94.3	13.1	53.3	36.2
1950	37.7	37.1	98.4	13.7	55.0	36.4
1951	39.4	39.3	99.9	14.9	55.4	37.9
1952	39.6	39.6	99.9	15.7	57.0	39.5
1953	40.3	41.0	101.7	16.4	59.4	40.8
1954	41.9	40.7	97.1	17.3	62.0	41.2
1955	43.4	43.8	100.8	17.8	63.9	40.9
1956	44.8	45.3	101.1	18.9	67.0	42.2
1957	45.9	45.5	99.0	20.0	68.7	43.6
1958	47.5	45.3	95.5	20.8	69.5	43.8
1959	49.8	49.6	99.7	21.5	71.4	43.3
1960	50.5	50.1	99.2	22.5	73.2	44.5
1961	52.2	51.3	98.2	23.2	74.9	44.4
1962	54.1	54.3	100.4	23.9	76.5	44.3
1963	58.1	58.2	100.3	24.7	78.0	42.6
1964	60.2	61.1	101.5	25.8	80.2	42.8
1965	61.2	64.5	105.4	26.3	80.6	43.0
1966	62.6	68.2	109.0	27.5	81.9	43.9
1967	62.5	67.9	108.6	29.1	84.1	46.6
1968	65.2	72.0	110.3	31.2	86.6	47.9
1969	67.0	74.5	111.1	33.6	88.2	50.1
1970	68.9	74.2	107.7	36.0	89.6	52.3
1971	72.8	77.2	106.1	37.9	90.4	52.1
1972	75.8	82.6	108.9	39.8	91.9	52.5
1973	81.2	89.8	110.5	42.9	93.3	52.9
1974	78.2	83.8	107.2	47.9	93.8	61.3
1975	81.8	81.7	99.9	53.2	95.5	65.1
1976	85.2	89.4	104.8	57.5	97.5	67.4
1977	88.7	95.1	107.2	62.4	99.3	70.3
1978	90.2	98.3	109.0	68.0	100.6	75.3
1979	91.9	100.5	109.3	74.5	99.0	81.0
1980	91.1	97.0	106.4	82.9	97.1	91.0
1981	94.1	99.7	105.9	90.9	96.6	96.7
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.8	104.8	101.9	103.4	100.2	100.6
1984	101.8	107.0	105.0	106.8	99.2	104.9
1985	104.2	107.7	103.3	112.0	100.4	107.4
1986	106.3	110.1	103.6	116.5	102.6	109.6
1987	109.3	115.5	105.7	119.9	101.8	109.7
1988	110.9	119.6	107.8	125.6	102.5	113.2
1989	112.3	122.8	109.3	128.6	100.1	114.5

See footnotes following table 6.

August 6, 1990

Source: Bureau of Labor Statistics



Appendix table 12. Nonfinancial corporations: Productivity, hourly compensation, unit labor cost, unit profits, and prices  
Indexes 1982=100

Year	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)
1958	68.3	40.7	59.6	21.7	72.5	31.8	26.3	30.3	70.8	32.8
1959	70.8	44.8	63.3	22.5	74.7	31.8	25.6	30.1	84.0	33.5
1960	71.8	46.1	64.2	23.4	76.4	32.7	26.6	31.0	76.2	33.8
1961	73.9	47.1	63.7	24.2	78.0	32.7	27.2	31.2	76.1	34.0
1962	76.7	50.8	66.2	25.1	80.3	32.7	26.9	31.1	83.3	34.4
1963	80.0	54.1	67.6	25.9	81.8	32.4	26.6	30.8	87.3	34.3
1964	83.0	57.7	69.6	27.1	84.2	32.6	26.6	30.9	91.7	34.8
1965	84.8	62.4	73.5	27.8	85.3	32.8	26.5	31.1	99.1	35.3
1966	86.1	66.7	77.5	29.4	87.4	34.1	26.5	32.0	98.7	36.2
1967	87.2	68.3	78.3	31.0	89.6	35.6	28.2	33.5	92.3	37.2
1968	89.6	72.2	80.6	33.3	92.4	37.2	30.2	35.2	92.6	38.8
1969	89.7	75.2	83.8	35.6	93.5	39.7	32.5	37.6	82.8	40.5
1970	90.0	74.4	82.7	38.1	94.6	42.3	36.4	40.7	66.6	42.3
1971	92.4	76.3	82.6	40.4	96.3	43.7	38.7	42.3	76.3	44.5
1972	94.3	82.0	87.0	42.7	98.6	45.3	39.0	43.5	82.5	46.0
1973	96.6	88.1	91.2	46.1	100.1	47.7	40.1	45.6	83.6	48.0
1974	94.0	86.0	91.5	50.5	98.9	53.8	46.5	51.7	72.1	53.0
1975	96.2	83.5	86.8	55.5	99.6	57.7	53.8	56.6	98.1	59.2
1976	98.0	88.9	90.6	60.2	102.0	61.4	54.5	59.4	113.9	62.9
1977	99.8	94.6	94.9	64.9	103.3	65.0	56.7	62.7	127.4	66.8
1978	100.4	100.4	100.0	70.4	104.2	70.1	59.9	67.3	129.9	71.2
1979	99.7	103.3	103.6	77.1	102.5	77.4	65.7	74.1	120.4	77.0
1980	99.0	101.4	102.4	85.2	99.8	86.1	77.5	83.7	108.5	85.2
1981	99.7	103.1	103.4	93.2	98.9	93.5	90.2	92.6	125.1	94.6
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.7	104.7	101.9	103.2	100.0	100.4	98.8	100.0	141.4	102.6
1984	105.2	114.3	108.6	107.1	99.4	101.8	98.4	100.8	174.0	105.4
1985	106.9	118.8	111.1	111.3	99.9	104.2	99.6	102.9	169.5	107.1
1986	109.4	122.0	111.5	116.7	102.8	106.7	103.0	105.7	156.8	108.9
1987	112.1	128.5	114.6	120.5	102.4	107.5	102.7	106.2	171.1	110.2
1988	113.4	134.9	119.0	125.8	102.6	111.0	103.8	109.0	176.3	113.2
1989	111.9	136.4	121.9	129.6	100.9	115.8	111.8	114.7	157.9	117.4

See footnotes following table 6.

August 6, 1990  
Source: Bureau of Labor Statistics