

# Bureau of Labor Statistics

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### PRODUCTIVITY AND COSTS Second Quarter 1986



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 1986. The seasonally—adjusted annual rates of productivity change in the second quarter were:

- 1.6 percent in the business sector,
- 1.7 percent in the nonfarm business sector,
- 1.9 percent in manufacturing,
- 0.4 percent in durable goods manufacturing, and
- 4.5 percent in nondurable goods manufacturing.

Second-quarter measures are summarized in table A and appear in detail in tables 1 through  $5\boldsymbol{.}$ 

#### Business

Productivity increased at an 1.6 percent annual rate during the second quarter of 1986 in the business sector, as output rose 1.3 percent and hours of all persons engaged in the sector declined 0.3 percent (seasonally adjusted annual rates). This was the first decline in hours since the trough of the business cycle (the fourth quarter of 1982), when a 3.4 percent decline was recorded. During the first quarter of 1986, productivity had increased 3.3 percent (table 1).

Hourly compensation increased at a 2.7 percent annual rate during the second quarter of 1986, close to a 2.5 percent gain during the previous 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 1.1 percent annual rate during the second quarter, compared with a 0.7 percent decline during the first quarter.

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), rose at a 4.5 percent annual rate during the second quarter, the largest quarterly gain since the first quarter of 1982 (when a 6.5 percent increase occurred). The large rise in real hourly compensation partly reflected a 1.7 percent decrease in the CPI-U, the largest quarterly drop since 1949.

The implicit price deflator for business output, which reflects changes in unit labor costs and unit nonlabor payments, increased 1.4 percent in the second quarter, the smallest increase in this series since 1970.

Table A. Productivity and costs: Preliminary second quarter 1986 measures (Seasonally adjusted annual rates)

Sector	Productivity	Output	Hours	Hourly compen- sation	Real hourly compen- sation	Unit labor costs
	Percent	change f	from prece	ding quarter	•	· · · · · · · · · · · · · · · · · · ·
Business Nonfarm business Manufacturing Durable Nondurable	1.6 1.7 1.9 0.4 4.5	1.3 1.7 -1.5 -4.2 2.8	-0.3 0.0 -3.4 -4.5 -1.6	2.7 2.2 1.9 1.5 2.8	4.5 3.9 3.6 3.2 4.5	1.1 0.5 0.0 1.1 -1.6
	Percent ch	ange from	n same qua	rter a year	ago	
Business Nonfarm business Manufacturing Durable Nondurable	1.2 1.1 1.9 1.9	2.8 2.9 1.7 0.9 3.1	1.5 1.8 -0.1 -1.0 1.3	3.3 3.1 3.1 3.7 2.3	1.7 1.4 1.4 2.0 0.6	2.1 1.9 1.2 1.7 0.4

#### Nonfarm business

Productivity increased 1.7 percent in the nonfarm business sector during the second quarter of 1986, as output rose 1.7 percent and hours of all persons—employees, proprietors, and unpaid family workers— were unchanged. This was the first quarter in which hours failed to increase since the expansion phase of the current business cycle began in the first quarter of 1983. During the first quarter of 1986, productivity had increased 4.3 percent in this sector (table 2).

Hourly compensation increased 2.2 percent in the second quarter, but rose 3.9 percent when the decline in the CPI-U was taken into account. Unit labor costs increased 0.5 percent, compared with a 1.2 percent drop during the first quarter of 1986.

The implicit price deflator for nonfarm business output rose 1.1 percent in the second quarter, compared with a 2.3 percent increase one quarter earlier. This was the smallest increase recorded in this series since 1967.

## Manufacturing

Productivity increased at a 1.9 percent seasonally adjusted annual rate in manufacturing in the second quarter of 1986, as output declined 1.5 percent and hours of all persons dropped 3.4 percent. This was the first quarterly decline in manufacturing output since the fourth quarter of 1982 (when the decline was at a 7.1 percent annual rate). Hours last declined in this sector in the third quarter of 1985 (by 0.1 percent) and, in the second quarter of that year, declined at a 4.2 percent annual rate. Although output and hours both declined in the second quarter of 1986, productivity grew more rapidly than during the first quarter (table 3).

Hourly compensation of manufacturing workers increased 1.9 percent during the second quarter, but increased 3.6 percent when the decline in consumer prices was taken into account. Unit labor costs were unchanged in the second quarter, compared with a 0.6 percent increase during the first quarter of 1986.

Both durable and nondurable goods industries experienced productivity increases in the second quarter, but growth was much greater among nondurable goods producers (tables 4 and 5). Hours of all persons declined in both subsectors.

## Revised measures

The productivity and cost measures contained in this news release are based on the latest measures of hours and output available. Revised output and compensation measures prepared by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce are reflected in the productivity and cost measures in this release. These revisions were published on July 22 by BEA as part of the regular revision cycle of the national income and product accounts and cover the last 3 years. See appendix tables 1-6.

In addition, recent information on employment and average weekly hours of all persons engaged in these sectors is also incorporated in productivity and cost measures at this time. Historical tables are available on request from the Bureau of Labor Statistics, Office of Productivity and Technology, Washington, D.C. 20212, (202) 523-9261.

Productivity and cost measures on diskettes formatted for use on IBM-compatible microcomputers using LOTUS 1-2-3 are also available. For ordering information, contact BLS Data Diskettes, Room 2127, 441 G Street NW, Washington, D.C. 20212, (202) 523-1090.

#### Next release date

The next release of productivity and cost measures is scheduled for 10:00 AM EDT, Wednesday, August 27, 1986. Released at that time will be preliminary second-quarter measures for nonfinancial corporations.

#### 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 nonprofit 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 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 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 has accounted for about 24 percent of gross national product in recent years.

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 paid employees of private households and nonprofit institutions, rental value of owner-occupied dwelling, the output of corporations engaged in baking, 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 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; mangerial 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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost	Unit non- labor pay- ments(3)	Implicit price deflator(4)
				Ir	ndexes 1977=100				
1985		105.7r	121.3r	114.8r	172.3r	98.4r	163.lr	158.3r	161.4r
	II	106.4r 107.3r	122.3r 123.5r	115.0r 115.2r	174.5r 176.4r	98.7r 99.1r	164.0r 164.4r	160.0r 161.4r	162.6r 163.4r
,	III IV	107.3F 106.4r	123.8r	116.4r	178.0r	99.0r	167.3r	159.6r	164.6
	ANNUAL	106.4r	122.7r	115.3r	175.3r	98.8r	164.8r	159.7r	163.0r
1986		107.3r	125.3r	116.8r	179.lr	99.2r	167.0r	162.2r	165.3r
	II	107.7p	125 <b>.7</b> p	116.7p	180.3p	100.3p	167.4p	163.0p	165.9p
			Percent	change from p	previous quarte	r at annual rate	(5)		
1985		0.9r	3.6	2.6r	4.2r	1.0r	3.3r	1.6r	2.7r
	II	2.7r	3.3r	0.6r	5.lr	1.0r	2.4r	4.2r	3.0r
	III	3.4r	4.1r	0.7r	4.4r	1.8r	1.0r	3.7r	1.9r
	ĬV	-3.2r	1.0r	4.3r	3.8r	-0.5r	7.2r	-4.3r	3.0r
	ANNUAL	1.0r	3.3r	2.2r	4.3r	0.7r	3.2r	2.2r	2.9r
1986	I	3.3r	4.7r	1.4r	2.5r	1.0r	-0.7r	6.6r	1.8r
	II	1.6p	1.3p	-0.3p	2.7p	4.5p	1.1p	2.1p	1.4p
			Percent cha	ange from con	cresponding qua	rter of previous	year		
1985	ı	0.8r	3.8r	3.0r	3.9r	0.3r	3.1r	2.7	3.0r
	II	0.8r	2.8r	2.0r	4.5r	0.7r	3.6r	2.0r	3.1r
	III	1.7r	3.4r	1.7r	4.4r	1.0r	2.6r	2.8r	2.7r
	IA	0.9r	3.0r	2.lr	4.4r	0.8r	3.4r	1.2r	2.7r
	ANNUAL	1.0r	3.3r	2.2r	4.3r	0.7r	3.2r	2.2r	2.9r
1986	I	1.5r	3.3r	1.8r	3.9r	0.8r	2.4r	2.5r	2.4
	II	1.2p	2.8p	1.5p	3.3p	1.7p	2.lp	1.9p	2.0p

See footnotes following table 6. r=revised p=preliminary

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost	Unit non- labor pay- ments(3)	Implicit price deflator(4)
				Indexe	es 1977=100				
1985	1	104.4r	121.1	116.0r	172.1	98.2r	164.8r	158.9r	162.7r
	11	104.9r	122.lr	116.4r	174.0r	98.4r	165.9r	160.8r	164.lr
	III	105.4r	123.3r	116.9r	175.4r	98.5r	166.3r	163.0r	165.2r
	ΙΛ	104.5r	123.6r	118.2r	177 <b>.</b> 0r	98.4r	169.3r	160.3r	166.2r
	ANNUAL	104.8r	122.5r	116.9r	174.6r	98.4r	166.7r	160.6r	164.6r
1986	I	105.6r	125.lr	118.5r	178.3r	98.8r	168.8r	163.9r	167.lr
	II	106.lp	125.6p	118.4p	179.3p	99.7p	169.lp	164.8p	167.6 <sub>p</sub>
			Percent	change from p	previous quarte	r at annual rate	:(5)		* * *
1985	I	0.3r	3.2r	2.9r	3.9r	0.7r	3.6	2.5r	3.2r
	II	1.8r	3.0r	1.2r	4.6r	0.5r	2.7r	4.7r	3.4r
	III	2.2r	4.0r	1.8r	3.2r	0.7r	1.0r	5.7r	2.6
	IA	-3.5r	1.0r	4.6r	3.7r	-0.6r	7.4r	-6.6r	2.4r
	ANNUAL	0.5r	3.0r	2.6r	4.0r	0.4r	3.5r	2.9r	3.3
1986	I	4.3r	5.lr	0.8r	3.1r	1.6r	-1.2r	9.3r	2.3r
	. II	1.7p	1.7p	0.0p	2.2p	3.9p	0.5p	2.3p	1.1p
			Percent cha	ange from con	responding qua	rter of previous	year		
1985	I	0.5r	3.6r	3.1r	3.9r	0.3r	3.4r	3.7r	3.5r
	II	0.2r	2.5r	2.3r	4.2r	0.5r	4.0r	2.8r	3.6
	III	1.0r	3.1r	2.lr	4.0r	0.6r	3.0r	3.7r	3.2
	ΙΛ	0.2r	2.8r	2.6r	3.9r	0.3r	3.7r	1.5r	2.9r
	ANNUAL	0.5r	3.0r	2.6r	4.0r	0.4r	3.5r	2.9r	3.3
1986	I	1.2r	3.3r	2.lr	3.6r	0.5r	2.5r	3.1r	2.7
	II	l.lp	2.9p	1.8p	3.lp	1.4p	1.9p	2.5p	2.1p

See footnotes following table 6. r=revised p=preliminary

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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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			Ind	exes 1977=100	)		
1985	I	119.3r	118.8r	99.6r	173.8r	99.2r	145.7r
	II	121.7r	119.9r	98.5r	175.6r	99.3r	144.3 <sub>r</sub>
	III	123.0r	121.2r	98.5r	178.lr	100.0r	144.8r
	IV	122.9r	121.9r	99.1r	179.3r	99.7r	145.8r
	ANNUAL	121.7r	120.4r	98.9r	176.7r	99.5	145.lr
1986	I	123.4r	122.4r	99.3r	180.2r	99.8r	146.lr
	11	124.0p	122.0p	98.4p	181.1p	100.7p	146.lp
		Percent char	nge from pr	evious quarte	er at annual ra	te(5)	
1985	I	3.9r	3.2r	-0.6r	5.5r	2.2r	1.5r
	II	8.2r	3.7r	-4.2r	4.3r	0.3r	-3.6r
	III	4.4r	4.3r	-0.1	5.6r	3.0r	1.2r
	IV	-0.3r	2.4r	2.7r	2.8r	-1.4r	3.0r
	ANNUAL	4.4r	3.8r	-0.5r	5.0r	1.4r	0.6r
1986	I	1.4r	1.9r	0.4r	2.1r	0.6r	0.6r
	II	1.9p	-1.5p	-3.4p	1.9p	3.6p	q0.0p
		Percent change	from corr	esponding qua	rter of previo	us year	
1985	I	4.0r	4.8r	0.8r	5.1r	1.4r	1.lr
	II	5.2r	4.0r	-1.2r	5.3r	1.6r	$0.1_{r}$
	III	4.4r	3.2r	-1.2r	5.3r	1.9r	0.9r
	IV	4.0r	3.4r	-0.6r	4.5r	1.0r	0.5r
	ANNUAL	4.4r	3.8r	-0.5r	5.0r	1.4r	0.6r
1986	I	3.4r	3.1r	-0.3r	3.7r	0.6r	0.3r
	II	1.9p	1.7p	-0.1p	3.1p	1.4p	1.2p

p=preliminary

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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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			Ind	exes 1977=100	)		
1985	ı	121.4r	122.6r	100.9r	172.0r	98.2r	141.6r
	II	124.4r	124.lr	99.8r	173.2r	97 <b>.</b> 9r	139.2r
	III	126.3r	125.6r	99.5r	176.5r	99.2r	139.8r
	IV	126.4r	126.4r	100.0r	178.0r	98.9r	140.8r
	ANNUAL	124.6r	124.7r	100.1r	174.9r	98.5r	140.3r
1986	I	126.7r	126.5r	99.9r	178.9r	99.1r	141.2r
	II	126.8p	125.2p	98.7p	179.6p	99 <b>.</b> 9p	141.6p
		Percent cha	nge from pr	evious quarte	er at annual ra	te(5)	
1985	I	8.2r	7.2r	-0.9r	6.lr	2.8r	-1.9r
	II	10.2r	5.lr	-4.6r	3.0r	-1.0r	-6.5 <sub>r</sub>
	III	6.lr	4.9r	-1.1	7.8r	5.lr	1.6r
	IV	0.5r	2.7r	2.2r	3.3r	-0.9r	2.9r
	ANNUAL	6.8r	6.6r	-0.2r	5.0r	1.4r	-1.7r
1986	I	0.9r	0.3r	-0.6r	2.2r	0.7r	1.2r
	II	0.4p	<b>-4.2</b> p	-4.5p	1.5p	3.2p	l.lp
		Percent change	e from corr	esponding qua	arter of previo	us year	
1985	I	6.5r	8.7r	2.0r	4.8r	1.lr	-1.6r
	II	7.8r	7.4r	-0.4r	4.8r	l.lr	-2.8r
	III	6.7r	5.4r	-1.2r	5.6r	2.1r	-l.lr
	IV	6.2r	5.0r	-1.1r	5.0r	1.5r	-1.1r
	ANNUAL	6.8r	6.6r	-0.2r	5.0r	1.4r	-1.7r
1986	I	4.3r	3.2r	-1.1r	4.lr	0.9r	-0.3r
	II	1.9p	0.9p	-1.0p	3.7p	2.0p	1.7p

See footnotes following table 6.

r=revised p=preliminary July 30, 1986

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			I	ndexes 1977=1	100		
1985	I	116.0r	113.2r	97.6r	176.5r	100.8r	152.lr
	II	117.5r	113.6r	96.7r	179.4r	101.5r	152.7r
	III	118.0r	114.5r	97.0r	180.4r	101.3r	152.8r
	IV	117.6r	115.lr	97.9r	181.3r	100.8r	154.lr
	ANNUAL	117.3r	114.lr	97.3r	179.4r	101.0r	152.9r
1986	I	118.3r	116.4r	98,3r	182.2r	100.9r	154.0r
	II	119.6p	117.2p	98.0p	183.5p	102.lp	153.4p
	<del></del>	Percent cha	ange from p	revious quart	er at annual r	ate(5)	
1985	I	-2.6r	-2.8r	-0.2r	4.4r	1.2r	7.2r
	II	5.2r	1.5r	-3.5r	6.9r	2.8r	1.7r
	III	1.8r	3.3r	1.5r	2.lr	-0.4r	0.3r
	IV	-1.4r	1.9r	3.4	1.9r	-2.3r	3.4r
	ANNUAL	0.7r	-0.3r	-1.0r	5.0r	1.4r	4.3r
1986	I	2.4r	4.5r	2.0r	2.2r	0.7r	-0.2r
	II	4.5p	2.8p	-1.6p	2.8p	4.5p	-1.6p
		Percent change	from corre	sponding quar	ter of previous	s year	
1985	I	0.lr	-0.9r	-1.0r	5.3r	1.7r	5.2r
	II	1.2r	-l.lr	-2.3r	6.lr	2.3r	4.8r
	III	0.9r	-0.3r	-1.1r	4.9r	1.5r	4.0r
	IV	0.7r	1.0r	0.3r	3.8r	0.3r	3.lr
	ANNUAL	0.7r	-0.3r	-1.0r	5.0r	1.4r	4.3r
1986	I	2.0r	2.8r	0.8r	3.3r	0.2r	1.3r
	II	1.8p	3.lp	1.3p	2.3p	0.6p	0.4p

p=preliminary

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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 compensa- tion (1)	Real hourly compen- sation(2)	Unit labor cost	Unit non- labor cost(7)	Total unit cost (8)	Unit pro- fits (9)	Implicit price deflator (4)
					Index	es 1977=100					
1985	I II IV	106.0r 106.5r 107.8r 107.0r	123.lr 124.2r 126.0r 126.lr	116.1r 116.6r 116.8r 117.8r	169.9r 171.6r 173.1r 174.5r	97.0r 97.0r 97.2r 97.0r	160.3r 161.1r 160.5r 163.0r	178.5r 179.8r 178.3r 179.8r	164.9r 165.8 165.0r 167.2	129.3r 130.2r 141.7r 131.2r	160.6r 161.6r 162.2r 162.9r
	ANNUAL	106.8r	124.8r	116.9r	172.3r	97.0r	161.2r	179.lr	165.8r	133.lr	161.8r
1986	I	106.9r	126.9r	118.7r	175.4r	97.lr	164.0r	181.lr	168.3r	131.7r	164.0r
			Percer	nt change	from prev	ious quarte	r at annu	al rate(5	)	<del></del>	
1985	I II III IV	0.8r 2.2r 4.9r -2.8r	3.2 3.7r 5.9r 0.5r	2.4r 1.4r 1.0 3.4r	3.8r 4.2r 3.4r 3.3r	0.6r 0.2r 0.9r -0.9r	3.0r 2.0r -1.4r 6.3r	2.2r 3.0r -3.3r 3.3r	2.8r 2.3r -1.9r 5.5r	-3.6r 3.0r 40.1r -26.4r -0.2r	2.2r 2.3r 1.7r 1.7r
1986	I	-0.5r	2.6r	3.1r	2.0r	0.5r	2.5r	3.1r	2.7r	1.3r	2.5
			Percent	change fi	rom corres	ponding qua	rter of p	revious y	ear		
1985	I II III IV ANNUAL	0.6r 0.6r 2.2r 1.2r	4.lr 3.lr 4.2r 3.3r	3.5r 2.5r 2.0r 2.1r 2.5r	3.8r 4.1r 3.9r 3.7r	0.2r 0.4r 0.5r 0.2r	3.2r 3.5r 1.6r 2.4r	4.3r 3.9r 1.1r 1.3r	3.5r 3.6r 1.5r 2.1r	-3.8r -5.9r 8.7r 0.6r	2.7r 2.6r 2.2r 2.0r
1986	I	0.9r	3.2r	2.2r	3.2r	0.2r	2.3r	1.5r	2.1r	1.8r	2.1r

See footnotes following table 6.

r=revised p=preliminary July 30, 1986

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost	Unit non- labor pay- ments(3)	Implicit price deflator(4)
				Ir	dexes 1977=100				
1983	I	101.9r	106.2r	104.2r	159.9r	98.8r	156.8r	141.0r	151.2r
	II	103.5r	109.2r	105.5r	160.9r	98.4r	155.5r	146.6r	152.3r
	III	103.0r	110.8r	107.5r	161.5r	97.7r	156.8r	147.3r	153.4r
	IV	103.8r	113.6r	109.4r	163.6r	98.0r	157.7r	150.6r	155.2r
	ANNUAL	103.0r	109.9r	106.7r	161.5r	98.2r	156.8r	146.3r	153.0r
1984	I	104.9r	116.9r	111.4r	165.9r	98.1r	158.2r	154.lr	156.7r
	II	105.6r	119.0r	112.7r	167.lr	97.9r	158.3r	156.7r	157.7r
	III	105.5r	119.5r	113.3r	169.0r	98.1r	160.2r	157.0r	159.0r
	IV	105.5r	120.2r	114.0r	170.6r	98.2r	161.7r	157.7r	160.3r
	ANNUAL	105.3r	118.8r	112.8r	168.lr	98.lr	159.7r	156.3r	158.5r
			Percent	change from p	previous quarte	r at annual rate	∍(5)		
1983	I	3.9r	4.9r	1.0r	3.9r	3.7r	0.lr	7.8r	2.5r
	II	6.lr	11.7r	5.3r	2.6r	-1.6r	-3.3r	16.9r	3.1r
	III	-1.6r	5.9r	7.7r	1.6r	-2.6r	3.3r	1.9r	2.8r
	IA	2.8r	10.4r	7.3r	5.3r	l.lr	2.4r	9.4r	4.8r
	ANNUAL	2.7r	4.2r	1.5r	4.2r	1.0r	1.5r	7.lr	3.3r
1984	I	4.4r	12.2r	7.4r	5.7r	0.5r	1.2r	9.6r	4.0r
	II	2.6r	7.5r	4.8r	2.8r	-0.8r	0.2r	7.1r	2.6r
	III	-0.3r	1.7r	2.lr	4.6r	0.8r	5.0r	0.6r	3.4r
	IV	-0.1r	2.5r	2.6r	3.8r	0.1r	3.9r	1.7r	3.2r
	ANNUAL	2.3r	8.1r	5.7r	4.lr	-0.1r	1.8r	6.8r	3.5r
			Percent ch	ange from cor	responding qua	rter of previous	year		
1983	I	2.1r	0.2r	-1.9r	5.7r	2.0r	3.5r	4.4r	3.8r
	II	3.3r	3.lr	-0.2r	4.6r	1.2r	1.3r	7.6r	3.4r
	III	2.8r	5.4r	2.6r	3.2r	0.6r	0.4r	7.6r	2.7 <sub>r</sub>
	IV	2.7r	8.2r	5.3r	3.4r	0.1r	0.6r	8.9r	3.3r
	ANNUAL	2.7r	4.2r	1.5r	4.2r	1.0r	1.5r	7.1r	3.3r
1984	I	2.9r	10.0r	6.9r	3.8r	-0.7r	0.9r	9.3r	3.7r
	II	2.0r	9.0r	6.8r	3.8r	-0.4r	1.8r	6.9r	3.5r
	· III	2.4r	7.9r	5.4r	4.6r	0.4r	2.2r	6.6r	3.7r
	IV	1.6r	5.9r	4.2r	4.2r	0.2r	2.6r	4.7r	3.3r
	ANNUAL	2.3r	8.1r	5.7r	4.lr	-0.lr	1.8r	6.8r	3.5r

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost	Unit non- labor pay- ments(3)	Implicit price deflator(4)
				Ir	dexes 1977=100				
1983	I	100.9r	105.8r	104.8r	159.9r	98.8r	158.5r	141.4r	152.5r
	II	102.7r	109.2r	106.3r	160.9r	98.4r	156.6r	148.0r	153.6r
	III	102.9r	111.4r	108.3r	161.7r	97.8r	157.lr	151.lr	155.0r
	IV	103.3r	114.lr	110.5r	163.4r	97.9r	158.2r	152.3r	156.2r
	ANNUAL	102.4r	110.lr	107.5r	161.5r	98.2r	157.7r	148.lr	154.3r
1984	I	103.9r	116.9r	112.5r	165.6r	97.9r	159.4r	153.2r	157.2r
	II	104.6r	119.lr	113.8r	166.9r	97.8r	159.5r	156.4r	158.4r
	III	104.4r	119.5r	114.5r	168.7r	98.0r	161.5r	157.2r	160.0r
	IV	104.3r	120.2r	115.2r	170.4r	98.1r	163.3r	157.9r	161.4r
	ANNUAL	104.3r	118.8r	114.0r	167.9r	98.0r	161.0r	156.lr	159.3r
			Percent	change from p	revious quarte	r at annual rate	(5)		
1983	I	5.0r	6.3r	1.2r	4.4r	4.lr	-0.6r	10.5r	2.9r
	11	7.3r	13.4r	5.7r	2.3r	-1.9r	-4.7r	19.8r	2.8r
	III	0.8r	8.5r	7.6r	2.0r	-2.2r	1.2r	8.7r	3.7r
	IV	1.3r	9.8r	8.4r	4.4r	0.1r	3.0r	3.4r	3.1r
	ANNUAL	3.3r	4.9r	1.6r	4.3r	l.lr	l.lr	8.6r	3.5r
1984	I	2.4r	10.2r	7.6r	5.4r	0.3r	3.0r	2.3r	2.7r
	II	2.9r	7.7r	4.7r	3.2r	-0.4r	0.3r	8.6r	3.1r
	III	-0.7r	1.6r	2.3r	4.3r	0.4r	5.lr	2.lr	4.0r
	IV	-0.4r	2.2r	2.6r	4.2r	0.5r	4.6r	1.9r	3.7r
	ANNUAL	1.8r	8.0r	6.0r	4.0r	-0.3r	2.lr	5.4r	3.2r
			Percent ch	ange from cor	responding quan	rter of previous	year		
1983	I	2.2r	0.4r	-1.7r	5.8r	2.1r	3.5r	4.7r	3.9r
	II	3.6r	3.6r	-0.1r	4.8r	1.4r	1.2r	8.7r	3.6
	III	3.8r	6.6r	2.7r	3.4r	0.8r	-0.4r	10.5r	3.1r
	IV	3.6r	9.5r	5.7r	3.3r	0.0r	-0.3r	10.4r	3.1r
	ANNUAL	3.3r	4.9r	1.6r	4.3r	l.lr	1.1r	8.6r	3.5r
1984	I	2.9r	10.5r	7.3r	3.5r	-0.9r	0.6r	8.3r	3.1r
	11	1.8r	9.0r	7.1r	3.8r	-0.5r	1.9r	5.7r	3.2r
	III	1.5r	7.3r	5.7r	4.3r	0.lr	2.8r	4.lr	3.3r
	IA	1.0r	5.4r	4.3r	4.3r	0.2r	3.2r	3.7r	3.4r
	ANNUAL	1.8r	8.0r	6.0r	4.0r	-0.3r	2.lr	5.4r	3.2r

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			Ind	exes 1977=100	)		<del></del>
1983	I	110.0r	99.2r	90.3r	161.9r	100.1r	147.3r
	II	111.2r	102.7r	92.4r	161.8r	99.0r	145.6r
	III	113.5r	107.3r	94.6r	162.4r	98.2r	143.lr
	IV	113.3r	109.6r	96.8r	163.6r	97.9r	144.3r
	ANNUAL	112.0r	104.7r	93.5r	162.4r	98.8r	145.0
1984	I	114.7r	113.3r	98.8r	165.4r	97.8r	144.lr
	II	115.7r	115.3r	99.7r	166.8r	97.8r	144.2r
	III	117.8r	117.4r	99.7r	169.lr	98.2r	143.5r
	IA	118.2r	117.9r	99.7r	171.5r	98.7r	145.lr
	ANNUAL	116.6r	116.0r	99.5r	168.2r	98.1r	144.2r
		Percent cha	nge from pr	evious quarte	er at annual ra	te(5)	
1983	I	9.8r	12.2r	2.3r	3.2r	3.0r	-5.9r
	II	4.5r	14.7r	9.7r	-0.2r	-4.3r	-4.5r
	III	8.5r	19.1r	9.8r	1.3r	-2.9r	-6.6r
	IV	-0.5r	9.1r	9.6r	3.0r	-1.2r	3.5r
	ANNUAL	5.8r	6.4r	0.6r	3.1r	-0.1r	-2.5r
1984	I	5.2r	14.3r	8.6r	4.6r	-0.5	-0.6r
	11	3.3r	7.lr	3.8r	3.4r	-0.2r	0.2r
	III	7.5r	7.4r	-0.1r	5.6r	1.6r	-1.8r
	IV	1.3r	1.6r	0.2r	5.9r	2.1r	4.5r
	ANNUAL	4.1r	10.8r	6.4r	3.6r	-0.7r	-0.5r
		Percent chang	e from corr	esponding qua	rter of previo	us year	
1983	I	5.6r	-0.8r	-6.lr	5.3r	1.6r	-0.3r
	II	5.8r	3.9r	-1.8r	3.3r	0.0r	-2.3r
	III	5.9r	9.2r	3.1r	2.0r	-0.6r	-3.7r
	IV	5.5r	13.7r	7.8r	1.8r	-1.4r	-3.5r
	ANNUAL	5.8r	6.4r	0.6r	3.1r	-0.1r	-2.5r
1984	I	4.4r	14.2r	9.4r	2.lr	-2.2r	-2.1r
	11	4.0r	12.3r	7.9r	3.1r	-1.2r	-0.9r
	III	3.8r	9.4r	5.4r	4.lr	-0.1r	0.3r
	ΙΛ	4.3r	7.5r	3.1r	4.9r	0.8r	0.5r
	ANNUAL	4.lr	10.8r	6.4r	3.6r	-0.7r	-0.5r

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
	'		Ind	exes 1977=100	)		<del></del>
1983	I	106.8r	94.2r	88.2r	161.3r	99.7r	151.lr
	II	108.7r	98.3r	90.5r	160.9r	98.4r	148.11
	III	111.6r	104.0r	93.2r	161.3r	97.6r	144.5
	IV	111.9r	107.8r	96.3r	162.3r	97.2r	145.0
	ANNUAL	109.8r	101.1r	92.0r	161.5r	98.2r	147.01
1984	I	114.0r	112.8r	98.9r	164.1r	97.lr	144.01
	II	115.4r	115.6r	100.2r	165.3r	96.9r	143.31
	III	118.3r	119.1r	100.7r	167.2r	97.1r	141.4
	IV	119.1r	120.5r	101.2r	169.4r	97.5r	142.3
	ANNUAL	116.7r	117.0r	100.2r	166.6r	97.2r	142.7r
	<del>, , , , , , , , , , , , , , , , , , , </del>	Percent char	nge from pr	evious quarte	er at annual ra	te(5)	<del></del>
1983	I	13.2r	17.lr	3.4r	3.0r	2.7r	-9.1r
	II	7.4r	18.8r	10.6r	-0.8r	-5.0r	-7.6r
	III	11.3r	25.2r	12.5r	1.0r	-3.2r	-9.3r
	īv	1.0r	15.2r	14.0r	2.4r	-1.8r	1.3r
	ANNUAL	7.7r	7.7r	0.0	2.8r	-0.4r	-4.5r
1984	I	7.6r	19.8r	11.4r	4.7r	-0.4r	-2.7r
	ΙĬ	4.9r	10.4r	5.3r	2.9r	-0.7r	-1.9r
	III	10.5r	12.8r	2.1r	4.7r	0.8r	-5.3r
	IV	2.7r	4.5r	1.8r	5.4r	1.7r	2.7r
	ANNUAL	6.3r	15.7r	8.9r	3.2r	-1.1r	-2.9r
		Percent change	from corr	esponding qua	rter of previous	us year	
1983	1	6.6r	-2.6r	-8.7r	5.3r	1.6r	-1.2r
	II	7.5r	3.6r	-3.6r	3.1r	-0.2r	-4.0r
	III	8.3r	11.5r	2.9r	1.5r	-1.0r	-6.3r
	IV	8.1r	19.0r	10.1r	1.3r	-1.9r	-6.3r
	ANNUAL	7.7r	7.7r	0.0	2.8r	-0.4r	-4.5r
1984	I	6.8r	19.7r	12.lr	1.8r	-2.6r	-4.7r
	II	6.lr	17.5r	10.7r	2.7r	-1.5r	-3.2r
	III	5.9r	14.5r	8.1r	3.6r	-0.5r	-2.2r
	IA	6.4r	11.8r	5.lr	4.4r	0.3r	-1.8r
	ANNUAL	6.3r	15.7r	8.9r	3.2r	-1.lr	-2.9r

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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
	<del></del>		Ind	exes 1977=100	)	····	
1983	I	114.4r	106.8r	93.3r	163.9r	101.3r	143.3r
	II	114.7r	109.2r	95.2r	164.2r	100.4r	143.2r
	III	116.1r	112.lr	96.6r	164.7r	99.7r	141.9r
	IV	115.3r	112.4r	97.5r	166.0r	99.4r	143.9r
	ANNUAL	115.2r	110.lr	95.6r	164.7r	100.2r	143.1r
1984	I	115.9r	114.2r	98.6r	167.5r	99.1r	144.6r
	II	116.lr	114.9r	99.0r	169.2r	99.2r	145.7r
	III	117.0r	114.8r	98.lr	171.9r	99.8r	146.9r
	IA	116.8r	114.0r	97.6r	174.6r	100.5r	149.4r
	ANNUAL	116.5r	114.5r	98.3r	170.8r	99.7r	146.6r
		Percent char	nge from pr	evious quarte	er at annual ra	te(5)	
1983	I	5.5r	6.2r	0.6	3.4r	3.1r	-2.0r
	II	0.9r	9.5r	8.5r	0.6r	-3.5r	-0.3r
	III	4.8r	11.2r	6.lr	1.3r	-2.9r	-3.4r
	IV	-2.5r	1.0r	3.6r	3.1r	-1.1r	5.8r
	ANNUAL	3.1r	4.8r	1.6r	3.7r	0.5	0.6r
1984	I	1.9r	6.7r	4.7r	3.8r	-1.2r	1.8r
	11	0.9r	2.4r	1.5r	4.0r	0.4r	3.lr
	III	3.1r	-0.3r	-3.3r	6.5r	2.6r	3.3r
	IV	-0.8r	-2.9r	-2.2r	6.3r	2.6r	7.2r
	ANNUAL	1.2r	4.0r	2.8r	3.7r	-0.6r	2.5r
		Percent change	e from corr	esponding qua	rter of previo	us year	
1983	I	4.0r	1.6r	-2.3r	6.0r	2.3r	2.0r
	11	3.3r	4.2r	0.9r	4.0r	0.6r	0.6r
	III	2.8r	6.2r	3.4r	2.7r	0.lr	-0.1r
	IV	2.lr	6.9r	4.6r	2.lr	-1.1r	0.0r
	ANNUAL	3.1r	4.8r	1.6r	3.7r	0.5	0.6r
1984	I	1.3r	7.0r	5.7r	2.2r	-2.2r	0.9r
	II	1.3r	5.3r	4.0r	3.0r	-1.2r	1.8r
	III	0.8r	2.4r	1.6r	4.4r	0.1r	3.5r
	ΙΛ	1.3r	1.4r	0.lr	5.2r	1.lr	3.8r
	ANNUAL	1.2r	4.0r	2.8r	3.7r	-0.6r	2.5r

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 compensa- tion (1)	Real hourly compen- sation(2)	Unit labor cost	Unit non- labor cost(7)	Total unit cost (8)	Unit pro- fits (9)	Implicit price deflator (4)
Indexes 1977=100											
1983	I	102.2r	106.2r	103.9r	158.7r	98.1r	155.3r	177.0r	160.8r	86.7r	151.9r
	II	103.5r	109.4r	105.7r	159.2r	97.4r	153.8r	174.8r	159.lr	107.6r	
	III	103.9r	111.9r	107.7r	159.9r	96.8r	153.9r	174.4r	159.lr	119.lr	
	IV	104.5r	115.lr	110.1r	161.7r	96.8r	154.8r	171.4r	159.0r	128.6r	
	ANNUAL	103.5r	110.6r	106.9r	159.9r	97.3r	154.5r	174.3r	159.5r	110.9r	153.7r
1984	I	105.3r	118.2r	112.3r	163.6r	96.8r	155.4r	171.lr	159.4r	134.4r	156.4r
	II	1 <del>0</del> 5.9r	120.5r	113.7r	164.8r	96.6r	155.7r	173.lr	160.lr	138.5r	157.5r
	III	105.5r	120.9r	114.6r	166.6r	96.7r	157.9r	176.4r	162.6r	11986	
	IA	105.8r	122.lr	115.5r	168.3r	96.8r	159.lr	177.5r	163.8r	11986	
	ANNUAL	105.6r	120.4r	114.0r	165.9r	96.8r	157.0r	174.6r	161.5r	133.4r	158.lr
		<del></del>	Percer	nt change	from prev	ious quarte	er at annu	al rate(5	)		
1983	I	5.9r	7.lr	1.1r	4.0r	3.7r	-1.8r	-8.8r	-3.8r	121.2r	1.3r
	11	5.3r	12.6r	6.9r	1.4r	-2.8r	-3.7r	-4.8r	-4.0r	137.5r	2.8r
	III	1.6r	9.7r	8.0r	1.8r	-2.4r	0.2r	-1.0r	-0.2r	49.7r	3.5r
	IV	2.1r	11.6r	9.4r	4.5r	0.2r	2.4r	-6.7r	-0.2r	35.9r	2.8r
	ANNUAL	3.2r	4.7r	1.5r	3.6r	0.4r	0.4r	-1.2r	0.0r	41.4r	2.6r
1984	I	3.3r	11.5r	7.9r	4.9r	-0.2	1.6	-0.5r	1.0r	19.4r	2.7r
	II	2.3r	7.8r	5.4r	3.0r	-0.6r	0.7r	4.6r	1.7r	12.7r	2.8r
	III	-1.6r	1.3r	3.0r	4.3r	0.4r	6.0r	7.9r	6.5r	-21.5r	3.3r
	IA	l.lr	4.2r	3.1r	4.lr	0.4r	3.0r	2.5r	2.9r	0.4r	2.6r
	ANNUAL	2.0r	8.8r	6.7r	3.7r	-0.5r	1.7r	0.lr	1.3r	20.2r	2.9r
	<del> </del>		Percent	change fr	om corres	ponding qua	arter of p	revious y	ear		
1983	1	2.4r	-0.5r	-2.8r	5.0r	1.3r	2.5r	2.5r	2.5r	5.2r	2.7r
	II	3.2r	3.0r	-0.2r	3.9r	0.5r	0.6r	-0.4r	0.4r	35.8r	2.6r
	III	3.2r	6.2r	2.9r	2.7r	0.lr	-0.5r	-1.3r	-0.7r	47.0r	2.4r
	IV	3.7r	10.2r	6.3r	2.9r	-0.4r	-0.8r	-5.4r	-2.lr	80.8r	2.6
	ANNUAL	3.2r	4.7r	1.5r	3.6r	0.4r	0.4r	-1.2r	0.0r	41.4r	2.6r
1984	I	3.1r	11.3r	8.0r	3.1r	-1.3r	0.1r	-3.3r	-0.9r	55.0r	3.0r
	II	2.3r	10.1r	7.7r	3.5r	-0.8r	1.2r	-1.0r	0.6r	28.6r	3.0r
	III	1.5r	8.0r	6.4r	4.2r	0.0r	2.6r	1.2r	2.2r	9.5r	2.9r
	ΙΛ	1.2r	6.lr	4.8r	4.lr	0.0r	2.8r	3.6r	3.0r	1.5r	2.9r
	ANNUAL	2.0r	8.8r	6.7r	3.7r	-0.5r	1.7r	0.lr	1.3r	20.2r	2.9r

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. Preliminary results are 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 preliminary value by between -1.7 and +1.9 index points. This interval is based on the performance of this measure between the first quarter of 1976 and the second quarter of 1985.

## 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.
- (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.