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PRODUCTIVITY AND COSTS

Third Quarter 1991

Business, Nonfarm Business, Manufacturing, and
Nonfinancial Corporations

The Bureau of Labor Statistics of the U.S. Department of Labor today reported productivity results--as measured by output per hour of all persons--for the third quarter of 1991. Based on revised information now available, the seasonally-adjusted annual rates of productivity change in the third quarter were:

- 1.1 percent in the business sector,
- 0.9 percent in the nonfarm business sector,
- 3.8 percent in manufacturing,
- 3.8 percent in durable goods manufacturing, and
- 4.0 percent in nondurable goods manufacturing.

Third-quarter measures are summarized in table A and appear in detail in tables 1 through 6. In business and nonfarm business, productivity and unit labor costs rose more slowly than in the previous quarter and hours increased for the first time in 6 quarters. In manufacturing, unit labor costs fell, partly reflecting faster third-quarter productivity growth than in the business sectors.

Among nonfinancial corporations, productivity grew at a 1.7 percent annual rate in the third quarter, as output rose 2.5 percent and hours at work increased 0.8 percent (tables B and 6). Unit labor costs increased only 0.9 percent.

For business, nonfarm business, and manufacturing, the revised productivity and output measures show smaller increases than had been reported on November 5, based on preliminary information then available (table C). The revisions reflect significantly lower measures of output growth during the third quarter of 1991 in business and nonfarm business and an upward revision in manufacturing hours.

The productivity and costs measures contained in this release are based on the most recent output and compensation measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce, which were released on December 4, 1991. See page 4 for further information regarding the incorporation of revised measures in productivity and costs series.

**Table A. Productivity and costs: Third-quarter 1991 measures
(Seasonally adjusted annual rates)**

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Percent change from preceding quarter						
Business	1.1	1.8	0.7	2.8	-0.2	1.7
Nonfarm business	0.9	1.6	0.7	2.7	-0.2	1.9
Manufacturing	3.8	6.9	3.0	2.2	-0.7	-1.5
Durable	3.8	5.5	1.6	2.8	-0.2	-1.0
Nondurable	4.0	9.2	4.9	1.6	-1.3	-2.3
Percent change from same quarter a year ago						
Business	0.5	-1.2	-1.6	3.5	-0.4	3.0
Nonfarm business	0.6	-1.2	-1.9	3.6	-0.3	3.0
Manufacturing	1.0	-2.7	-3.6	4.1	0.2	3.1
Durable	0.5	-4.8	-5.3	4.5	0.6	4.0
Nondurable	2.3	0.9	-1.4	3.8	0.0	1.5

Business

Productivity increased at a 1.1 percent annual rate during the third quarter of 1991 in the business sector, as output rose 1.8 percent and hours at work of all persons engaged in the sector increased 0.7 percent (seasonally adjusted annual rates). During the second quarter of 1991, business productivity had increased 1.9 percent, with changes in output and hours of 1.7 percent and -0.3 percent, respectively (table 1).

Hourly compensation increased at a 2.8 percent annual rate during the third quarter of 1991, compared with a 4.6 percent increase during the second 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 1.7 percent annual rate during the third quarter, compared with a 2.6 percent increase one quarter earlier. The third-quarter increase was the smallest since the first quarter of 1988 (when it fell 0.2 percent).

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), fell 0.2 percent in the third quarter, compared with a 2.4 percent increase in the second quarter.

The implicit price deflator for business output, which reflects changes in unit labor costs and unit nonlabor payments, increased 1.8 percent in the third quarter. During the first and second quarters, these prices rose 4.5 percent and 2.9 percent, respectively, in the business sector.

Nonfarm business

Productivity increased 0.9 percent in the nonfarm business sector during the third quarter of 1991, as output rose 1.6 percent and hours at work of all persons--employees, proprietors, and unpaid family workers--rose 0.7 percent. During the second quarter of 1991, nonfarm productivity had increased 1.9 percent (table 2).

Hourly compensation rose 2.7 percent in the third quarter (down from the 4.6 percent increase of the second quarter), and real compensation per hour (which takes into account changes in the CPI-U) fell 0.2 percent. Unit labor costs increased 1.9 percent, compared with a 2.6 percent rise during the second quarter.

The implicit price deflator for nonfarm business output rose 2.1 percent in the third quarter, compared with a 2.5 percent increase one quarter earlier.

Manufacturing

Productivity increased more rapidly in manufacturing than in the more comprehensive business sectors reported above (table 3). Labor productivity increased at a 3.8 percent seasonally adjusted annual rate in the third quarter of 1991. Output rose 6.9 percent, and hours rose 3.0 percent.

Productivity gains in durables and nondurables were similar during the third quarter, but the output of nondurable goods manufacturers rose faster than durable goods output.

Hourly compensation of all manufacturing workers increased 2.2 percent during the third quarter, but real hourly compensation fell 0.7. Unit labor costs fell at a 1.5 percent annual rate in the third quarter of 1991, compared with a 0.7 percent increase during the second quarter. This was the first decline in unit labor costs in a year.

Nonfinancial corporations

Preliminary, third-quarter 1991 measures of productivity and costs also were announced today for nonfinancial corporations (tables B and 6). Output per all-employee hour increased 1.7 percent from the second quarter to the third quarter of 1991, as output rose 2.5 percent and hours at work increased 0.8 percent, at annual rates. The sector includes all corporations doing business in the United States, except banks, stock and commodity brokers, and finance and insurance agencies.

Table B. Nonfinancial corporations: Third-quarter 1991 productivity and costs measures (Seasonally adjusted annual rates)								
Period	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs	Unit profits	Implicit price deflator
Percent change from preceding quarter								
1991 III	1.7	2.5	0.8	2.6	-0.4	0.9	-4.2	0.9
Percent change from the same quarter preceding year								
1991 III	2.2	-0.4	-2.6	3.5	-0.4	1.3	-1.4	2.0

Hourly compensation increased 2.6 percent, and real hourly compensation fell 0.4 percent (table 6). Unit labor costs rose 0.9 percent in the third quarter, the smallest increase in this measure since the first quarter of 1988 (when a 3.3 percent decline occurred). Unit nonlabor costs rose 2.4 percent (compared with a 1.1 percent decline in the second quarter), and unit profits fell 4.2 percent. One quarter earlier, these profits had increased at a 24.4 percent annual rate. The implicit deflator for nonfinancial corporate output rose 0.9 percent in the third quarter, compared with a 2.2 percent increase during the previous quarter.

Revised measures

Previous and current productivity and costs measures for the third quarter are compared in table C for business, nonfarm business, and manufacturing. In business and nonfarm business, measures of output were revised downward. As a result, productivity gains were smaller than reported on November 5, based on information then available. In manufacturing, productivity gains were also revised downward because the upward revision in hours was larger than the upward change for output. All productivity and costs measures are based on revised measures of labor input which reflect the results of the 1990 BLS Hours at Work Survey.

The comprehensive revisions made to the National Income and Product Accounts (NIPAs) by the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, on December 4, 1991 are reflected in the business, nonfarm business, and nonfinancial corporate measures in this news release and result from a number of changes in the underlying series. Appendix tables 1-3 show revised annual productivity and related indexes from 1959 forward. Data for 1947-1958 are not yet available. Currently, there is no projected date for the availability of productivity and costs measures for the 1947-1958 period.

The long term rates of productivity change have been affected by the comprehensive revisions to the NIPAs. The compound annual rate of growth of business output per hour for 1979-1990 is now 0.9 percent (revised down from 1.1 percent). For the same period, output per hour grew at a 0.7 percent rate for nonfarm business (down from 1.0 percent) and at a 1.2 percent rate for nonfinancial corporations (down from 1.3 percent).

Sector	Productivity	Output	Hours	Hourly compensation	Real hourly compensation	Unit labor costs
Business:						
Previous	2.3	2.9	0.6	3.5	0.5	1.2
Current	1.1	1.8	0.7	2.8	-0.2	1.7
Nonfarm business:						
Previous	2.4	3.0	0.6	3.5	0.5	1.1
Current	0.9	1.6	0.7	2.7	-0.2	1.9
Manufacturing:						
Previous	4.0	6.8	2.7	3.2	0.2	-0.7
Current	3.8	6.9	3.0	2.2	-0.7	-1.5

Because the business sectors have always excluded the rest-of-the-world sector (see TECHNICAL NOTES, page 8), the NIPA change in focus to gross domestic product from gross national product did not affect these productivity and related measures. However, other changes in the NIPAs did affect the measures shown here. These include definitional and classification changes, statistical changes to incorporate newly available data from regularly used sources, the revision of constant-dollar series to reflect the shift in the base period for developing price weights from 1982 to 1987, and others. (For an explanation of the changes, see Robert P. Parker, "A Preview of the Comprehensive Revisions of the National Income and Product Accounts: Definitional and Classificational Changes," in the September 1991 issue of *The Survey of Current Business*, pp. 23-31 and Robert P. Parker, "A Preview of the Comprehensive Revisions of the National Income and Product Accounts: New and Redesigned Tables," in the October 1991 issue of *The Survey of Current Business*, pp. 20-28.)

Historical measures of compensation and output (computed by BEA) and of employment and hours (computed by BLS) are regularly benchmarked to unemployment insurance (UI) records. BEA has estimated the effects of recent UI information on aggregate compensation and output data in the NIPAs for the first three quarters of 1991; these estimates are incorporated in this news release. However, the detailed UI information needed to measure labor input for major sectors in 1991 is not yet available. Consequently, this release does not incorporate the recent UI information into measures of hours and other series, such as output per hour, that depend on this information.

Incorporation of UI benchmark information into measures of employment and hours will also affect 1990 levels of these series. The cumulative effect might be to lower growth in business sector labor input by 1.5 to 2.5 percentage points by the first quarter of 1991, with little or no change in later quarters. Labor input measures for nonfarm business, manufacturing, and

nonfinancial corporations may be similarly affected. Consequently, BLS analysts expect that the growth rates of productivity, hourly compensation, and real hourly compensation from the fourth quarter 1990 to the first quarter of 1991 will be revised upward once the BLS employment and hours data have been revised.

For manufacturing, BLS develops estimates of output changes for recent quarters from the monthly Indexes of Industrial Production for durable and nondurable manufacturing prepared by the Board of Governors of the Federal Reserve System. The Bureau followed the usual procedures in calculating percent changes for manufacturing output and productivity for 1990 and 1991. However, for historical series, BLS uses annual manufacturing output data from the NIPAs and estimates quarterly trends within each year from movements in the Federal Reserve Indexes.

At this time, BEA has not completed its revisions to manufacturing output to bring it into conformance with the changes introduced in the broader NIPAs on December 4. Historical manufacturing productivity measures will be affected by these revisions. Until they are complete, BLS cannot compute historical manufacturing productivity and costs measures. Because the base year for index computation (1982) will also be affected, index numbers have not been calculated. Currently, there is no projected date for the availability of revised, historical productivity and costs measures for manufacturing.

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Next release date

The next issue of Productivity and Costs is scheduled for release at 10:00 AM EST, Wednesday, February 5, 1992, and will contain fourth-quarter and annual 1991 measures for business, nonfarm business, and manufacturing.

Tentative release dates for productivity and costs measures for major sectors of the U.S. economy in 1992 are:

Reference period	Release date
1991:	
Fourth Qtr., Annual	February 5
Fourth Qtr., Annual (revised)	March 10*
1992:	
First Qtr.	June 17
Second Qtr.	August 11
Second Qtr. (revised)	September 3
Third Qtr.	November 5
Third Qtr. (revised)	December 3

* For nonfinancial corporations, 1991 annual measures only; fourth quarter results will be included in the June 17 release.

These tentative dates are based on presently available schedules for the release of underlying source data in 1992. Each edition of **Productivity and Costs** contains a "Next release date" paragraph which readers should use to confirm the tentative dates above.

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.

TECHNICAL NOTES

Labor Input: The primary source of hours and employment data is the BLS Current Employment Statistics (CES) program, which provides monthly survey data on total employment and average weekly hours of production and nonsupervisory workers in nonagricultural establishments. Jobs rather than persons are counted. Weekly hours are adjusted to the hours at work definition using the BLS Hours at Work survey, conducted for this purpose.

Data from the BLS Current Population Survey (CPS) are used for farm labor; in the nonfarm sector, the National Income and Product Accounts (NIPA) prepared by the Bureau of Economic Analysis of the Department of Commerce and the CPS are used to measure labor input for government enterprises, proprietors, unpaid family workers, and paid employees of private households.

Output: Business sector output is equal to gross national product (GNP) in constant 1982 dollars, less the rest-of-the-world sector, general government, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, and the statistical discrepancy in computing the NIPA. Corresponding exclusions are also made in labor inputs. Business output was about 81 percent of GNP in 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 1982 dollars, less the rest-of-the-world sector, general government, output of nonprofit institutions, output of paid employees of private households, rental value of owner-occupied dwellings, unincorporated business, the output of corporations engaged in banking, finance, stock and commodity trading, and credit and insurance agencies, and the statistical discrepancy in computing the NIPA. 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 costs, 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 costs	Unit non-labor payments (3)	Implicit price deflator (4)	
Indexes 1982=100									
1989	I	r110.0	r132.6	r120.5	r131.3	r103.9	r119.3	r134.3	r124.2
	II	r109.7	r132.5	r120.7	r131.9	r102.9	r120.2	r136.6	r125.6
	III	r109.2	r132.4	r121.3	r132.6	r102.7	r121.5	r136.6	r126.4
	IV	r109.1	r132.2	r121.2	r134.1	r102.8	r122.8	r137.3	r127.6
	ANNUAL	r109.5	r132.4	r120.9	r132.5	r103.1	r121.0	r136.2	r126.0
1990	I	r109.6	r133.2	r121.6	r136.2	r102.6	r124.3	r138.1	r128.8
	II	r110.3	r133.9	r121.4	r139.0	r103.6	r126.1	r138.7	r130.2
	III	r109.6	r132.9	121.2	r140.9	r103.3	r128.5	r138.0	r131.6
	IV	r109.4	r131.8	120.5	r142.3	r102.6	r130.1	r137.5	r132.5
	ANNUAL	r109.7	r132.9	r121.2	r139.6	r103.1	r127.2	r138.1	r130.8
1991	I	r109.4	r130.2	119.1	r143.2	r102.4	r131.0	r140.2	r134.0
	II	r109.9	r130.7	r119.0	r144.8	r103.0	r131.8	r141.4	r135.0
	III	r110.2	r131.3	119.2	r145.8	r103.0	r132.4	r142.1	r135.6
Percent change from previous quarter at annual rate(5)									
1989	I	r-1.5	r2.6	r4.2	r3.5	r-1.3	r5.1	r4.0	r4.7
	II	r-1.0	r-0.3	r0.7	r2.0	r-3.9	r3.1	r6.8	r4.4
	III	r-2.0	r-0.1	r2.0	r2.1	r-1.0	r4.2	r0.1	r2.7
	IV	r-0.2	r-0.6	r-0.4	r4.4	r0.4	r4.6	r2.1	r3.7
	ANNUAL	r-0.7	r1.8	r2.6	r3.5	r-1.2	r4.3	r4.2	r4.3
1990	I	r1.7	r3.0	r1.2	r6.6	r-0.7	r4.8	r2.4	r4.0
	II	r2.4	r2.0	r-0.5	r8.4	r4.3	r5.8	r1.7	r4.3
	III	r-2.2	r-3.0	r-0.8	r5.7	r-1.1	r8.1	r-2.2	r4.4
	IV	r-0.9	r-3.0	r-2.2	r4.1	r-2.7	r5.0	r-1.3	r2.8
	ANNUAL	r0.2	r0.4	r0.2	r5.4	r0.0	r5.2	r1.4	3.8
1991	I	r-0.1	r-4.9	-4.7	r2.6	r-0.9	r2.7	r7.9	r4.5
	II	r1.9	r1.7	r-0.3	4.6	2.4	r2.6	r3.6	r2.9
	III	r1.1	r1.8	r0.7	r2.8	r-0.2	r1.7	r1.9	r1.8
Percent change from corresponding quarter of previous year									
1989	I	r-0.5	r3.2	r3.7	r4.5	r-0.3	r5.0	4.0	r4.7
	II	r-0.3	r2.1	r2.4	r3.7	r-1.4	r4.0	r5.6	r4.6
	III	r-1.1	r1.5	r2.7	r2.7	-1.8	r3.9	r4.1	r4.0
	IV	r-1.2	r0.4	1.6	r3.0	r-1.5	r4.2	3.2	r3.9
	ANNUAL	r-0.7	r1.8	r2.6	r3.5	r-1.2	r4.3	r4.2	r4.3
1990	I	r-0.4	r0.5	r0.9	r3.8	r-1.3	r4.2	r2.8	3.7
	II	r0.5	r1.0	r0.6	r5.3	r0.7	r4.9	r1.6	r3.7
	III	r0.4	0.3	r-0.1	r6.2	r0.7	r5.8	r1.0	r4.1
	IV	r0.2	r-0.3	r-0.6	r6.2	r-0.1	r5.9	r0.2	r3.9
	ANNUAL	r0.2	r0.4	r0.2	r5.4	r0.0	r5.2	r1.4	3.8
1991	I	r-0.2	r-2.3	r-2.1	r5.1	r-0.2	r5.4	r1.5	r4.0
	II	r-0.3	r-2.3	r-2.0	4.2	-0.6	r4.6	r1.9	3.6
	III	r0.5	r-1.2	-1.6	r3.5	r-0.4	r3.0	r3.0	r3.0

See footnotes following table 6.
r=revisedJanuary 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

Table 2. Nonfarm business sector: Productivity, hourly compensation, unit labor costs, 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 costs	Unit non-labor payments (3)	Implicit price deflator(4)	
Indexes 1982=100									
1989	I	r108.8	r133.0	r122.2	r130.4	r103.2	r119.8	r134.4	r124.5
	II	r108.2	r132.8	r122.7	r130.7	r102.0	r120.8	r136.9	r126.0
	III	r107.9	r132.8	r123.1	r131.5	r101.8	r121.9	r137.4	r126.9
	IV	r107.8	r132.6	r123.0	r133.0	r101.9	r123.4	r137.8	r128.0
	ANNUAL	r108.2	r132.8	r122.7	r131.5	r102.3	r121.5	r136.6	r126.4
1990	I	r108.1	r133.5	r123.5	r134.9	r101.6	r124.9	r138.4	r129.2
	II	r108.6	r134.1	r123.4	r137.6	r102.6	r126.7	r139.0	r130.6
	III	r107.9	r133.1	r123.3	r139.5	r102.3	r129.2	r138.4	r132.2
	IV	r107.9	r132.0	122.4	r141.0	r101.7	r130.7	r138.7	r133.3
	ANNUAL	r108.1	r133.2	123.1	r138.3	r102.1	r127.9	r138.6	r131.3
1991	I	r107.9	r130.4	120.9	r142.0	r101.5	r131.6	r141.8	r134.9
	II	r108.4	r130.9	120.8	r143.6	r102.1	r132.5	r142.5	r135.7
	III	r108.6	r131.4	121.0	r144.5	r102.1	r133.1	r143.4	r136.4
Percent change from previous quarter at annual rate(5)									
1989	I	-2.8	r1.4	r4.3	r3.4	r-1.5	r6.4	r-0.7	r3.9
	II	r-2.0	r-0.6	r1.4	r1.1	r-4.7	r3.2	r7.5	r4.7
	III	r-1.3	r0.1	r1.4	r2.5	r-0.7	r3.8	r1.5	r3.0
	IV	r-0.3	r-0.7	r-0.4	r4.5	r0.5	r4.8	r1.2	r3.5
	ANNUAL	r-0.9	r1.7	r2.7	3.4	-1.4	r4.3	r3.6	r4.1
1990	I	r1.0	r2.7	r1.8	r6.0	r-1.3	r5.0	r1.7	3.8
	II	r2.1	r1.8	r-0.3	r8.1	r4.1	r5.9	r1.8	r4.5
	III	r-2.5	r-3.0	r-0.5	r5.6	r-1.2	r8.4	r-1.7	r4.8
	IV	r-0.3	r-3.1	r-2.8	r4.4	r-2.4	r4.7	r1.0	r3.4
	ANNUAL	r-0.1	r0.3	r0.3	r5.2	r-0.2	r5.3	r1.5	r3.9
1991	I	r0.1	r-4.9	-4.9	r2.7	r-0.8	r2.7	r9.0	r4.8
	II	r1.9	r1.6	r-0.3	4.6	2.5	r2.6	r2.1	r2.5
	III	r0.9	r1.6	r0.7	r2.7	r-0.2	r1.9	r2.4	r2.1
Percent change from corresponding quarter of previous year									
1989	I	r-0.5	r3.4	r3.9	r4.4	-0.4	r4.9	3.3	r4.3
	II	r-0.6	r2.0	r2.7	r3.4	r-1.7	r4.0	r4.9	r4.3
	III	r-1.3	r1.4	r2.7	r2.6	r-1.9	r3.9	r4.0	r4.0
	IV	r-1.6	r0.0	1.7	r2.9	r-1.6	r4.5	r2.3	r3.8
	ANNUAL	r-0.9	r1.7	r2.7	3.4	-1.4	r4.3	r3.6	r4.1
1990	I	r-0.7	r0.4	r1.0	r3.5	r-1.6	r4.2	r2.9	r3.8
	II	r0.4	r1.0	r0.6	r5.2	r0.6	r4.9	r1.6	r3.7
	III	r0.1	0.2	r0.1	r6.1	r0.5	r6.0	r0.8	r4.2
	IV	r0.0	r-0.4	r-0.5	r6.0	r-0.2	r6.0	r0.7	r4.1
	ANNUAL	r-0.1	r0.3	r0.3	r5.2	r-0.2	r5.3	r1.5	r3.9
1991	I	r-0.2	r-2.3	r-2.2	r5.2	r-0.1	r5.4	r2.4	r4.4
	II	r-0.2	r-2.4	r-2.2	r4.3	r-0.5	r4.6	r2.5	r3.9
	III	r0.6	r-1.2	r-1.9	r3.6	r-0.3	r3.0	r3.6	r3.2

See footnotes following table 6.
r=revised

January 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

Table 3. Manufacturing sector: Productivity, hourly compensation, and unit labor costs, 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 costs	
Percent change from previous quarter at annual rate(5)							
1990	I	r4.3	1.8	r-2.4	r4.9	r-2.4	r0.6
	II	r3.7	4.3	r0.6	r7.2	r3.2	r3.4
	III	r5.7	3.5	r-2.1	r4.0	r-2.7	r-1.6
	IV	r-1.6	-8.1	r-6.6	r6.5	r-0.5	r8.2
	ANNUAL	r2.6	0.4	r-2.2	r5.3	r-0.1	r2.7
1991	I	-1.8	-10.8	-9.1	r3.3	r-0.2	r5.3
	II	r3.7	2.2	r-1.4	r4.4	r2.2	r0.7
	III	r3.8	r6.9	r3.0	r2.2	r-0.7	r-1.5
Percent change from corresponding quarter of previous year							
1990	I	r1.3	-0.8	r-2.1	r3.9	r-1.2	r2.6
	II	r1.8	0.2	r-1.6	r5.7	r1.1	r3.8
	III	r3.8	1.9	r-1.9	r5.6	r0.0	r1.7
	IV	r3.0	0.3	r-2.6	r5.6	r-0.6	r2.6
	ANNUAL	r2.6	0.4	r-2.2	r5.3	r-0.1	r2.7
1991	I	1.4	-3.0	r-4.4	r5.2	r-0.1	r3.7
	II	1.4	-3.5	r-4.9	r4.5	r-0.3	r3.0
	III	r1.0	-2.7	-3.6	r4.1	r0.2	r3.1

See footnotes following table 6.
r-revised

January 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

NOTE: Indexes are not available nor are data for years before 1990. See page 4 for details.

Table 4. Durable manufacturing sector: Productivity, hourly compensation, and unit labor costs, 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 costs

Percent change from previous quarter at annual rate (5)						
1990	I	r4.9	1.6	r-3.1	r3.9	r-3.3
	II	r7.5	7.3	-0.1	r7.2	r3.2
	III	r8.0	4.3	r-3.4	r4.2	r-2.5
	IV	r-3.1	-12.1	r-9.2	r7.2	r0.2
	ANNUAL	r3.8	0.3	r-3.4	r5.5	r0.1
1991	I	r-1.8	-13.3	r-11.7	r3.4	r-0.2
	II	r3.2	2.2	r-1.0	r4.6	r2.5
	III	r3.8	r5.5	r1.6	r2.8	r-0.2

Percent change from corresponding quarter of previous year						
1990	I	r2.4	-1.2	r-3.5	r4.1	r-1.0
	II	r2.9	0.3	r-2.6	r6.0	r1.3
	III	r5.0	2.0	r-2.8	r5.7	r0.1
	IV	r4.2	0.0	r-4.0	r5.6	r-0.6
	ANNUAL	r3.8	0.3	r-3.4	r5.5	r0.1
1991	I	r2.5	-3.9	r-6.2	r5.5	r0.2
	II	1.4	-5.1	-6.4	r4.8	r0.0
	III	r0.5	r-4.8	r-5.3	r4.5	r0.6

See footnotes following table 6.
r=revised

January 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

NOTE: Indexes and data for prior years not available. See page 4 for details.

Table 5. Nondurable manufacturing sector: Productivity, hourly compensation, and unit labor costs, 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 costs	
Percent change from previous quarter at annual rate (5)							
1990	I	r3.5	2.3	r-1.2	r6.7	r-0.7	r3.0
	II	r-2.2	-0.6	r1.7	r7.4	r3.3	r9.8
	III	r2.3	2.1	r-0.2	r3.8	r-2.8	r1.5
	IV	1.9	-0.9	-2.7	r5.9	r-1.0	r3.9
	ANNUAL	r1.0	0.6	r-0.4	r5.4	r0.0	r4.3
1991	I	r-1.0	-6.4	r-5.4	r4.0	r0.4	r5.1
	II	r4.4	2.3	r-2.1	r3.9	r1.8	r-0.5
	III	r4.0	r9.2	r4.9	r1.6	r-1.3	r-2.3
Percent change from corresponding quarter of previous year							
1990	I	r-0.1	0.0	r0.1	r4.0	r-1.1	r4.1
	II	r0.3	0.2	r-0.1	r5.5	r0.9	r5.2
	III	r2.2	1.6	r-0.6	r5.6	r0.1	r3.4
	IV	r1.4	0.7	r-0.6	r5.9	r-0.3	r4.5
	ANNUAL	r1.0	0.6	r-0.4	r5.4	r0.0	r4.3
1991	I	r0.2	-1.5	r-1.7	r5.3	r0.0	r5.0
	II	1.9	-0.8	-2.6	r4.4	r-0.4	r2.5
	III	r2.3	r0.9	-1.4	r3.8	r0.0	r1.5

See footnotes following table 6.
r=revised

January 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

NOTE: Indexes and data for prior years not available. See page 4 for details.

Table 6. Nonfinancial corporations: Productivity, hourly compensation, unit labor costs, 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 costs	Unit non-labor cost (7)	Total unit cost (8)	Unit profits (9)	Implicit price deflator (4)	
Indexes 1982=100											
1989	I	r111.2	r135.6	r121.9	128.2	101.5	r115.3	r108.7	r113.4	r177.0	r117.4
	II	r110.6	r135.5	r122.5	r128.6	r100.3	r116.2	r111.1	r114.8	r178.6	r118.7
	III	r110.5	r135.8	r122.9	r129.4	r100.1	r117.1	r113.5	r116.1	r173.0	r119.6
	IV	r110.3	r135.6	r123.0	r131.1	r100.5	r118.9	r114.4	r117.6	r161.7	r120.3
	ANNUAL	r110.7	r135.6	r122.5	r129.4	100.7	r116.9	r111.9	r115.5	r172.6	r119.0
1990	I	r110.3	r135.9	123.2	r132.6	r99.9	r120.3	r115.0	r118.8	r161.6	r121.4
	II	r111.3	r136.9	r123.0	r135.4	r101.0	r121.7	r115.1	r119.8	r163.6	r122.5
	III	r110.2	r135.4	r122.8	r137.3	r100.7	r124.6	r118.1	r122.8	r138.7	r123.7
	IV	r111.0	r134.7	r121.4	r138.7	r100.1	r125.0	r120.5	r123.7	r128.7	r124.0
	ANNUAL	r110.7	r135.7	r122.6	r136.1	r100.5	r122.9	r117.1	r121.3	r148.2	r122.9
1991	I	r111.3	r133.3	r119.7	r139.7	r99.9	r125.4	r123.7	r124.9	r130.9	r125.3
	II	r112.1	r134.0	r119.5	r141.2	r100.4	r125.9	r123.4	r125.2	r138.2	r126.0
	III	112.6	134.8	119.7	142.1	100.3	126.2	124.1	125.6	136.7	126.3
Percent change from previous quarter at annual rate(5)											
1989	I	r-4.4	r-0.3	r4.3	4.4	r-0.5	r9.3	r0.9	r6.9	r-14.5	r4.7
	II	r-2.1	r-0.3	r1.8	r1.1	r-4.8	r3.2	r9.2	r4.8	r3.8	r4.7
	III	r-0.6	r0.9	r1.4	r2.5	r-0.6	r3.1	r8.8	r4.6	r-12.1	r3.0
	IV	r-0.7	r-0.5	r0.2	r5.4	r1.4	r6.2	r3.4	r5.4	r-23.6	r2.5
	ANNUAL	r-1.8	r1.2	r3.0	r3.5	-1.3	r5.3	r5.0	r5.2	r-6.1	r4.1
1990	I	r0.1	r0.7	r0.6	r4.9	r-2.3	r4.8	r2.0	4.0	r-0.3	r3.6
	II	r3.7	r3.2	r-0.4	r8.7	r4.6	r4.8	r0.3	r3.6	r5.0	r3.7
	III	r-3.9	r-4.5	r-0.6	r5.6	r-1.2	r9.9	r11.1	r10.2	r-48.3	r4.1
	IV	r2.8	r-1.9	r-4.5	r4.3	r-2.5	r1.5	r8.1	r3.2	r-26.0	r1.0
	ANNUAL	r0.0	0.1	r0.1	r5.2	r-0.2	r5.1	r4.6	r5.0	r-14.1	3.3
1991	I	r1.4	r-4.3	r-5.6	r2.7	r-0.8	r1.3	r11.2	r4.0	r7.0	r4.2
	II	r2.9	r2.1	r-0.8	r4.4	r2.3	r1.5	r-1.1	r0.8	r24.4	r2.2
	III	1.7	2.5	0.8	2.6	-0.4	0.9	2.4	1.3	-4.2	0.9
Percent change from corresponding quarter of previous year											
1989	I	r-1.5	r2.5	r4.1	4.3	r-0.5	r5.9	r3.7	r5.3	r-4.5	r4.3
	II	r-2.0	r1.3	r3.4	r3.3	r-1.7	r5.5	r5.1	r5.4	r-3.4	r4.5
	III	r-1.7	r1.2	r3.0	r2.8	r-1.8	r4.6	r5.6	r4.9	r-4.2	r4.0
	IV	r-1.9	r-0.1	r1.9	r3.4	r-1.2	r5.4	r5.5	r5.4	r-12.1	r3.7
	ANNUAL	r-1.8	r1.2	r3.0	r3.5	-1.3	r5.3	r5.0	r5.2	r-6.1	r4.1
1990	I	r-0.8	r0.2	r1.0	r3.5	r-1.6	r4.3	r5.8	r4.7	r-8.7	r3.4
	II	r0.6	r1.1	r0.4	r5.4	r0.7	r4.7	r3.5	r4.4	r-8.4	3.2
	III	r-0.2	-0.3	r-0.1	r6.1	r0.6	r6.4	r4.1	r5.8	r-19.8	r3.5
	IV	r0.6	r-0.7	r-1.3	r5.8	r-0.4	r5.2	r5.3	r5.2	r-20.4	r3.1
	ANNUAL	r0.0	0.1	r0.1	r5.2	r-0.2	r5.1	r4.6	r5.0	r-14.1	3.3
1991	I	r0.9	r-1.9	r-2.8	r5.3	r0.0	r4.3	r7.6	r5.2	r-19.0	r3.2
	II	r0.8	r-2.2	r-2.9	4.2	-0.6	r3.5	r7.2	r4.5	r-15.5	r2.8
	III	2.2	-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

January 3, 1992
Source: Bureau of Labor Statistics

NOTE: First quarter 1991 movements in measures which incorporate hours of labor input should be interpreted with caution. See "Revised measures", starting page 4.

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 costs 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. Business sector: Productivity, hourly compensation, unit labor costs, and prices
Indexes 1982=100

Year	Output per hour of all persons	Output	Hours of all persons	Compensa- tion per hour (1)	Real compensa- tion per hour (2)	Unit labor costs	Unit non- labor pay- ments (3)	Implicit price deflator (4)
1959	64.6	51.5	79.6	20.2	67.0	31.3	33.8	32.1
1960	65.6	52.3	79.7	21.1	68.7	32.1	33.6	32.6
1961	68.1	53.4	78.5	21.9	70.7	32.2	34.0	32.8
1962	70.4	56.1	79.7	22.9	73.2	32.5	35.2	33.4
1963	73.3	58.8	80.1	23.8	75.0	32.4	36.2	33.7
1964	76.5	62.3	81.4	25.0	77.9	32.7	36.8	34.0
1965	78.6	66.0	83.9	26.0	79.6	33.1	38.6	34.9
1966	81.0	69.5	85.8	27.8	82.9	34.4	39.4	36.0
1967	83.0	71.0	85.6	29.4	84.9	35.4	40.4	37.1
1968	85.4	74.1	86.8	31.8	88.2	37.2	41.8	38.7
1969	85.9	76.3	88.9	34.1	89.7	39.7	42.2	40.5
1970	87.0	75.9	87.2	36.7	91.2	42.2	42.7	42.3
1971	90.2	78.3	86.9	39.0	93.0	43.3	46.4	44.3
1972	92.6	83.0	89.6	41.5	95.8	44.8	49.0	46.2
1973	95.0	88.2	92.8	45.1	98.0	47.5	52.1	49.0
1974	93.3	86.7	92.9	49.5	97.0	53.1	54.7	53.7
1975	95.5	85.0	89.1	54.5	97.7	57.1	63.0	59.0
1976	98.3	90.0	91.5	59.4	100.8	60.5	66.4	62.4
1977	99.8	94.9	95.1	64.2	102.3	64.3	70.9	66.5
1978	100.4	100.1	99.7	69.9	103.4	69.6	76.3	71.8
1979	99.3	102.1	102.8	76.7	102.0	77.2	80.5	78.3
1980	98.6	100.5	101.9	85.0	99.5	86.2	85.3	85.9
1981	99.9	102.4	102.5	93.0	98.7	93.1	97.5	94.5
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.2	104.1	101.8	103.7	100.5	101.5	107.5	103.4
1984	104.6	112.6	107.6	108.1	100.4	103.3	116.6	107.7
1985	106.1	116.7	109.9	113.0	101.3	106.5	120.9	111.2
1986	108.3	119.9	110.7	118.6	104.4	109.5	122.1	113.6
1987	109.4	124.8	114.1	122.7	104.3	112.2	125.6	116.6
1988	110.4	130.1	117.9	128.0	104.4	116.0	130.7	120.8
1989	109.5	132.4	120.9	132.5	103.1	121.0	136.2	126.0
1990	109.7	132.9	121.2	139.6	103.1	127.2	138.1	130.8

See footnotes following table 6.

January 3, 1992
Source: Bureau of Labor Statistics

Appendix table 2. Nonfarm business sector: Productivity, hourly compensation, unit labor cost, and prices
Indexes 1982=100

Year	Output per hour of all persons	Output	Hours of all persons	Compensation per hour (1)	Real compensation per hour (2)	Unit labor costs	Unit non-labor payments (3)	Implicit price deflator (4)
1959	69.2	51.1	73.8	21.3	70.5	30.7	33.9	31.7
1960	70.0	51.9	74.2	22.2	72.3	31.7	33.2	32.2
1961	72.2	53.0	73.4	22.9	74.0	31.7	33.8	32.4
1962	74.4	55.8	74.9	23.9	76.2	32.0	35.3	33.1
1963	77.1	58.4	75.8	24.7	77.9	32.0	36.2	33.4
1964	80.0	62.0	77.5	25.8	80.4	32.3	37.1	33.8
1965	81.9	65.8	80.4	26.7	81.8	32.6	38.8	34.6
1966	83.6	69.5	83.1	28.3	84.2	33.8	39.5	35.7
1967	85.4	70.9	83.1	29.9	86.5	35.1	40.6	36.9
1968	87.8	74.2	84.5	32.3	89.5	36.8	42.2	38.5
1969	87.8	76.3	87.0	34.5	90.7	39.3	42.4	40.3
1970	88.6	75.8	85.6	37.0	92.0	41.7	43.0	42.1
1971	91.6	78.3	85.4	39.4	93.8	42.9	46.5	44.1
1972	94.1	83.0	88.3	41.9	96.7	44.5	48.6	45.8
1973	96.4	88.4	91.7	45.4	98.6	47.1	49.7	47.9
1974	94.5	86.8	91.8	49.9	97.6	52.8	53.0	52.8
1975	96.7	85.0	88.0	54.8	98.3	56.7	61.6	58.3
1976	99.2	90.1	90.8	59.5	101.0	60.0	66.0	61.9
1977	100.6	95.0	94.5	64.3	102.4	63.9	70.8	66.1
1978	101.3	100.5	99.3	70.0	103.6	69.1	75.5	71.2
1979	99.9	102.5	102.7	76.7	101.9	76.8	79.2	77.5
1980	99.0	100.8	101.8	84.9	99.4	85.7	85.4	85.6
1981	99.9	102.4	102.5	93.0	98.8	93.1	96.6	94.2
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.4	104.4	102.0	103.9	100.7	101.5	109.2	104.0
1984	104.5	113.0	108.1	108.1	100.4	103.4	116.6	107.6
1985	105.4	116.8	110.8	112.6	101.0	106.8	121.6	111.6
1986	107.5	120.1	111.8	118.1	104.0	109.9	123.3	114.2
1987	108.3	125.0	115.4	122.1	103.7	112.8	126.7	117.2
1988	109.2	130.6	119.5	127.2	103.8	116.4	131.9	121.4
1989	108.2	132.8	122.7	131.5	102.3	121.5	136.6	126.4
1990	108.1	133.2	123.1	138.3	102.1	127.9	138.6	131.3

See footnotes following table 6.

January 3, 1992
Source: Bureau of Labor Statistics

Appendix table 3. Nonfinancial corporations: Productivity, hourly compensation, unit labor cost, unit profits, and prices Indexes 1982=100

Year	Output per all-employee hour	Output	Employee hours	Hourly compensation (1)	Real hourly compensation (2)	Unit labor cost	Unit non-labor cost (7)	Total unit cost (8)	Unit profits (9)	Implicit price deflator (4)
1959	74.1	46.4	62.6	22.6	74.9	30.5	24.0	28.6	82.5	32.0
1960	75.2	47.7	63.5	23.5	76.7	31.3	24.9	29.5	75.1	32.3
1961	77.6	48.9	62.9	24.3	78.3	31.3	25.4	29.6	74.8	32.4
1962	80.0	52.3	65.4	25.2	80.6	31.5	25.3	29.8	82.6	33.0
1963	82.5	55.2	66.8	26.0	82.1	31.5	25.3	29.8	87.4	33.3
1964	85.7	58.9	68.8	27.2	84.6	31.7	25.3	29.9	91.4	33.7
1965	86.7	63.0	72.7	27.9	85.6	32.2	25.4	30.3	100.0	34.6
1966	87.1	66.7	76.6	29.5	87.8	33.8	25.7	31.5	100.7	35.8
1967	88.1	68.3	77.5	31.1	89.8	35.3	27.4	33.0	94.2	36.8
1968	90.5	72.1	79.7	33.4	92.7	36.9	29.3	34.8	94.5	38.5
1969	90.0	74.5	82.8	35.7	93.9	39.7	31.7	37.4	85.7	40.4
1970	90.1	73.5	81.6	38.2	95.1	42.5	35.7	40.5	69.6	42.3
1971	93.5	76.2	81.5	40.7	96.9	43.5	37.6	41.8	79.1	44.1
1972	94.9	81.3	85.7	43.0	99.2	45.3	38.3	43.3	84.9	45.9
1973	94.8	85.2	89.9	46.4	100.8	48.9	40.4	46.5	88.0	49.1
1974	92.3	83.3	90.3	50.8	99.5	55.1	46.9	52.8	76.0	54.2
1975	94.7	81.1	85.6	55.9	100.2	59.0	53.9	57.5	101.3	60.2
1976	97.6	87.2	89.4	60.6	102.7	62.1	54.2	59.8	114.7	63.2
1977	99.6	93.2	93.6	65.3	104.0	65.6	56.2	62.9	127.1	66.9
1978	99.4	98.2	98.9	70.9	105.0	71.4	60.0	68.2	133.4	72.2
1979	97.1	99.7	102.7	77.5	103.0	79.8	67.0	76.2	124.3	79.2
1980	97.4	99.0	101.7	85.6	100.2	87.9	78.2	85.2	109.4	86.7
1981	98.7	101.7	103.0	93.4	99.2	94.6	91.4	93.7	120.8	95.4
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	103.7	105.6	101.8	103.3	100.1	99.6	99.2	99.5	135.9	101.8
1984	105.2	114.1	108.5	107.4	99.8	102.2	98.6	101.1	168.4	105.3
1985	106.3	118.2	111.2	111.9	100.4	105.2	99.9	103.7	168.0	107.7
1986	109.2	122.1	111.8	117.0	103.0	107.2	102.6	105.9	149.7	108.6
1987	110.7	127.1	114.9	120.3	102.2	108.7	102.6	107.0	172.4	111.0
1988	112.7	134.0	118.9	125.1	102.0	111.0	106.7	109.7	183.7	114.3
1989	110.7	135.6	122.5	129.4	100.7	116.9	111.9	115.5	172.6	119.0
1990	110.7	135.7	122.6	136.1	100.5	122.9	117.1	121.3	148.2	122.9

See footnotes following table 6.

January 3, 1992

Source: Bureau of Labor Statistics