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

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4.1 percent in the business sector, and
3.5 percent in the nonfarm business sector.
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In both sectors, the revised first-quarter gains in output were smaller than those reported initially, and the gains in hours were unchanged; therefore, the revisions decreased the first-quarter 1999 productivity gains. These data do not reflect the employment benchmark of the BLS Current Establishment Statistics released on June 4.

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

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6.2 percent in manufacturing,
8.7 percent in durable goods manufacturing, and
2.8 percent in nondurable goods manufacturing.
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The increase in manufacturing productivity reflected a 1.6 -percent rise in output and a drop of 4.4 percent in hours worked. The productivity increase was larger than the 5.3-percent increase recorded in the fourth quarter of 1998. 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. First-quarter measures are summarized in table $A$ and appear in detail in tables 1 through 5.

The data sources and methods used in the preparation of the manufacturing series differ from those used in preparing the business and 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.

Table A. Productivity and costs: Revised first-quarter 1999 measures (Seasonally adjusted annual rates)

| Sector | Productivity | Output | Hours | Hourly compensation | Real <br> hourly <br> compen- <br> sation | Unit labor costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent change from preceding quarter |  |  |  |  |  |  |
| Business | 4.1 | 4.6 | 0.4 | 5.0 | 3.5 | 0.9 |
| Nonfarm business | 3.5 | 4.4 | 0.9 | 4.2 | 2.6 | 0.7 |
| Manufacturing | 6.2 | 1.6 | -4.4 | 5.1 | 3.5 | -1.1 |
| Durable | 8.7 | 1.8 | -6. 3 | 5.0 | 3.5 | -3.4 |
| Nondurable | 2.8 | 1.3 | -1.5 | 5.5 | 3.9 | 2.6 |
| Percent change from same quarter a year ago |  |  |  |  |  |  |
| Business | 2.9 | 4.4 | 1.5 | 4.3 | 2.6 | 1.4 |
| Nonfarm business | 2.6 | 4.4 | 1.7 | 4.0 | 2.3 | 1.4 |
| Manufacturing | 5.0 | 2.3 | -2.6 | 3.5 | 1.8 | -1.4 |
| Durable | 8.1 | 4.9 | -2.9 | 2.8 | 1.1 | -4.8 |
| Nondurable | 1.3 | -0.9 | -2.1 | 4.7 | 3.0 | 3.4 |

Business

From the fourth quarter of 1998 to the first quarter of 1999 , business productivity increased 4.1 percent, reflecting increases of 4.6 percent in output and 0.4 percent in hours of all persons (seasonally adjusted annual rates). The increase in productivity was smaller than the 4.6 percent rise recorded in the previous quarter, when output rose 7.3 percent and hours grew 2.6 percent (table 1).

Hourly compensation increased 5.0 percent during the first quarter of 1999. This measure of compensation includes wages and salaries, supplements, employer contributions to employee benefit plans, and taxes. Unit labor costs, which reflect changes in both hourly compensation and productivity, increased 0.9 percent during the first quarter after declining 0.1 percent during the fourth quarter of 1998.

Real hourly compensation, which takes into account changes in the Consumer Price Index for All Urban Consumers (CPI-U), rose at a 3.5 percent annual rate in the first quarter. This was the seventh consecutive quarter in which real hourly compensation increased 2.0 percent or more (seasonally adjusted annual rates).

The implicit price deflator for business output, which reflects changes in unit labor costs and unit nonlabor payments, increased 0.8 percent in the first quarter of 1999. This increase was larger than any posted during calendar year 1998.

## Nonfarm business

Productivity rose 3.5 percent in nonfarm business during the first quarter of 1999 , reflecting an increase of 4.4 percent in output and a 0.9 percent rise in hours of all persons. All of these increases were smaller than those of the previous quarter, when nonfarm productivity rose 4.3 percent, as output increased 7.4 percent and hours grew 2.9 percent (table 2).

The first-quarter increase in hourly compensation, 4.2 percent, was similar to the 4.0 percent rise reported for the fourth quarter. When the rise in the CPI-U is taken into account, first-quarter gains in real hourly compensation in the first quarter, 2.6 percent, were larger than those of the previous quarter, when they grew 2.2 percent.

The 0.7 percent increase in unit labor costs in the nonfarm business sector in the first quarter followed a 0.4 percent decline in the fourth quarter of 1998. The implicit price deflator for nonfarm business output rose 1.1 percent in the first quarter of 1999.

## Manufacturing

Productivity increased 6.2 percent in manufacturing in the first quarter, as output rose 1.6 percent and hours of all persons fell 4.4 percent (seasonally adjusted annual rates). In durable goods industries, productivity rose sharply, 8.7 percent, during the first quarter. This reflected a 1.8 -percent increase in output during the quarter and a drop of 6.3 percent in hours worked in the industry. In nondurable goods industries, productivity rose 2.8 percent as output rose 1.3 percent and hours decreased 1.5 percent (tables 3,4 , and 5).

Hourly compensation of all manufacturing workers rose 5.1 percent during the first quarter. Hourly compensation increased 5.0 percent in durable goods industries and 5.5 percent in nondurable goods industries. Real hourly compensation, which takes account of changes in consumer prices, rose 3.5 percent for all manufacturing workers.

The 6.2-percent gain in manufacturing productivity in the first quarter of 1999 was more than enough to offset the 5.1 -percent increase in hourly compensation. As a result, unit labor costs fell 1.1 percent during the quarter, the fourth consecutive drop in this measure. In the durable goods sector, unit labor costs dropped 3.4 percent during the quarter. In the smaller nondurable goods sector, gains in hourly compensation exceeded those in labor productivity, and unit labor costs rose 2.6 percent. Unit labor costs in nondurable manufacturing have risen in every quarter since the third quarter of 1996.

Nonfinancial corporations
Preliminary first-quarter 1999 measures of productivity and costs for nonfinancial corporations also were announced today (tables B and 6). Productivity rose 4.2 percent in the first quarter, as output increased 5.7 percent and employee-hours grew 1.5 percent (seasonally adjusted annual rates). Productivity growth in the first quarter was higher than in the previous quarter, when it increased 3.3 percent. Output and hours grew 5.5 and 2.1 percent, respectively, in the fourth quarter. The sector includes 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.

Table B. Nonfinancial corporations: Preliminary first-quarter 1999 productivity and cost measures
(Seasonally adjusted annual rates)

| Period | Productivity | Output | Hours | Hourly <br> compen- <br> sation | Real <br> hourly <br> compen- <br> sation | Unit labor costs | Unit profits | Implicit <br> price <br> deflator |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent change from preceding quarter |  |  |  |  |  |  |  |  |
| 1999 I | 4.2 | 5.7 | 1.5 | 4.7 | 3.2 | 0.5 | 7.7 | 0.2 |
| Percent change from same quarter a year ago |  |  |  |  |  |  |  |  |
| 1999 I | 3.7 | 5.4 | 1.6 | 4.4 | 2.7 | 0.6 | -2.7 | -0.1 |

Hourly compensation increased 4.7 percent during the first quarter, and real hourly compensation rose 3.2 percent when the rise in the CPI-U is taken into account. The increase in real hourly compensation was the largest in the sector since a 3.9 percent increase was posted in the first quarter of 1992.

Unit labor costs for nonfinancial corporations increased 0.5 percent in the first quarter, and unit profits increased 7.7 percent. In the previous quarter, unit labor costs increased 0.8 percent, while unit profits fell 12.9 percent. The implicit price deflator for nonfinancial corporate output rose 0.2 percent in the first quarter after having fallen 0.4 percent one quarter earlier.

Current and previous measures for the first quarter of 1999 for business, nonfarm business, and manufacturing are compared in table C. In the business and nonfarm business sectors, productivity and output increased less, and unit labor costs increased more, than originally reported on May 11, based on information then available. In manufacturing, productivity and output grew more rapidly than originally reported.


Next release date
The next release of Productivity and Costs is scheduled for 10:00 AM EDT, Thursday, Aug. 5, 1999. Preliminary second-quarter measures for business, nonfarm business, and manufacturing will be released at that time. This release will incorporate the annual benchmark revision to the BLS establishment survey data. All employment and hours series will incorporate new information on seasonal patterns.

## 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

| Year <br> and <br> quarter | Output per hour of all persons | Output | Hours <br> of all <br> persons | Compensation per hour (1) | Real <br> compensa- <br> tion per <br> hour (2) | Unit labor costs | Unit nonlabor payments (3) | Implicit <br> price <br> deflator <br> (4) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Indexes 1992=100 |  |  |  |  |  |  |  |  |
| 1997 I | 104.4 | 117.8 | 112.9 | 113.2 | 99.5 | 108.5 | 112.4 | 109.9 |
| II | 104.8 | 119.1 | 113.6 | 113.9 | 99.8 | 108.7 | 113.2 | 110.3 |
| III | 105.8 | 120.6 | 114.0 | 115.0 | 100.3 | 108.8 | 113.8 | 110.6 |
| IV | 106.0 | 121.7 | 114.8 | 116.5 | 101.1 | 109.9 | 112.4 | 110.8 |
| ANNUAL | 105.2 | 119.8 | 113.8 | 114.7 | 100.3 | 109.0 | 112.9 | 110.4 |
| 1998 I | 107.1 | 123.7 | 115.6 | 117.9 | 102.1 | 110.2 | 112.2 | 110.9 |
| II | 107.1 | 124.3 | 116.1 | 119.1 | 102.7 | 111.2 | 110.5 | 111.0 |
| III | 107.8 | 125.5 | 116.4 | 120.2 | 103.2 | 111.5 | 110.4 | 111.1 |
| IV | 109.0 | 127.7 | 117.2 | 121.5 | 103.9 | 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 | r110.1 | r129.2 | 117.3 | r123.0 | 104.8 | r111.7 | r110.8 | 111.4 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 0.7 | 4.9 | 4.2 | 3.5 | 1.0 | 2.8 | 2.1 | 2.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.8 | 4.7 | 2.8 | 2.4 | 1.2 | 0.6 | 2.8 | 1.4 |
|  | III | 3.6 | 4.9 | 1.3 | 4.0 | 2.0 | 0.4 | 2.3 | 1.1 |
|  | IV | 0.8 | 3.6 | 2.7 | 5.2 | 3.3 | 4.4 | -4.8 | 0.9 |
|  | ANNUAL | 1.5 | 4.6 | 3.1 | 3.6 | 1.2 | 2.1 | 1.0 | 1.7 |
| 1998 | I | 4.1 | 7.1 | 2.8 | 5.0 | 3.9 | 0.8 | -0.7 | 0.2 |
|  | II | 0.1 | 1.7 | 1.6 | 4.1 | 2.3 | 4.0 | -6.0 | 0.3 |
|  | III | 2.6 | 4.0 | 1.4 | 3.7 | 2.0 | 1.0 | -0.4 | 0.5 |
|  | IV | 4.6 | 7.3 | 2.6 | 4.4 | 2.7 | -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 | r4.1 | r4.6 | 0.4 | r5. 0 | r3. 5 | r0.9 | r0. 6 | ro. 8 |

Percent change from corresponding quarter of previous year

| 1997 | I | 1.4 | 4.7 | 3.3 | 4.0 | 1.0 | 2.6 | 0.5 | 1.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.0 | 4.3 | 3.3 | 3.2 | 0.9 | 2.2 | 0.9 | 1.8 |
|  | III | 1.8 | 4.9 | 3.0 | 3.3 | 1.0 | 1.4 | 2.0 | 1.6 |
|  | IV | 1.7 | 4.5 | 2.8 | 3.8 | 1.9 | 2.0 | 0.6 | 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 | 4.6 | 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 | 2.9 | 5.0 | 2.1 | 4.3 | 2.7 | 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 | r2.9 | r4.4 | 1.5 | r4.3 | 2.6 | r1. 4 | r-1.2 | r0. 5 |



See footnotes following Table 6.
June 8, 1999
r=revised

Table 2. Nonfarm business sector: Productivity, hourly compensation, unit labor costs, and prices, 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 | Unit nonlabor payments (3) | Implicit price deflator <br> (4) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Indexes 1992=100 |  |  |  |  |  |  |  |  |
| 1997 I | 104.1 | 117.9 | 113.3 | 112.9 | 99.2 | 108.5 | 112.9 | 110.0 |
| II | 104.5 | 119.2 | 114.1 | 113.6 | 99.5 | 108.7 | 113.7 | 110.4 |
| III | 105.4 | 120.6 | 114.5 | 114.6 | 99.9 | 108.8 | 114.6 | 110.8 |
| IV | 105.6 | 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 |
| 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 | 111.4 | 111.5 |
| IV | 108.5 | 127.9 | 117.9 | 120.9 | 103.3 | 111.4 | 111.7 | 111.5 |
| ANNUAL | 107.2 | 125.5 | 117.0 | 119.1 | 102.5 | 111.1 | 112.0 | 111.4 |
| 1999 I | r109.4 | r129.3 | 118.2 | 122.1 | 104.0 | r111.6 | r112.3 | r111.9 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 0.1 | 4.5 | 4.4 | 3.7 | 1.1 | 3.5 | 2.3 | 3.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.6 | 4.5 | 2.8 | 2.4 | 1.2 | 0.7 | 2.8 | 1.5 |
|  | III | 3.4 | 4.8 | 1.3 | 3.8 | 1.8 | 0.3 | 3.1 | 1.4 |
|  | IV | 0.9 | 4.0 | 3.0 | 4.9 | 3.0 | 4.0 | -4.3 | 0.9 |
|  | ANNUAL | 1.2 | 4.5 | 3.2 | 3.5 | 1.2 | 2.3 | 1.3 | 1.9 |
| 1998 | I | 3.6 | 7.0 | 3.3 | 4.7 | 3.7 | 1.1 | -0.3 | 0.6 |
|  | II | 0.3 | 1.7 | 1.4 | 4.1 | 2.2 | 3.7 | -5.7 | 0.2 |
|  | III | 2.5 | 4.0 | 1.4 | 3.9 | 2.3 | 1.4 | -0.5 | 0.7 |
|  | IV | 4.3 | 7.4 | 2.9 | 4.0 | 2.2 | -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 | r3. 5 | r4.4 | 0.9 | r4.2 | r2. 6 | r0.7 | r1.9 | r1.1 |

Percent change from corresponding quarter of previous year

| 1997 | I | 1.0 | 4.6 | 3.5 | 3.9 | 0.9 | 2.9 | 0.5 | 2.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 0.7 | 4.1 | 3.4 | 3.2 | 0.8 | 2.5 | 1.3 | 2.0 |
|  | III | 1.5 | 4.7 | 3.1 | 3.2 | 1.0 | 1.7 | 2.6 | 2.0 |
|  | IV | 1.5 | 4.4 | 2.9 | 3.7 | 1.8 | 2.1 | 0.9 | 1.7 |
| 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 | 4.4 | 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 | 2.7 | 5.0 | 2.3 | 4.2 | 2.6 | 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 | r2. 6 | r4.4 | 1.7 | r4.0 | r2.3 | r1.4 | r-0.8 | r0.6 |


| See footnotes following Table 6. | June $8, ~ 1999$ |
| :--- | :--- |

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

|  | Year <br> and <br> quarter | Output per hour of all persons | Output | Hours <br> of all <br> persons | Compensation per hour (1) | Real compensation per hour (2) | Unit <br> labor <br> costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes 1992=100 |  |  |  |  |  |  |
| 1997 | I | 116.7 | 122.5 | 105.0 | 113.1 | 99.4 | 97.0 |
|  | II | 118.1 | 124.5 | 105.4 | 114.2 | 100.0 | 96.7 |
|  | III | 120.7 | 126.8 | 105.1 | 115.7 | 100.9 | 95.9 |
|  | IV | 121.9 | 129.1 | 105.9 | 118.0 | 102.4 | 96.8 |
|  | ANNUAL | 119.4 | 125.7 | 105.3 | 115.3 | 100.8 | 96.6 |
| 1998 | I | 122.4 | 129.9 | 106.1 | 119.2 | 103.2 | 97.3 |
|  | II | 123.6 | 130.7 | 105.7 | 119.9 | 103.3 | 97.0 |
|  | III | 125.0 | 130.8 | 104.6 | 120.9 | 103.7 | 96.7 |
|  | IV | 126.7 | 132.4 | 104.5 | 121.8 | 104.1 | 96.2 |
|  | ANNUAL | 124.4 | 130.9 | 105.2 | 120.4 | 103.7 | 96.8 |
| 1999 | I | r128.6 | r132.9 | r103.3 | r123.4 | 105.0 | r95.9 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 4.1 | 7.2 | 3.0 | 4.4 | 1.8 | 0.4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 5.0 | 6.6 | 1.5 | 3.7 | 2.4 | -1.3 |
|  | III | 9.0 | 7.7 | -1.2 | 5.7 | 3.7 | -3.1 |
|  | IV | 4.3 | 7.5 | 3.1 | 8.0 | 6.1 | 3.6 |
|  | ANNUAL | 4.9 | 6.5 | 1.6 | 4.2 | 1.8 | -0.7 |
| 1998 | I | 1.6 | 2.4 | 0.8 | 4.0 | 3.0 | 2.4 |
|  | II | 3.9 | 2.5 | -1.4 | 2.6 | 0.8 | -1.3 |
|  | III | 4.7 | 0.4 | -4.1 | 3.2 | 1.5 | -1.5 |
|  | IV | 5.3 | 4.8 | -0.5 | 3.3 | 1.5 | -1.9 |
|  | ANNUAL | 4.2 | 4.2 | -0.1 | 4.5 | 2.9 | 0.2 |
| 1999 | I | r6. 2 | r1. 6 | r-4.4 | r5.1 | r3. 5 | r-1.1 |



Percent change from corresponding quarter of previous year

| 1997 | I | 4.2 | 6.7 | 2.3 | 3.6 | 0.6 | -0.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 4.4 | 5.9 | 1.5 | 3.5 | 1.1 | -0.8 |
|  | III | 5.3 | 6.3 | 1.0 | 4.1 | 1.8 | -1.1 |
|  | IV | 5.6 | 7.3 | 1.6 | 5.4 | 3.5 | -0.1 |
|  | ANNUAL | 4.9 | 6.5 | 1.6 | 4.2 | 1.8 | -0.7 |
| 1998 | I | 4.9 | 6.0 | 1.1 | 5.3 | 3.8 | 0.4 |
|  | II | 4.7 | 5.0 | 0.3 | 5.1 | 3.4 | 0.4 |
|  | III | 3.6 | 3.2 | -0.4 | 4.4 | 2.8 | 0.8 |
|  | IV | 3.9 | 2.5 | -1.3 | 3.3 | 1.7 | -0.6 |
|  | ANNUAL | 4.2 | 4.2 | -0.1 | 4.5 | 2.9 | 0.2 |
| 1999 | I | r5. 0 | r2. 3 | -2.6 | 3.5 | 1.8 | -1.4 |
| $\begin{aligned} & \text { See f } \\ & r=r e v \end{aligned}$ | otnotes <br> ised | Table |  |  | June <br> Sour | f L | istic |

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


Percent change from previous quarter at annual rate(5)

| 1997 | I | 4.6 | 10.4 | 5.5 | 4.0 | 1.5 | -0.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 7.9 | 10.4 | 2.3 | 3.5 | 2.3 | -4.1 |
|  | III | 13.0 | 12.8 | -0.2 | 5.5 | 3.5 | -6.6 |
|  | IV | 7.8 | 10.7 | 2.7 | 10.2 | 8.2 | 2.2 |
|  | ANNUAL | 6.6 | 9.4 | 2.7 | 3.9 | 1.5 | -2.6 |
| 1998 | I | 2.0 | 3.5 | 1.5 | 2.6 | 1.6 | 0.6 |
|  | II | 6.6 | 4.6 | -1.8 | 1.5 | -0.3 | -4.7 |
|  | III | 8.5 | 4.8 | -3.5 | 1.6 | -0.1 | -6.4 |
|  | IV | 8.5 | 8.6 | 0.1 | 3.2 | 1.5 | -4.9 |
|  | ANNUAL | 6.8 | 7.0 | 0.2 | 4.1 | 2.5 | -2.5 |
| 1999 | I | r8.7 | r1. 8 | r-6.3 | r5.0 | r3. 5 | r-3.4 |



Percent change from corresponding quarter of previous year

| 1997 | I | 5.4 | 9.3 | 3.7 | 3.0 | 0.1 | -2.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 5.5 | 8.1 | 2.4 | 2.9 | 0.6 | -2.4 |
|  | III | 7.2 | 9.3 | 2.0 | 3.6 | 1.4 | -3.3 |
|  | IV | 8.3 | 11.1 | 2.5 | 5.8 | 3.9 | -2.3 |
|  | ANNUAL | 6.6 | 9.4 | 2.7 | 3.9 | 1.5 | -2.6 |
| 1998 | I | 7.6 | 9.3 | 1.5 | 5.4 | 3.9 | -2.0 |
|  | II | 7.3 | 7.8 | 0.5 | 4.9 | 3.2 | -2.2 |
|  | III | 6.2 | 5.9 | -0.3 | 3.9 | 2.3 | -2.1 |
|  | IV | 6.4 | 5.4 | -0.9 | 2.2 | 0.7 | -3.9 |
|  | ANNUAL | 6.8 | 7.0 | 0.2 | 4.1 | 2.5 | -2.5 |
| 1999 | I | r8.1 | r4.9 | -2.9 | 2.8 | 1.1 | -4.8 |
| $\begin{aligned} & \text { See f } \\ & r=r e v \end{aligned}$ | otnotes ised | Table |  |  | June <br> Sour | L | istic |

Table 5. Nondurable manufacturing sector: seasonally adjusted


Percent change from previous quarter at annual rate(5)

| 1997 | I | 3.9 | 3.4 | -0.5 | 4.6 | 2.0 | 0.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 1.5 | 1.9 | 0.4 | 3.8 | 2.6 | 2.2 |
|  | III | 4.3 | 1.7 | -2.5 | 5.7 | 3.7 | 1.3 |
|  | IV | -0.1 | 3.6 | 3.7 | 4.6 | 2.7 | 4.7 |
|  | ANNUAL | 3.0 | 3.1 | 0.1 | 4.5 | 2.1 | 1.4 |
| 1998 | I | 1.3 | 1.1 | -0.2 | 6.3 | 5.3 | 5.0 |
|  | II | 0.6 | -0.2 | -0.8 | 4.4 | 2.5 | 3.8 |
|  | III | 0.3 | -4.7 | -5.0 | 5.7 | 4.0 | 5.4 |
|  | IV | 1.5 | 0.2 | -1.3 | 3.3 | 1.6 | 1.8 |
|  | ANNUAL | 1.2 | 0.6 | -0. 5 | 5.1 | 3.5 | 3.9 |
| 1999 | I | r2.8 | r1. 3 | r-1.5 | r5.5 | 3.9 | r2.6 |



Percent change from corresponding quarter of previous year

| 1997 | I | 3.3 | 3.7 | 0.4 | 4.3 | 1.3 | 1.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 3.2 | 3.4 | 0.2 | 4.2 | 1.9 | 1.0 |
|  | III | 3.1 | 2.6 | -0.6 | 4.6 | 2.4 | 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 | 1.7 | 2.1 | 0.3 | 5.1 | 3.6 | 3.3 |
|  | II | 1.5 | 1.5 | 0.0 | 5.3 | 3.6 | 3.7 |
|  | III | 0.5 | -0.1 | -0.6 | 5.2 | 3.6 | 4.7 |
|  | IV | 0.9 | -0.9 | -1.8 | 4.9 | 3.3 | 4.0 |
|  | ANNUAL | 1.2 | 0.6 | -0.5 | 5.1 | 3.5 | 3.9 |
| 1999 | I | r1. 3 | -0.9 | -2.1 | 4.7 | 3.0 | r3. 4 |
| $\begin{aligned} & \text { See f } \\ & r=r e v \end{aligned}$ | otnotes ised | Table |  |  | June <br> Sour | f L | stics |

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


| 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 | 109.6 | 126.2 | 115.2 | 112.5 | 98.5 | 102.6 | 97.1 | 101.2 | 157.3 | 106.3 |
|  | III | 111.1 | 128.7 | 115.9 | 113.6 | 99.0 | 102.3 | 96.4 | 100.7 | 161.7 | 106.3 |
|  | IV | 111.3 | 130.2 | 117.0 | 115.0 | 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 | 117.9 | 116.0 | 100.4 | 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 | 114.1 | 135.4 | 118.6 | 118.5 | 101.7 | 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 | 116.2 | 139.1 | 119.7 | 121.1 | 103.1 | 104.2 | 94.9 | 101.8 | 149.4 | 106.1 |

Percent change from previous quarter at annual rate(5)

| 1997 | I | 1.3 | 5.9 | 4.5 | 3.4 | 0.8 | 2.0 | -0.6 | 1.4 | 3.2 | 1.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | II | 2.3 | 6.3 | 3.9 | 2.5 | 1.3 | 0.2 | -0.6 | 0.0 | 1.7 | 0.2 |
|  | III | 5.6 | 8.2 | 2.5 | 4.1 | 2.2 | -1.3 | -3.1 | -1.8 | 11.8 | 0.0 |
|  | IV | 1.0 | 4.8 | 3.8 | 5.0 | 3.1 | 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 |
|  | III | 4.4 | 6.1 | 1.7 | 4.0 | 2.4 | -0.3 | -0.9 | -0.4 | 3.6 | 0.1 |
|  | IV | 3.3 | 5.5 | 2.1 | 4.2 | 2.4 | 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 | 4.2 | 5.7 | 1.5 | 4.7 | 3.2 | 0.5 | -5.2 | -0.9 | 7.7 | 0.2 |


| 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 | 2.5 | 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 | 3.8 | 2.3 | 0.9 | -1.9 | 0.2 | -2.0 | -0.1 |
|  | II | 3.1 | 5.7 | 2.6 | 4.3 | 2.7 | 1.2 | -1.7 | 0.5 | -4.3 | -0.1 |
|  | III | 2.8 | 5.2 | 2.4 | 4.3 | 2.7 | 1.5 | -1.1 | 0.8 | -6.2 | -0.1 |
|  | IV | 3.4 | 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 | 3.7 | 5.4 | 1.6 | 4.4 | 2.7 | 0.6 | -0.5 | 0.3 | -2.7 | -0.1 |



See footnotes following Table 6.
June 8, 1999
r=revised

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 -1.2 and +1.4 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 fourth quarter of 1998.

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.

