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information: (202) 523-9261
Current data: (202) 523-1221 or 1208
Media contact: (202) 523-1913

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PRODUCTIVITY AND COSTS

First Quarter 1985

Revised Data for Business, Nonfarm Business, and Manufacturing, and
Preliminary Measures for Nonfinancial Corporations

The Bureau of Labor Statistics of the U.S. Department of Labor today reported revised productivity data--as measured by output per hour of all persons--for the first quarter of 1985. The revised measures show these seasonally adjusted annual rates of productivity change for the first quarter of 1985:

- 3.5 percent in the business sector,
- 2.5 percent in the nonfarm business sector,
- 0.6 percent in manufacturing,
- 2.7 percent in durable goods manufacturing, and
- 2.5 percent in nondurable goods manufacturing.

First-quarter measures are summarized in table A and appear in detail in tables 1 through 6. Preliminary measures announced today indicate that nonfinancial corporate sector productivity declined 2.8 percent in the first quarter (tables B and 6).

Business

Productivity declined at a 3.5 percent seasonally adjusted annual rate in the first quarter of 1985 in the business sector, as output increased 0.1 percent and hours of all persons engaged in the sector rose 3.7 percent (table 1). This was the first quarter in which productivity declined since the second quarter of 1982 (when it fell 2.3 percent). The increase in output was the smallest since the fourth quarter of 1982 (when output dropped 1.2 percent). The increase in hours was about twice the size of the gain one quarter earlier and reflected faster growth of both employment and average weekly hours.

Hourly compensation increased at a 5.2 percent annual rate during the first quarter. This measure includes the cost to employers of wages and salaries, supplements, payments to employee-benefit plans, and taxes. Real hourly compensation also takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U); during the first quarter, it rose 1.8 percent. Unit labor costs, which reflect changes in both productivity and hourly compensation, rose at a 9.0 percent annual rate during the first quarter, the largest gain since the second quarter of 1982 (when it increased 9.4 percent).

The implicit price deflator for the business sector, which is a measure of price change for business net output, rose 5.3 percent in the first quarter, the largest quarterly gain since the second quarter of 1982 (when it rose 5.4 percent).

Table A. Productivity and costs: Revised first quarter 1985 measures
(Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
PRELIMINARY						
Fourth quarter 1984 to first quarter 1985						
Business	-3.5	0.1	3.7	5.2	1.8	9.0
Nonfarm business	-2.5	0.8	3.3	5.4	2.1	8.1
Manufacturing	0.6	0.9	0.2	5.8	2.4	5.1
Durable	2.7	2.0	-0.7	7.2	3.8	4.4
Nondurable	-2.5	-0.9	1.7	3.5	0.2	6.2
First quarter 1984 to first quarter 1985						
Business	1.2	4.4	3.2	3.9	0.4	2.7
Nonfarm business	1.0	4.1	3.1	4.1	0.5	3.1
Manufacturing	2.2	3.6	1.3	4.4	0.8	2.1
Durable	2.9	5.4	2.4	4.4	0.8	1.5
Nondurable	1.1	0.8	-0.3	4.2	0.6	3.0

Nonfarm business

Productivity declined at a 2.5 percent annual rate in the first quarter of 1985 in the nonfarm business sector, compared with a 2.2 percent increase during the fourth quarter of 1984. This was the first nonfarm productivity decline since the third quarter of 1981 (when it fell 1.1 percent). Output growth slowed appreciably from the fourth quarter of 1984 (table 2).

Hourly compensation increased 5.4 percent in the first quarter, and real hourly compensation rose 2.1 percent. Unit labor costs rose at an 8.1 percent annual rate, the largest increase since the fourth quarter of 1981 (when an 12.1 percent increase occurred).

The implicit price deflator for nonfarm business output increased at a 5.9 percent annual rate during the first quarter, compared with a 2.9 percent rise during the fourth quarter of last year. This was the largest increase in nonfarm prices since the fourth quarter of 1981 (when an 8.3 percent increase occurred).

Manufacturing

Productivity increased 0.6 percent in the first quarter in manufacturing, as output rose 0.9 percent and hours increased 0.2 percent. During the fourth quarter of 1984, productivity declined (table 3). Productivity, output, and hours all moved in opposite directions in durable and nondurable goods industries (see tables A, 4, and 5). The gain in durable goods productivity more than offset the drop among nondurable goods producers, so that the manufacturing sector showed a small gain for the quarter.

Hourly compensation increased at a 5.8 percent annual rate in the first quarter in manufacturing as a whole, or 2.4 percent in real terms after the increase in the CPI-U is taken into account. Unit labor costs rose 5.1 percent during the first 3 months of 1985.

Table B. Productivity and costs in nonfinancial corporations:
Preliminary first quarter 1985 measures
(Seasonally adjusted annual rate)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs	Unit profits
PRELIMINARY							
Fourth quarter 1984 to first quarter 1985							
Nonfinancial corporations	-2.8	0.3	3.2	4.0	0.7	7.0	-1.3
First quarter 1984 to first quarter 1985							
Nonfinancial corporations	0.0	3.8	3.8	3.3	-0.2	3.4	4.9

Nonfinancial corporations

Productivity declined 2.8 percent in the first quarter in nonfinancial corporations, as output increased 0.3 percent and hours of all persons increased 3.2 percent (table B). These corporations, which include all those doing business in the United States with the exception of banks, stock and commodity brokers, and finance and insurance agencies, showed a 2.5 percent productivity gain in the fourth quarter of

1984. Hourly compensation increased at a 4.0 percent annual rate during the first quarter, or 0.7 percent when the increase in the CPI-U is taken into account. Unit labor costs rose 7.0 percent in the first quarter, and unit profits fell 1.3 percent. During the fourth quarter of last year, these measures rose 1.2 percent and 16.0 percent, respectively (table 6). The implicit price deflator rose 5.7 percent in the first quarter, the largest increase since the fourth quarter of 1981 (when it rose 7.9 percent). Table C shows how the implicit price deflator and the underlying series have behaved since 1980.

Table C. Indexes of price, cost, and profit in nonfinancial corporations (1977=100)

Measure	1980	1981	1982	1983	1984	1984				1985
						I	II	III	IV	
Implicit price deflator	126.4	138.9	146.3	150.9	155.4	153.6	154.6	156.1	157.1	159.3
Total unit costs	131.7	143.6	154.3	155.2	156.4	155.0	155.0	157.5	158.0	160.1
Unit labor costs	131.2	140.9	150.6	151.8	153.6	152.5	152.3	154.5	155.0	157.6
Unit nonlabor costs	133.0	151.2	164.8	164.9	164.3	162.0	162.8	165.9	166.4	168.6
Unit profits	86.0	102.6	84.6	117.2	147.6	143.2	151.1	145.3	150.7	150.3

Revised measures

Preliminary and revised productivity and cost measures for the first quarter are compared in table D for the business and manufacturing sectors. The revised output measures show smaller gains than preliminary series, while hours of labor input have been revised upward somewhat. As a result, business sector productivity measures show larger declines than were reported a month ago, based on information then available. In manufacturing, productivity growth was slower.

Table D. Preliminary and revised productivity and related measures,
 first quarter 1985
 Percent change from previous quarter
 (Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Business:						
Preliminary	-1.9	1.3	3.3	5.7	2.3	7.8
Revised	-3.5	0.1	3.7	5.2	1.8	9.0
Nonfarm business:						
Preliminary	-1.2	1.6	2.9	6.0	2.6	7.3
Revised	-2.5	0.8	3.3	5.4	2.1	8.1
Manufacturing:						
Preliminary	1.6	0.9	-0.7	6.8	3.4	5.1
Revised	0.6	0.9	0.2	5.8	2.4	5.1

TECHNICAL NOTES

Business sector output is equal to gross national product, less the rest-of-the-world sector, general government, output of paid employees of private households and nonprofit institutions, 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 has accounted for about 77 percent of gross national product in recent years.

Total manufacturing measures are computed by summing series prepared for the durable and nondurable 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 the following 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, foods, and tobacco products.

Manufacturing output has accounted for about 24 percent of gross national product in recent years.

Nonfinancial corporate output is equal to gross national product, less the rest-of-the-world sector, general government, unincorporated business, output of paid employees of private households and nonprofit institutions, 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 has accounted for about 59 percent of gross national product in recent years.

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 contributions 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									
1984	I	105.7	117.8	111.4	166.7	98.6	157.7	151.6	155.6
	II	107.0	121.0	113.0	167.5	98.2	156.5	157.2	156.7
	III	107.2	121.5	113.4	169.3	98.3	158.0	158.5	158.1
	IV	108.0	123.0	113.9	171.1	98.5	158.4	160.2	159.0
	ANNUAL	107.0	120.8	112.9	168.6	98.4	157.6	157.0	157.4
1985	I	107.1r	123.1r	114.9r	173.3r	99.0r	161.9r	159.5r	161.1r
Percent change from previous quarter at annual rate(5)									
1984	I	4.0	11.4	7.2	6.2	0.8	2.1	7.0	3.7
	II	4.9	11.2	6.0	1.9	-1.8	-2.9	15.4	2.9
	III	0.6	1.8	1.2	4.4	0.7	3.7	3.4	3.6
	IV	3.1	5.0	1.8	4.4	0.8	1.2	4.3	2.2
	ANNUAL	3.2	8.8	5.4	4.2	0.0	1.0	7.9	3.2
1985	I	-3.5r	0.1r	3.7r	5.2r	1.8r	9.0r	-1.6r	5.3r
Percent change from corresponding quarter of previous year									
1984	I	3.5	10.2	6.5	4.1	-0.4	0.6	8.4	3.0
	II	3.3	9.9	6.4	4.0	-0.3	0.7	8.7	3.3
	III	2.7	8.0	5.1	4.6	0.4	1.9	7.1	3.6
	IV	3.2	7.3	4.0	4.2	0.1	1.0	7.4	3.1
	ANNUAL	3.2	8.8	5.4	4.2	0.0	1.0	7.9	3.2
1985	I	1.2r	4.4r	3.2r	3.9r	0.4r	2.7r	5.2r	3.5r

See footnotes following table 6.
r=revised

May 29, 1985
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 1977=100									
1984	I	105.2	118.0	112.3	166.5	98.4	158.3	152.2	156.3
	II	106.6	121.0	113.6	168.0	98.4	157.6	156.8	157.3
	III	106.3	121.3	114.1	169.5	98.4	159.5	158.0	159.0
	IV	106.9	122.7	114.8	171.0	98.5	160.0	160.3	160.1
	ANNUAL	106.2	120.7	113.6	168.7	98.4	158.8	156.9	158.2
1985	I	106.2r	122.9r	115.7r	173.3r	99.0r	163.2r	160.9r	162.4r
Percent change from previous quarter at annual rate(5)									
1984	I	2.9	10.3	7.2	6.1	0.7	3.1	2.3	2.8
	II	5.5	10.6	4.8	3.7	0.0	-1.7	12.5	2.8
	III	-1.1	0.7	1.8	3.6	-0.1	4.7	3.1	4.2
	IV	2.2	4.7	2.4	3.7	0.1	1.4	5.9	2.9
	ANNUAL	2.7	8.5	5.7	4.1	-0.1	1.4	6.7	3.1
1985	I	-2.5r	0.8r	3.3r	5.4r	2.1r	8.1r	1.6r	5.9r
Percent change from corresponding quarter of previous year									
1984	I	3.5	10.6	6.9	4.0	-0.5	0.4	8.3	2.9
	II	2.9	9.7	6.6	4.0	-0.3	1.1	7.1	3.0
	III	2.1	7.6	5.4	4.4	0.2	2.3	5.7	3.4
	IV	2.4	6.5	4.0	4.3	0.2	1.9	5.9	3.2
	ANNUAL	2.7	8.5	5.7	4.1	-0.1	1.4	6.7	3.1
1985	I	1.0r	4.1r	3.1r	4.1r	0.5r	3.1r	5.7r	3.9r

See footnotes following table 6.
r=revised

May 29, 1985
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							
1984	I	114.0	112.8	98.9	167.1	98.8	146.6
	II	115.0	115.1	100.1	168.3	98.6	146.4
	III	117.0	117.0	100.0	169.9	98.7	145.2
	IV	116.3	116.5	100.2	172.1	99.1	147.9
	ANNUAL	115.6	115.3	99.8	169.4	98.8	146.5
1985	I	116.5r	116.8	100.2r	174.5r	99.6r	149.8
Percent change from previous quarter at annual rate(5)							
1984	I	3.5	12.6	8.8	6.2	0.8	2.6
	II	3.6	8.4	4.6	2.9	-0.8	-0.6
	III	7.1	6.8	-0.2	3.7	0.1	-3.1
	IV	-2.2	-1.5	0.7	5.2	1.6	7.6
	ANNUAL	3.5	10.5	6.7	3.6	-0.6	0.1
1985	I	0.6r	0.9	0.2r	5.8r	2.4r	5.1
Percent change from corresponding quarter of previous year							
1984	I	4.4	14.5	9.7	2.7	-1.7	-1.6
	II	3.7	12.4	8.3	3.3	-1.0	-0.4
	III	3.1	9.1	5.8	3.9	-0.3	0.8
	IV	2.9	6.4	3.4	4.5	0.4	1.5
	ANNUAL	3.5	10.5	6.7	3.6	-0.6	0.1
1985	I	2.2r	3.6	1.3r	4.4r	0.8r	2.1

See footnotes following table 6.
r=revised

May 29, 1985
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							
1984	I	115.2	114.0	98.9	165.8	98.1	143.9
	II	116.1	116.6	100.4	167.0	97.8	143.8
	III	118.3	119.5	101.0	168.1	97.6	142.0
	IV	117.8	119.5	101.5	170.1	97.9	144.4
	ANNUAL	116.9	117.4	100.4	167.7	97.9	143.5
1985	I	118.6r	120.1r	101.3r	173.0r	98.8r	146.0r
Percent change from previous quarter at annual rate(5)							
1984	I	7.7	19.5	10.9	6.1	0.8	-1.5
	II	3.1	9.5	6.2	2.8	-0.9	-0.3
	III	7.9	10.2	2.1	2.6	-1.0	-4.8
	IV	-1.9	0.2	2.1	4.9	1.3	6.9
	ANNUAL	4.8	14.4	9.1	3.2	-1.0	-1.6
1985	I	2.7r	2.0r	-0.7r	7.2r	3.8r	4.4r
Percent change from corresponding quarter of previous year							
1984	I	6.2	19.3	12.3	2.2	-2.2	-3.8
	II	4.8	16.5	11.1	2.9	-1.4	-1.8
	III	4.3	13.0	8.4	3.4	-0.8	-0.9
	IV	4.1	9.6	5.3	4.1	0.0	0.0
	ANNUAL	4.8	14.4	9.1	3.2	-1.0	-1.6
1985	I	2.9r	5.4r	2.4r	4.4r	0.8r	1.5r

See footnotes following table 6.
r=revised

May 29, 1985
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							
1984	I	112.1	111.0	99.0	169.5	100.2	151.1
	II	113.3	112.8	99.5	170.6	100.0	150.6
	III	114.9	113.3	98.6	172.7	100.3	150.4
	IV	114.1	112.1	98.2	175.1	100.8	153.4
	ANNUAL	113.6	112.3	98.9	171.9	100.3	151.4
1985	I	113.4r	111.9r	98.7r	176.6r	100.8r	155.7r
Percent change from previous quarter at annual rate(5)							
1984	I	-2.7	3.0	5.8	5.8	0.5	8.7
	II	4.3	6.8	2.4	2.7	-1.0	-1.5
	III	5.7	1.8	-3.7	5.1	1.4	-0.6
	IV	-2.7	-4.1	-1.5	5.5	1.9	8.4
	ANNUAL	1.5	4.9	3.3	3.8	-0.4	2.3
1985	I	-2.5r	-0.9r	1.7r	3.5r	0.2r	6.2r
Percent change from corresponding quarter of previous year							
1984	I	1.8	7.9	6.1	3.0	-1.4	1.2
	II	2.0	6.6	4.5	3.3	-1.0	1.3
	III	1.4	3.4	2.1	4.3	0.1	2.9
	IV	1.1	1.8	0.7	4.8	0.7	3.6
	ANNUAL	1.5	4.9	3.3	3.8	-0.4	2.3
1985	I	1.1r	0.8r	-0.3r	4.2r	0.6r	3.0r

See footnotes following table 6.
r=revisedMay 29, 1985
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											
1984	I	108.1	120.2	111.2	164.8	97.5	152.5	162.0	155.0	143.2	153.6
	II	108.9	123.1	113.1	165.8	97.2	152.3	162.8	155.0	151.1	154.6
	III	108.2	123.1	113.8	167.1	97.1	154.5	165.9	157.5	145.3	156.1
	IV	108.8	124.7	114.6	168.7	97.1	155.0	166.4	158.0	150.7	157.1
	ANNUAL	108.5	122.8	113.2	166.6	97.2	153.6	164.3	156.4	147.6	155.4
1985	I	108.1p	124.8p	115.5p	170.4p	97.3p	157.6p	168.6p	160.5p	150.3p	159.3p
Percent change from previous quarter at annual rate(5)											
1984	I	3.6	11.6	7.7	5.7	0.4	2.0	-3.2	0.6	23.4	2.7
	II	2.8	9.8	6.8	2.4	-1.3	-0.4	2.0	0.2	23.8	2.6
	III	-2.5	0.2	2.8	3.2	-0.4	5.9	8.0	6.5	-14.5	3.9
	IV	2.5	5.2	2.6	3.7	0.2	1.2	1.1	1.2	16.0	2.7
	ANNUAL	2.3	9.0	6.6	3.5	-0.8	1.1	-0.4	0.7	25.9	3.0
1985	I	-2.8p	0.3p	3.2p	4.0p	0.7p	7.0p	5.5p	6.6p	-1.3p	5.7p
Percent change from corresponding quarter of previous year											
1984	I	4.0	11.8	7.5	3.6	-0.9	-0.4	-3.0	-1.1	54.8	2.8
	II	2.9	10.5	7.5	3.3	-1.0	0.4	-1.4	-0.1	35.2	2.9
	III	0.9	7.4	6.4	3.3	-0.9	2.4	0.9	2.0	14.7	3.2
	IV	1.6	6.6	5.0	3.8	-0.3	2.2	1.9	2.1	10.9	3.0
	ANNUAL	2.3	9.0	6.6	3.5	-0.8	1.1	-0.4	0.7	25.9	3.0
1985	I	0.0p	3.8p	3.8p	3.3p	-0.2p	3.4p	4.1p	3.6p	4.9p	3.7p

See footnotes following table 6.

p=preliminary

May 29, 1985
Source: Bureau of Labor Statistics

Footnotes, Tables 1-6

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: Based on data covering the period from the first quarter of 1976 to the second quarter of 1984, the probability is 0.95 that the interval between -1.8 and 2.0 index points contains the revision of the index of productivity in the business sector from the first to the third quarterly publication of the estimate.

- (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) Nonlabor payments include profits, depreciation, interest, rental income, 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 measures adjusted to annual estimates of output (gross product originating) from the Bureau of Economic Analysis, U.S. Department of Commerce.
- (7) Unit nonlabor cost includes depreciation, interest, and indirect taxes.
- (8) Total unit cost is the sum of labor and nonlabor costs.
- (9) Unit profits include corporate profit and inventory valuation adjustment.

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