

News

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PRODUCTIVITY AND COSTS Fourth Quarter and Annual Averages, 1988

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 fourth quarter and the year of 1988. Based on information now available, productivity changes in annual rates were:

	Fourth quarter	Annual averages 1987 - 1988
Business sector.....	-2.0	1.0
Nonfarm business sector.....	0.0	1.4
Manufacturing.....	0.9	3.2
Durable goods manufacturing.....	0.1	3.3
Nondurable goods manufacturing..	2.2	2.9

Productivity advanced moderately in 1988 in the business and nonfarm business sectors. The gains in 1988 were larger than those of 1987. In manufacturing, productivity growth was more rapid than in the broader sectors, but smaller than the preceding year's increase.

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 and C.

THIRD-TO-FOURTH QUARTER CHANGES, 1988

Business

Productivity fell at a 2.0 percent annual rate during the fourth quarter of 1988 in the business sector, in contrast with the 1.7 percent gain during the third quarter. The business sector measure is the most comprehensive indicator of productivity change. The decline in the fourth quarter reflects a drop in farm productivity, which does not affect the nonfarm business or manufacturing measures. Output in the business sector rose 2.1 percent, and hours of all persons engaged in the sector increased 4.1 percent (seasonally adjusted annual rates). During the third quarter of 1988, output increased 2.8 percent and hours of all persons increased 1.1 percent (table 1).

Table A. Productivity and costs: Preliminary fourth quarter 1988 measures
(Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change from preceding quarter						
Business	-2.0	2.1	4.1	4.7	0.3	6.8
Nonfarm business	0.0	3.6	3.5	5.6	1.2	5.6
Manufacturing	0.9	4.9	3.9	5.4	1.0	4.4
Durable	0.1	4.7	4.6	5.8	1.4	5.7
Nondurable	2.2	5.1	2.8	4.4	0.1	2.2
Percent change from same quarter a year ago						
Business	-0.1	3.2	3.3	4.8	0.5	4.9
Nonfarm business	0.7	4.2	3.4	4.8	0.4	4.0
Manufacturing	3.2	5.6	2.3	4.6	0.3	1.3
Durable	3.0	5.9	2.8	4.8	0.4	1.7
Nondurable	3.6	5.1	1.5	4.3	0.0	0.7

Hourly compensation increased at a 4.7 percent annual rate during the fourth quarter of 1988, compared with a 6.2 percent gain 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 6.8 percent annual rate during the fourth quarter, compared with a 4.4 percent increase during the third quarter.

Real hourly compensation, which takes into account the increase in the Consumer Price Index for All Urban Consumers (CPI-U), increased 0.3 percent in the fourth quarter.

The implicit price deflator for the business sector, which reflects changes in unit labor costs and unit nonlabor payments, increased 4.7 percent in the fourth quarter, matching the third-quarter rise.

Nonfarm business

Productivity was unchanged in the nonfarm business sector in the fourth quarter. Output and payroll hours grew, however; output rose 3.6 percent and hours of all persons -- employees, proprietors, and unpaid family workers -- increased 3.5 percent (table 2). During the third quarter, productivity had advanced 2.0 percent.

Hourly compensation increased 5.6 percent in the fourth quarter, compared with a 5.7 percent gain during the preceding quarter. When the increase in the CPI-U is taken into account, real hourly compensation rose 1.2 percent. Unit labor costs increased 5.6 percent in the fourth quarter. During the third quarter, unit labor costs rose only 3.7 percent with a similar gain in hourly compensation. This reflects the impact of the productivity gain in the third quarter.

The implicit price deflator for nonfarm business output rose 5.5 percent in the fourth quarter, compared with a 4.1 percent increase in the third quarter.

Manufacturing

Total manufacturing productivity showed little movement as largely offsetting changes occurred in durables and nondurables. Output per hour (productivity) increased at a 0.9 percent seasonally-adjusted annual rate in the final quarter of 1988, compared with a 5.2 percent increase during the third quarter. Output rose 4.9 percent in the fourth quarter and hours of all persons increased 3.9 percent. Although the productivity gain was the smallest since 1982 (when a 0.8 percent increase occurred in the fourth quarter), the increase in hours was the largest quarterly gain in 1988. During the third quarter of 1988, output rose 7.1 percent and hours increased 1.8 percent (table 3).

Productivity grew little in durables while increasing more rapidly in nondurables, but output and hours increased in both subsectors. (Nearly half again as many jobs are in durable as nondurable goods industries.) Output grew more rapidly in the nondurable goods industries (tables 4 and 5).

Hourly compensation of all manufacturing workers increased 5.4 percent during the fourth quarter. When the increase in consumer prices is taken into account, real hourly compensation rose 1.0 percent. Unit labor costs increased at a 4.4 percent annual rate, compared with a 0.5 percent decrease during the third quarter of 1988. The fourth-quarter rise in unit labor costs was the largest since 1982 (when a 9.7 percent increase occurred in the first quarter.)

ANNUAL AVERAGE CHANGES, 1987-1988

Business

Business productivity for 1988 was 1.0 percent higher than in 1987, as output advanced 4.5 percent and hours of all persons rose 3.4 percent (table B). During 1987, productivity rose 0.8 percent. Productivity, output, and employment have increased in every year since the recession year of 1982. Hourly compensation increased 4.8 percent in 1988, compared with a 4.0 percent gain during 1987. Unit labor costs increased 3.7 percent during 1988 and 3.1 percent in 1987; the 1988 increase was the largest since the 8.3 percent rise of 1982.

Table B. Productivity and costs: 1988 annual measures

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change in annual averages, 1987 - 1988						
Business	1.0	4.5	3.4	4.8	0.7	3.7
Nonfarm business	1.4	5.1	3.6	4.7	0.5	3.2
Manufacturing	3.2	6.1	2.8	3.5	-0.6	0.4
Durable	3.3	6.6	3.2	3.5	-0.6	0.2
Nondurable	2.9	5.3	2.3	3.5	-0.6	0.6

Real hourly compensation increased 0.7 percent in 1988, compared with a 0.3 percent rise in 1987. The implicit price deflator for the business sector increased 3.0 percent in 1988, up from the 2.8 percent gain of 1987.

Annual changes in productivity and related measures for the 1979-1988 decade are shown in table C. These measures were computed by comparing annual average values for adjacent years.

Nonfarm business

Productivity increased 1.4 percent in the nonfarm business sector during 1988. Output rose 5.1 percent and hours of all persons increased 3.6 percent (table 2). Employment rose 3.7 percent (3.3 million jobs) in 1988 and increased 22.1 percent (16.8 million jobs) from the recession low of the fourth quarter of 1982 to the fourth quarter of 1988.

Hourly compensation increased 4.7 percent in 1988, compared with a 3.8 percent increase in 1987. Real hourly compensation rose 0.5 percent, compared with a 0.2 percent increase in 1987. There has been little change in real hourly compensation in the last decade.

Unit labor costs increased 3.2 percent in 1988, the largest rise in these costs since 1982 (when they rose 8.4 percent). The implicit price deflator for the nonfarm business sector rose 2.7 percent in 1988, compared with a 2.8 percent rise in 1987.

Manufacturing

Productivity increased 3.2 percent in manufacturing in 1988, compared with a 3.4 percent increase during 1987. Productivity gains in manufacturing have been substantially larger recently than in the more comprehensive business sector (of which it is a part, accounting for about one-quarter of business hours).

Table C. Annual changes in productivity and related measures, 1979-1988

Measure	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Business:										
Productivity.....	-1.2	-0.3	1.4	-0.4	2.7	2.5	2.1	2.2	0.8	1.0
Output.....	2.0	-1.1	2.1	-3.1	4.2	8.4	4.2	3.5	3.6	4.5
Hours.....	3.2	-0.8	0.7	-2.8	1.5	5.7	2.1	1.3	2.8	3.4
Hourly comp.....	9.7	10.5	9.2	7.8	4.2	4.1	4.5	4.3	4.0	4.8
Real hourly comp...	-1.5	-2.7	-1.0	1.6	0.9	-0.2	0.9	2.4	0.3	0.7
Unit labor costs...	11.1	10.9	7.7	8.3	1.4	1.5	2.4	2.1	3.1	3.7
Implicit price def.	9.0	9.0	9.6	5.9	3.3	3.3	2.5	2.3	2.8	3.0
Nonfarm business:										
Productivity.....	-1.6	-0.4	1.0	-0.6	3.3	2.1	1.4	2.0	0.8	1.4
Output.....	1.9	-1.2	1.7	-3.3	5.0	8.3	3.9	3.5	3.8	5.1
Hours.....	3.5	-0.7	0.7	-2.7	1.6	6.0	2.5	1.5	3.0	3.6
Hourly comp.....	9.5	10.5	9.4	7.8	4.3	3.9	4.2	4.2	3.8	4.7
Real hourly comp...	-1.7	-2.7	-0.8	1.5	1.1	-0.4	0.6	2.3	0.2	0.5
Unit labor costs...	11.2	11.0	8.3	8.4	1.0	1.8	2.8	2.2	3.1	3.2
Implicit price def.	8.9	9.7	9.7	6.3	3.5	3.0	3.0	2.4	2.8	2.7
Manufacturing:										
Productivity.....	-0.1	0.0	2.2	2.2	5.8	5.5	4.6	3.3	3.4	3.2
Output.....	2.0	-4.5	1.6	-6.1	6.4	12.2	3.8	2.3	4.3	6.1
Hours.....	2.1	-4.5	-0.6	-8.1	0.6	6.4	-0.8	-1.0	0.9	2.8
Hourly comp.....	9.7	11.6	9.6	8.5	3.1	3.4	5.0	3.7	2.1	3.5
Real hourly comp...	-1.5	-1.7	-0.6	2.2	-0.1	-0.8	1.4	1.9	-1.5	-0.6
Unit labor costs...	9.7	11.7	7.3	6.2	-2.5	-1.9	0.3	0.5	-1.2	0.4
Implicit price def.	6.2	8.4	8.9	5.1	1.1	0.7	-1.5	1.6	-0.2	n.a.

n.a. - Not available.

Output rose 6.1 percent and hours of all persons increased 2.8 percent (table 3). Employment grew 2.6 percent (507,000 jobs) in 1988. Since 1982, employment has grown 8.7 percent (1.6 million jobs). Productivity grew in both durables and nondurables in 1988, but hours increased faster in durables. Output also grew more rapidly in durable goods industries (tables 4 and 5).

Hourly compensation of all manufacturing workers increased 3.5 percent during 1988. When the increase in consumer prices is taken into account, real hourly compensation fell 0.6 percent, the second consecutive annual drop. Unit labor costs rose 0.4 percent in 1988, compared with a 1.2 percent drop during 1987.

REVISED THIRD QUARTER 1988 MEASURES

The Bureau of Labor Statistics also reported revised measures for the third quarter of 1988 for nonfinancial corporations (table D). Productivity declined less in the third quarter than had been reported on December 5, 1988, based on information then available.

Table D. Previously published and current measures for nonfinancial corporations, third quarter 1988
Percent change from previous quarter
(Seasonally-adjusted annual rates)

Item	Produc- tivity	Output	Hours	Real			Unit profits	Implicit price deflator
				Hourly compen- sation	hourly compen- sation	Unit labor costs		
Previous	-1.1	2.1	3.3	5.4	0.7	6.6	-9.1	4.8
Current	-0.8	2.5	3.3	5.5	0.8	6.4	-8.9	4.8

Previous and revised productivity and cost measures for the third quarter are compared in table E for the business, nonfarm business, and manufacturing sectors. The changes mainly reflect revisions in the underlying output measures since December.

Table E. Previously published and current productivity and related measures, third quarter 1988
Percent change from previous quarter
(Seasonally-adjusted annual rates)

Sector	Produc- tivity	Output	Hours	Real		
				Hourly compen- sation	hourly compen- sation	Unit labor costs
Business:						
Previous	1.5	2.6	1.1	6.1	1.3	4.5
Current	1.7	2.8	1.1	6.2	1.4	4.4
Nonfarm business:						
Previous	1.9	3.4	1.5	5.6	0.8	3.7
Current	2.0	3.5	1.5	5.7	0.9	3.7
Manufacturing:						
Previous	5.2	7.2	1.8	4.7	0.0	-0.5
Current	5.2	7.1	1.8	4.8	0.0	-0.5

NEXT RELEASE DATE

The next issue of Productivity and Costs is scheduled for release at **10:00 AM EST, Tuesday, March 7, 1989**, and will contain measures for nonfinancial corporations, business, nonfarm business, and manufacturing.

TECHNICAL NOTES

Business sector output is equal to gross national product in constant 1982 dollars, less the rest-of-the-world sector, general government, output of non-profit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, and the statistical discrepancy in computing the national income accounts. Corresponding exclusions are also made in labor inputs. Business output accounted for 80 percent of gross national product in 1987. The nonfarm business sector, which also excludes farming, accounted for about 78 percent of gross national product in 1987.

Total manufacturing measures are computed by summing series prepared for the durable and nondurables goods sectors.

The durable sector includes 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. The nondurable sector includes these 2-digit SIC industries: Textile mill products, apparel products, leather and leather products, printing and publishing, chemical and chemical products, petroleum products, rubber and plastic products, food, and tobacco products.

Manufacturing output accounted for about 22 percent of gross national product in 1987.

Nonfinancial corporate output is equal to gross national product in constant 1982 dollars, less the rest-of-the-world sector, general government, unincorporated business, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, the output of corporations engaged in banking, finance, stock and commodity trading, and credit and insurance agencies, and the statistical discrepancy in computing the national income accounts. Nonfinancial corporate output accounted for about 59 percent of gross national product in 1987.

The productivity and associated cost measures in this news release describe the relationship between output in real terms 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 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 1977=100								
1987	I	109.9	130.5	118.8	187.3	101.5	170.5	165.6
	II	110.6	132.2	119.5	189.0	101.2	170.8	168.7
	III	111.7	134.3	120.3	191.1	101.4	171.1	171.2
	IV	111.8	136.2	121.8	194.0	102.0	173.5	171.9
	ANNUAL	111.0	133.3	120.1	190.4	101.5	171.5	170.5
1988	I	112.8	138.0	122.3	195.8	102.1	173.5	172.3
	II	111.8	138.8	124.1	198.1	102.1	177.1	174.7
	III	r112.3	r139.8	124.5	r201.1	102.4	r179.0	r176.8
	IV	111.8	140.5	125.7	203.4	102.5	182.0	178.8
	ANNUAL	112.1	139.3	124.2	199.5	102.2	177.9	175.7
Percent change from previous quarter at annual rate(5)								
1987	I	0.3	3.7	3.4	2.5	-2.8	2.2	4.6
	II	2.7	5.3	2.5	3.6	-1.2	0.8	7.9
	III	3.9	6.6	2.6	4.6	0.8	0.7	6.7
	IV	0.6	5.7	5.1	6.2	2.4	5.6	-5.8
	ANNUAL	0.8	3.6	2.8	4.0	0.3	3.1	2.3
1988	I	3.5	5.5	1.9	3.7	0.3	0.2	2.5
	II	-3.4	2.4	6.0	4.8	0.0	8.5	1.0
	III	r1.7	r2.8	1.1	r6.2	r1.4	r4.4	r5.3
	IV	-2.0	2.1	4.1	4.7	0.3	6.8	0.8
	ANNUAL	1.0	4.5	3.4	4.8	0.7	3.7	1.7
Percent change from corresponding quarter of previous year								
1987	I	-0.6	1.6	2.2	3.8	1.5	4.4	0.7
	II	0.2	3.1	2.9	3.8	0.0	3.6	2.1
	III	1.5	4.5	3.0	3.9	-0.3	2.3	2.9
	IV	1.9	5.3	3.4	4.2	-0.2	2.3	3.2
	ANNUAL	0.8	3.6	2.8	4.0	0.3	3.1	2.3
1988	I	2.7	5.8	3.0	4.5	0.5	1.8	2.7
	II	1.1	5.0	3.9	4.8	0.9	3.7	1.0
	III	r0.6	r4.1	3.5	5.2	1.0	r4.6	r0.7
	IV	-0.1	3.2	3.3	4.8	0.5	4.9	2.4
	ANNUAL	1.0	4.5	3.4	4.8	0.7	3.7	1.7

See footnotes following table 6.
r=revised

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Source: Bureau of Labor Statistics

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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 1977=100									
1987	I	107.8	130.1	120.7	186.4	101.0	172.9	167.2	170.9
	II	108.6	131.9	121.5	187.9	100.6	173.0	169.8	171.9
	III	109.6	134.1	122.3	190.0	100.8	173.3	173.0	173.2
	IV	109.9	136.0	123.8	192.9	101.4	175.6	170.9	174.0
	ANNUAL	109.0	133.0	122.1	189.4	101.0	173.8	170.2	172.5
1988	I	110.8	137.9	124.4	194.6	101.5	175.7	171.6	174.2
	II	110.1	139.2	126.4	196.6	101.3	178.6	171.8	176.2
	III	r110.7	r140.5	126.9	199.4	r101.6	180.2	r173.9	r178.0
	IV	110.7	141.7	128.0	202.1	101.9	182.6	176.2	180.4
	ANNUAL	110.5	139.8	126.5	198.2	101.5	179.3	173.4	177.2

Percent change from previous quarter at annual rate(5)									
1987	I	0.0	4.0	4.0	2.1	-3.2	2.1	5.7	3.3
	II	3.2	5.7	2.5	3.4	-1.4	0.2	6.5	2.3
	III	3.7	6.8	2.9	4.5	0.6	0.7	7.7	3.1
	IV	0.9	5.9	4.9	6.4	2.6	5.4	-4.8	1.8
	ANNUAL	0.8	3.8	3.0	3.8	0.2	3.1	2.3	2.8
1988	I	3.4	5.6	2.1	3.5	0.1	0.1	1.6	0.6
	II	-2.4	4.0	6.6	4.2	-0.5	6.8	0.7	4.7
	III	r2.0	r3.5	1.5	r5.7	r0.9	3.7	r4.8	r4.1
	IV	0.0	3.6	3.5	5.6	1.2	5.6	5.4	5.5
	ANNUAL	1.4	5.1	3.6	4.7	0.5	3.2	1.9	2.7

Percent change from corresponding quarter of previous year									
1987	I	-0.8	1.6	2.4	3.7	1.4	4.5	0.6	3.1
	II	0.2	3.2	3.0	3.7	-0.1	3.5	1.9	3.0
	III	1.5	4.7	3.2	3.7	-0.4	2.2	2.9	2.5
	IV	1.9	5.6	3.6	4.1	-0.4	2.1	3.6	2.6
	ANNUAL	0.8	3.8	3.0	3.8	0.2	3.1	2.3	2.8
1988	I	2.8	6.0	3.1	4.4	0.5	1.6	2.6	1.9
	II	1.4	5.6	4.1	4.6	0.7	3.2	1.2	2.5
	III	r1.0	4.7	3.8	r5.0	0.8	4.0	r0.5	r2.8
	IV	0.7	4.2	3.4	4.8	0.4	4.0	3.1	3.7
	ANNUAL	1.4	5.1	3.6	4.7	0.5	3.2	1.9	2.7

See footnotes following table 6.
r=revised

February 6, 1989
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 1977=100 -----							
1987	I	130.0	127.2	97.8	185.9	100.8	143.1
	II	131.7	128.7	97.7	186.3	99.7	141.4
	III	132.8	131.1	98.8	187.2	99.3	141.0
	IV	133.2	133.5	100.2	188.2	99.0	141.3
	ANNUAL	132.0	130.1	98.6	186.9	99.7	141.7
1988	I	134.3	135.0	100.6	190.7	99.4	142.1
	II	135.5	136.9	101.1	192.1	99.0	141.8
	III	137.2	139.3	101.5	194.4	99.0	141.6
	IV	137.5	141.0	102.5	196.9	99.3	143.2
	ANNUAL	136.1	138.1	101.4	193.6	99.1	142.2
----- Percent change from previous quarter at annual rate(5) -----							
1987	I	3.6	4.1	0.5	1.4	-3.8	-2.1
	II	5.5	4.9	-0.6	0.7	-4.0	-4.6
	III	3.2	7.8	4.4	2.1	-1.7	-1.1
	IV	1.3	7.5	6.1	2.1	-1.5	0.8
	ANNUAL	3.4	4.3	0.9	2.1	-1.5	-1.2
1988	I	3.2	4.6	1.3	5.4	2.0	2.2
	II	3.7	5.8	2.0	3.0	-1.7	-0.7
	III	5.2	7.1	1.8	4.8	0.0	-0.5
	IV	0.9	4.9	3.9	5.4	1.0	4.4
	ANNUAL	3.2	6.1	2.8	3.5	-0.6	0.4
----- Percent change from corresponding quarter of previous year -----							
1987	I	2.7	2.4	-0.3	2.7	0.4	0.0
	II	3.6	3.7	0.1	2.3	-1.4	-1.2
	III	3.7	5.1	1.4	2.0	-2.1	-1.7
	IV	3.4	6.0	2.6	1.6	-2.7	-1.8
	ANNUAL	3.4	4.3	0.9	2.1	-1.5	-1.2
1988	I	3.3	6.2	2.8	2.6	-1.3	-0.7
	II	2.8	6.4	3.4	3.2	-0.7	0.3
	III	3.3	6.2	2.8	3.8	-0.3	0.5
	IV	3.2	5.6	2.3	4.6	0.3	1.3
	ANNUAL	3.2	6.1	2.8	3.5	-0.6	0.4

See footnotes following table 6.
r=revised

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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 1977=100 -----							
1987	I	136.6	133.3	97.6	184.9	100.2	135.3
	II	138.1	134.2	97.2	184.4	98.8	133.5
	III	139.1	136.5	98.2	185.3	98.3	133.2
	IV	140.0	139.9	99.9	186.2	97.9	133.0
	ANNUAL	138.5	136.0	98.2	185.2	98.8	133.7
1988	I	141.3	141.3	100.0	189.5	98.8	134.1
	II	142.7	144.0	100.9	190.1	98.0	133.3
	III	144.2	146.4	r101.5	192.3	98.0	133.4
	IV	144.2	148.1	102.7	195.1	98.3	135.3
	ANNUAL	143.1	144.9	101.3	191.8	98.2	134.0
----- Percent change from previous quarter at annual rate(5) -----							
1987	I	4.7	4.5	-0.2	1.3	-3.9	-3.2
	II	4.4	2.8	-1.5	-1.0	-5.6	-5.1
	III	2.9	7.0	4.0	2.0	-1.7	-0.9
	IV	2.6	10.2	7.3	1.9	-1.7	-0.7
	ANNUAL	3.8	4.0	0.2	1.8	-1.8	-1.9
1988	I	3.8	4.3	0.4	7.1	3.6	3.2
	II	3.8	7.7	3.8	1.4	-3.2	-2.3
	III	4.3	r6.8	r2.4	4.7	0.0	r0.5
	IV	0.1	4.7	4.6	5.8	1.4	5.7
	ANNUAL	3.3	6.6	3.2	3.5	-0.6	0.2
----- Percent change from corresponding quarter of previous year -----							
1987	I	3.3	2.1	-1.2	2.6	0.3	-0.8
	II	4.1	3.3	-0.8	2.0	-1.7	-2.0
	III	3.8	4.5	0.6	1.7	-2.4	-2.1
	IV	3.7	6.1	2.3	1.1	-3.2	-2.5
	ANNUAL	3.8	4.0	0.2	1.8	-1.8	-1.9
1988	I	3.4	6.0	2.5	2.5	-1.4	-0.9
	II	3.3	7.3	3.8	3.1	-0.8	-0.2
	III	3.6	7.2	r3.4	3.8	r-0.3	0.1
	IV	3.0	5.9	2.8	4.8	0.4	1.7
	ANNUAL	3.3	6.6	3.2	3.5	-0.6	0.2

See footnotes following table 6.
r=revised

February 6, 1989
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 1977=100						
1987	I	120.1	118.0	98.2	188.0	156.4
	II	122.4	120.5	98.4	189.7	155.0
	III	123.5	123.1	99.7	190.8	154.5
	IV	123.2	124.0	100.7	191.9	155.8
	ANNUAL	122.3	121.4	99.3	190.1	155.4
1988	I	123.9	125.6	101.4	193.2	156.0
	II	124.8	126.4	101.3	195.7	156.8
	III	126.9	128.8	101.5	197.9	156.0
	IV	127.6	130.4	102.2	200.1	156.8
	ANNUAL	125.8	127.8	101.6	196.8	156.4
----- Percent change from previous quarter at annual rate(5)						
1987	I	1.9	3.4	1.5	1.6	-0.2
	II	7.6	8.5	0.8	3.8	-3.6
	III	3.8	9.0	5.1	2.4	-1.3
	IV	-1.1	3.1	4.2	2.2	3.4
	ANNUAL	2.8	4.9	2.0	2.8	0.0
1988	I	2.3	5.1	2.7	2.9	0.6
	II	3.2	2.7	-0.5	5.2	2.0
	III	r6.8	r7.7	0.9	4.6	r-2.0
	IV	2.2	5.1	2.8	4.4	2.2
	ANNUAL	2.9	5.3	2.3	3.5	0.6
----- Percent change from corresponding quarter of previous year						
1987	I	1.8	2.9	1.1	3.2	1.4
	II	2.9	4.4	1.5	3.1	0.2
	III	3.6	6.2	2.5	2.6	-1.0
	IV	3.0	6.0	2.9	2.5	-0.5
	ANNUAL	2.8	4.9	2.0	2.8	0.0
1988	I	3.1	6.4	3.2	2.8	-0.3
	II	2.0	4.9	2.9	3.2	1.1
	III	2.7	4.6	1.8	3.7	1.0
	IV	3.6	5.1	1.5	4.3	0.7
	ANNUAL	2.9	5.3	2.3	3.5	0.6

See footnotes following table 6.
r=revised

February 6, 1989
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 1977=100 -----											
1987	I	110.1	131.3	119.3	182.9	99.1	166.2	180.8	169.9	128.5	164.9
	II	110.9	133.3	120.2	184.3	98.7	166.1	182.6	170.3	129.8	165.4
	III	112.2	136.1	121.3	186.1	98.7	165.9	183.0	170.2	136.4	166.1
	IV	112.2	137.7	122.8	188.5	99.1	168.1	183.6	172.0	128.3	166.7
	ANNUAL	111.3	134.6	120.9	185.5	98.9	166.6	182.5	170.6	130.8	165.8
1988	I	113.3	140.1	123.6	189.9	99.0	167.5	183.4	171.5	132.5	166.9
	II	112.9	141.2	125.0	191.9	98.9	170.0	185.1	173.8	132.6	168.8
	III	r112.7	r142.0	126.1	r194.5	r99.1	r172.6	r187.8	176.4	r129.6	170.8
----- Percent change from previous quarter at annual rate(5) -----											
1987	I	-1.0	2.9	4.0	1.6	-3.6	2.6	2.5	2.6	-3.5	2.0
	II	3.1	6.1	2.9	2.9	-1.8	-0.2	4.1	1.0	3.9	1.2
	III	4.7	8.8	4.0	4.1	0.3	-0.6	0.8	-0.2	21.9	1.7
	IV	-0.1	4.7	4.8	5.2	1.5	5.3	1.3	4.2	-21.5	1.5
	ANNUAL	1.5	4.3	2.7	3.4	-0.3	1.8	2.3	1.9	-1.2	1.6
1988	I	4.3	7.2	2.8	3.0	-0.4	-1.2	-0.3	-1.0	13.8	0.3
	II	-1.6	3.0	4.7	4.2	-0.6	5.9	3.7	5.3	0.3	4.8
	III	r-0.8	r2.5	3.3	r5.5	r0.8	r6.4	r6.1	6.3	r-8.9	4.8
----- Percent change from corresponding quarter of previous year -----											
1987	I	0.5	2.0	1.5	3.3	1.0	2.8	2.3	2.6	-3.8	2.0
	II	1.5	3.9	2.4	3.2	-0.6	1.7	3.2	2.1	-2.2	1.7
	III	2.3	5.6	3.2	3.3	-0.9	0.9	1.5	1.1	2.0	1.2
	IV	1.6	5.6	3.9	3.4	-1.0	1.8	2.2	1.9	-1.1	1.6
	ANNUAL	1.5	4.3	2.7	3.4	-0.3	1.8	2.3	1.9	-1.2	1.6
1988	I	3.0	6.7	3.6	3.8	-0.1	0.8	1.5	1.0	3.1	1.2
	II	1.8	5.9	4.1	4.1	0.2	2.3	1.4	2.1	2.2	2.1
	III	r0.4	r4.3	3.9	4.5	0.3	r4.0	r2.7	3.7	-5.0	2.8

See footnotes following table 6.
r=revised

February 6, 1989
Source: Bureau of Labor Statistics

SOURCE: Output data from 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 second revisions after an additional 60 days. In the business sector, the probability is 0.95 that the third publication (second 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 first quarter of 1976 and the second quarter of 1988.

Footnotes, Tables 1-6

- (1) Wages and salaries of the 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.