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## PRODUCTIVITY AND COSTS

 Second Quarter 1999The Bureau of Labor Statistics of the U.S. Department of Labor today reported revised productivity data--as measured by output per hour of all persons--for the second quarter of 1999. The seasonally adjusted annual rates of productivity change in the second quarter were:

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0.8 percent in the business sector and
0.6 percent in the nonfarm business sector.
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In both sectors, changes in productivity were revised down compared with results reported on Aug. 5, reflecting downward revisions in output and upward revisions in hours of all persons. (See table C.)

In manufacturing, the revised productivity changes in the second quarter were:

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4.8 percent in manufacturing,
8.2 percent in durable goods manufacturing, and
0.1 percent in nondurable goods manufacturing.
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In total manufacturing, the change in productivity was revised downward slightly compared with the preliminary estimate. Output and hours in manufacturing, which includes about 17 percent of U.S. business-sector employment, tend to vary more from quarter to quarter than data for the more aggregate business and nonfarm business sectors. Second-quarter measures are summarized in table $A$ and appear in detail in tables 1 through 5; the differences between these measures and the preliminary second-quarter figures issued on Aug. 5 are shown in table C.
|Effective with the release of third-quarter data in November 1999, the Productivity and Costs news release will be issued at 8:30 a.m. E.T. rather |than 10:00 a.m.
$\qquad$
Table A. Productivity and costs: Revised second-quarter 1999 measures (Seasonally adjusted annual rates)

| Sector | Productivity | Output | Hours | Hourly <br> compen- <br> sation | Real <br> hourly <br> compen- <br> sation | Unit labor costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent change from preceding quarter |  |  |  |  |  |
| Business | 0.8 | 1.9 | 1.0 | 5.4 | 1.8 | 4.5 |
| Nonfarm business | 0.6 | 1.8 | 1.2 | 5.1 | 1.5 | 4.5 |
| Manufacturing | 4.8 | 4.2 | -0.6 | 6.1 | 2.5 | 1.3 |
| Durable | 8.2 | 7.0 | -1.1 | 6.6 | 3.0 | -1.5 |
| Nondurable | 0.1 | 0.4 | 0.2 | 5.4 | 1.8 | 5.3 |


|  | Percent change from same quarter a year ago |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Business | 3.0 | 4.5 | 1.4 | 4.7 | 2.5 | 1.6 |
| Nonfarm business | 2.8 | 4.5 | 1.7 | 4.3 | 2.2 | 1.5 |
| Manufacturing | 5.3 | 2.7 | -2.4 | 4.5 | 2.3 | -0.8 |
| Durable | 8.6 | 5.6 | -2.7 | 4.2 | 2.0 | -4.1 |
| Nondurable | 1.2 | -0.8 | -2.0 | 5.0 | 2.9 | 3.8 |

The data sources and methods used in the preparation of the manufacturing series differ from those used in preparing the business and nonfarm business series, and these measures are not directly comparable. Output measures for business and nonfarm business are based on measures of gross domestic product prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Quarterly output measures for manufacturing reflect indexes of industrial production independently prepared by the Board of Governors of the Federal Reserve System. See Technical Notes for further information on data sources.

Business
From the first to the second quarter of 1999, business sector productivity rose at a 0.8 percent annual rate, as output increased 1.9 percent and hours of all persons engaged in the sector increased 1.0 percent reflecting a larger increase in output, 4.9 percent, and an increase in hours of 0.9 percent (table 1).

The increase of 5.4 percent in hourly compensation in the second quarter of 1999 marked the fourth consecutive quarter that the measure grew more than 4.0 percent (seasonally adjusted annual rates). Hourly compensation includes wages and salaries, supplements, employer contributions to employee benefit plans, and taxes. Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), increased at a 1.8 percent annual rate in the second quarter of 1999 after rising 3.6 percent in the first quarter.

Unit labor costs, which reflect changes in both hourly compensation and productivity, accelerated from a 1.1-percent rise in the first quarter of 1999 to a 4.5-percent growth rate in the second quarter. The second-quarter increase in unit labor costs was the largest since a 6.5 -percent jump in the first quarter of 1993. The implicit price deflator for the business sector rose 1.3 percent in the second quarter of 1999 as a 4.4 -percent drop in unit nonlabor payments offset part of the rise in unit labor costs.

Nonfarm business
Productivity in the nonfarm business sector increased 0.6 percent during the second quarter of 1999, as output increased 1.8 percent and hours of all persons rose 1.2 percent (table A). The increases in productivity and output were the smallest since the second quarter of 1998, when productivity increased 0.4 percent and output increased 1.7 percent (table 2).

Hourly compensation grew at a 5.1 percent annual rate in the second quarter of 1999, following a 4.4 percent increase in the first quarter. When the rise in the CPI-U is taken into account, real hourly compensation increased 1.5 percent in the second quarter of 1999.

In the second quarter of 1999, unit labor costs increased 4.5 percent, the largest increase since the first quarter of 1994, when they also rose 4.5 percent. Unit nonlabor payments fell 3.5 percent in the second quarter of 1999, and the implicit price deflator for nonfarm business output rose 1.6 percent (seasonally adjusted annual rates).

## Manufacturing

In the second quarter of 1999, productivity increased 4.8 percent in manufacturing, as output grew 4.2 percent and hours of all persons fell 0.6 percent (seasonally adjusted annual rates). The second-quarter increase in output per hour was due primarily to an 8.2 percent productivity gain in the durable goods sector, as output per hour increased only 0.1 percent in the nondurable goods sector (tables 3, 4, and 5). In durable goods, output rose 7.0 percent in the second quarter while hours of all persons dropped 1.1 percent. Nondurable goods manufacturing output rose 0.4 percent last quarter and hours increased 0.2 percent.

Hourly compensation of all manufacturing workers increased 6.1 percent during the second quarter of 1999, reflecting a 6.6 percent rise in hourly compensation in durable goods industries and a 5.4 percent increase in the nondurable goods sector. Real hourly compensation in the total manufacturing sector rose 2.5 percent in the second quarter, reflecting increases in durable and nondurable manufacturing of 3.0 and 1.8 percent, respectively.

Unit labor costs in manufacturing rose 1.3 percent in the second quarter of 1999. Trends in the two subsectors differed; unit labor costs in durable goods dropped 1.5 percent and those in nondurable goods rose 5.3 percent.

Nonfinancial corporations
Preliminary second-quarter 1999 measures of productivity and costs also were announced today for nonfinancial corporations (tables B and 6). Productivity increased 2.7 percent during the second quarter, as output rose 3.7 percent and hours increased 1.0 percent (seasonally adjusted annual rates). The increases in output and hours were the smallest since the first quarter of 1996, when output rose 1.4 percent and hours were unchanged. Nonfinancial corporations include all corporations doing business in the United States except those classified as depository institutions, nondepository institutions, security and commodity brokers, insurance carriers, regulated investment offices, small business investment offices, and real estate investment trusts.
$\qquad$
Table B. Nonfinancial corporations: Preliminary second-quarter 1999 productivity and cost measures
(Seasonally adjusted annual rates)

| Period | Productivity | Output | Hours | Hourly compensation | Real <br> hourly <br> compen- <br> sation | Unit labor costs | Unit profits | Implicit <br> price <br> deflator |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |



|  |  | Percen | change | from p | ing | quarter |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 II | 2.7 | 3.7 | 1.0 | 5.1 | 1.5 | 2.3 | -5.9 | 1.0 |

```
----------------------------------------------------------------------------
            Percent change from same quarter a year ago
1999 II 3.8 5llllllllll
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Hourly compensation rose 5.1 percent in the second quarter, after rising 4.9 percent in the first quarter of 1999. When the rise in the CPI-U is taken into account, real hourly compensation increased 1.5 percent in the second quarter of 1999, down from the 3.4 -percent increase one quarter earlier (table 6).

Unit labor costs for nonfinancial corporations increased 2.3 percent in the second quarter of 1999, after declining 0.1 percent in the previous quarter. Unit nonlabor costs rose 1.3 percent in the second quarter, up from the 6.2 percent decline one quarter earlier. Unit profits fell 5.9 percent in the second quarter, after rising 13.4 percent in the first quarter of 1999. The implicit price deflator for nonfinancial corporate output rose 1.0 percent in the second quarter of 1999.

Revised Measures
Current and previous measures for the second quarter of 1999 for the business, nonfarm business, and manufacturing sectors are compared in table C. The quarterly movements differ from those reported on Aug. 5 based on information then available. In the business and nonfarm business sectors, changes in output (which are based on information from the national income and product accounts prepared by the U.S. Department of Commerce) were revised down, leading to smaller increases in productivity and larger increases in unit labor costs than previously reported. Measures for the manufacturing sector reflect only minor revisions.

Table C. Previous and revised productivity and related measures Quarterly percent change at seasonally adjusted annual rate

| Sector | Produc- <br> tivity | Output | Hours | Hourly <br> compen- <br> sation | Real <br> hourly <br> compen- <br> sation | Unit <br> labor <br> costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Second quarter 1999 |  |  |  |  |  |
| Business: |  |  |  |  |  |  |
| Previous | 1.6 | 2.5 | 0.9 | 5.4 | 1.8 | 3.8 |
| Current | 0.8 | 1.9 | 1.0 | 5.4 | 1.8 | 4.5 |
| Nonfarm business: |  |  |  |  |  |  |
| Previous | 1.3 | 2.4 | 1.1 | 5.1 | 1.5 | 3.8 |
| Current | 0.6 | 1.8 | 1.2 | 5.1 | 1.5 | 4.5 |
| Manufacturing: |  |  |  |  |  |  |
| Previous | 4.9 | 4.2 | -0.7 | 6.0 | 2.4 | 1.1 |
| Current | 4.8 | 4.2 | -0.6 | 6.1 | 2.5 | 1.3 |

## Next release date

The next release of Productivity and Costs is scheduled for 8:30 AM EST, Friday, Nov. 12, 1999. Preliminary third-quarter measures for business, nonfarm business, and manufacturing will be released at that time along with revised historical measures for all sectors.
|NOTICE: The Nov. 12, 1999, release of "Productivity and Costs" will incorporate a comprehensive, historical revision of the national income and |product accounts produced by the Bureau of Economic Analysis, U.S. Department |of Commerce. Beginning with that release, BLS also plans to incorporate the |Consumer Price Index research series using current methods (CPI-U-RS) into its measure of real hourly compensation. Information on this series is |available in "CPI research series using current methods, 1978-98," Monthly |Labor Review, June 1999.

## TECHNICAL NOTES

Labor Hours: Hours data for the labor productivity and costs measures include hours for all persons working in the sector--wage and salary workers, the self-employed, and unpaid family workers. The primary source of hours and employment data is the BLS Current Employment Statistics (CES) program, which provides monthly survey data on the number of jobs held by wage and salary workers in nonfarm establishments. The CES also provides average weekly paid hours of production and nonsupervisory workers in these establishments. Average weekly paid hours of nonproduction and supervisory workers are estimated by the Office of Productivity and Technology. Weekly paid hours are adjusted to hours at work 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 (BEA) of the Department of Commerce and the CPS are used to measure labor input for government enterprises, proprietors, and unpaid family workers.

Output: Business sector output is an annual-weighted index constructed after excluding from gross domestic product (GDP) the following outputs: General government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Corresponding exclusions also are made in labor inputs. Business output accounted for about 76 percent of the value of GDP in 1992. Nonfarm business, which also excludes farming, accounted for about 75 percent of GDP in 1992.

Annual manufacturing indexes are constructed by deflating current-dollar industry value of production data from the U.S. Bureau of the Census with deflators from the BEA. These deflators are based on data from the BLS producer price program and other sources. The industry shipments are aggregated using annual weights, and intrasector transactions are removed. Quarterly manufacturing output measures are based on the index of industrial production prepared monthly by the Board of Governors of the Federal Reserve System adjusted to be consistent with annual indexes of manufacturing sector output prepared by BLS. Durables include the following 2-digit SIC industries: Primary metal industries; fabricated metal products; nonelectrical machinery; industrial and commercial machinery and computer equipment; electronic and other electrical equipment; transportation equipment; instruments; lumber and lumber products; furniture and fixtures; stone, clay, and glass and concrete products; and miscellaneous manufactures. Nondurables include: Food and kindred products, tobacco products, textile mill products, apparel products, paper and allied products, printing and publishing, chemicals and chemical products, petroleum refining and related industries, rubber and plastic products, and leather and leather products.

Nonfinancial corporate output is an annual-weighted index constructed by excluding from GDP the following outputs: General government; nonprofit institutions; employees of private households; the rental value of owneroccupied dwellings; unincorporated business; and those corporations which are depository institutions, nondepository institutions, security and commodity brokers, insurance carriers, regulated investment offices, small business investment offices, and real estate investment trusts. Nonfinancial corporations accounted for about 52 percent of the value of GDP in 1992.

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.

Information in this release will be made available to sensory-impaired individuals upon request. Voice phone: 202-606-STAT; TDD phone: 202-606-5897; TDD message referral phone number: 1-800-326-2577.

Table 1. Business sector: Productivity, hourly compensation, unit labor costs, and prices, seasonally adjusted

|  |  |  | Real |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Year | Output per | Hours | Compensa- | compensa- | Unit | Unit non- Implicit |
| and | hour of |  | of all | tion per | tion per | labor |


| Indexes 1992=100 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1997 | I | 104.3 | 117.8 | 112.9 | 113.2 | 99.5 | 108.5 | 112.3 | 109.9 |
|  | II | 104.8 | 119.1 | 113.7 | 113.9 | 99.8 | 108.6 | 113.2 | 110.3 |
|  | III | 105.8 | 120.6 | 114.0 | 115.0 | 100.3 | 108.7 | 113.9 | 110.6 |
|  | IV | 106.0 | 121.7 | 114.7 | 116.6 | 101.2 | 109.9 | 112.5 | 110.8 |
|  | ANNUAL | 105.2 | 119.8 | 113.8 | 114.7 | 100.3 | 109.0 | 112.9 | 110.4 |
| 1998 | I | 107.0 | 123.7 | 115.7 | 117.9 | 102.1 | 110.2 | 112.1 | 110.9 |
|  | II | 107.0 | 124.3 | 116.1 | 119.1 | 102.6 | 111.2 | 110.5 | 111.0 |
|  | III | 107.9 | 125.5 | 116.4 | 120.3 | 103.2 | 111.5 | 110.4 | 111.1 |
|  | IV | 109.0 | 127.7 | 117.2 | 121.5 | 103.8 | 111.5 | 110.7 | 111.2 |
|  | ANNUAL | 107.7 | 125.3 | 116.3 | 119.7 | 103.0 | 111.1 | 110.9 | 111.0 |
| 1999 | I | 110.1 | 129.3 | 117.5 | 123.0 | 104.7 | 111.8 | 110.9 | 111.5 |
|  | II | r110.3 | r129.9 | r117.8 | 124.6 | 105.2 | r113.0 | r109.7 | 111.8 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 0.5 | 4.9 | 4.4 | 3.6 | 1.0 | 3.1 | 1.6 | 2.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.9 | 4.7 | 2.7 | 2.3 | 1.1 | 0.4 | 3.2 | 1.4 |
|  | III | 3.8 | 4.9 | 1.1 | 4.1 | 2.1 | 0.3 | 2.4 | 1.1 |
|  | IV | 0.9 | 3.6 | 2.6 | 5.4 | 3.5 | 4.4 | -4.9 | 0.9 |
|  | ANNUAL | 1.5 | 4.6 | 3.1 | 3.6 | 1.2 | 2.1 | 1.0 | 1.7 |
| 1998 | I | 3.6 | 7.1 | 3.3 | 4.8 | 3.7 | 1.1 | -1.2 | 0.2 |
|  | II | 0.2 | 1.7 | 1.6 | 3.9 | 2.1 | 3.7 | -5.5 | 0.3 |
|  | III | 3.1 | 4.0 | 0.9 | 4.1 | 2.4 | 1.0 | -0.3 | 0.5 |
|  | IV | 4.3 | 7.3 | 2.9 | 4.2 | 2.4 | -0.1 | 1.1 | 0.3 |
|  | ANNUAL | 2.4 | 4.6 | 2.2 | 4.4 | 2.8 | 2.0 | -1.8 | 0.6 |
| 1999 | I | 3.9 | 4.9 | 0.9 | 5.1 | 3.6 | 1.1 | 0.7 | 1.0 |
|  | II | r0. 8 | r1.9 | r1.0 | 5.4 | 1.8 | r4.5 | r-4.4 | 1.3 |

Percent change from corresponding quarter of previous year

| 1997 | I | 1.3 | 4.7 | 3.4 | 4.0 | 1.0 | 2.6 | 0.4 | 1.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 0.9 | 4.3 | 3.3 | 3.2 | 0.9 | 2.2 | 0.9 | 1.8 |
|  | III | 1.9 | 4.9 | 3.0 | 3.3 | 1.0 | 1.4 | 2.1 | 1.6 |
|  | IV | 1.8 | 4.5 | 2.7 | 3.8 | 1.9 | 2.0 | 0.5 | 1.5 |
|  | ANNUAL | 1.5 | 4.6 | 3.1 | 3.6 | 1.2 | 2.1 | 1.0 | 1.7 |
| 1998 | I | 2.6 | 5.1 | 2.4 | 4.1 | 2.6 | 1.5 | -0.2 | 0.9 |
|  | II | 2.1 | 4.3 | 2.1 | 4.5 | 2.9 | 2.4 | -2.4 | 0.6 |
|  | III | 1.9 | 4.1 | 2.1 | 4.5 | 2.9 | 2.5 | -3.0 | 0.5 |
|  | IV | 2.8 | 5.0 | 2.2 | 4.2 | 2.6 | 1.4 | -1.5 | 0.3 |
|  | ANNUAL | 2.4 | 4.6 | 2.2 | 4.4 | 2.8 | 2.0 | -1.8 | 0.6 |
| 1999 | I | 2.9 | 4.5 | 1.6 | 4.3 | 2.6 | 1.4 | -1.1 | 0.5 |
|  | II | r3.0 | r4.5 | 1.4 | 4.7 | r2.5 | r1.6 | r-0.8 | 0.8 |
| $\begin{aligned} & \text { See f } \\ & r=r e t \end{aligned}$ | otnotes ised | owing | 6. |  |  |  | Septe <br> Sourc | $\begin{aligned} & 1999 \\ & \text { eau of } \end{aligned}$ | stat |

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

|  |  |  | Real |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Year | Output per | Hours | Compensa- | compensa- | Unit | Unit non- |
| and | hour of |  | of all | tion per | tion per | labor |
| quarter | all persons | Output | persons | hour (1) | hour (2) | costs |


| Indexes 1992=100 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1997 | I | 104.1 | 117.9 | 113.3 | 112.9 | 99.2 | 108.5 | 112.8 | 110.0 |
|  | II | 104.5 | 119.2 | 114.1 | 113.6 | 99.5 | 108.7 | 113.7 | 110.4 |
|  | III | 105.4 | 120.6 | 114.4 | 114.6 | 99.9 | 108.7 | 114.6 | 110.8 |
|  | IV | 105.7 | 121.8 | 115.3 | 116.0 | 100.7 | 109.8 | 113.3 | 111.1 |
|  | ANNUAL | 104.9 | 119.9 | 114.3 | 114.3 | 99.9 | 108.9 | 113.6 | 110.6 |
| 1998 | I | 106.5 | 123.9 | 116.3 | 117.4 | 101.6 | 110.2 | 113.1 | 111.2 |
|  | II | 106.6 | 124.4 | 116.7 | 118.5 | 102.1 | 111.1 | 111.6 | 111.3 |
|  | III | 107.3 | 125.6 | 117.1 | 119.7 | 102.7 | 111.5 | 111.5 | 111.5 |
|  | IV | 108.4 | 127.9 | 118.0 | 120.8 | 103.2 | 111.4 | 111.8 | 111.5 |
|  | ANNUAL | 107.2 | 125.5 | 117.0 | 119.1 | 102.5 | 111.1 | 112.0 | 111.4 |
| 1999 | I | 109.4 | 129.4 | 118.3 | 122.1 | 104.0 | 111.6 | 112.5 | 111.9 |
|  | II | r109.6 | r130.0 | 118.7 | 123.6 | r104.3 | r112.8 | r111.5 | r112.3 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 0.0 | 4.5 | 4.5 | 3.8 | 1.2 | 3.8 | 1.8 | 3.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.7 | 4.5 | 2.8 | 2.3 | 1.1 | 0.5 | 3.2 | 1.5 |
|  | III | 3.5 | 4.8 | 1.2 | 3.7 | 1.7 | 0.2 | 3.4 | 1.4 |
|  | IV | 1.0 | 4.0 | 2.9 | 5.2 | 3.3 | 4.1 | -4.4 | 0.9 |
|  | ANNUAL | 1.2 | 4.5 | 3.2 | 3.5 | 1.2 | 2.3 | 1.3 | 1.9 |
| 1998 | I | 3.2 | 7.0 | 3.7 | 4.6 | 3.6 | 1.4 | -0.8 | 0.6 |
|  | II | 0.4 | 1.7 | 1.4 | 3.9 | 2.0 | 3.5 | -5.4 | 0.2 |
|  | III | 2.7 | 4.0 | 1.2 | 4.1 | 2.4 | 1.3 | -0.3 | 0.7 |
|  | IV | 4.1 | 7.4 | 3.1 | 3.8 | 2.0 | -0.4 | 1.2 | 0.2 |
|  | ANNUAL | 2.2 | 4.6 | 2.4 | 4.2 | 2.6 | 2.0 | -1.4 | 0.7 |
| 1999 | I | 3.6 | 5.0 | 1.3 | 4.4 | 2.9 | 0.8 | 2.4 | 1.3 |
|  | II | r0.6 | r1.8 | r1.2 | 5.1 | 1.5 | r4.5 | r-3.5 | 1.6 |

Percent change from corresponding quarter of previous year

| 1997 | I | 1.0 | 4.6 | 3.6 | 3.9 | 0.9 | 2.9 | 0.5 | 2.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 0.6 | 4.1 | 3.4 | 3.2 | 0.8 | 2.5 | 1.3 | 2.0 |
|  | III | 1.6 | 4.7 | 3.1 | 3.2 | 1.0 | 1.6 | 2.7 | 2.0 |
|  | IV | 1.6 | 4.4 | 2.8 | 3.7 | 1.8 | 2.1 | 0.9 | 1.7 |
|  | ANNUAL | 1.2 | 4.5 | 3.2 | 3.5 | 1.2 | 2.3 | 1.3 | 1.9 |
| 1998 | I | 2.4 | 5.1 | 2.6 | 3.9 | 2.4 | 1.5 | 0.3 | 1.1 |
|  | II | 2.0 | 4.4 | 2.3 | 4.3 | 2.7 | 2.3 | -1.9 | 0.8 |
|  | III | 1.8 | 4.1 | 2.3 | 4.4 | 2.8 | 2.6 | -2.7 | 0.6 |
|  | IV | 2.6 | 5.0 | 2.3 | 4.1 | 2.5 | 1.5 | -1.4 | 0.4 |
|  | ANNUAL | 2.2 | 4.6 | 2.4 | 4.2 | 2.6 | 2.0 | -1.4 | 0.7 |
| 1999 | I | 2.7 | 4.5 | 1.7 | 4.0 | 2.3 | 1.3 | -0.6 | 0.6 |
|  | II | r2.8 | r4.5 | 1.7 | 4.3 | 2.2 | r1. 5 | r-0.1 | 1.0 |
| See footnotes following Table 6. r=revised |  |  |  |  |  |  | September 2, 1999 Source: Bureau of |  | stat |

Table 3. Manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted


Percent change from previous quarter at annual rate(5)

| 1997 | I | 4.1 | 7.2 | 3.0 | 4.3 | 1.7 | 0.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 4.7 | 6.6 | 1.8 | 3.4 | 2.2 | -1.2 |
|  | III | 8.4 | 7.7 | -0.6 | 5.0 | 3.0 | -3.1 |
|  | IV | 4.1 | 7.5 | 3.3 | 7.9 | 5.9 | 3.7 |
|  | ANNUAL | 4.7 | 6.5 | 1.8 | 4.0 | 1.7 | -0.7 |
| 1998 | I | 1.5 | 2.4 | 0.9 | 3.8 | 2.7 | 2.3 |
|  | II | 3.7 | 2.5 | -1.2 | 2.4 | 0.6 | -1.2 |
|  | III | 4.8 | 0.4 | -4.1 | 3.1 | 1.5 | -1.5 |
|  | IV | 5.3 | 4.8 | -0.5 | 3.5 | 1.7 | -1.8 |
|  | ANNUAL | 4.0 | 4.2 | 0.1 | 4.3 | 2.7 | 0.2 |
| 1999 | I | 6.3 | 1.6 | -4.5 | 5.2 | 3.7 | -1.1 |
|  | II | r4.8 | 4.2 | r-0.6 | r6.1 | r2. 5 | r1.3 |



Percent change from corresponding quarter of previous year

| 1997 | I | 4.2 | 6.7 | 2.4 | 3.6 | 0.6 | -0.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 4.2 | 5.9 | 1.6 | 3.4 | 1.0 | -0.8 |
|  | III | 5.0 | 6.3 | 1.2 | 3.9 | 1.6 | -1.1 |
|  | IV | 5.3 | 7.3 | 1.9 | 5.2 | 3.2 | -0.1 |
|  | ANNUAL | 4.7 | 6.5 | 1.8 | 4.0 | 1.7 | -0.7 |
| 1998 | I | 4.6 | 6.0 | 1.4 | 5.0 | 3.5 | 0.4 |
|  | II | 4.4 | 5.0 | 0.6 | 4.8 | 3.1 | 0.4 |
|  | III | 3.5 | 3.2 | -0.3 | 4.3 | 2.7 | 0.8 |
|  | IV | 3.8 | 2.5 | -1.2 | 3.2 | 1.6 | -0.6 |
|  | ANNUAL | 4.0 | 4.2 | 0.1 | 4.3 | 2.7 | 0.2 |
| 1999 | I | 5.0 | 2.3 | -2.6 | 3.5 | 1.8 | -1.4 |
|  | II | 5.3 | 2.7 | r-2.4 | r4.5 | 2.3 | -0.8 |

See footnotes following Table 6.
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Table 4. Durable manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted

|  | Year <br> and <br> quarter | Output per hour of all persons | Output | Hours of all persons | Compensation per hour (1) | Real <br> compensa- <br> tion per <br> hour (2) | Unit labor costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes 1992=100 |  |  |  |  |  |  |
| 1997 | I | 125.0 | 136.9 | 109.5 | 110.6 | 97.2 | 88.5 |
|  | II | 127.3 | 140.3 | 110.2 | 111.5 | 97.7 | 87.6 |
|  | III | 131.0 | 144.6 | 110.4 | 112.8 | 98.3 | 86.1 |
|  | IV | 133.4 | 148.3 | 111.2 | 115.4 | 100.2 | 86.5 |
|  | ANNUAL | 129.2 | 142.5 | 110.3 | 112.6 | 98.4 | 87.1 |
| 1998 | I | 133.8 | 149.6 | 111.8 | 116.0 | 100.4 | 86.7 |
|  | II | 135.8 | 151.3 | 111.4 | 116.3 | 100.2 | 85.6 |
|  | III | 138.7 | 153.1 | 110.4 | 116.8 | 100.3 | 84.2 |
|  | IV | 141.6 | 156.3 | 110.4 | 117.8 | 100.7 | 83.2 |
|  | ANNUAL | 137.5 | 152.6 | 111.0 | 116.7 | 100.5 | 84.9 |
| 1999 | I | 144.6 | 157.1 | 108.7 | 119.2 | 101.5 | 82.5 |
|  | II | r147.4 | r159.8 | 108.3 | r121.1 | r102.3 | r82.2 |
| Percent change from previous quarter at annual rate(5) |  |  |  |  |  |  |  |
| 1997 | I | 4.4 | 10.4 | 5.8 | 3.8 | 1.2 | -0.6 |
|  | II | 7.6 | 10.4 | 2.6 | 3.2 | 2.0 | -4.1 |
|  | III | 12.1 | 12.8 | 0.6 | 4.6 | 2.6 | -6.7 |
|  | IV | 7.4 | 10.7 | 3.0 | 9.8 | 7.8 | 2.2 |
| 1998 | ANNUAL | 6.3 | 9.4 | 2.9 | 3.6 | 1.3 | -2.6 |
|  | I | 1.3 | 3.5 | 2.2 | 1.9 | 0.9 | 0.6 |
|  | II | 6.1 | 4.6 | -1.4 | 1.1 | -0.7 | -4.7 |
|  | III | 8.8 | 4.8 | -3.7 | 1.8 | 0.2 | -6.4 |
|  | IV | 8.6 | 8.6 | 0.0 | 3.3 | 1.6 | -4.9 |
| 1999 | ANNUAL | 6.4 | 7.0 | 0.6 | 3.7 | 2.1 | -2.6 |
|  | I | 8.6 | 2.1 | -6.0 | 5.0 | 3.4 | -3.4 |
|  | II | r8.2 | r7.0 | r-1.1 | r6. 6 | r3.0 | r-1.5 |



| 1997 | I | 5.3 | 9.3 | 3.8 | 2.9 | 0.0 | -2.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 5.3 | 8.1 | 2.6 | 2.7 | 0.4 | -2.4 |
|  | III | 6.8 | 9.3 | 2.3 | 3.3 | 1.0 | -3.3 |
|  | IV | 7.8 | 11.1 | 3.0 | 5.3 | 3.4 | -2.3 |
|  | ANNUAL | 6.3 | 9.4 | 2.9 | 3.6 | 1.3 | -2.6 |
| 1998 | I | 7.0 | 9.3 | 2.1 | 4.8 | 3.3 | -2.0 |
|  | II | 6.6 | 7.8 | 1.1 | 4.3 | 2.6 | -2.2 |
|  | III | 5.9 | 5.9 | 0.0 | 3.6 | 2.0 | -2.1 |
|  | IV | 6.1 | 5.4 | -0.7 | 2.0 | 0.5 | -3.9 |
|  | ANNUAL | 6.4 | 7.0 | 0.6 | 3.7 | 2.1 | -2.6 |
| 1999 | I | 8.0 | 5.0 | -2.8 | 2.8 | 1.1 | -4.9 |
|  | II | r8.6 | r5.6 | r-2.7 | r4.2 | r2.0 | r-4.1 |

See footnotes following Table 6 .
September 2, 1999
r=revised
Source: Bureau of Labor Statistics

Table 5. Nondurable manufacturing sector: Productivity, hourly compensation, and unit labor costs, seasonally adjusted

|  | Year <br> and <br> quarter | Output per hour of all persons | Output | Hours of all persons | Compensation per hour (1) | Real compensation per hour (2) | Unit labor costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Indexes 1992=100 |  |  |  |  |  |
| 1997 | I | 109.8 | 108.8 | 99.0 | 116.2 | 102.1 | 105.8 |
|  | II | 110.2 | 109.3 | 99.2 | 117.3 | 102.7 | 106.4 |
|  | III | 111.3 | 109.7 | 98.6 | 118.9 | 103.6 | 106.8 |
|  | IV | 111.3 | 110.7 | 99.5 | 120.3 | 104.4 | 108.1 |
|  | ANNUAL | 110.7 | 109.6 | 99.1 | 118.2 | 103.3 | 106.8 |
| 1998 | I | 111.8 | 111.0 | 99.3 | 122.2 | 105.8 | 109.3 |
|  | II | 112.0 | 111.0 | 99.1 | 123.7 | 106.6 | 110.4 |
|  | III | 112.0 | 109.6 | 97.9 | 125.3 | 107.5 | 111.8 |
|  | IV | 112.5 | 109.7 | 97.5 | 126.4 | 108.0 | 112.4 |
|  | ANNUAL | 112.1 | 110.3 | 98.4 | 124.4 | 107.1 | 111.0 |
| 1999 | I | 113.3 | 109.9 | 97.0 | 128.2 | 109.1 | 113.1 |
|  | II | r113.3 | r110.0 | r97.1 | r129.9 | r109.6 | r114.6 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 4.3 | 3.4 | -0.9 | 4.7 | 2.1 | 0.4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.3 | 1.9 | 0.7 | 3.7 | 2.5 | 2.4 |
|  | III | 4.2 | 1.7 | -2.4 | 5.5 | 3.5 | 1.2 |
|  | IV | -0.1 | 3.6 | 3.7 | 4.9 | 3.0 | 5.0 |
|  | ANNUAL | 3.0 | 3.1 | 0.1 | 4.5 | 2.1 | 1.4 |
| 1998 | I | 2.0 | 1.1 | -0.9 | 6.7 | 5.7 | 4.6 |
|  | II | 0.7 | -0.2 | -0.9 | 4.7 | 2.8 | 4.0 |
|  | III | 0.1 | -4.7 | -4.7 | 5.3 | 3.6 | 5.2 |
|  | IV | 1.5 | 0.2 | -1.3 | 3.6 | 1.9 | 2.1 |
|  | ANNUAL | 1.3 | 0.6 | -0.6 | 5.3 | 3.6 | 3.9 |
| 1999 | I | 3.0 | 0.8 | -2.1 | 5.8 | 4.3 | 2.7 |
|  | II | r0.1 | r0.4 | ro. 2 | r5.4 | r1. 8 | r5.3 |



Percent change from corresponding quarter of previous year

| 1997 | I | 3.3 | 3.7 | 0.4 | 4.3 | 1.4 | 1.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 3.2 | 3.4 | 0.2 | 4.2 | 1.9 | 1.0 |
|  | III | 3.1 | 2.6 | -0. 5 | 4.6 | 2.3 | 1.5 |
|  | IV | 2.4 | 2.6 | 0.2 | 4.7 | 2.8 | 2.2 |
|  | ANNUAL | 3.0 | 3.1 | 0.1 | 4.5 | 2.1 | 1.4 |
| 1998 | I | 1.8 | 2.1 | 0.2 | 5.2 | 3.6 | 3.3 |
|  | II | 1.7 | 1.5 | -0.1 | 5.4 | 3.7 | 3.7 |
|  | III | 0.6 | -0.1 | -0.7 | 5.4 | 3.7 | 4.7 |
|  | IV | 1.1 | -0.9 | -2.0 | 5.1 | 3.5 | 4.0 |
|  | ANNUAL | 1.3 | 0.6 | -0.6 | 5.3 | 3.6 | 3.9 |
| 1999 | I | 1.3 | -1.0 | -2.3 | 4.8 | 3.1 | 3.5 |
|  | II | r1.2 | r-0.8 | -2.0 | r5.0 | r2.9 | r3.8 |


| See footnotes following Table 6. | September 2,1999 |
| :--- | :--- |
| r=revised | Source: Bureau of Labor Statistics |

Table 6. Nonfinancial corporations: Productivity, hourly compensation, unit labor costs, unit profits, and prices, seasonally adjusted

|  | Year <br> and <br> quarter | Output <br> per all- <br> employee <br> hour | Output | Employee hours | Hourly compensation (1) | Real <br> hourly <br> compen- <br> sation(2) | Unit labor costs | Unit <br> non- <br> labor <br> costs (6) | Total unit costs (7) | Unit profits (8) | Implicit price deflator (4) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Indexes 1992=100 |  |  |  |  |  |  |  |  |  |  |  |
| 1997 | I | 108.9 | 124.3 | 114.1 | 111.8 | 98.2 | 102.6 | 97.3 | 101.2 | 156.6 | 106.2 |
|  | II | 109.5 | 126.2 | 115.2 | 112.4 | 98.5 | 102.6 | 97.1 | 101.2 | 157.3 | 106.3 |
|  | III | 111.0 | 128.7 | 115.9 | 113.6 | 99.0 | 102.3 | 96.4 | 100.7 | 161.7 | 106.3 |
|  | IV | 111.4 | 130.2 | 116.9 | 115.1 | 99.8 | 103.3 | 95.7 | 101.3 | 155.7 | 106.3 |
|  | ANNUAL | 110.3 | 127.3 | 115.4 | 113.3 | 99.0 | 102.7 | 96.6 | 101.1 | 157.8 | 106.3 |
| 1998 | I | 112.1 | 132.1 | 117.8 | 116.1 | 100.5 | 103.5 | 95.4 | 101.4 | 153.5 | 106.2 |
|  | II | 112.9 | 133.4 | 118.1 | 117.3 | 101.1 | 103.9 | 95.5 | 101.7 | 150.4 | 106.1 |
|  | III | 114.2 | 135.4 | 118.6 | 118.6 | 101.8 | 103.8 | 95.2 | 101.6 | 151.8 | 106.1 |
|  | IV | 115.1 | 137.2 | 119.3 | 119.7 | 102.3 | 104.1 | 96.2 | 102.0 | 146.6 | 106.0 |
|  | ANNUAL | 113.6 | 134.5 | 118.4 | 118.0 | 101.6 | 103.8 | 95.6 | 101.7 | 150.5 | 106.1 |
| 1999 | I | 116.5 | 139.5 | 119.7 | 121.2 | 103.2 | 104.0 | 94.7 | 101.6 | 151.3 | 106.1 |
|  | II | 117.3 | 140.7 | 120.0 | 122.7 | 103.6 | 104.6 | 95.0 | 102.1 | 149.0 | 106.4 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 1.5 | 5.9 | 4.3 | 3.5 | 0.9 | 2.0 | -0.6 | 1.4 | 3.2 | 1.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 2.2 | 6.3 | 4.0 | 2.4 | 1.2 | 0.2 | -0.6 | 0.0 | 1.7 | 0.2 |
|  | III | 5.5 | 8.2 | 2.5 | 4.1 | 2.2 | -1.3 | -3.1 | -1.8 | 11.8 | 0.0 |
|  | IV | 1.2 | 4.8 | 3.5 | 5.3 | 3.4 | 4.0 | -2.7 | 2.3 | -14.1 | -0.1 |
|  | ANNUAL | 2.5 | 6.1 | 3.6 | 3.5 | 1.1 | 1.0 | -1.3 | 0.4 | 2.1 | 0.6 |
| 1998 | I | 2.7 | 5.9 | 3.2 | 3.6 | 2.6 | 0.9 | -1.1 | 0.4 | -5.6 | -0.4 |
|  | II | 2.9 | 4.0 | 1.1 | 4.4 | 2.5 | 1.5 | 0.1 | 1.1 | -7.7 | -0.1 |
|  | III | 4.6 | 6.1 | 1.5 | 4.3 | 2.6 | -0.3 | -0.9 | -0.4 | 3.6 | 0.1 |
|  | IV | 3.1 | 5.5 | 2.3 | 4.0 | 2.2 | 0.8 | 4.0 | 1.6 | -12.9 | -0.4 |
|  | ANNUAL | 3.0 | 5.6 | 2.6 | 4.1 | 2.5 | 1.1 | -1.0 | 0.6 | -4.6 | -0.1 |
| 1999 | I | 5.0 | 6.7 | 1.6 | 4.9 | 3.4 | -0.1 | -6.2 | -1.6 | 13.4 | 0.2 |
|  | II | 2.7 | 3.7 | 1.0 | 5.1 | 1.5 | 2.3 | 1.3 | 2.1 | -5.9 | 1.0 |

Percent change from corresponding quarter of previous year

| 1997 | I | 2.4 | 5.9 | 3.5 | 3.7 | 0.8 | 1.3 | -1.4 | 0.6 | 1.9 | 0.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 2.1 | 5.8 | 3.6 | 3.1 | 0.8 | 1.0 | -0.8 | 0.5 | 2.0 | 0.7 |
|  | III | 2.8 | 6.4 | 3.5 | 3.2 | 1.0 | 0.4 | -1.2 | 0.0 | 4.2 | 0.5 |
|  | IV | 2.6 | 6.3 | 3.6 | 3.8 | 1.9 | 1.2 | -1.8 | 0.5 | 0.2 | 0.4 |
|  | ANNUAL | 2.5 | 6.1 | 3.6 | 3.5 | 1.1 | 1.0 | -1.3 | 0.4 | 2.1 | 0.6 |
| 1998 | I | 2.9 | 6.3 | 3.3 | 3.9 | 2.3 | 0.9 | -1.9 | 0.2 | -2.0 | -0.1 |
|  | II | 3.1 | 5.7 | 2.6 | 4.4 | 2.7 | 1.2 | -1.7 | 0.5 | -4.3 | -0.1 |
|  | III | 2.8 | 5.2 | 2.3 | 4.4 | 2.8 | 1.5 | -1.1 | 0.8 | -6.2 | -0.1 |
|  | IV | 3.3 | 5.4 | 2.0 | 4.1 | 2.5 | 0.7 | 0.5 | 0.7 | -5.8 | -0.2 |
|  | ANNUAL | 3.0 | 5.6 | 2.6 | 4.1 | 2.5 | 1.1 | -1.0 | 0.6 | -4.6 | -0.1 |
| 1999 | I | 3.9 | 5.6 | 1.6 | 4.4 | 2.7 | 0.5 | -0.8 | 0.1 | -1.4 | -0.1 |
|  | II | 3.8 | 5.5 | 1.6 | 4.6 | 2.4 | 0.7 | -0. 5 | 0.4 | -0.9 | 0.2 |

[^0]SOURCES: Output data are from the Bureau of Economic Analysis and the Census Bureau of the U.S. Department of Commerce; the Bureau of Labor Statistics, U.S. Department of Labor; and the Federal Reserve Board. Compensation and hours data are from the Bureau of Labor Statistics 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 within 40 days of the close of the reference period; revisions appear 30 days later and second revisions after an additional 60 days. In the business sector, the third publication (second revision) of a quarterly index of output per hour of all persons has differed from the initial value by between -1.1 and +1.3 index points approximately 95 percent of the time. This interval is based on the performance of this measure between the fourth quarter of 1995 and the first quarter of 1999.

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 selfemployed.
(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 output divided by the output index.
(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) Unit nonlabor costs include capital consumption allowances, interest, rental income of persons, and indirect taxes. For nonfinancial corporations, rental income of persons is zero by definition.
(7) Total unit costs are the sum of unit labor and nonlabor costs.
(8) Unit profits include corporate profits with inventory valuation and capital consumption adjustments.


[^0]:    See footnotes following Table 6.
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    r=revised
    Source: Bureau of Labor Statistics

