News

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Bureau of Labor Statistics

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PRODUCTIVITY AND COSTS Preliminary Fourth Quarter and Annual Averages, 1991

The Bureau of Labor Statistics of the U.S. Department of Labor today reported preliminary fourth-quarter seasonally-adjusted annual rates of productivity change-as measured by output per hour of all persons--and annual changes for the full year 1991. The changes were:

	Fourth quarter	Annual averages 1990-1991
Business sector	1.6	0.2
Nonfarm business sector	1.1	0.2
Manufacturing	1.5	1.4
Durable goods manufacturing	1.1	1.3
Nondurable goods manufacturing	2.1	1.6

In business and nonfarm business, productivity rose only slightly in 1991, the second straight year in which productivity was virtually unchanged. Growth in manufacturing productivity was stronger than in the more comprehensive business sectors, but resulted from larger declines in output and hours than in the business sectors.

In the fourth quarter, productivity increased in business, nonfarm business, and manufacturing as output showed little growth and hours declined. Fourth-quarter and annual 1991 measures are summarized in tables A and B and appear in detail in tables 1 through 5.

THIRD-TO-FOURTH QUARTER CHANGES, 1991

Business

Productivity increased at a 1.6 percent annual rate during the fourth quarter of 1991 in the business sector, as output growth slowed to a 0.1 percent annual rate and hours of all persons engaged in the sector declined 1.5 percent (seasonally adjusted). During the third quarter of 1991, business productivity had increased 1.1 percent, but output grew 1.8 percent and hours rose 0.7 percent (table 1).

Table A. Product measures (Seasonally adjus				inary fou	ırth-quart	er 1991
	Produc- tivity		Hours	-	Real hourly compen- sation	labor
Pe	ercent (change f	com prec	eding qua	rter	
Business	1.6	0.1	-1.5	2.9	-0.2	1.3
Nonfarm business	1.1	0.0	-1.1	2.4	-0.7	1.3
Manufacturing	1.5	0.8	-0.7	4.0	0.8	2.5
				5.4		4.3
Nondurable	2.1	3.6	1.5	2.2	-0.9	0.1
Perc	ent char	nge from	same qu	arter a y	year ago	
Business	1.1	-0.4	-1.5	3.2	0.3	2.1
Nonfarm business	1.0	-0.5	-1.4	3.1	0.2	2.1
Manufacturing					0.5	1.5
Durable		-2.0			1.1	2.5
Nondurable		2.0	-0.3	2.9	0.0	0.5

Hourly compensation increased at a 2.9 percent annual rate during the fourth quarter of 1991, compared with a 2.8 percent increase during the third quarter. This measure includes wages and salaries, supplements, employer contributions to employee-benefit plans, and taxes. Unit labor costs, which reflect changes in hourly compensation and productivity, increased at a 1.3 percent annual rate during the fourth quarter, down from a 1.7 percent increase one quarter earlier. This was the smallest increase in these costs since the first quarter of 1988 (when a 0.2 percent decline occurred).

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), fell 0.2 percent in both the third and fourth quarters. This series declined during 9 of the past 12 quarters.

The implicit price deflator for business output, which reflects changes in unit labor costs and unit nonlabor payments, increased a scant 1.0 percent in the fourth quarter, the smallest increase since 1970 (when a 0.9 percent increase occurred in the third quarter). During the third quarter of 1991, prices of the goods and services which comprise business output had increased at a 1.8 percent annual rate.

Monfarm business

In the nonfarm business sector, productivity gained 1.1 percent in the fourth quarter. Output was unchanged, and hours of all persons—employees, proprietors, and unpaid family workers—fell 1.1 percent. The decline in hours resulted from a 0.9 percent reduction in employment (the sixth in a row) and a 0.2 percent shortening of the average work week. During the third quarter, nonfarm productivity

had increased 0.9 percent as output grew 1.6 percent and hours increased 0.7 percent (table 2). As in the more comprehensive business sector, the drop in hours was the third in 1991.

Hourly compensation rose 2.4 percent in the fourth quarter, but fell 0.7 percent when the increase in the CPI-U was taken into account. As in the more comprehensive business sector, this series has declined in 9 quarters of the 1989-1991 period. Unit labor costs increased 1.3 percent, compared with a 1.8 percent rise during the third quarter.

The implicit price deflator for nonfarm business output rose 1.5 percent in the fourth quarter, compared with a 2.1 percent increase one quarter earlier. This was the smallest rise in prices since 1986 (when a 0.9 percent increase was recorded in the second quarter).

Manufacturing

Manufacturing productivity rose at a 1.5 percent seasonally adjusted annual rate in the fourth quarter of 1991, not much different from the more comprehensive business sector reported above. Output rose 0.8 percent and hours of all persons decreased 0.7 percent. The decline in hours was the third decrease of 1991. During the third quarter, productivity had increased 4.0 percent, as output rose 7.1 percent and hours gained 3.0 percent (table 3). Both durable and nondurable goods industries experienced productivity increases in the fourth quarter, but the movements reflected opposite trends in output and hours. While both underlying series declined among durable goods manufacturing industries, both output and hours grew in nondurable goods production (tables 4 and 5).

Hourly compensation of all manufacturing workers increased 4.0 percent during the fourth quarter, but edged up only 0.8 percent when the increase in consumer prices was taken into account. Unit labor costs rose at a 2.5 percent annual rate in the fourth quarter of 1991, compared with a 1.7 percent decrease during the third quarter.

ANNUAL CHANGES, 1990-1991

Business

Business productivity increased 0.2 percent when the annual average for 1990 is compared with the average for 1991 (table B), the same increase as in 1990. Output fell 1.5 percent in 1991, and hours of all persons engaged in the sector decreased 1.7 percent. During 1990, output and hours both grew somewhat.

Hourly compensation increased 3.9 percent in 1991, compared with a 5.4 percent increase during 1990. Unit labor costs increased 3.7 percent during 1991, compared with a 5.2 percent increase one year earlier. Real hourly compensation declined 0.3 percent in 1991, compared with no change in 1990. At 102.8, the index of real hourly compensation for 1991 is lower than that of any year since 1985, when it stood at 101.3 (1982=100).

Sector and	•				* .					• •
measure	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Business:	•				• •					
Productivity	0.1	2.2	2.3	1.4	2.0	1.0	0.9	-0.7	0.2	0.2
Output	-2.3	4.1	8.2	3.6	2.8	4.1	4.3	1.8	0.4	-1.5
Hours	-2.5	1.8	5.7	2.1	0.7	3.1	3.3	2.6	0.2	-1.7
Hourly comp	7.6	3.7	4.2	4.5	4.9	3.5	4.3	3.5	5.4	3.9
Real hourly comp	1.3	0.5	-0.1	0.9	3.0	-0.1	0.1	-1.2	0.0	-0.3
Unit labor costs	7.4	1.5	1.9	3.0	2.8	2.5	3.3	4.3	5.2	3.7
Nonfarm Business:	1	erick (4 - 10 to		14.5	$F = \{ \dots \}$,	A SECTION AND A SECTION ASSESSMENT		
Productivity	0.1	2.4	2.1	0.8	1.9	0.8	0.9	-0.9	-0.1	0.2
Output	-2.4	4.4	8.2	3.4	2.8	4.1	4.4	1,7	0.3	-1.6
Hours	-2.4	2.0	6.0	2.5	0.9	3.3	3.5	2.7	0.3	-1.8
Hourly comp	7.5	3.9	4.0	4.2	4.9	3.4	4.1	3.4	5.2	4.0
Real hourly comp	1.2	0.7	-0.3	0.6	3.0	-0.2	0.0	-1.4	-0.2	-0.2
Unit labor costs	7.4	1.5	1.9	3.3	2.9	2.6	3.2	4.3	5.3	3.7
Manufacturing:	Springer of the final	an Har	D	10.483	t (15%).	State to	e de Arrie	: W. 11.1		
Productivity	3.8	2.9	2.6	2.3	4.3	4.1	4.0	0.5	2.5	1.4
Output	-5.0	4.0	9,4	1.5	2.8	4.9	7.1	0.9	0.3	-2.2
Hours	-8.5	1.2	6.6	-0.8	-1.4	0.7	2.9	0.4	-2.2	-3.6
Hourly comp	9.4	2.5	3.1	5.0	4.0	2.2	3.9	4.0	5.3	4.2
Real hourly comp	3.1	-0.7	-1.1	1.4	2.1	-1.4	-0.2	-0.8	-0.1	.0.0
Unit labor costs	5.4	-0.4	0.5	2.7	-0.3	-1.8	-0.1	3.5	2.7	2.7

Unit labor costs increased 3.7 percent during 1991, compared with a 5.2 percent increase a year earlier. Since productivity growth was the same in both years, the slower growth in these costs during 1991 reflected a slowing of the rate of gain of hourly compensation.

NOTE: Future revisions due to the regular benchmarking of employment and hours measures to unemployment insurance records will affect measures incorporating labor input data (productivity, hourly compensation, real hourly compensation, and hours of all persons). The new data might lower the growth of business labor input by 1.5 to 2.5 percentage points in the first quarter of 1991 and by less than half a percent in the annual movement. Labor input data for the business, nonfarm business, manufacturing, and nonfinancial corporate sectors may be similarly affected by the benchmarking.

Nonfarm business

Productivity also increased 0.2 percent in the nonfarm business sector during 1991, as output fell 1.6 percent and hours of all persons decreased 1.8 percent. Hourly compensation rose 4.0 percent in 1991, but fell 0.2 percent when the increase in the CPI-U was taken into account.

Unit labor costs in the nonfarm business sector grew more slowly in 1991 than in 1990. This reduction reflected both an increase in productivity (compared with a slight decline in 1990) and a smaller gain in hourly compensation.

Manufacturing

Manufacturing productivity increased more rapidly in 1991 than in the more comprehensive business sectors reported above, growing 1.4 percent over the 1990 level. However, both output and hours simultaneously declined for the year as a whole for the first time since 1982. Output fell 2.2 percent in 1991 and hours of all persons declined 3.6 percent. During 1990, productivity rose 2.5 percent, output inched ahead 0.3 percent, and hours decreased 2.2 percent.

Hourly compensation of manufacturing workers increased 4.2 percent during 1991, but was unchanged when the increase in consumer prices was taken into account. This marked the fifth year in a row real hourly compensation fell or showed no growth for manufacturing workers. Unit labor costs rose 2.7 percent in both 1991 and 1990.

Both durable and nondurable goods industries experienced productivity increases in 1991, but gains were faster for nondurables producers (tables 4, 5).

Historical productivity and cost measures for manufacturing (total, durable, and nondurable) are shown in appendix tables 1-3 from 1977 forward. They incorporate unpublished revisions to output and compensation measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce for 1977 through 1989 which were previously unavailable. These new data include changes reflecting the rebasing of output deflators to 1987 prices (rather than 1982), the results of the 1989 Annual Survey of Manufactures, and other changes. However, these data do not yet incorporate other improvements already shown in the revised historical measures for business, nonfarm business, and nonfinancial corporations, published January 3.

Revised third quarter 1991 measures for nonfinancial corporations

Revised productivity and cost measures for the third quarter for nonfinancial corporations were unchanged from those announced January 3, 1992.

third quarte Percent char (Seasonally	nge from	-						
Item	Produc- tivity	Output	Hours		Real hourly compen- sation	• -	Unit profits	Implicit price deflator
Preliminary Revised	1.7	2.5 2.5	0.8	2.6	-0.4 -0.4	0.9 0.9	-4.2 -4.2	0.9

Next release date

The next issue of Productivity and Costs is scheduled for release at 10:00 AM EST, Tuesday, March 10, 1992, and will contain preliminary annual measures for nonfinancial corporations, and revised fourth quarter and annual measures for business, nonfarm business, and manufacturing.

NOTE: New and revised annual productivity measures for 1990 for 173 selected U.S. industries were released on December 30, 1991, in USDL 91-661, Productivity by Industry: 1990. Call (202) 523-9244 for further information.

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TECHNICAL NOTES

Information in this release will be made available to sensory-impaired individuals upon request. Voice phone: 202-523-1221; TDD phone: 202-523-3926; TDD message referral phone number: 1-800-326-2577.

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 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 1987 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 1990. Nonfarm business, which also excludes farming, was about 79 percent of GNP in 1990.

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; industrial machinery and equipment; electronic and other electric equipment; 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, paper and allied 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 1990.

Nonfinancial corporate output is equal to GNP in constant 1987 dollars, less the rest-of-the-world sector, general government, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, unincorporated business, the output of corporations engaged in banking, finance, stock and commodity trading, and credit and insurance agencies, and the statistical discrepancy in computing the NIPA. Nonfinancial corporations accounted for about 60 percent of GNP in 1990.

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

ted			••	.	Real	15 d.s.	****	T 1 4 - 4 +	•.
1	hour of	Output	of all persons	tion per hour (1)	tion per hour (2)	labor cost			
			Inde	xes 1982=100		. 101		ante est	
I	109.6	133.2	121.6				138.1	128.8	
II	110.3	133.9	121.4	139.0	103.6				
III		132.9	121.2	140.9	103.3				
IV	109.4	131.8	120.5	142.3	102.6	130.1		132.5	
ANNUAL	109.7	132.9			103.1	127.2		130.8	
т.	109.4	130.2	119.1	143.2	102.4	131.0	140.2	134.0	
ΤŤ	400 0	130.7	119.0	144.8	103.0	131.8	141.4	135.0	
	110.2	131.3	119.2	145.8	103.0	132.3r	142.1	135.6	
IV	110.6	131.3	118.7	146.9	102.9		142.3	135.9	
ANNUAL	109.9	130.9	119.1	145.1	102.8	132.0	141.5	135.1	
	Perce	nt change	from prev	ious quarter	at annual i	ate (5)			
7	1 - 7	3.0	1.2	6.6	-0.7	4.8	2.4	4.0	
	2.4	2.0	-0.5	8.4		5.8	1.7	4.3	
	-2.2	-3.0	-0.8	5.7	-1.1	8.1	-2.2		
	-0.9	-3.0	-2.2	4.1	-2.7	5.0	-1.3	2.8	
ANNUAL							1.4	3.8	
					0.0		7.0	A =	
- +	-0.1	-4.9	-4./	2.0	-0.9	2.1			
11	1.9	1./	-0.3	9.0	2.4	2.0			
	1.4	0.1	_1 5	2.0	-0.2	1.7			
	0.3	_1 6	-1.7	2.0	-0.2	3.7			
	·						~~~~~~~~		
						vious year			
I		0.5	0.9	3.8	-1.3	4.2	2.8	3.7	
		1.0	0.6	5.5	0.7	4.9	1.6	3.7	
III	0.4	0.3	-0.1	6.2	0.7	5.8			
IV	0.2	-0.3	-0.6	6.2			0.2	3.9	
7 .	0.2	0.4	0.2	5.4	0.0	5.2	1.4	3.8	
. т					-0.2	5.4	1.5	4.0	
	-0.3	-2.3	-2.0	4.2	-0.6		1.9	3.6	
	0.5	-1.2	-1.6	3.5	-0.4	3.0		3.0	
	1.1	-0.4	-1.5	3.2	0.3		3.5	2.5	
ANNUAL	0.2		*-			•	•	3.3	
	ANNUAL III III IV IV III IV IV IV IV	1 109.6 11 110.3 111 109.6 17 109.4 11 109.9 111 110.6 17 110.6 17 109.9 111 110.6 17 109.9 111 110.6 17 109.9 111 110.6 17 109.9 17 18 19 19 19 19 19 19 19	I 109.6 133.2 III 110.3 133.9 IV 109.4 131.3 IV 110.6 131.3 IV 110.6 131.3 IV 109.9 130.9 III 1.7 III 1.9 1.7 III 1.9 1.7 III 1.9 1.7 III 1.9 1.7 III 1.1 1.8 IV 1.6 0.1 IV 0.2 0.4 III 0.5 1.0 III 0.4 0.3 IV 0.2 0.4 III 0.5 1.0 IIII 0.5 0.1 III 0.5 0.2 III 0.5 0.3 III 0.5 0.2 III 0.5 0.3 III 0.5 0.2 0.4 III 0.5 0.2 0.3 III 0.5 0.2 0.3 III 0.5 0.2 0.4 IIII 0.5 0.5 0.5 0.5 IIII 0.5 0.5 0.5 IIII 0.5 0.5 0.5	Compared Compared	Output per Output Hours Compensation	Real Output per Output Hours Compensation per hour of all persons of all tion per hour (2)	Name	Note	Name

es following

See footnotes following table 6. February 5, 1992 Source: Bureau of Labor Statistics

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

Ye	d.	Output per hour of all persons	•	of all persons	Compensa- tion per hour (1)	hour (2)	labor	Unit non- labor pay- ments (3)	price
					xes 1982-100				
990	1	108.1	133.5	123.5	134.9	101.6	124.9	138.4	129.2
	II	108.6	134.1	123.4	137.6	102.6	126.7	139.0	130.6
	III	107.9	133.1	123.3	139.5	102.3	129.2	138.4	132.2
	IV	107.9	132.0	122.4	141.0	101.7	130.7	138.7	133.3
	ANNUAL	108.1	133.2	123.1	138.3	102.1	127.9	138.6	131.3
991	ī	107.9	130.4	120.9	142.0	101.5	131.6	141.8	134.9
	ıī	108.4	130.9	120.8	143.6		100 -	142.5	135.7
	III	108.6	131.4	121.0	144.5	102.1	132.5	143.4	136.4
	īv	108.9	131.4	120.6	145.4	101.9	133.5	144.1	136.9
erio. Kong	ANNUAL	108.4		14 7 42 14	143.8	101.9	132.7	142.9	136.0
		Perce	nt change	from prev	ious quarter	at annual	rate(5)		
990	I	1.0	2.7	1.8	-6.0	-1.3	5.0	1.7	3.8
,,,,	ıî	2.1	1.8	-0.3	8.1	4.1	5.9	1.8	4.5
	ııı	-2.5	-3.0	-0.5	5.6	-1.2	8.4	-1.7	4.8
	ĪV	-0.3	-3.1	-2.8	4.4	-1.2 -2.4	4.7	1.0	3.4
					5.2				
	ANNUAL	-0.1	0.3			-0.2	5.3	1.5	3.9
991	I	0.1	-4.9	-4.9	2.7	-0.8	2.7	9.0	4.8
	ΙĪ		1.6	-0.3	4.6	2.5	2.6	2.1	2.5
	III	0.9	1 6	. 07	2.7	-0.3r	1.8r	2.5r	2.1
	IV	1.1	0.0	-1.1	2.7 2.4	-0.3r -0.7	1.8r 1.3	1.9	1.5
	ANNUAL	0.2	-1.6	-1.8	4.0	-0.2	3.7	3.1	3.5
		Perce	nt change	from corre	sponding qua	rter of pre	vious yea	r	
990	I	-0.7	0.4	1.0	3.5	-1.6	4.2	2.9	3.8
	IĪ	0.4	1.0	0.6	5.2	0.6	4.9	1.6	3.7
	III	0.1	0.2		6.1	0.5	6.0	0.8	4.2
	IV	0.0	-0.4	-0.5	6.0	0.5 -0.2	6.0	0.7	4.1
	ANNUAL			0.3	5.2	2.7	5.3	* * *	3.9
1991	I	-0.2	-2.3	-2.2	5.2	-0.1	5.4	2.4	4.4
	ıi		-2.4	-2.2	4.3	-0.5	4.6	2.5	3.9
	III	0.6	-1.2	-1.9	3.6	-0.5 -0.3	3.0	3.6	3.2
	IV		-0.5	-1.4	3.1	0.2	2.1	3.8	2.7
			nja vers	and the second	in the second		4 1 1 1 1 1 1 1 1 1	N/A	
	ANNUAL	0.2	-1.6	-1.8	4.0	-0.2	3.7	3.1	3.5

See footnotes following table 6. February 5, 1992 rerevised 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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			I	ndexes 1982-1	100		
1990	I	124.1r	134.1r	108.1r	131.3r	98.9r	105.9r
	11	125.1r	135.4r	108.3r	133.6r	99.6r	106.8r
	, III	126.8r	136.6r	107.7r	134.9r	99.0r	106.4r
	IV	126.4r	133.9r	105.9r	137.0r	98.8r	108.4r
	ANNUAL	125.7r	135.0r	107.4r	134.3r	99.2r	106.9r
1991	. 1	126.0r	130.3r	103.4r	138.2r	98.8r	109.7r
	II	127.1r.	131.0r	103.0r	139.7r	99.3r	109.9r
	III	128.4r	133.2r	103.8r	140.4r	99.1r	109.4r
	ĪV	128.8	133.5	103.6	141.8	99.3	110.1
	ANNUAL	127.5	132.0	103.5	139.9	99.1	109.8
		Percent ch	ange from p	revious quart	ter at annual r	ate (5)	·
1990	. I	4.3	1.9r	-2.4	4.9	-2.4	0.5r
	II	3.3r	4.0r	0.6	7.2	3.2	3.8r
	III	5.6r	3.4r	-2.1	4.0	-2.7	-1.6
	IV	-1.1r	-7.6r	-6.6	6.5	-0.5	7.6r
	ANNUAL	2.5r	0.3r	-2.2	5.3	-0.1	2.7
1991	1	-1.5r	-10.5r	-9.1	3.3	-0.2	4.9r
	II	3.7	2.2	-1.4	4.4	2.2	0.7
	III	4.0r	7.1r	3.0	2.2	-0.8r	-1.7
	IA	1.5	0.8	-0.7	4.0	0.8	2.5
۸	ANNUAL	1.4	-2.2	-3.6	4.2	. 0.0	2.7
		Percent change	from corre	sponding qua	rter of previou	s year	
1990		1.2r	-0.9r	-2.1	3.9	-1.2	2.72
	II	1.7r	0.2	-1.6	5.7	1.1	3.9r
	III	3.8	1.8	-1.9	5.6	0.0	1.7
	IV	3.0	0.3r	-2.6	5.6	-0.6	2.5r
	ANNUAL	2.5r	0.3r	-2.2	5.3	-0.1	2.7
1991	ī	1.5r	-2.9r	-4.4	5.2	-0.1	3.6
	II	1.6r	-3.3r	-4.9	4.5	-0.3	2.9
	III	1.2r	-2.5r	-3.6	4.1	0.2	2.8
	IV	1.9	-0.3	-2.2	3.5	0.5	1.5
	ANNUAL	1.4	-2.2	-3.6	4.2	0.0	2.7

See footnotes following table 6. r=revised

February 5, 1992 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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
]	Indexes 1982=	100		
1990	I	132.4r	143.2r	108.1r	129.3r	97.4r	97.7r
1330	ıī	134.8r	145.7r	108.1r	131.6r	98.1r	97.6r
	III	137.4r	147.3r	107.2r	132.9r	97.5r	96.7r
	IV	136.3r	142.6r	104.6r	135.3r	97.6r	99.2r
	ANNUAL	135.4r	144.7r	106.9r	132.4r	97.8r	97.8r
1991	. 1	135.7r	137.6r	101.4r	136.4r	97.5r	100.5r
	II	136.8r	138.3r	101.1r	137.9r	98.1r	100.9r
	III	138.1r	140.2r	101.5r	138.9r	98.1r	100.6r
	IV	138.4	139.7	101.0	140.7	98.6	101.7
	ANNUAL	137.1	139.0	101.3	138.4	98.1	100.9
		Percent ch	ange from p	revious quar	ter at annual rat	e (5)	-
1990	. I	4.9	1.6	-3.1	3.9	-3.3	-0.9
	II	7.5	7.3	-0.1	7.2	3.2	-0.2
	III	8.0	4.3	-3.4	4.2	-2.5	-3.5
	IV	-3.1	-12.1	-9.2	7.2	0.2	10.7
	ANNUAL	3.7r	0.2r	-3.4	5.5	0.1	1.7
1991	. 1	-1.8	-13.3	-11.7	3.4	-0.2	5.3
	II	3.2	2.2	-1.0	4.6	2.5	1.4
	III	3.8	5.5	1.6	2.8	-0.2	-1.0
•	IV	1.1	-1.2	-2.3	5.4	2.2	4.3
	ANNUAL	1.3	-4.0	-5.2	4.5	0.3	3.2
~~~		Percent change	from corre	esponding qua	rter of previous	year	
1990	·	2.2r	-1.4r	-3.5	4.1	-1.0	1.8r
	. II	2.8r	0.2r	-2.6	6.0	1.3	3.1r
	III	5.0	2.0	-2.8	5.7	0.1	0.7r
	IV	4.2	0.0	-4.0	5 <b>.6</b>	-0.6	1.4
	ANNUAL	3.7r	0.2r	-3.4	5.5	0.1	1.7
1991	Ī	2.5	-3.9	-6.2	5.5	0.2	2.9
	II	1.4	-5.1	-6.4	4.8	0.0	3.3
	III	0.5	-4.8	-5.3	4.5	0.6	4.0
	IA	1.5	-2.0	-3.5	4.0	1.1	2.5
	ANNUAL	1.3	-4.0	-5.2	4.5	0.3	3.2

See footnotes following table 6. r=revised

February 5, 1992 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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
			I	nde <b>xes</b> 1982=1	00		
1990	I II III	114.0r 113.3r 114.0r	123.3r 123.1r 123.7r	108.1 108.6r 108.5r	134.7r 137.2r 138.5r	101.4r 102.3r 101.6r	118.2r 121.0r 121.5r
	IV	114.5r	123.5r	107.8r	140.5r	101.3r	122.6r
	ANNUAL	114.0r	123.4r	108.2r	137.7r	101.7r	120.8r
1991	II III IV	114.2r 115.5r 116.7r 117.3	121.4r 122.1r 124.9r 126.0	106.3 105.7 107.0r 107.4	141.8r 143.2r 143.7r 144.5	101.4r 101.9r 101.5r 101.3	124.1r 124.0r 123.2r 123.2
	ANNUAL	115.9	123.6	106.7	143.3	101.5	123.6
		Percent ch	ange from p	revious quart	er at annual r	ate (5)	
1990	III III I	3.5 -2.2 2.3 1.9	2.3 -0.6 2.1 -0.9	-1.2 1.7 -0.2 -2.7	6.7 7.4 3.8 5.9	-0.7 3.3 -2.8 -1.0	3.0 9.8 1.5 3.9
	ANNUAL	1.0	0.6	-0.4	5.4	0.0	4.4r
1991	II III IV	-1.0 4.4 4.2r 2.1	-6.4 2.3 9.3r 3.6	-5.4 -2.1 4.9 1.5	4.0 3.9 1.5r 2.2	0.4 1.8 -1.4r -0.9	5.1 -0.5 -2.6r 0.1
	ANNUAL	1.6	0.2	-1.4	4.0	-0.2	2.3
		Percent change	from corre	sponding quar	ter of previou	s year	
1990	II III IV	-0.2r 0.2r 2.1r 1.4	-0.1r 0.2 1.5r 0.7	0.1 -0.1 -0.6 -0.6	4.0 5.5 5.6 5.9	-1.1 0.9 0.1 -0.3	4.2r 5.3r 3.4 4.5
	ANNUAL	1.0	0.6	⁶ -0.4	5.4	0.0	4.4r
1991	II III IV	0.2 1.9 2.3 2.4	-1.5 -0.8 0.9 2.0	-1.7 -2.6 -1.4 -0.3	5.3 4.4 3.8 2.9	0.0 -0.4 -0.1r 0.0	5.0 2.5 1.4r 0.5
	ANNUAL	1.6	0.2	-1.4	4.0	-0.2	2.3

See footnotes following table 6. r=revised

February 5, 1992 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	hours	Hourly compensa- tion (1)	compen- sation(2)	Unit labor cost	Unit non- labor cost(7)	Total unit cost (8)	Unit pro- fits (9)	Implicit price deflator (4)
						1982=100		·,			
1990	ı	110.3	135.9	123.2	132.6	. 99.9		115.0	118.8	161.6	121.4
	II	111.3	136.9	123.0	135.4	101.0	121.7	115.1	119.8	163.6	122.5
	III	110.2	135.4	122.8	137.3	100.7	124.6	118.1	122.8	138.7	123.7
	IV	111.0	134.7	121.4	138.7	100.1	125.0	120.5	123.7	128.7	124.0
	ANNUAL	110.7	135.7	122.6	136.1	100.5	122.9	117.1	121.3	148.2	122.9
1991	ı	111.3	133.3	119.7	139.7	99.9	125.4	123.7	124.9	130.9	125.3
	II		134.0	119.5	141.2	100.4	125.9	123.4	125.2	138.2	126.0
	III	112.6	134.8	119.7	142.1	100.3	126.2	124.1	125.6	136.7	126.3
			Pe	rcent cha	nge from p	revious qua	rter at	annual rat	e (5)		*******
1990	I	0.1	0.7	0.6	4.9		4.8	2.0	4.0	-0.3	3.6
	· II	3.7	3.2	-0.4	8.7	4.6	4.8	0.3	3.6	5.0	3.7
	111	-3.9	-4.5	-0.6	5.6	-1 2	9.9	11.1	10.2	-48.3	4.1
	IV	2.8	-1.9	-4.5	4.3	-2.5	1.5	8.1	3.2	-26.0	1.0
	ANNUAL	0.0	0.1	0.1	5.2	-0.2	5.1	4.6	5.0	-14.1	3.3
1991	. 1	1.4	-4.3	-5.6	2.7	-0.8	1.3	11.2	4.0	7.0	4.2
	II		2.1	-0.8	4.4	-0.8 2.3	1.5	-1.1	0.8	24.4	2.2
	III		2.5	0.8	2.6	-0.4	0.9	2.4	1.3	-4.2	0.9
						esponding o		f previous	year		
1990	). I	-0.8	0.2	1.0	3.5	-1.6	4.3	5.8	4.7	-8.7	3.4
	ï		1.1	0.4	5.4	0.7	4.7	3.5	4.4	-8.4	3.2
	III	-0.2	-0.3	-0.1	6.1	0.6	6.4	4.1	5.8	-19.8	3.5
	IV	0.6	-0.7	-1.3	5.8	-0.4	5.2	5.3	5.2	-20.4	3.1
	ANNUAL	0.0	0.1	0.1	5.2	-0.2	5.1	4.6	5.0	-14.1	3.3
1991	ı	0.9	-1.9	-2.8	5.3	0.0	4.3	7.6	5.2	-19.0	3.2
	11		-2.2			-0.6	3.5	7.2	4.5	-15.5	2.8
	III.		-0.4	-2.6	3.5	-0.4	1.3	5.0	2.3	-1.4	2.0

 See footnotes following table 6. r=revised February 5, 1992 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 1990.

# Footnotes, Tables 1-6

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

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

Year	Output per hour of all persons	Output (6)	Hours of all persons	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
1977	98.0	106.3	108.6	62.6	99.8	64.0
1978	97.4	110.2	113.1	67.7	100.2	69.5
1979	96.2	111.0	115.3	74.2	98.7	77.1
1980	94.4	103.8	109.9	83.1	97.4	88.1
1981	96.4	105.3	109.3	91.4	97.0	94.8
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.9	104.0	101.2	102.5	99.3	99.6
1984	105.6	113.8	107.8	105.7	98.1	100.1
1985	108.0	115.5	107.0	111.0	99.5	102.8
1986	112.6	118.8	105.4	115.4	101.7	102.5
1987	117.2	124.6	106.2	118.0	100.2	100.7
1988	122.0	133.4	109.4	122.6	100.0	100.5
1989	122.5	134.6	109.8	127.5	99.2	104.0
1990	125.7	135.0	107.4	134.3	99.2	106.9
1991	127.5	132.0	103.5	139.9	99.1	109.8

See footnotes following table 6. February 5, 1992
Source: Bureau of Labor Statistics

Annual 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See NOTE, page 4.

Appendix table 2. 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	Compensa- tion per hour(1)	Real compensa- tion per hour(2)	Unit labor cost
1977	104.2	114.0	109.4	62.7	99.9	60.2
1978	102.4	118.7	115.9	67.4	99.8	65.8
1979	100.2	119.7	119.5	73.9	98.2	73.7
1980	98.3	110.4	112.4	83.1	97.3	84.6
1981	98.7	110.0	111.5	91.5	97.1	92.7
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.4	103.1	100.6	101.9	98.7	99.5
1984	107.7	118.0	109.6	104.6	97.2	97.1
1985	109.8	120.3	109.5	109.9	98.5	100.0
1986	115.1	122.8	106.7	114.9	101.2	99.8
1987	121.5	129.4	106.5	116.8	99.2	96.2
1988	128.3	141.9	110.6	120.4	98.2	93.8
1989	130.6	144.4	110.6	125.5	97.7	96.1
1990	135.4	144.7	106.9	132.4	97.8	97.8
1991	137.1	139.0	101.3	138.4	98.1	100.9

See footnotes following table 6.

February 5, 1992 Source: Bureau of Labor Statistics

Appendix table 3. Wondurable manufacturing sector: Productivity, hourly compensation, and unit labor cost Indexes 1982-100

Á	Year	Output per hour of all persons	Output Hours (6) of all persons	Compensation per hour (1)	Real compensa- tion per hour(2)	Unit labor cost
	1977	90.5	97.1 107.3	62.3	99.3	68.9
	1978	91.6	99.9 109.1	67.7	100.2	73.9
	1979	91.8	100.5 109.4	74.1	98.5	80.7
	1980	89.9	95.7 106.5	82.6	96.8	91.9
	1981	93.9	99.6 106.1	90.7	96.3	96.6
	1982	100.0	100.0 100.0	100.0	100.0	100.0
	1983	103.2	105.2 101.9	103.6	100.4	100.3
	1984	103.3	108.6 105.2	107.0	99.4	103.6
	1905	106.2	109.8 103.4	112.3	100.7	105.7
	1906	109.9	113.9 103.7	116.0	102.1	105.6
	1987	112.2	118.8 105.9	120.0	102.0	107.0
	1988	114.5	123.2 107.6	126.1	102.9	110.2
	1989	112.9	122.7 108.7	130.7	101.7	115.8
	1990	114.0	123.4 108.2	137.7	101.7	120.8
	1991	115.9	123.6 106.7	143.3	101.5	123.6

See footnotes following table 6.

February 5, 1992 Source: Bureau of Labor Statistics