MONTHLY LABOR
REVIEW

U.S. Department of Labor

Bureau of Labor Statistics

Women at work:
A visual essay

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The October *Review*

The Bureau of Labor Statistics issued its first projections of the 2000 labor force and occupational employment structure in 1986. In his evaluation of these and subsequent projections of the labor force at the turn of the century, Howard N Fullerton, Jr., points out that the difference between the projected number in the labor force in 2000 and the actual number of 140.9 million was about 2 million or 1-1/2 percent. Curiously enough, the two potential sources of error—the size of the population and the labor force participation rate—both had larger relative errors, but they offset each other.

Andrew Alpert and Jill Auyer evaluate the closely followed projections of occupational employment that were issued at the same time as the labor force projections. Overall, they state, the projections for 2000 at the major occuptional group level were measurably better than those that had been made for 1995, but those for more fine-grained occupations were not.

Program reports by Patricia Getz and Chris Manning cover planned changes to the Current Employment Statistics program and recent changes in the program's seasonal adjustment procedures, respectively.

The issue is topped off by a visual essay, or chart section, on women in the workforce. This is in the nature of an experiment, and we encourage readers to give us any feedback on how to better execute the concept, topics to consider, and any other reactions.

September 11 related to layoffs

During 2001 and 2002, employers reported 507 extended mass layoff events that were related either directly or indirectly to the terrorist attacks of September 11, 2001. The layoffs involved 145,844 workers in 34 States.

Forty-nine percent of these layoffs and fifty-four percent of the separations occurred in just five States—California, Washington, Nevada, Illinois, and New York. Among those laid off because of the terrorist attacks, 33 percent had been employed in the air transportation industry. An additional 21 percent had been employed in hotels and motels.

An extended mass layoff event is defined as 50 or more initial claims for unemployment insurance benefits from an establishment during a 5-week period, with at least 50 workers separated for more than 30 days. For more information, see *Extended Mass Layoffs in 2002*, BLS report 971, August 2003.

Work fatalities lower in 2002

A total of 5,524 fatal work injuries were recorded in 2002, a decline of 6.6 percent from 2001. The count for 2002 was the lowest recorded by the fatality census, which has been conducted yearly since 1992. In 2001, 5,915 fatal work injuries occurred, excluding the 2,886 work-related fatalities that resulted from the September 11 terrorist attacks, which were tabulated separately.

Fatal work injuries were down in almost every demographic category in 2002—men and women, wage and salary and self-employed workers, and virtually all age groups. Fatal highway incidents were down 3 percent from 2001, but continued to be the most frequent type of fatal workplace event. Construction continued to record the highest number of fatal injuries of any major industry. Additional information is available from "National Census of Fatal Occupational Injuries in 2002," news release USDL 03–488.

Health care benefits

The proportion of employees covered by employer-sponsored medical care plans in private industry has fallen gradually over the last decade. In March 2003, 45 percent of employees had elected medical care coverage, down from 63 percent in 1992–93.

The large majority of employees covered by medical care plans were in plans requiring employee contributions. Employee contributions to medical care premiums averaged $228.98 per month for family coverage and $60.24 for single coverage. Since 1992–93, the average monthly contribution required of employees has risen about 75 percent for both single and family coverage. Learn more in "Employee Benefits in Private Industry, 2003," news release USDL 03–489.

Retirement plans

In March 2003, just under half of private industry employees participated in an employer provided retirement plan. Twenty percent of private industry employees were in defined benefit plans and 40 percent were covered by defined contribution plans. (Some employees participate in both types.)

The overall coverage of retirement plans has held relatively steady for the last few years. The mix of plans, however, has changed. Defined benefit plans cover a smaller portion of workers than they did 10 years ago, while defined contribution plans cover a larger portion. Learn more in "Employee Benefits in Private Industry, 2003," news release USDL 03–489.

International productivity comparison

Of 13 important economies, Korea and Sweden recorded the highest manufacturing productivity gains in 2002. The Netherlands and the United Kingdom recorded the smallest gains. Italy posted the only decline. The United States posted its highest annual growth rate in manufacturing output per hour in 15 years, but the gain, at 6.4 percent, was ranked only fourth among the 13 economies. For more information, see "International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends, 2002," news release USDL 03–469. ☐

Evaluating the BLS labor force projections to 2000

*BLS labor force participation rates were
high and census population projections were
low, resulting in relatively accurate
labor force projections to 2000*

Howard N Fullerton Jr.

The Bureau of Labor Statistics (BLS) has made labor force projections since the late 1950s. Data for these projections are based on age, sex, race and Hispanic origin. Beginning in 1968, BLS has reviewed and evaluated past labor force projections to determine closeness to the actual figures. Such evaluations help both individuals making projections and those using the projections to understand the sources of error and the accuracy of specific components.

BLS projected the 2000 labor force at five different times, roughly 2 years apart. Of these 5 projections, 3 had errors of a million or less; the most extreme errors ranged 1.5 percent above or below the actual 2000 labor force of 140.9 million. The growth rate of the labor force is crucial to the BLS employment projections program. The error in the growth rate varied by a tenth of a percentage point above or below the actual growth rate for the periods over which the projection was made. At the same time, projections of the civilian noninstitutional population were uniformly low. Thus, the labor force participation rate projections were generally too high.

Until recently, BLS projections focused on years divisible by five, so evaluations took place at 5-year intervals. This article is an evaluation of the BLS labor force projections to 2000. Beginning in 1986 and continuing to 1994, BLS prepared five projections either to 2000 or through 2000.[1] This article examines the difference between the projections and the labor force as estimated in the Current Population Survey (CPS) using weights from the 1990 census. The differences, or errors, are calculated by sex for detailed age

groups of the white, black, Asian and other, and Hispanic origin population and labor force. (These earlier projections did not have as much age detail for Hispanics as for the other groups.) Each of the five projections to 2000 had three alternatives: high, moderate, and low. This analysis, for the most part, focuses on the middle or "moderate" growth projection in each series. Where appropriate, the accuracy of the five 2000 projections are compared with evaluations of BLS projections to 1985, 1990, and 1995. Each of the projections is identified by the year from which the projection was made (1986, 1988, 1990, 1992, and 1994).[2]

One of the challenges in evaluating projections is that the estimates for 2000 are not strictly comparable with the data projected. For example, after the 1990 census, extensive changes to the CPS were implemented in 1994. These changes included an adjustment for the undercount, as well as changes in the questions asked. The latter resulted in a greater proportion of women and older persons being counted in the labor force. It is not possible to quantify the effect of these improvements in the survey, so it is not possible to know how much they affect projection accuracy. However, it is clear that projections made before 1994 did not anticipate the effects of the redesign and that projections made after 1994 did not immediately incorporate all the changes.

Another challenge in evaluation is that no one measure of error or quality satisfies all users of the labor force projections. Some use the total labor force—or even the growth rate of the labor force—not needing any of the components. For many users, some part of the labor force is vital,

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for example, youth workers or older workers. Others use the projected labor force participation rates to conduct market research or to project State populations. Another group of users focus on the distribution of the labor force by race and sex.

Still another challenge is that there are two sources of possible error in projecting the labor force: the projected population and the projected labor force participation rates. It would be helpful to know how these series combine to produce the errors in the labor force projections.

This article first examines the error in the aggregate labor force, both in the levels and in the growth rates. It then examines errors in the projection of the population and errors in labor force participation rates. Finally, this article analyzes labor force errors, including issues of distribution and levels among demographic groups.

Aggregate 2000 projections

Evaluation of the aggregate 2000 labor force projections reveals that the overall errors were greatest in 1986 and 1990; except for these 2 years, the errors were less than 1 percent. The following tabulation shows the projections to 2000 (in millions), and the numerical and percent error made in each year the projections were based:

Projection for 2000 made from—	Labor force	Error	
		Millions	Percent
1986	138.8	–2.1	-1.5
1988	141.1	.3	.2
1990	142.9	2.0	1.5
1992	141.8	1.0	.7
1994	140.0	–.9	–.6
Actual:			
2000	140.9	...	...

The error information in the tabulation indicates that the short, versus long time-span does not seem to be a factor in improving the accuracy of labor force projections. A similar conclusion would be inferred from earlier analyses. (The first three projections also were evaluated for 1995. The overall errors were greatest in 1986 and 1990; for the other years, the errors were less than 1 percent. It is interesting to note that the numerical errors are less for 2000 than those for 1995 with the 1988 and 1990 projections. It is possible for a projection to improve with age.)

For some users, the absolute error or the percent error is not relevant, but the error in the growth rate is. The following tabulation displays the historic growth rate for the civilian labor force, the projected annual growth rate, the actual growth rate, and the error in the growth rate. All three rates in a row are measured over the same number of years. The historic rate is calculated over the same number of years *before* the date of the projection, as 2000 is *after* the date of the projection:

Projection for 2000 made in—	Historical rate	Projected rate	Actual rate	Error
1986	2.2	1.2	1.3	–0.1
1988	2.0	1.2	1.2	.0
1990	1.6	1.3	1.1	.1
1992	1.5	1.3	1.2	.1
1994	1.2	1.1	1.2	–.1

The error in the annual growth rate from 1988 was actually 0.02 percent. For four other projections, the error in the annual growth rate was either –0.1 or 0.1. For individuals using the projections to forecast either employment or economic growth, this level of error would be minor. For growth rates, BLS projected variously that the rate of growth would slow significantly from past rates of growth (by a full percentage point in the 1986 projection) to not much different from past rates of growth (by a tenth of a point in the 1994 projection). Except for the 1994 projection, when BLS projected a decrease in the growth rate and the labor force continued to grow at past rates, the change was in the correct direction and the error in the growth rate was less than the projected change in the growth rate.

Population projections

BLS labor force projections are prepared using the incidence method: the labor force participation rates by age, sex, race, or Hispanic origin are multiplied by comparable projections of the population, prepared by the Census Bureau.[3] BLS adjusts the resident population, provided by the Census Bureau, to get figures of the civilian, noninstitutional population. Although errors were made in making this adjustment, they are not considered to be sufficiently large to incorporate into this analysis. Some sense of the size of this type of error may be garnered by seeing how the errors in the adjusted population varies for the first two labor force projections. For the projection from 1994, the projected population also was adjusted for the 1990 undercount, as the CPS itself was so adjusted.

Population projections have three components: births, deaths, and net immigration. Each of these may be a source of error, as well as the initial population from which the projection is made. Because these projections spanned a period of less than 16 years, errors in births did not affect the size or composition of the labor force. Although it is true that there were fewer deaths than projected, most of those extended lives occurred at older ages when persons are less likely to be in the labor force. The source of the discrepancy must be net immigration either over the projection or as part of the estimate of the base year population. If so, then errors would be larger for Hispanics and Asian and others. The Census Bureau prepares its own evaluation of their population projections; this article examines only the population projections as they affect the size and composition of the labor force.[4]

Error for the population projections. For the past decade, population growth has accounted for more labor force growth than has the labor force participation rate change. Thus, the accuracy of population projections should be crucial to the accuracy of the labor force projections. The following tabulation shows the 2000 projections for the civilian, noninstitutional population aged 16, and the errors associated with the total population projections:

Projections for 2000 made in—	Total	Error	
		Millions	*Percent*
1986	204.7	–5.0	–2.4
1988	204.6	–5.1	–2.4
1990	208.0	–1.7	–.8
1992	208.0	–1.7	–.8
1994	208.8	–.9	–.4
Actual			
2000	209.7	...	...

Unlike the labor force projection, all the population projections were low. Unlike the labor force projections, the population projections show steady improvement. The difference between the percent errors in the first tabulation (page 4) and this one indicate that BLS made offsetting errors in labor force participation rates, reducing the errors in the aggregate labor force. The following tabulation presents hypothetical labor force projections using the projected population and the actual 2000 labor force participation rates:

Projections for 2000 made in—	Total (in millions)	Error	Difference from actual error	Percent error
1986	136.9	–3.9	–1.8	–2.8
1988	136.8	–4.0	–4.3	–2.9
1990	139.5	–1.3	–3.4	–1.0
1992	139.2	–1.6	–2.6	–1.9
1994	140.4	–.5	.4	–.3

The numerical errors made in this hypothetical projection are less than those for the population (previous tabulation). Except for the projection from 1994, these projections would have a larger error than the projections that were made: the labor force would have been even smaller. The percent errors for these hypothetical labor force projections were different from those for the population projection and, except for 1994, the percent errors for the hypothetical labor force projections were greater.

Errors by sex, race and Hispanic origin, and age in the population projections. To trace errors in the population projection, the mean absolute percent error (hereinafter referred to as "mean error") may be calculated at differing levels of aggregation. Table 1 provides the mean errors for several of the various aggregations (in percent). The mean error for aggregate population is the absolute value of the percent error. The mean error for men and women considered separately averages to the aggregate mean error, so they are not displayed in this table. When mean errors are calculated for the three race and one Hispanic origin groups, they are larger than the aggregate error, but the relative standing of the various projections does not change. The errors made when projecting by race offset each other. Therefore, the projection with all race/ethnicity groups separated out is more accurate than that implied by the error associated with any single race/ethnicity grouping. When sex and race are considered together, the mean errors are lower than the error associated with race alone for the first two projections and about the same as those for the last three projections of the population. Finally, accounting for age, sex, and race results in a larger aggregate error than any of the other groupings considered. Examination of the detailed projections does not indicate that using more aggregated age groups would have increased the accuracy of the overall projections.

The population of both men and women were underprojected. A closer examination reveals that the difference was greater for men than for women through the projection from 1990. The first two projections had markedly larger projection errors than the last three. That the error was larger for men than for women reflects the greater tendency for men to be undocumented immigrants, thus, it is likely that the errors attributed to underestimates of undocumented workers decreased because population projection errors reduced as time passed. All five projections correctly projected that there would be substantially more women than men in the 16 and older population.

For all five labor force projections (three population projections), the size of the white population was underprojected. As whites made up 84 percent of the population in 2000, they should also account for most of the error. Generally, however, it is easier to measure and project large groups. For all the projections, the errors for the white labor force projections were less than 84 percent of the error. Except for the projection from 1990, whites accounted for more than half of the projection error.

Two population groups would be expected to be hard to project: Asians and others and Hispanics. Both groups have high immigration, are fairly heterogeneous, and are relatively small. Asians and others accounted for 5 percent of the 16 and older population in 2000, but for each of the projections, the first population projection, they accounted for 27 percent of the error. For the next population projection, their numerical error slightly exceeded the error for whites. For the fifth population projection, the errors were much smaller, accounting for 16 percent of error. However, their projected population was higher than actual, unlike the other three groups.

Hispanics may be of any race, however, more than 90 percent are white. Thus, errors in projecting the numbers of Hispanics

Table 1. Mean errors for various aggregations, projections for 2000 made in 1986–94

[In percent]

Category	Projection for 2000 made in–				
	1986	1988	1990	1992	1994
Aggregate error	2.4	2.4	0.8	0.8	0.4
Mean error for—					
Race	6.4	6.4	4.3	3.5	1.5
Sex and race	5.5	5.6	4.2	3.4	1.5
Sex, race, and age	7.6	7.7	6.3	4.1	3.6

carry into the number of whites. It should be no surprise that the Hispanic population is difficult to project accurately because Hispanics have high immigration rates and it is estimated they are a large component of undocumented immigration. Hispanics accounted for 11 percent of the 16 and older population in 2000. Errors in their population projection accounted for 38 percent of the error from 1986 and 37 percent of the projections from 1988. For the labor force projection from 1990, which used the same population projection for Hispanics as the previous two, the error was the same size (1.9 million low), but it now exceeded the total population error (1.7 million low). This projection was not based on the 1990 census. The 1992 and 1994 projections were the relative size of the projection errors decreased. Even so, the error in the number of Hispanics exceeded that for whites in the projection from 1992. The dynamic changes in the Hispanic population are reflected in the difficulties of projecting this group.

For the first two population projections (first three labor force projections), the black population had relatively small errors—less than their share of the population, which is 12 percent. This population group, though growing faster than the overall population, has demonstrated a consistent path of growth. The black population was the most accurately projected group in the projections from 1994. For the projection from 1992 the error was much larger, and accounted for 30 percent of total error. For the projection from 1994, although the size of the numerical error was smallest of the five (because the total error was by far the smallest), the black's share of the projection error was larger than their share of the population.

Errors by age, sex, and race or Hispanic origin in the population projections. For each of the five population projections, there are 108 errors to examine at the level of age, sex, race or Hispanic origin. Table 2 provides summary information about the depth and dispersion of the errors, in thousands. It indicates that the population was underprojected. The middle, half-way points, or medians are negative. For the first population projection, three-quarters of the population errors were negative. It is apparent from the three lines of error

dispersion that the more recent projections had a smaller range of errors. Indeed, the ranges of errors dropped by a third. The decrease in dispersion is larger that the change in the medians of the errors.

Which groups had the lowest underprojection? For the projections from 1986 through 1992, it was white men ages 20 to 24. For the projection from 1994, it was Hispanic women ages 25 to 34. (The error for this group of women was always in the lowest one-eighth.) White men ages 20 to 24 consist of a large group with a large absolute error, but their relative errors are smaller. The relative errors for Hispanic women ages 25 to 34 are larger than those for white men ages 20 to 24. Hispanic men ages 20 to 24 also have large errors—absolute and relative—for the 1986 population projections. Nevertheless, errors in projecting the size of the 20- to-24 and 25- to-34-year old Hispanic population also affected projecting the size of the white population of the same age.

Which groups were the most overprojected? This varied by year. For the 1986 population projection, it was white men ages 50 to 54. For the 1988 population projection, it was white men ages 30 to 34, followed by white men, 35 to 39. For the 1994 projection, Asian and other women ages 50 to 54 were the most overprojected group. Again, white men are a large group and the source of a large error. Also for the 1994 projection, Asian and others were overprojected as a group. White men's age groups were over- and underprojected, by large amounts, but the population of older white men was uniformly overprojected.

At this point, it is clear that the population projections were too low; given that the aggregate labor force projections were much more accurate, it is easy to infer that the projected labor force participation rates must be too high. It is not clear what effect the errors in the population projections had on the distribution of the labor force by race or sex. That question must be answered after examining the labor force participation rate projections.

Table 2. Summary of depth and dispersion of errors in projections for 2000 made in 1986–94

[In thousands]

Category	1986	1988	1990	1992	1994
	Depth				
Lowest	−965	−958	−622	−495	−273
Lowest one-eighth	−167	−167	−114	−106	−53
Lowest quarter	−100	−108	−56	−44	−25
Half (median)	−36	−36	−22	−6	−10
Highest quarters	−1	−1	23	16	8
Highest eighth	41	41	53	33	24
Highest	136	137	226	195	75
	Dispersion				
Inner 50 percent	100	107	78	59	33
Inner 75 percent	208	208	167	139	76
Range	1,101	1,095	848	691	348

Labor force participation rates

Aggregate measures of labor force participation. What BLS brings to the labor force projection process is its projection of labor force participation rates. Although the population projections currently account for most of projected labor force change, study of the errors made in projecting the labor force participation rates is important also.

Four of the five labor force participation rate projections had the aggregate labor force participation higher than the actual. As table 3 indicates, the aggregate labor force rate has yet to reach 68 percent, though three of the projections anticipated that this would happen by 2000. Given that 2000 was the last year in a sequence of high economic growth, it is significant that the projected labor force rates were higher than the actual. From the projection made in 1988 up to 1994 the error in the aggregate labor force participation rate decreased for each projection. However, the 1986 projection was the second most accurate. Comparing women and men, it is clear that men's rates were more accurately projected than those of women. All the projected participation rates for women were high. As the labor force rates of men change more slowly than those of women, it is easier to accurately project their labor force participation rate. This slower rate of change for male rates may be ending at the older ages. A variety of incentives exist that could result in higher labor force participation rates for retirement age men. These include a change in the normal retirement age under Social Security, and a switch from defined benefit to defined contribution retirement plans.

Sex and race or Hispanic origin. Mean absolute percent errors may be calculated also for the labor force participation rates. For the aggregate error, they are the absolute value of the relative errors. (See table 4.) Errors by gender provide little additional information beyond that for aggregate error—the greatest difference from the aggregate error occurs with the projection from 1994, which had the rate for women too high and that for men too low—because there is no reward for

| Table 3. | Projections of the 2000 labor force participation rate, by sex and percentage point errors, 1986–1994, and actual |

Projections for 2000 made in—	Total		Men		Women	
	Percent	Error (in percent-age points)	Percent	Error (in percent-age points)	Percent	Error (in percent-age points)
1986	67.8	0.6	74.7	0.0	61.5	1.3
1988	69.0	1.8	75.9	1.2	62.6	2.4
1990	68.7	1.5	76.0	1.3	62.0	1.8
1992	68.2	1.0	75.3	.6	61.6	1.4
1994	67.0	−.2	74.0	−.7	60.6	.4
Actual	67.2	...	74.7	...	60.2	...

| Table 4. | Mean errors for various aggregations of the projections for 2000, by sex, race, and age |

[In percent]

Category	Projections for 2000 made in—				
	1986	1988	1990	1992	1994
Aggregate error	0.9	2.7	2.3	1.5	0.3
Mean error for–					
Sex	1.1	2.8	2.4	1.6	.8
Race	1.2	1.9	.9	.8	3.1
Sex and race	4.4	5.9	2.8	2.1	3.0
Sex, race, and age ..	14.5	9.8	5.7	6.2	5.1

offsetting errors. The mean absolute percent error for race indicates that the worst projection was the one from 1994. Labor force rates for the four race and Hispanic origin groups shows that the percentage point error for 1994 was zero for whites—their best projection—but that the projection from 1994 was by far the worst for blacks, Asians and others, and Hispanics. The mean absolute percent errors were not weighted by size of group. Whites were 83 percent of the 2000 labor force, so that for weighted measures of error, the most accurate year for the overall labor force would be the most accurate year for whites. For the mean absolute percent error by race and gender, the projection from 1988 was least accurate. It was not the case that a good projection for men implied a good projection for women, but certainly the converse was not true. (The correlation of men and women's errors is 0.33.) When the age structure is also considered, then the projection from 1986 had the greatest mean absolute percent error. The projection for this year also had the greatest numerical error. Both the population and the labor force participation projections contributed to this error in the 1986 projection, with the population too low and the participation too high.

The labor force participation rate projections from 1994 had the lowest error for whites, but had the worst errors for other race groups. Because whites make up the majority of the labor force, the 1994 projection had the lowest error in labor force participation rates. By contrast, the 1986 projection had large errors in both the population and labor force participation rate projections.

Age, sex, and race or Hispanic origin. Overall, there are 108 labor force participation rate projection errors to examine. Table 5 summarizes the cumulative errors for those categories, ranked from most negative to most positive. The aggregate labor force participation rates were too high in 4 of the 5 projections; the median of the errors of the age-sex-race or Hispanic origin participation rates were closer to zero than the errors of the aggregate, with the exception of the most recent projection. If the thesis is that the labor force participation rates were too high to offset population projections that were too low, then 4 projections of the 5 fit that mold. This information is also

available in chart 1 (top panel), which has box-and-whisker plots for the five projections. (See box on page 10.)

One desirable characteristic of the projections as a sequence would be that the dispersion of the errors would be less for the more recent projections. The measures of dispersion in table 5 (bottom) and chart 1 (top panel) indicate that this was taking place until the 1994 projection. That the most accurate projection is not the most recent made seems to be a characteristic of labor force projections, this also happened with the projections to 1990 and 1995.

Which groups had the worst labor force participation rate projection error? The following tabulation illustrates the answer to this question for each projection.

Projection from—	Most overprojected	Most underprojected
1986	Black men 18 and 19	Asian and other men 60 and 61
1988	Black men 18 and 19	Asian and other men 65 to 69
1990	Asian and other women 16 and 17	Hispanic women 45 to 54
1992	Black men 60 and 61	Black women 25 to 29
1994	Asian and other women 50 to 54	Hispanic men 60 to 64

The pattern here implies that small groups are hard to project. For half the groups, 2 years of errors occur. With the exception of black women 25 to 29, the remaining groups are small.

"Were some age groups harder to project than others?" To examine this question, chart 1 (middle panel) presents box-and-whisker plots of the errors by age-sex-race/Hispanic origin groups. (We have six projection errors for white women ages 20 to 24, six for black women of the same age, and so on.) Although the median of the errors by projection year are near zero, except for the 1994 projection, the data by age indicate that there was significant variation in the errors by age. For the 25- to-54-age group, which exhibits the highest labor

force participation rates, the median of the errors were either high or near zero, giving the source of the high aggregate labor force participation rates. For the older ages, the median of the errors was below zero. For these age groups for which there is now great interest in their pattern of labor force participation, there was a consistent pattern of labor force participation projections that were too low. Labor force participation rates for older men increased from 1985 to 1990, then decreased until 1994 and have increased since then. These changes did not start at the same time for all groups of older men. Starting with the 1996 labor force projections, BLS has projected this change in trend. (It was among the first to do so.)

According to the box-and-whisker plots of labor force participation rates by age group (chart 1, middle panel), it is clear that the age groups younger than 60 were overprojected. The labor force participation rates for groups older than 60 were uniformly underprojected. Some age groups were harder to project than others. The two age groups with the largest boxes were those 18 and 19 and 65 to 69. The latter group had the most extreme errors. However, the extreme errors for those 65 to 69 were high— for Asian and other men in the 1986 projection and Asian and other women in the 1988 projection.

Labor force

At this point, it is clear that the labor force participation rate projections were, as a group, too high. However, the aggregate labor force was fairly accurately projected. As new labor force projections were reviewed within BLS, the reviewers have an independent estimate of the aggregate labor force and employment, which contributes to a more accurate overall labor force. In the face of low population projections, labor force participation rates were increased, resulting in an accurate projection of the labor force.

Sex and race or Hispanic origin. Historically, BLS labor force projections have been characterized as having projected labor force levels too high for men and too low for women. However, for 3 of the 5 projections in this evaluation, the projected labor force for men was lower than the actual. For women, all of the projected labor force levels were higher than the actual. Thus, the traditional view of BLS labor force projections is now wrong. For the two projections with the largest overall error, the male labor force was off by 2.2 million in 1986; women's labor force was off by 1.4 million in 1990. In the projection with least overall error, men and women's errors offset. In any case, there does not seem to be a pattern of projecting labor force better for one gender than the other.

Table 5.	Summary of errors in the components of the labor force participation rates, for 5 years of the 2000 projection				
Error	1986	1988	1990	1992	1994
Depth					
Lowest	−16.9	−9.8	−8.5	−9.0	−10.6
Lowest eighth	−5.8	−3.5	−2.6	−3.4	−4.9
Lowest quarter	−3.1	−2.1	−1.8	−1.3	−3.6
Half (median)	−.1	.6	.6	.4	−1.6
Highest quarter	3.1	3.5	2.3	1.8	.3
Highest eighth	6.6	6.1	4.3	3.4	1.7
Highest	12.4	11.1	8.3	7.6	7.1
Dispersion					
Inner 50 percent	6.1	5.6	4.1	3.1	3.9

Chart 1. Errors in 2000 for participation rates and labor force, by selected categories

Participation rate error by projection

Participation rate error by age group

Labor force error by age group

<div style="border:1px solid black; padding:1em;">
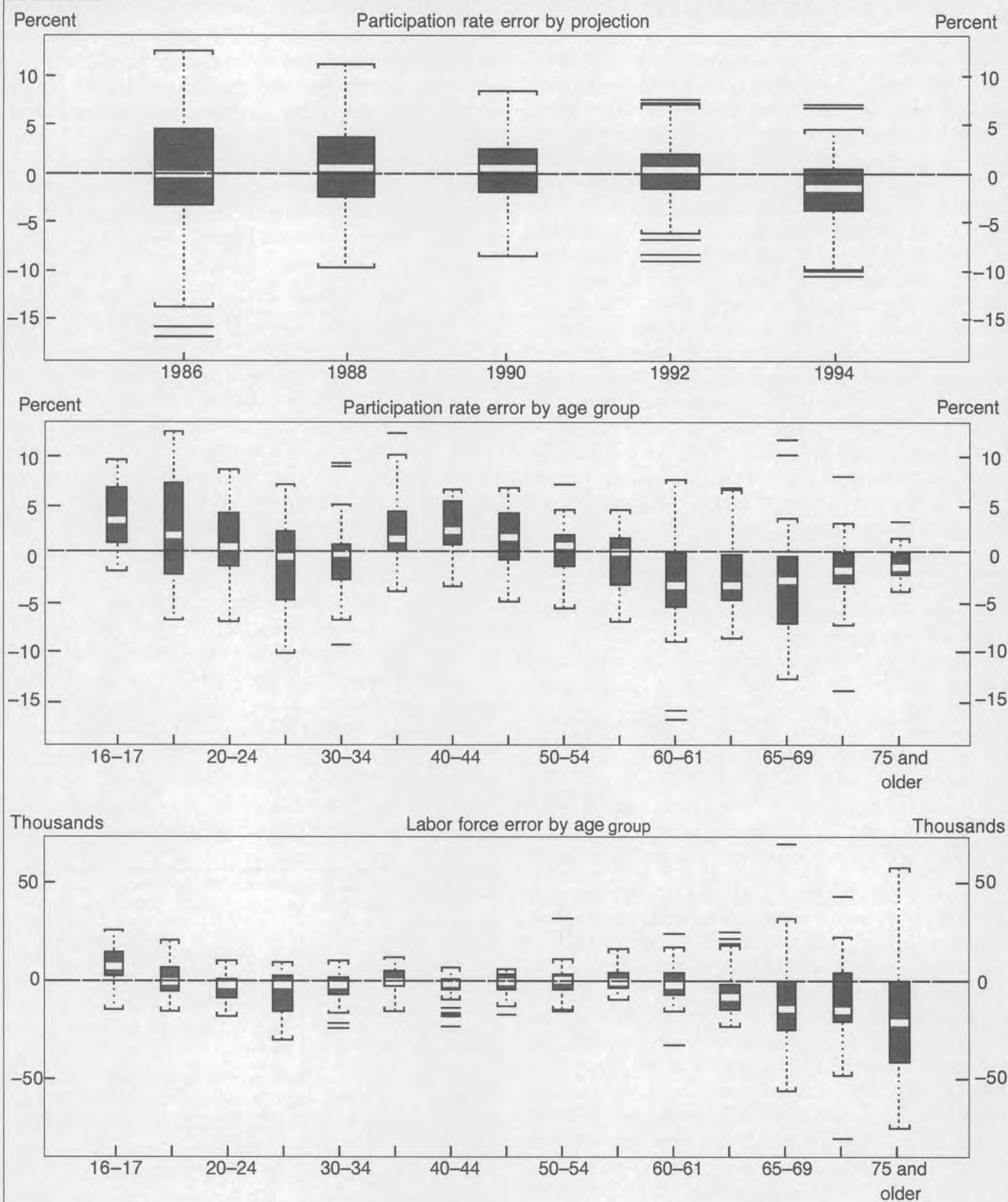
Box-and-whisker plots

"A boxplot is a way to look at the overall shape of a set of data. The central box shows the data between the 'hinges' (roughly quartiles), with the median respresented by a line. 'Whiskers' go out to the extremes of the data, and very extreme points are shown by themselves." See W. N. Venables and B. D. Ripley, *Modern Applied Statistics with S-PLUS*, 2nd edition (New York, Springer, 1997), p.172.

The goal of box and whisker plotting is to examine distributions; in this case, the distribution of errors. The errors are centered on zero (that is, they have a median near zero). We would like them to be tightly distributed around zero. That means that the two quartiles would be near zero and the remaining errors would be near the upper and lower quartiles (the vertical lines would be short). We would like no outliers, however, they do exist in this analysis, and provide an interesting discussion.

The heavy white line in each box is the median. The upper and lower edges of the box are the quartiles or hinges. The horizontal lines above and below the box indicate the maximum and minimum values.

</div>

The following tabulation shows mean absolute percent errors for various aggregations:

	Projection for 2000 made in—				
	1986	*1988*	*1990*	*1992*	*1994*
Aggregate error	1.5	0.2	1.5	0.7	0.6
Mean absolute percent errors for—					
Sex	1.4	1.5	1.5	.7	.8
Race	6.2	5.9	4.7	3.9	3.4
Sex and race	6.3	5.6	5.5	4.0	4.1
Sex, race, and age	15.4	12.3	9.1	7.5	8.5

The first row of the tabulation substantiates the information from this section's overview. Once gender is taken into account, the 1988 projection error increases. The 1988 projection had a highly accurate projection of the level, but the labor force level was too low for men and too high for women. The accuracy of overall projections is the result of offsetting errors. The other four projections did not have large offsetting errors by sex. The more detailed measures reveal where the errors were made. Thus, taking race and Hispanic origin into account increases the error because less of the offset is concealed. In the 1988 and 1990 projections, the projected white labor force was too large, compared with those of the black and Asian and other groups, for which the labor force was projected too low. The 1994 projection accurately projected the white labor force, but that for blacks was almost a million low. For all the projections, Hispanics were underprojected, by substantial amounts.

Taking race and gender into account, the error in the 1994 projection rises because the accuracy of the white labor force level is due to sizable offsetting errors in the labor force levels of men and women. Once age, sex, race (and Hispanic origin) are taken into account, the errors increase, as offsetting errors of having some ages too high and others too low are taken into account. This shows the pattern of error decreasing from the 1986 projection to the 1992 projection, then increasing for the 1994 projection. However, the accuracy of the overall labor force was obtained through offsetting errors.

Age, sex, or race and Hispanic origin. Table 6 summarizes the cumulative errors for 108 categories of the labor force, ranked from most negative to most positive. The median of the individual errors are all small, but negative. The low quartiles or hinges are all negative and the high hinges are all positive—the errors are grouped around zero. The innerquartile range decreased from the 1986 projection to the 1992 projection, before a slight increase for the 1994 projection. However, the range and the inner 75 percent show a decrease through 1994. The errors for the 1994 projection were systematic, but not large.

The white population and labor force is significantly larger than the black, Hispanic, or Asian and other population and labor forces. Thus, the largest numerical errors are in white groups. For the 1986 through 1992 projections, the group with the largest overprojection was white women ages 35 to 39. For the 1994 projection, white women ages 40 to 44 had the greatest error. By comparison, for the first four projections, white men ages 20 to 24 were underprojected the most. For the 1994 projection, Hispanic men ages 25 to 34 were the group most underprojected.

The older labor force had the greatest relative errors. The labor force for these ages is small, so a modest numerical error

Table 6.	Summary of errors in the components of the labor force for 5 years of the 2000 projection				
[In thousands]					
Error	1986	1988	1990	1992	1994
	Depth				
Lowest	−518	−543	−372	−326	−290
Lowest eighth	−244	−140	−118	−97	−100
Lowest quarter	−93	−75	−62	−43	−59
Half (median)	−16	−14	−4	−6	−13
Highest quarter	0	9	21	13	4
Highest eighth	39	55	97	61	26
Highest	712	772	563	765	230
	Dispersion				
Inner 50 percent	94	84	84	55	64
Inner 75 percent	282	195	215	158	126
Range	1,230	1,315	935	1,091	520

yields a large relative error. (See chart 1, bottom panel for relative errors by age group.) For those age groups with high labor force participation, the relative errors had a median of zero and the errors were closely grouped around the median. The labor force participation rate projections at the older ages, which were too low for older men, had negative median errors and wide dispersion around the median. Thus, the greatest errors in the labor force were at ages with modest impact on the size of the labor force.[5]

Distribution

For some users, the size and growth rate of the labor force is unimportant; the concern is for the distribution between men and women, among the various race and ethnic groups, or among the various age groups. The text tabulation (page 10) presents the index of dissimilarity comparing the projections to the 2000 actual, by various levels of aggregation.

	Projection for 2000 made in—				
Index of dissimilarity by—	*1986*	*1988*	*1990*	*1992*	*1994*
Sex	0.7	0.8	0.3	0.3	0.4
Race	.6	.8	.7	.5	.6
Race and sex	1.3	1.5	1.0	.9	.9
Race, sex, and age	3.3	2.6	2.0	1.9	1.3

The index of dissimilarity may be interpreted as the amount the one distribution has to change to be like another. In these cases, it records how much the projected distribution has to change to be like the actual 2000 labor force distribution. Thus, the 1986 projection would have had to change by 0.7 of a percentage point to reflect the actual distribution of the labor force between men and women. The projections were also quite good in reflecting the actual composition of the labor force by race. Taking race and gender into account, there is a higher index of dissimilarity (or greater error) than when considering race or only sex. However, in the worst year, 1988, the distribution would have only needed to change by 1.5 percentage points. Once race, sex, and age are all taken into account, the indexes increase again; however, they improve with time, as the worst year, 1986, is 3.3 percent and the best year, 1994, is 1.3 percent. Even though the older labor force was underprojected, the age composition of the labor force was fairly well projected.

Alternatives and confidence intervals

For each of the five labor force projections, BLS prepared three alternatives (low moderate and high). This analysis focuses on the middle or moderate alternative because BLS presents the middle alternative in its presentations. However, a user could

Table 7.	High and low alternatives of the labor force for 5 years of the 2000 projection			
	High alternative		**Low alternative**	
Projection for 2000 made in—	Labor force (thousands)	Participation rate	Labor force (thousands)	Participation rate
1986	141.1	68.0	134.5	65.7
1988	146.8	70.7	137.7	67.3
1990	156.2	71.5	141.8	66.1
1992	156.5	70.1	147.3	67.3
1994	153.4	68.7	143.6	65.5
Actual				
1994	140.9	67.2	140.9	67.2

reasonably expect the 2000 labor force to be between the low and high alternatives.

Unlike projections for earlier years, some of these alternative projections did not cover the actual. (See table 7.) Only the projections prepared in 1986 bracketed or covered both the actual 2000 labor force and the participation rate. Given the characteristics of the projections with the labor force levels more accurately projected than the labor force participation rates, one would expect that the labor force projections would cover the actual and the labor force participation rates would not. For three of the projections, the low alternative labor force was higher than the 2000 actual. This happened for only two of the labor force participation rate projections. The 1992 projection was the only one to have neither the labor force or participation rate confidence interval cover the actual. Every possible combination of covering and not covering occurred among the five projections. Evaluations of projections to earlier years indicated that the actual labor force projection was covered by the alternatives.

THE PROCESS OF REVIEWING labor force projections helps provide a picture of the strengths and weaknesses of the BLS labor force projections model. Over time, this allows for improvements in that model. Faced with population projections that were too low, BLS made subtle adjustments in the labor force participation rate for the labor force ages 30 to 64, resulting in somewhat high aggregate labor force participation rates. For users of the labor force projections who needed projections of the size of the total labor force or of its growth rate, this projection would have served them well. For users of projected labor force participation rates, the problem was with projections for older workers, whose rates were too low. □

Notes

[1] Howard N Fullerton, Jr., "Labor force projections: 1986 to 2000," *Monthly Labor Review*, September 1987, pp. 19–29. Reprinted with additional detail in *Projections 2000*, BLS Bulletin 2302, March 1988. Howard N Fullerton, Jr., "New labor force projections, spanning 1988 to 2000," *Monthly Labor Review*, November 1989, pp. 3–12.

Reprinted with additional detail in *Outlook 2000*, BLS Bulletin 2352, April 1990. Howard N Fullerton, Jr., "Labor force projections: the baby boom moves on," *Monthly Labor Review*, November 1991, pp. 31–44. Reprinted with additional detail in *Outlook 1990–2005*, BLS Bulletin 2402, May 1992. Howard N Fullerton, Jr., "Another look at the labor force," *Monthly Labor Review*, November 1993, pp. 31–40. Reprinted with additional detail in *The American Work Force: 1992–2005*, BLS Bulletin 2452, April 1994. Howard N Fullerton, Jr., "The 2005 labor force: growing, but slowly," *Monthly Labor Review*, November 1995, pp. 29–44.

[2] Howard N Fullerton, Jr., "Evaluating the 1995 BLS labor force projections," *Proceedings of the Section on Government Statistics and Section on Social Statistics* (Alexandria, VA, American Statistical Association, 1997), pp. 394–99; Howard N, Fullerton, Jr., "An evaluation of labor force projections to 1990," *Monthly Labor Review*, August 1992, pp. 3–14; Howard N, Fullerton, Jr., "An evaluation of labor force projections to 1985," *Monthly Labor Review*, November 1988, pp. 7–17; Howard N, Fullerton, Jr., "How accurate were the 1980 labor force projections?," *Monthly Labor Review*, July 1982, pp. 15–21; Paul M. Ryscavage, "BLS labor force projections: a review of methods and results," *Monthly Labor Review*, April 1979, pp. 15–22;

and Marc Rosenblum, "On the accuracy of labor force projections," *Monthly Labor Review*, October 1972, pp. 22–29.

[3] Projections of the Population of the United States by Age, Sex and Race: 1987 to 2080, *Current Population Reports*, Series P–25, no. 1018 (Bureau of the Census, 1989). Projections of the Population of the United States by Age, Sex and Race: 1993 to 2050, *Current Population Reports*, Series P–25, No. 1104 (Bureau of the Census, 1993). Projections of the Population of the United States by Age, Sex and Race: 1995 to 2050, *Current Population Reports*, Series P–25, no. 1130 (Bureau of the Census, 1995).

[4] Tammany Mulder, "Accuracy of the U.S. Census Bureau National Population Projections and Their Respective Components of Change," Population Division Working Paper No. 50 (Bureau of the Census, forthcoming).

[5] This is confirmed if a box and whisker chart of the errors in thousands is examined. If a user were particularly interested in the labor force participation of older workers or the size of their labor force, this set of projections would have been relatively unhelpful.

Evaluating the BLS 1988–2000 employment projections

BLS employment projections for the period from 1988 to 2000 were borne out in most broad occupations; the chief source of error was the projection of changes in staffing patterns, attributable primarily to the conservative nature of the projections

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The BLS occupational employment projections developed for the 1988–2000 period were reasonably accurate, correctly capturing most general occupational trends. As with previous evaluations, however, the inaccuracies that surfaced reflected a conservative tilt to the projections. The primary source of error was the projection of changes in the utilization of occupations by industry, or staffing patterns, rather than the projections of industry employment themselves.

Evaluation measures

In the study presented in this article, several different measures were used to assess the accuracy of the projections for both major occupational groups and detailed occupations. Among the various measures, the most traditional involved comparing actual with projected employment in terms of percent change, numerical growth, and share of employment growth between 1988 and 2000. An absolute percent error—the absolute value of the numerical error divided by actual employment in the target year of the projection—was calculated for all major groups and detailed occupations. The actual and projected *directions* of change also were compared,

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to see whether employment in occupations that were projected to grow or decline actually did so.[1] Finally, because the 1988–2000 occupational employment projections were the basis for job outlook information presented in the 1990–91 edition of the *Occupational Outlook Handbook*, the accuracy of the projections was assessed in terms of the assumptions made about the factors affecting employment growth or decline.

Major occupational groups

Total employment grew by 21.7 percent between 1988 and 2000, slightly faster than the 15.3 percent that had been projected. The difference is largely the result of an under-projection of total employment by about 7.6 million. The direction of the employment change was anticipated correctly for all but one of the nine major groups. Employment in eight of the nine groups was underestimated. (See table 1.)

All but three of the major groups had absolute percent errors of less than 10 percent. The category of agriculture, forestry, fishing,

| Table 1. | Employment, by major occupational group, 1988 actual and 2000 projected and actual |

[Numbers in thousands]

| Occupation | Total employment | | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, 2000[1] | Share of total job growth, 1988–2000 (percent) | |
| | Projected 2000 | | | Actual 2000 | | | | | | | |
	1988	Level	Share (percent)	Level	Share (percent)	Projected	Actual			Projected	Actual
Total, all occupations	118,104	136,211	100.0	143,786	100.0	15.3	21.7	−7,575	5.3	100.0	100.0
Executive, administrative, and managerial	12,297	15,006	11.0	14,995	10.4	22.0	21.9	11	.1	15.0	10.5
Professional specialty	14,568	18,070	13.3	20,360	14.2	24.0	39.8	−2,290	11.2	19.3	22.5
Technicians and related support ...	3,919	5,146	3.8	5,202	3.6	31.3	32.8	−56	1.1	6.8	5.0
Marketing and sales	12,109	14,535	10.7	15,485	10.8	20.0	27.9	−950	6.1	13.4	13.1
Administrative support, including clerical	22,080	24,698	18.1	25,564	17.8	11.9	15.8	−865	3.4	14.5	13.6
Service	18,479	22,651	16.6	23,160	16.1	22.6	25.3	−509	2.2	23.0	18.2
Agriculture, foresty, fishing, and related	3,503	3,334	2.4	3,998	2.8	−4.8	14.1	−664	16.6	−.9	1.9
Precision production, craft, and repair	14,427	15,866	11.6	16,022	11.1	10.0	11.1	−156	1.0	7.9	6.2
Operators, fabricators, and laborers	16,721	16,904	12.4	19,000	13.2	1.1	13.6	−2,097	11.0	1.0	8.9

[1] The absolute percent error is calculated as the numerical error (positive or negative), divided by actual employment in the target year of the projection.

and related occupations had the highest error of any major group, 16.6 percent. Professional specialty occupations and operators, fabricators, and laborers also had relatively high errors, 11.2 percent and 11.0 percent, respectively. The group with the lowest absolute error, 0.1 percent, was executive, administrative, and managerial occupations.

Five of the nine major groups had absolute errors below 5 percent. Of the five, the category of executive, administrative, and managerial occupations not only was the most accurately projected major group, but also was the lone group for which employment was overprojected. Technicians and related support occupations and precision production, craft, and repair occupations also had very low errors, 1.1 percent and 1.0 percent, respectively. The absolute percent error was 2.2 percent for service occupations and 3.4 percent for administrative support occupations.

In addition to making reasonably accurate employment projections at the aggregate major group level, the Bureau projected the share of total job growth of each group fairly accurately. For example, professional specialty occupations had the largest numerical error, off by more than 2 million workers, but still, the category's share of total job growth was underprojected by only 3.2 percent. The largest difference in share of job growth was 7.9 percent, for operators, fabricators, and laborers; the group's growth was projected to be 1 percent, but actually was 8.9 percent. The gap was due mainly to an overestimation of the effects of automation on the demand for workers.

Although agriculture, forestry, fishing, and related occupations had the highest employment projection error, at 16.6 percent, the group's share of total job growth was underprojected by only 2.8 percent. The group was projected to have a negative share of total job growth, but the share was actually positive. Finally, the share of total job growth accounted for by executive, administrative, and management occupations, the most accurately projected group, was actually overprojected by 4.5 percent.

Significant errors in the projections for detailed occupations with sizable employment can have a substantial impact on the overall projections for their respective groups. For example, employment in professional specialty occupations was projected to increase 24 percent over the 1988–2000 period; however, employment actually grew by 39.8 percent. Thus, employment in the category was underprojected by more than 2 million workers. Underprojections for several large professional specialty occupations—college and university faculty, social workers, special-education teachers, and teachers and instructors of vocational education and training— contributed significantly. In addition, an underprojection of computer-related employment by about 1 million workers had a substantial impact.[2]

Operators, fabricators, and laborers also were underprojected by more than 2 million workers. Together, the two categories (that is, operators, fabricators, and laborers and professional specialty occupations) accounted for almost three-fifths of the total numerical projection error for all

Table 2. Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

| Occupation | 1988 | Total employment | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, original projections, 2000[1] | Absolute percent error, simulated projections, 2000 | | Share of total job growth, 1988–2000 (percent) | |
| | | Projected 2000 | | Actual 2000 | | | | | | | | | |
		Level	Share (percent)	Level	Share (percent)	Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
Total, all occupations	118,104	136,211	100.00	143,786	100.00	15.3	21.7	–7,575	5.3	0.0	5.3	100.00	100.00
File clerks	263	290	.21	290	.20	10.2	10.2	0	.0	12.1	10.6	.15	.10
Property, real-estate, and community association managers .	225	267	.20	267	.19	19.0	18.9	0	.1	1.4	.3	.24	.17
Directory assistance operators	33	26	.02	26	.02	–20.6	–20.4	0	.2	23.6	19.2	–.04	–.03
Credit checkers	35	44	.03	44	.03	26.4	25.9	0	.4	1.6	5.4	.05	.04
Farmworkers	938	785	.58	781	.54	–16.3	–16.7	3	.4	10.4	12.6	–.85	–.61
Advertising, marketing, promotions, public relations, and sales managers	406	511	.37	508	.35	25.7	25.2	2	.5	18.1	7.0	.58	.40
Mail clerks, except mail machine operators and postal service	136	137	.10	137	.09	1.2	.6	1	.6	12.6	11.1	.01	.00
Guards	795	1,050	.77	1,044	.73	32.2	31.4	6	.6	53.7	14.2	1.41	.97
Surgical technologists .	35	55	.04	55	.04	56.4	55.2	0	.8	7.0	7.2	.11	.08
Stock clerks and order fillers	2,152	2,406	1.77	2,426	1.69	11.8	12.7	–20	.8	.8	1.8	1.40	1.07
General managers and top executives	3,030	3,509	2.58	3,539	2.46	15.8	16.8	–31	.9	7.0	6.3	2.64	1.98
Statistical clerks	77	76	.06	75	.05	–1.7	–2.6	1	.9	5.4	3.9	–.01	–.01
Engineering, natural science, and computer and information systems managers	258	341	.25	344	.24	32.0	33.3	–3	1.0	2.1	5.3	.46	.33
Maintenance repairers, general utility	1,080	1,282	.94	1,269	.88	18.7	17.5	12	1.0	5.4	6.3	1.11	.74
Pipelayers and pipelaying fitters	52	59	.04	59	.04	13.3	12.1	1	1.0	11.3	6.2	.04	.02
Helpers, construction trades	555	633	.46	640	.44	14.1	15.3	–7	1.0	9.6	10.5	.43	.33
Surveyors, cartographers, and photogrammetrists	40	45	.03	45	.03	10.9	12.2	–1	1.1	.4	4.4	.02	.02
Air traffic controllers	27	31	.02	31	.02	15.5	16.9	0	1.2	5.1	6.9	.02	.02
Drywall installers and finishers	152	178	.13	176	.12	16.9	15.4	2	1.4	1.2	3.1	.14	.09
Bank tellers	522	546	.40	555	.39	4.6	6.2	–9	1.6	18.3	15.2	.13	.13
Title examiners, abstractors, and searchers	27	31	.02	32	.02	17.3	19.2	–1	1.6	13.4	13.7	.3	.02
Production, planning, and expediting clerks	229	250	.18	254	.18	9.4	11.2	–4	1.7	5.1	2.1	.12	.10
Librarians	143	157	.12	160	.11	10.0	12.0	–3	1.8	12.8	13.0	.8	.07
Securities, commodities, and financial services sales agents	200	309	.23	315	.22	54.8	57.6	–6	1.8	1.5	3.1	.60	.45
Cooks, short order and fast food	630	719	.53	705	.49	14.1	12.0	14	1.9	6.3	3.8	.49	.29
Architects, except landscape and naval ...	86	107	.08	105	.07	24.7	22.3	2	2.0	4.1	1.8	.12	.07
Machine feeders and offbearers	249	218	.16	213	.15	–12.5	–14.2	4	2.0	2.8	1.0	–.17	–.14

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

| Occupation | 1988 | Total employment | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, original projections, 2000[1] | Absolute percent error, simulated projections, 2000 | | Share of total job growth, 1988–2000 (percent) | |
| | | Projected 2000 | | Actual 2000 | | | | | | | | | |
		Level	Share (percent)	Level	Share (percent)	Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
Machine-forming operators and tenders, metal and plastic	184	166	.12	169	.12	−10.0	−8.1	−3	2.0	10.3	15.5	−.10	−.06
Purchasing agents, except wholesale, retail, and farm products	206	236	.17	231	.16	14.6	12.2	5	2.2	1.8	.7	.17	.10
Industrial machinery mechanics	463	538	.40	526	.37	16.2	13.7	12	2.2	1.5	5.1	.41	.25
Firefighters	233	257	.19	251	.17	10.3	7.9	6	2.2	18.1	13.3	.13	.07
Plastic molding machine setters, setup operators, operators, and tenders	144	176	.13	172	.12	22.2	19.2	4	2.4	2.7	2.0	.18	.11
Musicians, singers, and related workers	229	251	.18	245	.17	9.5	6.9	6	2.5	26.1	15.3	.12	.06
Grinding, lapping, and buffing machine toolsetters and setup operators, metal and plastic	72	70	.05	72	.05	−2.1	.4	−2	2.5	1.4	4.6	−.1	.0
Operations research analysts	55	85	.06	83	.06	55.4	51.5	2	2.6	5.8	9.7	.17	.11
Sewing machine operators, nongarment	143	135	.10	131	.09	−5.6	−8.1	4	2.7	3.9	4.7	−.4	−.04
Paralegals and legal assistants	83	145	.11	141	.10	75.3	70.6	4	2.8	10.1	13.3	.34	0.23
Designers, except .... interior designers	236	301	.22	311	.22	27.4	31.5	−10	3.1	5.4	.6	.36	0.29
Insurance adjusters, examiners, and investigators	145	175	.13	180	.13	20.0	23.9	−6	3.2	4.4	1.8	.16	0.14
Bakers, bread and pastry	124	167	.12	172	.12	34.8	39.3	−5	3.2	7.3	4.4	.24	0.19
Registered nurses	1,577	2,190	1.61	2,120	1.47	38.8	34.4	70	3.3	3.4	1.4	3.38	2.11
Real-estate appraisers ...	41	49	.04	47	.03	19.9	16.0	2	3.3	8.9	5.1	.04	.03
Insulation workers	64	77	.06	74	.05	19.2	15.3	2	3.3	5.6	5.2	.07	.04
Machinists	397	433	.32	418	.29	9.1	5.5	14	3.4	9.4	4.1	.20	.08
Aircraft mechanics and service technicians	124	144	.11	140	.10	16.4	12.5	5	3.5	31.6	12.4	.11	.06
Painters and paper-hangers	431	501	.37	484	.34	16.3	12.2	18	3.6	4.0	.9	.39	.20
Structural and reinforcing metal workers	78	92	.07	88	.06	18.2	14.0	3	3.7	17.3	11.4	.08	.04
Food preparation workers	1,027	1,260	.93	1,310	.91	22.8	27.5	−49	3.8	1.3	4.6	1.29	1.10
Plumbers, pipefitters, and steamfitters	396	469	.34	451	.31	18.4	14.0	17	3.9	14.0	9.6	.40	.22
Farm managers	131	160	.12	154	.11	22.1	17.6	6	3.9	21.4	11.2	.16	.09
Court clerks	42	51	.04	53	.04	21.4	26.4	−2	3.9	10.3	12.8	.05	.04
Medical assistants	149	253	.19	263	.18	70.1	77.1	−10	4.0	1.0	4.0	.58	.45
Announcers	49	59	.04	56	.04	19.2	14.4	2	4.2	.7	5.0	.05	.03
Painters, transportation equipment......................	46	45	.03	43	.03	−3.5	−7.5	2	4.3	6.5	3.8	−.01	−.01
Payroll and timekeeping clerks	176	172	.13	180	.12	−2.4	2.1	−8	4.4	4.0	7.2	−.02	.01

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	Total employment					Percent change, 1988–2000		Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
	1988	Projected 2000		Actual 2000		Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
		Level	Share (percent)	Level	Share (percent)								
Janitors and cleaners, including maids and housekeeping cleaners	2,895	3,450	2.53	3,300	2.30	19.2	14.0	150	4.5	8.7	4.2	3.07	1.58
Recreational therapists	26	35	.03	37	.03	36.9	43.5	−2	4.6	6.6	2.5	.05	.04
Artists and commercial artists	216	274	.20	287	.20	27.1	33.2	−13	4.6	.4	3.5	.32	.28
Coating, painting, and spraying machine operators, tenders, setters, and setup operators	113	123	.09	129	.09	9.0	14.5	−6	4.8	2.3	2.7	.06	.06
College and university faculty	846	869	.64	913	.64	2.8	8.0	−45	4.9	11.6	14.8	.13	.26
Paving, surfacing, and tamping equipment operators	70	82	.06	78	.05	16.6	11.2	4	4.9	19.6	12.2	.06	.03
Sheet metal workers and duct installers	246	257	.19	245	.17	4.3	−.6	12	5.0	17.3	10.9	.06	−.01
Computer programmers	519	769	.56	731	.51	48.1	40.9	37	5.1	27.5	22.8	1.38	.83
Baggage porters and bellhops	32	40	.03	43	.03	25.9	33.0	−2	5.3	4.6	4.4	.05	.04
Taxi drivers and chauffeurs	109	137	.10	130	.09	26.0	19.4	7	5.4	11.4	13.2	.16	.08
Freight, stock, and material movers, hand	884	905	.66	858	.60	2.4	−2.9	47	5.5	14.7	11.1	.12	−.10
Systems analysts	403	617	.45	653	.45	53.3	62.2	−36	5.5	3.8	11.3	1.18	.97
Woodworking machine operators and tenders, setters and setup operators	69	75	.06	80	.06	8.2	14.6	−4	5.6	2.0	3.8	.03	.04
Punching machine setters and setup operators, metal and plastic	51	50	.04	47	.03	−2.1	−7.3	3	5.6	12.5	7.5	−.01	−.01
Pest control workers	48	56	.04	53	.04	16.5	10.2	3	5.7	1.7	2.6	.04	.02
Chemists	80	93	.07	99	.07	16.7	23.8	−6	5.7	13.4	4.6	.07	.07
Postal mail carriers	285	310	.23	329	.23	8.8	15.5	−19	5.8	7.7	2.1	.14	.17
Human resources assistants, except payroll and timekeeping	129	141	.10	150	.10	9.4	16.3	−9	5.9	4.6	8.1	.07	.08
Billing, cost, and rate clerks	323	333	.24	355	.25	3.4	9.9	−21	6.0	2.9	5.7	.06	.12
Dispatchers, except police, fire, and ambulance	137	160	.12	170	.12	16.5	23.9	−10	6.0	.8	9.7	.13	.13
Textile bleaching and dyeing machine operators and tenders	26	23	.02	22	.01	−13.4	−18.3	1	6.0	13.4	23.0	−.02	−.02
Crossing guards	57	61	.04	57	.04	6.9	.8	3	6.0	23.0	14.3	.02	.00
Veterinarians	46	57	.04	61	.04	25.5	33.6	−4	6.0	11.4	15.2	.06	.06
Office machine and cash register servicers	56	57	.04	61	.04	1.3	7.8	−4	6.1	41.2	19.3	.00	.02

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	Total employment					Percent change, 1988–2000		Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
	1988	Projected 2000		Actual 2000		Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
		Level	Share (percent)	Level	Share (percent)								
Paper goods machine setters and setup operators	54	56	.04	60	.04	4.7	11.5	−4	6.1	9.4	4.0	.01	.02
Cooks, institution or cafeteria	403	467	.34	440	.31	16.0	9.3	27	6.1	20.0	10.4	.36	.15
Roofers	123	147	.11	156	.11	19.2	27.0	−10	6.2	6.4	.9	.13	.13
Civil engineers	186	219	.16	206	.14	17.4	10.5	13	6.2	10.8	5.3	.18	.08
Child care workers	670	856	.63	915	.64	27.8	36.6	−59	6.5	4.3	5.0	1.03	.95
Loan and credit clerks	151	192	.14	180	.13	27.2	19.5	12	6.5	6.5	8.1	.23	.11
Office clerks, general	2,519	2,974	2.18	3,192	2.22	18.1	26.7	−218	6.8	4.8	9.0	2.51	2.62
Bookkeeping, accounting, and auditing clerks	2,252	2,272	1.67	2,125	1.48	.9	-5.6	146	6.9	12.2	4.0	.11	−.49
Communication, transportation, and utilities operations managers	167	194	.14	209	.15	16.3	25.3	−15	7.2	5.9	12.1	.15	.16
Loan counselors and officers	172	209	.15	225	.16	21.5	31.0	−16	7.2	13.7	3.4	.20	.21
Dietitians and nutritionists	40	51	.04	55	.04	27.8	37.8	−4	7.3	8.3	2.6	.06	.06
Millwrights	77	90	.07	84	.06	17.3	9.2	6	7.5	12.4	5.6	.07	.03
Industrial truck and tractor operators	421	400	.29	433	.30	−5.1	2.8	−33	7.6	3.0	11.8	−.12	.05
Hard-tile setters	26	32	.02	30	.02	22.4	13.7	2	7.7	6.4	1.6	.03	.01
Teachers, secondary school	1,164	1,388	1.02	1,506	1.05	19.2	29.4	−118	7.8	8.1	14.8	1.24	1.33
Accountants and auditors	963	1,174	.86	1,089	.76	22.0	13.1	86	7.9	8.1	1.2	1.17	0.49
Electromechanical equipment assemblers, precision	59	53	.04	49	.03	−9.9	−16.6	4	8.0	6.3	5.8	−.03	−.04
Retail salespersons	3,834	4,564	3.35	4,223	2.94	19.0	10.2	340	8.1	8.5	1.0	4.03	1.52
Pharmacists	162	206	.15	191	.13	26.9	17.4	16	8.2	5.8	.5	.24	.11
Aircraft pilots and flight engineers	83	108	.08	100	.07	30.9	20.9	8	8.3	59.9	30.9	.14	.07
Physical therapists	68	107	.08	117	.08	57.0	71.4	−10	8.4	3.7	3.3	.21	.19
Grinders and polishers, hand	84	74	.05	80	.06	−12.6	−4.5	−7	8.5	4.4	3.2	−.06	−.01
Coin, vending, and amusement machine servicers and repairers	27	27	.02	30	.02	.5	10.0	−3	8.6	21.2	23.6	.00	.01
Inspectors, testers, and graders, precision	676	634	.47	693	.48	−6.2	2.6	−60	8.6	11.7	2.3	−.23	.07
Cement masons, concrete finishers, and terrazzo workers	114	134	.10	146	.10	16.9	27.9	−13	8.6	14.7	17.5	.11	.12
Bus drivers, school	349	418	.31	458	.32	19.9	31.3	−40	8.7	7.9	15.5	.38	.43
Cleaners and servants, private household	477	464	.34	509	.35	−2.6	6.7	−45	8.8	25.2	22.0	−.07	.12
Psychologists	104	132	.10	145	.10	27.0	39.5	−13	9.0	8.1	.3	.16	.16
Construction and building inspectors	56	64	.05	70	.05	14.2	25.7	−6	9.2	6.3	10.0	.04	.06
Combination machine tool setters, setup operators, operators, and tenders, metal and plastic	89	97	.07	107	.07	9.1	20.3	−10	9.3	1.8	5.7	.04	.07

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	1988	Total employment Projected 2000 Level	Projected 2000 Share (percent)	Actual 2000 Level	Actual 2000 Share (percent)	Percent change, 1988–2000 Projected	Percent change, 1988–2000 Actual	Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000 Ratio of actual industry totals to projected staffing pattern	Absolute percent error, simulated projections, 2000 Ratio of actual staffing pattern to projected industry totals	Share of total job growth, 1988–2000 (percent) Projected	Share of total job growth, 1988–2000 (percent) Actual
Data entry keyers	452	426	.31	471	.33	−5.6	4.2	−44	9.4	17.1	18.9	−.14	.07
Respiratory therapists	56	79	.06	87	.06	41.3	56.3	−8	9.6	15.8	7.8	.13	.12
Insurance policy processing clerks	171	186	.14	170	.12	8.8	−.9	17	9.8	5.1	4.5	.08	−.01
Truckdrivers, light and heavy	2,399	2,768	2.03	3,072	2.14	15.4	28.0	−303	9.9	3.4	6.8	2.04	2.62
Welfare eligibility workers and interviewers	91	102	.07	113	.08	12.0	24.3	−11	9.9	3.2	4.6	.06	.09
Opticians, dispensing	49	65	.05	72	.05	31.5	45.9	−7	9.9	3.4	7.2	.09	.09
Police patrol officers	367	421	.31	467	.32	14.7	27.3	−46	9.9	4.4	12.8	.30	.39
Supervisors, farming, forestry, and agricutural-related occupations	76	80	.06	89	.06	5.6	17.6	−9	10.2	10.0	12.9	.02	.05
Electricians	542	638	.47	712	.50	17.8	31.5	−74	10.4	6.0	16.6	.53	.66
Cement and gluing machine operators and tenders	40	36	.03	32	.02	−11.1	−19.5	3	10.5	7.8	.1	−.02	−.03
Waiters and waitresses	1,786	2,337	1.72	2,115	1.47	30.9	18.4	223	10.5	16.0	4.6	3.04	1.28
Electrolytic plating machine setters, setup operators, operators, and tenders, metal and plastic	44	41	.03	46	.03	−7.9	3.1	−5	10.7	6.5	6.5	−.02	.01
Cooks, restaurant	572	728	.53	816	.57	27.2	42.5	−88	10.8	7.6	3.5	.86	.95
Financial managers	673	802	.59	724	.50	19.3	7.7	78	10.8	12.9	3.3	.72	.20
Clinical laboratory technologists and technicians	242	288	.21	324	.23	19.2	33.9	−36	11.0	15.7	5.3	.26	.32
Painting, coating, and decorating workers, hand	45	43	.03	39	.03	−4.4	−13.9	4	11.0	9.0	5.3	−.01	−.02
Physician assistants	48	62	.05	69	.05	28.1	44.0	−8	11.1	8.5	3.0	.07	.08
Legal secretaries	263	329	.24	296	.21	25.5	12.7	34	11.3	4.6	15.3	.37	.13
Food counter, fountain, and related workers	1,626	1,866	1.37	2,108	1.47	14.7	29.6	−242	11.5	7.7	4.0	1.32	1.88
Duplicating, mail, and other office machine operators	164	181	.13	205	.14	10.5	24.8	−24	11.5	.4	6.1	.09	.16
Farm equipment mechanics	54	55	.04	49	.03	1.4	−9.1	6	11.5	29.1	67.9	.00	−.02
Meat, poultry, and fish cutters and trimmers, hand	110	129	.09	145	.10	16.6	31.9	−17	11.6	5.3	15.7	.10	.14
Heating, air-conditioning, and refrigeration mechanics and installers	225	263	.19	298	.21	16.8	32.4	−35	11.8	6.3	6.9	.21	.28
Nursing aides, orderlies, and attendants	1,184	1,562	1.15	1,393	.97	31.9	17.7	168	12.1	11.5	.5	2.09	.82
Carpenters	1,081	1,257	.92	1,120	.78	16.2	3.6	136	12.2	14.3	3.9	.97	.15
Weighers, measurers, checkers, and samplers, recordkeeping	40	45	.03	52	.04	12.2	28.0	−6	12.3	8.9	5.4	.03	.04
Meter readers, utilities ...	49	45	.03	51	.04	−8.8	4.2	−6	12.4	18.7	10.4	−.02	.01

| Table 2. | Continued—Employment, by occupation, 1988 actual and 2000 projected and actual |

[Numbers in thousands]

Occupation	1988	Total employment				Percent change, 1988–2000		Numer- ical error, 2000 (pro- jected level minus actual level)	Absolute percent error, original projec- tions, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
		Projected 2000		Actual 2000						Ratio of actual industry totals to pro- jected staffing pattern	Ratio of actual staffing pattern to pro- jected industry totals		
		Level	Share (percent)	Level	Share (percent)	Pro- jected	Actual					Pro- jected	Actual
Automotive mechanics and service technicians	771	898	.66	798	.56	16.3	3.5	99	12.4	13.8	1.5	.70	.10
Recreation workers	186	221	.16	252	.18	18.9	35.8	−32	12.5	.7	11.3	.19	.26
Geologists, geophysicists, and oceanographers	42	49	.04	44	.03	15.7	2.7	6	12.6	11.1	.1	.04	.00
Human resources managers	171	208	.15	239	.17	22.1	40.0	−31	12.8	10.0	6.8	.21	.27
Lawyers	582	763	.56	676	.47	31.0	16.0	87	12.9	1.6	11.0	1.00	.36
Photographers	94	111	.08	128	.09	17.5	35.3	−17	13.2	61.1	3.6	.09	.13
Private detectives and investigators	47	61	.04	54	.04	30.8	15.5	7	13.2	24.4	2.7	.08	.03
Blue-collar worker supervisors	1,797	1,930	1.42	2,237	1.56	7.4	24.5	−307	13.7	12.0	2.7	.73	1.71
Stationary engineers	36	36	.03	31	.02	−1.3	−13.6	4	14.2	11.5	1.3	.00	−.02
Textile drawout and winding machine operators and tenders	227	197	.14	172	.12	−13.3	−24.2	25	14.3	2.7	18.6	−.17	−.21
Interviewing clerks, except personnel and social welfare	129	152	.11	133	.09	17.8	2.9	19	14.4	32.6	6.4	.13	.01
Laborers, landscaping and groundskeeping	806	998	.73	1,166	.81	23.8	44.6	−168	14.4	1.0	14.6	1.06	1.40
Cutting and slicing machine setters, operators, and tenders	91	80	.06	93	.06	−12.2	2.7	−14	14.5	15.4	3.7	−.06	.01
Government chief executives and legislators	69	71	.05	84	.06	3.0	20.7	−12	14.7	1.5	13.7	.01	.06
Automotive body and related repairers	214	270	.20	235	.16	26.2	10.0	35	14.7	18.4	2.7	.31	.08
Mobile heavy equipment mechanics	108	124	.09	108	.07	14.4	−.4	16	14.9	6.5	31.7	.09	.00
Hairdressers, hairstylists, and cosmetologists	609	683	.50	594	.41	12.1	−2.5	89	15.0	9.2	4.9	.41	−.06
Receptionists and information clerks	833	1,164	.85	1,370	.95	39.8	64.5	−206	15.0	3.0	8.5	1.83	2.09
Flight attendants	88	123	.09	106	.07	38.7	20.5	16	15.1	81.6	36.0	.19	.07
Optometrists	37	43	.03	37	.03	16.5	1.1	6	15.3	20.1	2.5	.03	.00
Extruding and forming machine setters, operators, and tenders	100	106	.08	125	.09	6.3	25.5	−19	15.3	8.3	8.2	.03	.10
Water and liquid waste treatment plant and system operators	76	87	.06	103	.07	14.5	35.5	−16	15.5	1.0	14.3	.06	.11
Biological scientists	57	72	.05	85	.06	26.0	49.2	−13	15.6	19.1	6.0	.08	.11
Secretaries, except legal and medical	2,903	3,288	2.41	2,845	1.98	13.2	−2.0	443	15.6	30.8	10.5	2.12	−.23
Physicians	535	684	.50	591	.41	27.8	10.4	93	15.7	14.0	1.1	.82	.22
Printing press machine setters, operators, and tenders	108	119	.09	141	.10	9.5	30.1	−22	15.9	16.1	4.6	.06	.13

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

| Occupation | 1988 | Total employment | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, original projections, 2000[1] | Absolute percent error, simulated projections, 2000 | | Share of total job growth, 1988–2000 (percent) | |
| | | Projected 2000 | | Actual 2000 | | | | | | | | | |
		Level	Share (percent)	Level	Share (percent)	Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
New-accounts clerks, banking	108	129	.09	111	.08	19.0	2.5	18	16.2	2.4	14.8	.11	.01
Bus drivers, transit and intercity	157	175	.13	210	.15	11.7	33.8	−35	16.5	5.7	19.6	.10	.21
Bricklayers, blockmasons, and stonemasons	167	193	.14	166	.12	15.8	−.6	27	16.5	14.4	1.9	.15	.00
Hotel, motel, and resort desk clerks	113	142	.10	170	.12	25.9	51.0	−28	16.7	18.8	2.5	.16	.22
Welders and cutters	325	309	.23	371	.26	−5.0	14.1	−62	16.7	11.5	6.8	−.09	.18
Highway maintenance workers	175	190	.14	163	.11	8.7	−6.9	27	16.7	34.6	12.3	.08	−.05
Police and detective supervisors	88	97	.07	116	.08	10.1	32.3	−20	16.8	4.9	11.4	.05	.11
Library assistants and bookmobile drivers	105	111	.08	133	.09	5.8	27.2	−22	16.8	4.2	14.0	.03	.11
Tire repairers and changers	88	100	.07	85	.06	14.1	−2.6	15	17.1	20.3	2.1	.07	−.01
Budget analysts	62	72	.05	61	.04	16.5	−.6	11	17.2	15.5	1.0	.06	.00
Driver/sales workers	242	255	.19	308	.21	5.4	27.4	−53	17.3	13.6	4.8	.07	.26
Dentists	167	189	.14	161	.11	13.1	−3.7	28	17.5	22.6	2.7	.12	−.02
Construction managers	187	236	.17	287	.20	26.0	53.1	−51	17.7	8.8	5.7	.27	.39
Court reporters, medical transcriptionists, and stenographers	159	122	.09	104	.07	−22.8	−34.4	18	17.7	28.0	.6	−.20	−.21
Counselors	124	157	.12	191	.13	26.9	54.3	−34	17.7	4.7	15.1	.18	.26
Public-relations specialists	91	105	.08	128	.09	15.4	40.2	−23	17.7	20.1	7.1	.08	.14
Railroad conductors and yardmasters	27	21	.02	26	.02	−19.5	−2.1	−5	17.8	16.1	1.9	−.03	.00
Logging equipment operators	46	44	.03	53	.04	−5.3	15.3	−9	17.9	11.3	1.3	−.01	.03
Science and mathematics technicians	232	275	.20	233	.16	18.6	.5	42	18.1	13.4	4.3	.24	.00
Bus and truck mechanics and diesel engine specialists	269	312	.23	264	.18	16.1	−1.8	48	18.3	20.8	.9	.24	−.02
Inspectors and compliance officers, except construction	130	148	.11	181	.13	13.9	39.3	−33	18.3	18.0	1.2	.10	.20
Billing and posting clerks and machine operators	99	89	.07	109	.08	−9.5	10.7	−20	18.3	13.8	5.4	−.05	.04
Numerical control machine tool operators and tenders, metal and plastic	64	70	.05	86	.06	9.2	33.7	−16	18.3	15.7	10.1	.03	.08
Tool and die makers	152	159	.12	135	.09	4.5	−11.7	25	18.4	26.8	6.2	.04	−.07
Chemical engineers	49	57	.04	48	.03	16.4	−1.7	9	18.4	4.1	2.2	.04	.00
Couriers and messengers	123	147	.11	124	.09	19.4	.8	23	18.4	12.4	.3	.13	.00
Education administrators	320	382	.28	469	.33	19.4	46.6	−87	18.6	5.6	12.9	.34	.58
Firefighting and prevention supervisors	47	51	.04	63	.04	9.5	34.8	−12	18.8	6.0	13.3	.02	.06
Dental assistants	166	197	.14	243	.17	18.9	46.6	−46	18.9	4.3	15.0	.17	.30

| Table 2. | Continued—Employment, by occupation, 1988 actual and 2000 projected and actual |

[Numbers in thousands]

Occupation	Total employment					Percent change, 1988–2000		Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
	1988	Projected 2000		Actual 2000						Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals		
		Level	Share (percent)	Level	Share (percent)	Projected	Actual					Projected	Actual
Power-generating and reactor plant operators	33	37	.03	31	.02	11.0	–6.8	6	19.1	6.4	31.4	.02	–.01
Cost estimators	169	195	.14	163	.11	15.4	–3.1	31	19.2	26.2	6.9	.14	–.02
Metal fabricators, structural metal products	40	39	.03	48	.03	–2.2	21.5	–9	19.5	4.2	12.4	.00	.03
Central office and PBX installers and repairers	75	59	.04	50	.03	–20.6	–33.7	10	19.7	48.7	18.8	–.09	–.10
Refuse and recyclable material collectors	126	126	.09	105	.07	.1	–16.4	21	19.8	51.0	19.0	.00	–.08
Human resources, training, and labor relations specialists	252	305	.22	381	.26	21.2	51.2	–75	19.8	18.7	4.5	.30	.50
Licensed practical and licensed vocational nurses	626	855	.63	713	.50	36.6	13.9	143	20.0	23.4	1.3	1.27	.34
Electrical power-line installers and repairers	104	122	.09	101	.07	16.8	–2.7	20	20.1	1.2	20.8	.10	–.01
Glaziers	49	58	.04	48	.03	17.6	–2.2	10	20.2	32.7	7.3	.05	.00
Carpet installers	56	68	.05	85	.06	21.2	52.0	–17	20.3	14.2	1.6	.07	.11
Lathe and turning machine tool setters and setup operators, metal and plastic	89	86	.06	71	.05	–3.1	–19.5	14	20.3	29.8	9.8	–.02	–.07
Detectives and criminal investigators	61	66	.05	83	.06	8.9	36.7	–17	20.4	12.8	6.8	.03	.09
Upholsterers	73	81	.06	67	.05	11.2	–7.7	14	20.5	12.8	8.0	.04	–.02
Teachers, preschool	238	309	.23	389	.27	30.2	63.7	–80	20.5	5.9	22.5	.40	.59
Cashiers	2,310	2,614	1.92	3,289	2.29	13.2	42.4	–675	20.5	20.5	.2	1.68	3.81
Bartenders	414	506	.37	419	.29	22.1	1.3	86	20.5	27.2	5.6	.51	.02
Mechanical engineers	225	269	.20	223	.16	19.8	–.7	46	20.7	11.6	1.1	.25	–.01
Dispatchers, police, fire, and ambulance	64	71	.05	89	.06	9.6	38.6	–19	20.9	6.3	15.0	.03	.10
Drafters	319	358	.26	296	.21	12.2	–7.3	62	21.0	25.1	6.3	.22	–.09
Photographic processing machine operators and tenders	49	57	.04	47	.03	17.5	–3.0	10	21.1	29.1	16.3	.05	–.01
Social workers	385	495	.36	629	.44	28.5	63.1	–133	21.2	12.7	7.9	.61	.95
Medical records and health information technicians	47	75	.05	95	.07	59.9	103.1	–20	21.3	25.7	1.7	.15	.19
Crushing, grinding, mixing, and blending machine operators and tenders	136	117	.09	149	.10	–13.9	9.6	–32	21.4	21.0	.5	–.10	.05
Procurement clerks	42	47	.03	59	.04	9.9	40.0	–13	21.5	27.4	2.6	.02	.07
Bindery machine operators and setup operators	63	71	.05	90	.06	11.4	42.1	–19	21.6	28.2	4.1	.04	.10
Office and administrative support supervisors and managers	1,183	1,319	.97	1,683	1.17	11.5	42.3	–364	21.6	16.5	5.6	.75	1.95
Library technicians	54	59	.04	76	.05	8.8	40.0	–17	22.3	8.5	13.6	.03	.08
Welding machine setters, operators, and tenders	99	86	.06	110	.08	–13.7	11.1	–25	22.4	12.1	10.9	–.08	.04

[Numbers in thousands]

| Occupation | 1988 | Total employment | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, original projections 2000[1] | Absolute percent error, simulated projections, 2000 | | Share of total job growth, 1988–2000 (percent) | |
| | | Projected 2000 | | Actual 2000 | | | | | | Ratio of actual industry totals to projected staffing pattern | Ratio of actual staffing pattern to projected industry totals | | |
		Level	Share (percent)	Level	Share (percent)	Projected	Actual					Projected	Actual
Butchers and meatcutters	258	269	.20	219	.15	4.5	−14.8	50	22.7	22.9	.5	.06	−.15
Food service and lodging managers	560	721	.53	587	.41	28.8	4.8	134	22.8	21.4	.3	.89	.11
Hosts and hostesses, restaurant, lounge, or coffee shop	183	239	.18	310	.22	30.5	69.4	−71	23.0	19.6	4.4	.31	.50
Cleaners of vehicles and equipment	215	230	.17	299	.21	7.0	38.9	−69	23.0	2.9	17.2	.08	.33
Clergy	185	199	.15	162	.11	7.2	−12.9	37	23.0	75.9	34.0	.07	−.09
Machine tool cutting operators and tenders, metal and plastic	148	133	.10	108	.08	−10.1	−26.9	25	23.1	34.8	8.8	−.08	−.16
Industrial engineers, except safety engineers	132	155	.11	126	.09	18.0	−4.2	29	23.2	9.2	5.9	.13	−.02
Industrial production managers	215	254	.19	206	.14	18.0	−4.3	48	23.2	20.7	.7	.21	−.04
Animal caretakers, except farm	92	106	.08	138	.10	15.5	50.5	−32	23.2	6.3	13.7	.08	.18
Order clerks	293	289	.21	377	.26	−1.5	28.7	−88	23.4	18.4	7.3	−.02	.33
Brokerage clerks	64	66	.05	86	.06	3.1	34.9	−20	23.5	15.7	9.3	.01	.09
Laundry and drycleaning machine operators and tenders, except pressing	169	208	.15	168	.12	22.8	−1.0	40	24.1	18.6	4.6	.21	−.01
Excavation and loading machine operators	76	84	.06	111	.08	10.2	46.3	−27	24.7	20.7	6.0	.04	.14
Claims examiners, property and casualty insurance	30	37	.03	49	.03	23.5	64.3	−12	24.8	24.3	2.5	.04	.07
Bakers, manufacturing	41	40	.03	53	.04	−3.2	29.6	−13	25.3	18.2	5.0	−.01	.05
Teachers, special education	275	317	.23	429	.30	15.6	56.1	−111	26.0	13.2	14.8	.24	.60
Reservation and transportation ticket agents and travel clerks	133	170	.12	230	.16	27.8	73.1	−60	26.2	6.2	27.4	.20	.38
Conservation scientists and foresters	27	30	.02	40	.03	8.3	47.9	−11	26.7	30.6	1.1	.01	.05
Insurance sales agents	423	481	.35	378	.26	13.7	−10.7	103	27.3	15.2	8.3	.32	−.18
Physical therapy assistants and aides	39	60	.04	82	.06	52.5	109.7	−22	27.3	25.8	1.4	.11	.17
Administrative services managers	217	274	.20	381	.27	26.2	75.4	−107	28.0	27.4	8.4	.31	.64
Electronics repairers, commercial and industrial equipment	79	92	.07	72	.05	17.1	−8.9	20	28.6	28.8	4.9	.07	−.03
Insurance claims clerks	103	115	.08	162	.11	11.0	56.4	−47	29.0	27.6	1.3	.06	.23
Solderers and brazers	29	27	.02	38	.03	−5.7	33.2	−11	29.2	21.0	17.6	−.01	.04
Head sawyers and sawing machine operators and tenders, setters, and setup operators	80	86	.06	66	.05	7.5	−17.1	20	29.6	37.7	6.1	.03	−.05
Dental hygienists	91	107	.08	152	.11	17.6	67.6	−45	29.8	16.8	15.5	.09	.24

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	1988	Total employment				Percent change, 1988–2000		Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
		Projected 2000		Actual 2000		Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
		Level	Share (percent)	Level	Share (percent)								
Proofreaders and copy markers	33	31	.02	44	.03	–7.4	32.3	–13	30.0	1.7	10.1	–.01	.04
Personal care and home health aides	327	535	.39	765	.53	63.3	133.8	–231	30.1	7.4	20.3	1.14	1.71
Drilling and boring machine tool setters and setup operators, metal and plastic	56	54	.04	41	.03	–3.1	–26.0	13	30.9	40.1	6.4	–.01	–.06
Textile machine setters and setup operators	37	33	.02	26	.02	–8.7	–30.3	8	30.9	12.7	15.1	–.02	–.04
Chemical plant and system operators	35	28	.02	40	.03	–20.4	15.6	–12	31.1	37.7	9.9	–.04	.02
Radiologic technologists and technicians	132	218	.16	166	.12	66.0	26.3	52	31.4	27.7	4.1	.48	.13
Manicurists	26	33	.02	48	.03	26.2	84.6	–15	31.6	35.3	4.6	.04	.09
Dental laboratory technicians, precision ...	51	56	.04	42	.03	10.2	–16.5	13	31.9	20.2	8.7	.03	–.03
Occupational therapists	33	48	.04	72	.05	48.8	121.1	–23	32.7	30.6	3.3	.09	.15
Correctional officers	186	262	.19	398	.28	40.8	113.6	–136	34.1	25.9	10.9	.42	.82
Packaging and filling machine operators and tenders	286	254	.19	385	.27	–11.4	34.4	–131	34.1	32.4	7.4	–.18	.38
Electrical and electronic technicians and technologists	341	471	.35	351	.24	38.2	3.0	120	34.1	46.0	4.3	.72	.04
Crane and tower operators	60	67	.05	50	.03	11.3	–17.0	17	34.2	25.3	3.8	.04	–.04
Sheriffs and deputy sheriffs	63	63	.05	96	.07	–.4	51.5	–33	34.3	23.3	14.3	.00	.13
Actors, directors, and producers	80	104	.08	158	.11	29.6	97.2	–54	34.3	31.2	17.9	.13	.30
Gas and petroleum plant and system occupations	30	22	.02	34	.02	–24.4	15.3	–12	34.5	49.0	28.0	–.04	.02
Teacher assistants	682	827	.61	1,269	.88	21.3	86.0	–441	34.8	21.5	16.0	.80	2.28
Child care workers, private household	375	347	.25	257	.18	–7.5	–31.4	90	34.9	10.6	22.0	–.16	–.46
Plasterers and stucco masons	26	29	.02	44	.03	8.1	66.6	–15	35.1	34.7	.3	.01	.07
Operating engineers	158	179	.13	132	.09	13.4	–16.3	47	35.4	48.5	6.4	.12	–.10
Machine builders and other precision machine assemblers	55	47	.03	73	.05	–14.8	32.5	–26	35.7	34.6	5.8	–.04	.07
Speech-language pathologists and audiologists	53	68	.05	106	.07	27.8	99.1	–38	35.8	30.9	7.9	.08	.21
Dining room and cafeteria attendants and bar helpers	448	578	.42	425	.30	29.0	–5.1	153	36.0	44.0	5.7	.72	–.09
Judges, magistrates, and other judicial workers	40	47	.03	74	.05	17.9	84.3	–27	36.0	28.6	.4	.04	.13
Economists and marketing research analysts	36	45	.03	71	.05	27.2	99.0	–26	36.1	40.9	5.5	.05	.14
Forest and conservation workers	40	44	.03	32	.02	10.7	–18.6	12	36.1	30.5	5.6	.02	–.03

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	1988	Projected 2000 Level	Projected 2000 Share (percent)	Actual 2000 Level	Actual 2000 Share (percent)	Percent change, 1988–2000 Projected	Percent change, 1988–2000 Actual	Numerical error, 2000 (projected level minus actual level)	Absolute percent error, original projections, 2000[1]	Absolute percent error, simulated projections, 2000 Ratio of actual industry totals to projected staffing pattern	Absolute percent error, simulated projections, 2000 Ratio of actual staffing pattern to projected industry totals	Share of total job growth, 1988–2000 (percent) Projected	Share of total job growth, 1988–2000 (percent) Actual
Counter and rental clerks	241	308	.23	486	.34	27.7	101.2	−177	36.5	51.4	6.0	.37	.95
Teachers and instructors, vocational education and training	239	255	.19	405	.28	6.6	69.4	−150	37.1	27.4	9.9	.09	.65
Sales agents, real estate	311	361	.26	263	.18	16.0	−15.6	98	37.4	32.4	6.5	.27	−.19
Machine assemblers	47	41	.03	66	.05	−11.8	42.6	−25	38.1	34.8	6.5	−.03	.08
Insurance underwriters ...	103	134	.10	97	.07	29.4	−6.4	37	38.3	33.2	4.2	.17	−.03
Small-engine mechanics .	43	50	.04	36	.03	18.2	−14.9	14	38.8	36.1	.9	.04	−.02
Chemical equipment controllers, operators, and tenders	70	59	.04	97	.07	−15.5	38.5	−38	39.0	44.1	7.0	−.06	.10
Amusement and recreation attendants ...	175	217	.16	360	.25	23.7	105.0	−143	39.6	20.4	24.2	.23	.72
Fishers	46	50	.04	36	.03	8.6	−22.2	14	39.7	19.9	16.7	.02	−.04
Social and human service assistants	118	171	.13	284	.20	44.9	140.7	−113	39.8	29.0	12.3	.29	.65
Switchboard operators	254	316	.23	225	.16	24.3	−11.4	91	40.2	34.2	8.0	.34	−.11
Agricultural and food scientists	25	30	.02	22	.02	20.8	−13.9	9	40.3	36.0	4.2	.03	−.01
Central office operators..	43	36	.03	26	.02	−14.9	−39.4	10	40.4	74.1	19.4	−.04	−.07
Pharmacy aides	70	89	.07	63	.04	27.1	−9.8	26	40.9	35.9	3.1	.10	−.03
Data-processing equipment repairers	71	115	.08	81	.06	61.2	14.3	33	41.0	54.7	19.2	.24	.04
Bill and account collectors	149	195	.14	330	.23	30.7	121.8	−136	41.1	40.4	4.2	.25	.71
Electronic home entertainment equipment repairers	44	49	.04	35	.02	12.6	−20.7	15	42.1	45.2	2.5	.03	−.04
Correspondence clerks ...	29	37	.03	26	.02	27.3	−10.4	11	42.1	58.4	10.8	.04	−.01
Shipping, receiving, and traffic clerks	535	591	.43	1,025	.71	10.4	91.5	−434	42.4	37.8	4.4	.31	1.91
Roustabouts, oil and gas	39	39	.03	27	.02	1.1	−29.2	12	42.8	6.0	34.9	.00	−.04
Emergency medical technicians and paramedics	76	86	.06	152	.11	13.0	99.1	−66	43.2	20.8	24.7	.05	.29
Parking lot attendants	47	54	.04	95	.07	14.1	101.1	−41	43.3	26.8	3.9	.04	.19
Medical secretaries	207	327	.24	227	.16	58.0	10.0	99	43.6	50.5	2.0	.66	.08
Pressing machine operators and tenders, textile, garment, and related materials	87	95	.07	66	.05	9.3	−24.0	29	43.8	21.9	15.9	.04	.08
Brokers, real estate	70	84	.06	58	.04	19.7	−16.7	25	43.8	39.2	3.1	.08	−.05
Management analysts	130	176	.13	313	.22	35.0	140.3	−137	43.8	53.9	3.5	.25	.71
Cannery workers	71	70	.05	48	.03	−2.1	−32.0	21	44.0	33.6	5.2	−.01	−.09
Adjustment clerks	231	278	.20	505	.35	20.2	118.3	−227	45.0	41.4	8.5	.26	1.07
Hand packers and packagers	635	560	.41	1,019	.71	−11.8	60.5	−459	45.1	41.8	8.8	−.41	1.49
Ophthalmic laboratory technicians	26	33	.02	23	.02	28.1	−12.1	10	45.7	23.4	26.1	.04	−.01
Electrical and electronic assemblers	237	134	.10	246	.17	−43.6	4.0	−113	45.8	50.5	18.4	−.57	.04
Ushers, lobby attendants, and ticket takers	44	48	.04	89	.06	8.0	100.1	−41	46.0	24.9	26.8	.02	.17

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

| Occupation | 1988 | Total employment | | | | Percent change, 1988–2000 | | Numerical error, 2000 (projected level minus actual level) | Absolute percent error, original projections, 2000[1] | Absolute percent error, simulated projections, 2000 | | Share of total job growth, 1988–2000 (percent) | |
| | | Projected 2000 | | Actual 2000 | | | | | | | | | |
		Level	Share (percent)	Level	Share (percent)	Projected	Actual			Ratio of actual industry totals to projected staffing pattern	Ratio of actual staffing pattern to projected industry totals	Projected	Actual
Boilermakers	25	27	.02	18	.01	8.9	−25.6	8	46.4	57.4	6.4	.01	−.02
Psychiatric aides	114	141	.10	96	.07	23.6	−15.7	45	46.6	41.8	2.5	.15	−.07
Computer operators, except peripheral equipment	275	354	.26	241	.17	29.0	−12.0	113	46.7	74.8	10.2	.44	−.13
Barbers	76	76	.06	52	.04	.2	−31.8	24	46.9	30.0	15.2	.00	−.09
Jewelers and precious-stone and -metal workers	36	42	.03	28	.02	15.9	−21.2	13	47.1	40.4	2.7	.03	−.03
Electronic semi-conductor processors	38	34	.02	65	.05	−10.8	72.8	−32	48.4	48.8	.2	−.02	.11
Directors, religious activities and education	56	62	.05	121	.08	9.8	116.9	−60	49.4	22.6	36.8	.03	.25
Home appliance and power tool repairers	76	76	.06	51	.04	−.5	−33.4	25	49.5	47.4	9.5	.00	−.10
Broadcast and sound technicians	27	19	.01	39	.03	−31.1	41.5	−20	51.3	51.5	6.2	−.05	.04
Telephone and cable tv line installers and repairers	127	100	.07	206	.14	−21.3	62.5	−106	51.6	36.4	23.9	−.15	.31
Electrical and electronic equipment assemblers, precision	161	91	.07	197	.14	−43.8	21.8	−106	53.9	60.1	17.8	−.39	0.14
Shoe and leather workers and repairers, precision	32	32	.02	20	.01	.1	−36.4	12	57.5	10.6	67.7	.00	−.04
Purchasing managers	252	289	.21	182	.13	14.4	−28.0	107	58.8	60.6	1.4	.20	−.27
Precision instrument repairers	46	50	.04	31	.02	7.8	−33.6	19	62.4	45.3	11.6	.02	−.06
Cutters and trimmers, hand	63	65	.05	39	.03	2.7	−37.2	25	63.6	58.5	10.2	.01	−.09
Travel agents	142	219	.16	133	.09	54.1	−6.2	85	64.2	66.6	.4	.42	−.03
Instructors, adult (nonvocational) education	227	268	.20	163	.11	17.9	−28.3	105	64.5	75.3	13.8	.23	−.25
Electrical and electronics engineers	439	615	.45	369	.26	40.0	−16.0	246	66.7	63.2	4.7	.97	−.27
Aerospace engineers	78	88	.06	52	.04	12.7	−32.5	35	67.0	12.1	43.6	.05	−.10
Station installers and repairers, telephone	58	47	.03	27	.02	−19.8	−52.6	19	69.3	108.5	19.1	−.06	−.12
Fallers and buckers	36	30	.02	18	.01	−17.2	−51.2	12	69.6	66.3	1.4	−.03	−.07
Sewing machine operators, garment	620	531	.39	297	.21	−14.3	−52.2	235	79.2	14.3	56.6	−.49	−1.26
Peripheral equipment operators	42	54	.04	30	.02	29.0	−28.3	24	80.0	98.8	14.1	.07	−.05
Wholesale and retail buyers, except farm products	207	220	.16	120	.08	6.3	−42.1	100	83.6	87.2	.9	.07	−.34
Offset lithographic press operators	91	114	.08	62	.04	25.3	−32.4	53	85.3	77.7	9.0	.13	−.11
Compositors and typesetters, precision	26	25	.02	13	.01	−4.8	−49.4	12	88.2	65.0	12.9	−.01	−.05

Table 2. Continued—Employment, by occupation, 1988 actual and 2000 projected and actual

[Numbers in thousands]

Occupation	Total employment					Percent change, 1988–2000		Numer-ical error, 2000 (pro-jected level minus actual level)	Absolute percent error, original projec-tions, 2000[1]	Absolute percent error, simulated projections, 2000		Share of total job growth, 1988–2000 (percent)	
	1988	Projected 2000		Actual 2000		Pro-jected	Actual			Ratio of actual industry totals to pro-jected staffing pattern	Ratio of actual staffing pattern to pro-jected industry totals	Pro-jected	Actual
		Level	Share (percent)	Level	Share (percent)								
Word processors and typists	985	924	.68	482	.34	−6.2	−51.1	442	91.7	129.2	12.4	−.34	−1.96
Railroad brake, signal, and switch operators	37	29	.02	14	.01	−22.9	−61.5	14	100.4	103.4	1.6	−.05	−.09
Aircraft assemblers, precision	31	31	.02	15	.01	−1.7	−52.8	16	108.1	27.9	54.6	.00	−.06
Statement clerks	32	33	.02	16	.01	2.6	−50.8	17	108.7	82.8	13.9	.00	−.06
Furnace, kiln, oven, drier, or kettle operators and tenders ..	62	52	.04	25	.02	−16.9	−60.5	27	110.6	114.5	.2	−.06	−.15
Custom tailors and sewers	130	146	.11	68	.05	12.4	−47.9	78	115.6	97.9	10.5	.09	−.24
Service station attendants....................	308	331	.24	140	.10	7.4	−54.6	191	136.6	126.9	2.7	.13	−.65
Housekeepers and butlers	34	33	.02	13	.01	−2.6	−60.5	20	146.4	102.0	22.0	.00	−.08
Typesetting and composing machine operators and tenders ..	39	45	.03	13	.01	14.3	−66.3	31	238.8	186.4	14.2	.03	−.10

occupations. Employment of operators, fabricators, and laborers was expected to change little over the projection period, but it actually grew close to 13.6 percent between 1988 and 2000. Employment of transportation and material-moving machine and vehicle operators, a category that includes truck and bus drivers, was off by about 516,000 workers. The underprojection of transportation workers alone accounted for more than one-third of the projection error for all operators, fabricators, and laborers. Some of the overall projection error for this major group also can be attributed to an underprojection of helpers, laborers, and material movers, including freight, stock, and material movers and hand packers and packagers, by about 421,000 workers. The underlying assumption behind the projection was that increasing automation would lead to less demand for these workers; the impact, however, was overestimated. Helpers, laborers, and material movers contributed about one-fourth of the error for the entire group.

Employment of marketing and sales occupations was expected to increase 20 percent between 1988 and 2000, but it actually grew 27.9 percent. This underprojection of about 950,000 workers resulted primarily from an underestimate of cashiers by more than 600,000 workers. Employment of cashiers was projected to grow only about as fast as the average for all occupations, with more widespread use of bar code readers increasing the productivity of workers in this category. In actuality, employment grew much faster than average: 42.4 percent between 1988 and 2000. At the same time, employment of retail salespersons increased by about 340,000 workers. A large increase in discount retailers over the projection period was expected to slow the demand for retail salespersons, but it appears that the impact was overestimated. The two occupations combined (that is, cashiers and retail salespersons) contributed about four-fifths of the total error for the entire major group.

The category of administrative support occupations, including clerical, was underprojected by 865,000 workers. Employment of adjusters, investigators, and collectors grew much faster than projected, resulting in an underprojection of about 401,000 workers. By contrast, employment of secretaries, stenographers, and typists was overprojected by more than 1 million workers and contributed more than one-fifth of the total error for the major group. This detailed group of occupations was expected to grow more slowly than average, on the basis of the assumption that increasing office automation would decrease the demand for these workers. However, the group's employment actually *declined* over the projection period. In contrast to the assumptions regarding automation for operators, fabricators, and laborers, the effects of automation on secretaries, stenographers, and typists were underestimated.

The category of agriculture, forestry, fishing, and related occupations was the only major category for which the direction of the change in employment was not correctly projected. Employment was expected to decline slightly, but it actually grew by about 14 percent. Although the numerical error was modest compared with that of other groups, the absolute percent error was the highest. It appears, however, that the error for this group was significantly affected by changes to the occupational classification system in the early 1990s. Existing occupational definitions were revised, and new occupations within agriculture, forestry, and fishing were added to the Occupational Employment Statistics (OES) survey, resulting in shifts in employment that accounted for the growth in the group.[3]

Detailed occupations

In addition to the nine major occupational groups, employment projections for 1988–2000 were developed for nearly 500 detailed occupations. However, occupations with 25,000 or fewer workers in 1988 were eliminated from the analysis, leaving 338 occupations for which projections were evaluated.[4] Table 2 presents data on each of the remaining occupations, ranked by absolute percent error. The absolute percent errors for all 338 occupations averaged about 23.2 percent.[5] Approximately two-thirds of the occupations had below-average errors.

The last two columns of table 2 present the projected and actual share of total job growth. Although there are some notable exceptions, the projected shares for the detailed occupations, like those for the major groups, were relatively accurate.

The majority of occupations had absolute projection errors below 20 percent. (See table 3.) These 197 occupations accounted for almost 74 percent of total occupational employment. Only 57 occupations had absolute average errors above 40 percent, a little more than 7 percent of employment.

Consistent with findings of past evaluations, projection error continues to be inversely related to employment size. In 1988, 155 out of the 338 occupations analyzed had between 25,000 and 100,000 workers. These 155 occupations had an average projection error of about 23.3 percent. However, as the following tabulation shows, the 39 occupations with more than 600,000 workers had an average error of only 14.8 percent:

Occupations by size of employment	Mean absolute percent error
Less than 100,000	28.4
25,000 to 49,999	32.7
50,000 to 99,999	23.6
100,000 to 299,999	20.1
300,000 to 599,999	20.0
500,000 or more	14.5
600,000 or more	14.8
All occupations evaluated	23.2
Proportion of occupations with a lower-than-average error	66.6

The direction of employment change was projected correctly for roughly 70 percent of the occupations included in the evaluation.[6] Employment growth was projected for the majority of the occupations. Of the 232 occupations that actually grew between 1988 and 2000, an increase was projected for all but 30. However, of the 106 occupations for which employment declined, only 32 were projected to decline over the period.

Consistent with past evaluations, the 1988–2000 projections appear to be conservative in nature. For those occupations in which the direction of change was correctly anticipated, more than two-thirds were underprojected. In fact, of the two-thirds of occupations that were projected to grow by less than 30 percent, only about one-third actually did so. A higher proportion of occupations grew by more than 30 percent over the projection period. At the same time, only about 11.5 percent of the occupations were projected to grow by more than 30 percent, and one-third actually did. The same is true for occupations at the other extreme: more of the occupations shrank than were originally projected to. (See table 4.)

Sources of error

Errors in the projections for individual occupations can ultimately be traced back to errors in assumptions or judgments, resulting in incorrectly projected changes in staffing patterns, industry projections, or a combination of both. To determine whether projection errors could in fact be traced back to the one or the other, two matrices were created, for purposes of simulation. The first matrix was generated by multiplying the projected 2000 staffing patterns of industries by the actual 2000 industry employment numbers. This matrix reveals the outcome if perfect industry employment had been projected, isolating errors in the projections due to analytical judgments about changes in the staffing patterns. The second matrix was generated by multiplying the actual 2000 staffing patterns[7] by the 2000 projected industry totals. This matrix reveals the outcome if perfect staffing patterns had been projected, isolating errors due to incorrect industry projections.

The 2000 employment figure for each occupation from each matrix was then compared with the actual 2000 employment figure, and an absolute percent error was calculated. The two columns headed "Absolute percent error, simulated projections, 2000" in table 2 present projection errors from the two matrices created to analyze these effects. The two errors for an occupation can then be compared. If one error is

significantly higher than the other, the source of the error can be traced back to either the staffing pattern or the industry projection. For example, one can see clearly that the projection error for service station attendants is attributable more to errors in projected staffing patterns than to incorrect industry projections. The absolute percent error for service station attendants, 136.6 percent, was one of the largest. The error in the relevant matrix, using actual staffing patterns and projected industry totals, is 2.7 percent, whereas it is 127 percent with actual industry totals and projected staffing patterns. Slow growth was projected for service station attendants, with more repair and maintenance work seen moving outside of service stations. However, employment actually declined between 1988 and 2000, and most gas stations are now self-service only, no longer offering routine vehicle maintenance and having customers pump their own gas and even pay at the pump. The opposite is true in the case of aerospace engineers, an occupation with an absolute error of 67 percent. The percent error with projected staffing patterns and actual industry totals is 12.1 percent, and the error with actual staffing patterns and projected industry totals is 43.6 percent. Employment of aerospace engineers is concentrated in the aerospace manufacturing industry, which was projected to grow 0.3 percent annually, but actually declined by about 3.9 percent, on average, each year between 1988 and 2000.

About 54 percent of the occupations had errors attributable more to changes in the staffing pattern, and 21 percent

had errors attributable more to industry projections. The remaining 25 percent of occupations had errors equally attributable to staffing pattern changes and industry projections. In most cases, both errors in industry projections and errors in staffing pattern projections had a small impact on accuracy, even if the errors were attributable more to one or the other factor.

Job clusters. In investigating sources of projection error, it is helpful to examine groups of related occupations, or *job clusters*. Several such clusters are examined closely in this section because they have large projection errors or because they highlight specific sources of error. In the case of many health-care-related occupations, for example, errors in the projections are attributable mainly to incorrect assumptions behind the projections of the utilization of workers in the occupation by industry. (See table 5.) The first group of health-care workers listed in the table is labeled the health-diagnosing occupations and consists of optometrists, physicians, and dentists. All of the health-diagnosing occupations actually grew more slowly than projected. For example, physicians were projected to grow 27.8 percent, but grew only 10.4 percent. (See table 2.) Dentists actually declined 3.7 percent, instead of growing 13.1 percent as projected.

The second and third groups of occupations listed in the table are dubbed health assessment and treating occupations and health technicians and technologists, respectively. Most

Table 3.	Distribution of occupational absolute percent errors			
Range of absolute percent errors	Number of occupations with errors in range	Percent of occupations with errors in range	Employment totals accounted for (thousands)	Percent of employment accounted for
0 up to, but not including, 10	116	34.3	53,826	48.1
10 up to, but not including, 20	81	24.0	28,708	25.7
20 up to, but not including, 30	48	14.2	13,843	12.4
30 up to, but not including, 40	36	10.7	7,329	6.6
40 up to, but not including, 50	30	8.9	5,377	4.8
50 up to, but not including, 60	5	1.5	643	.6
60 or greater	22	6.5	2,140	1.9

NOTE: Average absolute percent error for all occupations is 23.2 percent.

Table 4.	Distribution of projected and actual percent changes			
Range of percent changes	Projected		Actual	
	Number	Percent of total	Number	Percent of total
Total	338	100.0	338	100.0
Greater than 60	5	1.5	39	11.5
60 down to, but not including, 50	9	2.7	13	3.8
50 down to, but not including, 40	6	1.8	20	5.9
40 down to, but not including, 30	19	5.6	35	10.4
30 down to, but not including, 20	60	17.8	33	9.8
20 down to, but not including, 10	114	33.7	58	17.2
10 down to, but not including, 0	58	17.2	34	10.1
0 or less	67	19.8	106	31.4

| Table 5. | Sources of projection error for health-care-related occupations, 2000, and projected and actual share of total job growth, 1988–2000 | | | | | |

Occupation	Absolute percent error[1]	Absolute percent error (ratio of actual industry totals to projected staffing patterns)	Absolute percent error (ratio of actual staffing patterns to projected industry totals)	Share of total job growth (percent)	
				Projected	Actual
Health-diagnosing occupations:					
Optometrists	15.3	20.1	2.5	0.0	0.0
Physicians	15.7	14.0	1.1	.8	.2
Dentists	17.5	22.6	2.7	.1	.0
Health-assessment and -treating occupations:					
Physician assistants	11.1	8.5	3.0	.1	.1
Occupational therapists	32.7	30.6	3.3	.1	.2
Speech-language pathologists and audiologists	35.8	30.9	7.9	.1	.2
Health technicians and technologists:					
Clinical laboratory technologists and technicians	11.0	15.7	5.3	.3	.3
Medical records and health information technicians	21.3	25.7	1.7	.2	.2

[1] Absolute percent error is calculated as the numerical error (positive or negative), divided by actual employment in the target year of the projection.

of these occupations grew faster than projected. For example, occupational therapists were projected to grow 48.8 percent, but actually grew 121.1 percent; and medical records and health information technicians were projected to grow 59.9 percent, but actually grew 103.1 percent. Both of these occupations were among the fastest-growing occupations between 1988 and 2000.

The main assumption behind the projected changes in staffing patterns for health-diagnosing occupations was that these occupations would decline as a share of the workforce in offices of health practitioners because of an increase in large group practices requiring a higher proportion of support staff. Among the major assumptions behind the expected increase in utilization of the other two groups of health-care workers was an increase in outpatient services and a shifting of responsibilities to lower skilled health-care workers in an attempt to contain costs. Because the health-diagnosing occupations were overprojected, the effects that group practices would have on the staffing patterns of doctors' offices appears to have been underestimated. The growing reliance on lower skilled health-care workers to carry out more routine tasks also appears to have been underestimated, because of the overly conservative projections for these occupations.

In contrast, the projection errors for occupations concentrated in the education services industry can be attributed more to error in the projection of industry employment rather than staffing. Overall employment in education services was projected to grow at an average annual rate of 1.2 percent, but it actually grew at a rate of 3.2 percent. Table 6 shows that the absolute percent errors are higher in the simulation testing for industry error, not only for teachers, but also for related occupations, such as counselors and school bus drivers. All of these occupations were underprojected.

A main contributor to growth in educational services is an increase in school enrollment, which is a reflection of the population growth of youths aged 5 to 17 years. In 1988, the Census Bureau projected an increase of 2 million among the elementary school population by 2000. This population actually increased by approximately 4.4 million. Also, in 1988 the Census Bureau projected an increase of 1.3 million in the secondary school population by 2000; it actually increased by 1.7 million.[8] Faster growth in the school-aged population caused enrollment rates to rise and increased the demand for teachers over the 1988–2000 period.

Errors in the projections for textile workers also can be traced back to incorrect projections in the industries in which they are employed. However, this group of occupations differs from those previously discussed, because employment was projected to decline rather than grow. Employment of textile workers is concentrated in three industries: knitting mills; apparel; and weaving, finishing, and yarn and thread mills. Overall employment in all of these industries declined at a faster rate than was projected. The category of knitting mills was projected to decline by 1.5 percent annually, but employment actually declined by 4.3 percent. Apparel was projected to decline by 1.5 percent annually, but actually declined by 6 percent. The category of weaving, finishing, and yarn and thread mills was projected to decline by 1.2 percent, but actually declined by 2.8 percent. As a result, the occupations in table 7 also declined faster than projected. For example, the category of sewing machine operators was projected to decline 14 percent, but actually declined by 52 percent and ended up as the occupation with second-largest job decline. While the major assumptions for the decline—a shift in U.S. apparel production overseas to countries with lower labor costs, an increase in cheap apparel imports, and greater worker productivity through the introduction of new labor-saving

Table 6.	Sources of projection error for education-related occupations, 2000, and projected and actual share of total job growth, 1988–2000					
Occupations	Absolute percent error[1]	Absolute percent error (ratio of actual industry totals to projected staffing patterns)	Absolute percent error (ratio of actual staffing patterns to projected industry totals)	Share of total job growth (percent)		
				Projected	Actual	
Teachers, secondary school	7.8	8.1	14.8	1.24	1.33	
Bus drivers, school	8.7	7.9	15.5	.38	.43	
Counselors	17.7	4.7	15.1	.18	.26	
Education administrators	18.6	5.6	12.9	.34	.58	
Teachers, preschool	20.5	5.9	22.5	.40	.59	

[1] Absolute percent error is calculated as the numerical error (positive or negative), divided by actual employment in the target year of the projection.

machinery—were correct, the impact of these trends on employment appears to have been underestimated.

The *Occupational Outlook Handbook*[9]

Projections of employment change are the foundation for statements on job outlooks in reports and career guidance publications. Accordingly, the quality of the information those statements provide depends on the accuracy of the projections on which they are based. Identifying sources of error and bias and evaluating their effects enables the Bureau of Labor Statistics to improve the accuracy of its projections.

An evaluation, however, also helps users whose decisions may be guided by the projections—a group that includes career guidance counselors, education planners, training officials, jobseekers, and students. Utilizing the information presented in an evaluation, all of these individuals can assess the reliability of job outlook statements. Therefore, significant weight should be given to evaluating discussions of employment *change*, as well as to evaluating discussions of employment levels.

The 1988–2000 occupational employment projections were the basis for the job outlook information presented in the 1990–91 edition of the *Occupational Outlook Handbook*. In the *Handbook*, growth descriptors are used to give readers a general impression of job prospects in each occupation. The following descriptors relating to ranges of employment growth or decline between 1988 and 2000 were used:[10]

	Projected change in employment, 1988–2000
Growth descriptor	
Much faster than average ...	Increase of 31 or more percent
Faster than average	Increase of 20 percent to 30 percent
About as fast as average	Increase of 11 percent to 19 percent
More slowly than average ..	Increase of 4 percent to 10 percent
Little or no change	Increase or decrease of 3 percent or less
Decline	Decrease of 4 percent or more

Table 8 gives a summary of the distributions of growth descriptors of occupations and also reinforces the conservative nature of the projections. Overall, 87 occupations ended up in the growth category projected, and another 100 occupations were one category higher or lower. The largest number of occupations was projected to grow about as fast as average. The majority actually grew much faster than average or declined. About 30 percent of all occupations were projected to have average growth, whereas only 14.8 percent actually did so. A little more than 26 percent of the occupations were projected to either grow faster than the average or decline; in actuality, almost 60 percent of the occupations fell into one of these two categories.

More than 65 percent of occupations projected to be in the much-faster-than-average category and almost 50 percent of declining occupations actually fell into their respective categories, making these categories the most accurate in terms of number of occupations. Of those occupations projected to grow as fast as average, only 20 percent actually did so. The higher degree of accuracy in the extreme-growth categories suggests that the accuracy of the BLS projections is greatest where there is actual strong growth or strong decline.

Fastest-growing occupations. The high degree of accuracy in projecting employment in those occupations which grew much faster than average becomes evident when one examines the 20 occupations projected to be the fastest growing.[11] (See table 9.) The average absolute error for this group was 23.6 percent, slightly higher than the 23.3-percent average error for all occupations. Only 6 of the 20 occupations projected to be fastest growing ranked among the top 20 actual fastest-growing occupations, 4 of which are health-care-related occupations. However, when all occupations were ranked on the basis of their actual percent change between 1988 and 2000, 15 of the 20 projected to grow the fastest ranked among the top 25 percent of occupations that actually did. All of these occupations were projected to have much faster than average growth, and all but 5 actually grew much faster than average. Of the 20 fastest-growing occupations,

the average growth, in percentage terms, was 55 percent; however, the actual average growth rate of those occupations, 110 percent, was double the projected rate.

Employment grew in all but two of the occupations projected to be among the 20 fastest growing, suggesting that the basic BLS assumptions about growth tended to be accurate; however, employment was either under- or over-estimated. For example, the technological advances in radiology and the increasing importance of the discipline in diagnosing disease and injury were the major reasons that much faster than average growth was projected for radiologic technologists and technicians. However, the growth of that occupation seems to have been limited, possibly by the high cost of implementing the technology.[12] Nonetheless, the fundamental BLS assumptions about growth for the occupation were correct, and although it was not actually among the 20 fastest-growing occupations, radiologic technologists and technicians still experienced faster-than-average employment growth.

Employment was overestimated to a larger degree for data-processing equipment repairers and medical secretaries. Employment in these occupations had average and slower-than-average growth, respectively. In the case of data-processing equipment repairers, faster-than-average growth was projected because of rapid increases in the use of office computers and other technology that requires repair workers. However, employment growth was limited because the increased quality of the machines caused fewer breakdowns and many computers were designed to self-diagnose problems. In the case of medical secretaries, increased use of automated office technology .hindered employment growth. Also, as technology shortened the completion time of tasks, other medical staff, such as medical assistants, performed tasks traditionally carried out by medical secretaries, further hindering their growth.

Occasionally, unforeseen changes in technology, business practices, or governmental regulations affect occupations to a significant degree. It is often difficult or impossible to anticipate and incorporate such changes into the growth assumptions for some occupations, and the changes frequently result in projection error. For example, the category of travel agents was among the 20 occupations projected to be the fastest growing, but it actually declined between 1988 and 2000. Travel agents were projected to have such high growth, in percentage terms, because of an increase in business travel and disposable income. These assumptions were correct; however, the development and use of the Internet and online travel services, enabling consumers to shop for the best deals and book trips themselves, were not anticipated in 1988.[13]

Another source of error in the BLS projections was the change in the classification system of occupations upon which

Table 7. Sources of projection error for textile-related occupations, 2000, and projected and actual share of total job growth, 1988–2000

Occupation	Absolute percent error[1]	Absolute percent error (ratio of actual staffing patterns to projected staffing patterns)	Absolute percent error (ratio of actual staffing patterns to projected industry totals)	Share of total job growth (percent)	
				Projected	Actual
Textile bleaching and dyeing machine operators and tenders	6.0	13.4	23.0	0.0	0.0
Textile drawout and winding machine operators and tenders	14.3	2.7	18.6	–.2	–.2
Textile machine setters and setup operators	30.9	12.7	15.1	.0	.0
Shoe and leather workers and repairers, precision ..	57.5	10.6	67.7	.0	.0
Sewing machine operators, garment	79.2	14.3	56.6	–.5	–1.3

[1] Absolute percent error is calculated as the numerical error (positive or negative), divided by actual employment in the target year of the projection.

Table 8. Distribution of projected and actual growth descriptors

Projected growth category	Projected number of occupations in each growth category	Actual number of occupations in each growth category					
		Declining	Little or no change	Slower than average	Average	Faster than average	Much faster than average
Total	338	87	36	25	50	34	106
Declining	51	25	5	4	6	1	10
Little or no change	32	16	5	5	0	4	2
Slower than average	50	12	3	5	8	7	15
Average	101	20	19	6	21	13	22
Faster than average	66	12	3	4	9	6	32
Much faster than average	38	2	1	1	6	3	25

Occupation	Projected rank, 1988–2000	Actual rank, 1988–2000	Absolute percent error
Table 9. Projected and actual occupational employment rankings, by change from 1988 to 2000			
Fastest-growing occupations			
Paralegals and legal assistants	1	28	2.8
Medical assistants	2	23	4.0
Radiologic technologists and technicians	3	124	31.4
Personal care and home health aides	4	3	30.1
Data-processing equipment repairers	5	170	41.0
Medical records and health information technicians	6	11	21.3
Medical secretaries	7	198	43.6
Physical therapists	8	27	8.4
Surgical technologists	9	44	.8
Operations research analysts	10	49	2.6
Securities, commodities, and financial services sales agents	11	40	1.8
Travel agents[1]	12	260	64.2
Systems analysts	13	38	5.5
Physical therapy assistants and aides	14	9	27.3
Occupational therapists	15	5	32.7
Computer programmers	16	70	5.1
Social and human service assistants	17	1	39.8
Respiratory therapists	18	42	9.3
Correctional officers	19	8	34.1
Electrical and electronics engineers[1]	20	287	66.7
Occupations with the largest job growth			
Retail salespersons	1	15	8.1
Registered nurses	2	6	3.3
Janitors and cleaners, including maids and housekeeping cleaners	3	14	4.5
Waiters and waitresses	4	19	10.5
General managers and top executives	5	8	.9
Office clerks, general	6	3	6.8
Secretaries, except legal and medical	7	262	15.6
Nursing aides, orderlies, and attendants	8	31	12.1
Truckdrivers, light and heavy	9	4	9.9
Receptionists and information clerks[1]	10	7	15.0
Cashiers	11	1	20.5
Guards	12	24	.6
Computer programmers	13	29	5.1
Food counter, fountain, and related workers	14	11	11.5
Food preparation workers	15	20	3.8
Licensed practical and licensed vocational nurses	16	56	20.0
Teachers, secondary school	17	18	7.8
Systems analysts	18	23	5.5
Accountants and auditors	19	45	7.9
Personal care and home health aides	20	12	30.1
Occupations with the largest job declines			
Farmworkers	1	6	.4
Electrical and electronic assemblers[2]	2	144	45.8
Sewing machine operators, garment	3	2	79.2
Hand packers and packagers[2]	4	329	45.1
Electrical and electronic equipment assemblers, precision[2]	5	238	53.9
Word processors and typists[2]	6	1	91.7
Inspectors, testers, and graders, precision[2]	7	176	8.6
Court reporters, medical transcriptionists, and stenographers	8	16	17.7
Packaging and filling machine operators and tenders[2]	9	292	34.1
Machine feeders and offbearers	10	22	2.0
Textile drawout and winding machine operators and tenders	11	15	14.3
Child care workers, private household	12	8	34.9
Telephone and cable TV line installers and repairers[2]	13	283	51.6
Data entry keyers[2]	14	182	9.4
Industrial truck and tractor operators[2]	15	159	7.6
Crushing, grinding, mixing, and blending machine operators and tenders[2]	16	161	21.4
Machine-forming operators and tenders, metal and plastic	17	52	2.0
Welders and cutters[2]	18	251	16.7
Central office and PBX installers and repairers	19	32	19.7
Machine tool cutting operators and tenders, metal and plastic	20	18	23.1

[1] Occupation that was projected to grow, but actually declined.

[2] Occupation that was projected to decline, but actually grew.

the projections are based. (This kind of change, in which some occupations may have suboccupations added to or removed from them, is to be contrasted with a definitional change in an occupation. As mentioned earlier, occupations that had definitional changes were excluded from the analysis.) New occupations were added after the projections were made in 1988. This is one reason for the sharp decline in employment among electrical and electronic engineers. In 1988, computer engineers were classified as electrical and electronic engineers. Beginning in 1989, however, computer engineering was surveyed as a separate occupation, shifting employment away from electrical and electronic engineers.

Occupations with the largest job growth. Like the fastest-growing occupations, occupations with the largest job growth offer insight into those occupations which will have the greatest impact on the labor market. Occupations with the largest job growth often have slower growth in percentage terms, but a much larger number of workers, than those ranked among the fastest growing. As a result, the former occupations usually create more job openings. However, some occupations are among both the fastest-growing occupations and the occupations with the largest job growth. Three occupations examined in this analysis were in both categories: personal care and home health aides; shipping, receiving, and traffic clerks; and teacher assistants.

The projections for the 20 occupations with the largest job growth were relatively accurate, reflecting the fact that projection error is inversely related to employment size. (See table 9.)[14] Thirteen occupations with the largest projected job growth were among the top 20 with the largest actual job growth. The 13 occupations accounted for a combined 7.1 million jobs and 94 percent of net job growth. The average absolute percent error of the group was only 9.2 percent, well below the 24.5-percent average for all occupations.

Most of the occupations with the largest projected and largest actual job growth were in service industries—in particular, health, education, and food services. A growing elderly population with an increasing need for medical care is one factor driving growth among the different nursing occupations and personal care and home health aides. Also, increasing health care costs are channeling certain tasks into the hands of lower skilled health-care workers instead of physicians. As regards education services, rapidly increasing school enrollments are the major factor driving the demand for secondary school teachers and teacher assistants. Finally, a growing population with increasing income and more leisure time is one source of growth among workers in the food services industry, such as waiters and waitresses; food counter, fountain, and related workers; and food preparation workers. Strong economic growth and a growing population with higher incomes are also sources of growth for occupations in the retail trade sector. Employed mainly in retail trade, cashiers

added the most new jobs between 1988 and 2000, almost 1 million. Combined with retail salespersons, cashiers added almost 1.4 million new jobs to the economy.

In one instance, an occupation projected to be among those adding the most jobs actually declined over the projection period. Secretaries, except legal and medical, were projected to add 385,000 new jobs, but employment actually declined by 59,000 jobs. In fact, secretaries ended up among the 20 occupations with the largest job *losses*, due mainly to increases in office technology that made those in the occupation more productive. As they became more productive, secretaries increasingly worked for more than one manager. Managers themselves also increasingly performed routine office work, such as word processing and filing, further reducing the need for secretaries.

Occupations with the largest job declines. Declining occupational employment stems from declining industry employment or factors such as technological advancements and changes in business practices. The average projected numerical decline for the 20 occupations with the largest losses was 58,000 jobs. The average actual numerical decline was 130,000 jobs. The accuracy among the occupations in this group was not as high as among those with the largest job growth: only 7 occupations that were projected to be among the occupations with the largest job declines actually were. (See table 9.)

Technological advancements were the major reason for both projected and actual declines in employment. New labor-saving machinery, for example, was a factor in the decline in textile jobs such as sewing machine operators and textile draw-out and winding machine operators and tenders. The employment of office support workers, such as word processors and typists, and court reporters, medical transcriptionists, and stenographers was curtailed by new office technology, including e-mail and voice mail. Other factors, such as growing domestic and international competition and corporate restructuring, also dampened the level of employment in these occupations.

Among the 20 occupations with the largest projected employment declines, half actually grew over the projection period. The largest numerical difference between projected and actual employment levels was for hand packers and packagers. As regards many of the other occupations projected to decline, the effects of automation and other labor-saving technology appear to have been overestimated.

Conclusions and implications

Overall, the employment projections for the year 2000 were slightly more accurate than the earlier ones for 1995: employment for six of the nine major occupational groups was projected with greater accuracy for 2000. However, projections

on such an aggregate scale are, by their nature, uncertain. Because projections are made for individual occupations, and not major groups, errors are compounded as these occupations are combined. The detailed occupations that make up each group can be large enough that any error in their individual projection can affect the outcome for the group overall.

Compared with errors from past evaluations, the average absolute percent error for the 2000 occupational employment projections was not significantly different. The mean absolute percent error for the 2000 projections, 23.2 percent, was close to the mean absolute percent error of 24.0 percent for the 1995 projections and only slightly higher than the errors found in previous sets of projections.[15] However, the two most recent evaluations covered many more occupations than did the earlier ones.

The two matrices prepared for the simulations carried out in the current and previous evaluations have been analyzed and the major source of error for many detailed occupations identified. As the previous evaluation found, good industry projections are crucial to developing good occupational projections, but the chief source of errors appears to be the projected staffing patterns. In the matrix for which projected staffing patterns were applied to actual 2000 industry totals, the mean absolute percent error was 22.6 percent; in the matrix for which actual staffing patterns were applied to projected 2000 industry totals, the mean absolute error dropped to 9.3 percent.

Historically, all BLS evaluations of its occupational employment projections have yielded the result that the projections are conservative. The 1988–2000 projections are no exception: most of the projections were clustered around average growth, even when more occupations grew much faster than the average or declined. The inherent conservatism contributed to overall errors in staffing patterns, in part because analysts were conservative in projecting occupational coefficients or changes in the proportion of an occupation within each industry.

In projecting occupational patterns from 1988 to 2000, analysts reviewed historical employment data and conducted analyses to identify factors underlying trends. The evaluation of the 1988–2000 projections has provided analysts the first chance to look back at this work. Because an industry-occupation matrix was used to project employment by occupation, analysts projected changes to the occupation-industry cells on the basis of knowledge gained through research performed in preparing the *Occupational Outlook Handbook*. Judgments were made as to whether factors causing changes in occupational utilization within industries would have less, more, or the same effect in the future. The analysis also uncovered factors expected to affect the utilization of workers that did not affect them in the past. Analytical judgments were then translated into numerical estimates—increases or decreases in the coefficients of the industry-occupation matrix from 1988 to 2000. To maintain consistency among the judgments of analysts projecting occupational change, the following guidelines for describing changes were implemented to develop projected coefficients for all occupations across all industries:[16] changes of 5 percent to 9 percent are described as small, those from 10 percent to 19 percent are considered moderate, and those of 20 or more percent are said to be significant.

Biases towards conservatism are recognized by the Bureau; thus, the guidelines for projecting the changes in the occupational coefficients have been revised. For example, beginning in the early 1990s, the Bureau set forth new guidelines for interpreting the projected ranges for identifying small, moderate, and large changes in the occupational coefficients: according to these guidelines, any positive change up to 10 percent is considered small, a change from 10 percent to 20 percent is deemed moderate, one from 20 percent to 35 percent is held to be large, and a change of 50 percent or more is judged very large. The revised guidelines have allowed analysts to describe changes in the occupational coefficients more accurately, which should result in more accurate projections.

The influence of conservative coefficients of change on the projections, however, was not the only source of error. Rather, the impact of many technological changes and trends were not fully realized and therefore also contributed to errors in the projected staffing patterns. Incorrect analytical judgments relating to the impact of technological change and to trends such as outsourcing and the growing role of temporary-help firms played a large part in this regard. Furthermore, some events, such as the timing of business cycles, the onset of international conflicts, and the occurrence of natural disasters, are difficult to predict and ultimately have a substantial impact on the accuracy of the projections. ☐

Notes

[1] Another measure used to evaluate the projections included comparing the actual distribution of employment growth among occupations with the projected distribution. To evaluate how the errors attributed to detailed occupations affected the errors associated with their respective major groups, each detailed occupation's error was weighted by its employment size in 1988. (Each occupation's contribution to the error for a particular major group is presented in the analysis of the projections for the major occupational groups. The contribution was calculated by first dividing an occupation's projected employment by its actual employment in the target year. The result of the calculation was then multiplied by the ratio of the occupation's actual employment to the total actual employment for the major group, and this resulting value was then divided by the sum of the errors for all occupations to determine each occupation's share of the

error as a percentage.) A comparison of the projected and actual growth in terms of descriptors of the detailed occupations also is presented as a method of evaluation.

[2] This underprojection was really the result of changes in the *occupational classification* over time. In 1988, the only computer-related occupation for which a projection was developed was systems analysts. The projection turned out to be close to the mark. However, between 1989 and 1998, three more computer-related occupations, including the residual category of "all other computer scientists," were added alongside systems analysts. In 2000, these three occupations accounted for an additional 1 million workers.

[3] Over the 1988–2000 period, the OES definition of the detailed occupation category of landscaping and groundskeeping laborers was modified. The change caused workers in agriculture, forestry, fishing, and related occupations to be shuffled among detailed occupations within the major group. Therefore, more types of workers were classified as landscaping and groundskeeping laborers in 2000 than in 1988, which caused employment in agriculture, forestry, fishing, and related occupations to be underprojected.

[4] For an explanation of occupations that were eliminated from the analysis, see the technical note at the end of this article.

[5] Weighted by actual 2000 employment, the mean absolute percent error was 4.43 percent.

[6] Occupations with projected and actual growth between –3 percent and 3 percent were categorized as having little or no change. Those occupations whose projected and actual growth fell into this category were counted as having employment projected in the correct direction, even if the projected and actual employment figures were in different directions.

[7] See the technical note at the end of the for an explanation of why 1998 staffing patterns were used instead of the actual 2000 Standard Occupational Classification (SOC)-based patterns.

[8] See Valerie Personick, "Industry output and employment: a slower trend for the nineties," *Monthly Labor Review*, November 1989, pp. 25–41, for the original population projections. Updated population figures are given on the National Population Estimates page on the U.S. Census Bureau's website, **http://www.census.gov/population/www/estimates/uspop.html**.

[9] For additional information regarding the evaluation of material in

the 1990–91 *Occupational Outlook Handbook*, see "The 1988–2000 Employment Projections: How Accurate Were They?" *Occupational Outlook Quarterly*, spring 2003.

[10] More information on these growth adjectives is available in the section titled "Key to understanding what's in the *Handbook*," in the *Occupational Outlook Handbook*, Bulletin 2350 (Bureau of Labor Statistics, 1990–91).

[11] The list of the 20 fastest-growing occupations was originally published in table 5 in the November 1989 *Monthly Labor Review*. Because of changes in the 2000 SOC system, some of the occupational titles now differ from the original 1988 titles. For example, human services workers are now called social and human service assistants.

[12] Assumptions regarding the growth of radiologic technologists and technicians were published in *Occupational Projections and Training Data*, Bulletin 2351 (Bureau of Labor Statistics, 1990) and in the "Job Outlook" sections of the respective occupations in the 1990–91 *Occupational Outlook Handbook*.

[13] Current growth assumptions were analyzed in *Occupational Projections and Training Data*, Bulletin 2542 (Bureau of Labor Statistics, 2002–03) and in the "Job Outlook" sections of the *Occupational Outlook Handbook*, Bulletin 2540 (Bureau of Labor Statistics, 2002–03).

[14] A table listing the 20 occupations with the largest job growth was originally published in the November 1989 *Monthly Labor Review*. Because of modifications to the SOC, one of the occupational titles changed from its original 1988 title: licensed practical nurses are now called licensed practical and licensed vocational nurses. Also stemming from the modifications to the SOC, the two occupations of order fillers, wholesale and retail sales; and stock clerks, stockroom, warehouse, or storage yard were combined into the sole occupation titled "stock clerks and order fillers." The combined occupation ranks among both those with the largest projected growth and those with the largest actual growth, but was not in the *Review* table. Because the original occupations were not combined when the projections were made, they are not included in the table.

[15] See Neal H. Rosenthal, "The quality of BLS projections: a historical account," *Monthly Labor Review*, May 1999, pp. 27–35.

[16] See *Occupational Projections and Training Data*, Bulletin 2351 (Bureau of Labor Statistics, April 1990).

APPENDIX: Technical Note

Framework of the projections. The 1988–2000 occupational employment projections were developed within the framework of an industry-occupation matrix containing 258 industries and 491 occupations. Data used for the 1988 matrix and the projected 2000 matrix came from a variety of sources. For industries covered by the Occupational Employment Statistics (OES) survey, the most current survey data were utilized to develop the occupational distribution or staffing patterns used to estimate 1988 wage and salary employment. Employment by occupation in each industry was derived by multiplying the occupational distribution of employment by 1988 wage and salary worker employment for each industry; data for each of these categories were obtained

from the BLS Current Employment Statistics (CES) survey. Both the CES survey and the OES survey are surveys of business establishments, covering only wage and salary workers. Data from the 1988 Current Population Survey (CPS) were used to develop the occupational distribution patterns for workers in agriculture, fishing, hunting, and trapping, and for private households, as well as to develop economywide estimates of self-employed and unpaid family workers by occupation. Occupational distribution patterns for the Federal Government were developed by the Office of Personnel Management. Data from the National Center for Education Statistics were used for teachers.

In order to evaluate projections, the occupational employment data from the base year and the actual data from the target year must be comparable. The 1980 Standard Occupational Classification System (SOC) underwent a major revision in the year 2000. The titles and content of the major occupational groups and many detailed occupations in the 2000 SOC are now substantially different than they were in the previous version. Some major groups were renamed, combined, or reorganized. Some individual occupations were renamed or reclassified into different major groups. Many new occupations were added. Some were aggregated and some were split into more detail. Because of these changes, the occupations and major groups reflected in the 2000–10 national employment matrix are not comparable to those reflected in the 1988–2000 matrix.

Owing to the revisions to the SOC, the incomparability across occupations and major groups between 1988 and 2000 had to be addressed. A new industry-occupation matrix was created to get around the comparability problems. Actual employment data for 2000 were re-created for the purposes of the evaluation presented in the text by applying 1998 staffing patterns to the 2000 industry totals. Unlike the occupational structure, the industry structure had not changed between 1988 and 2000. Accordingly, the original 1988 and projected 2000 employment data published in 1989 were reconfigured to the 1998 occupational structure. Therefore, some of the occupational titles are not exactly the same as those published in the November 1989 Monthly Labor Review article. This incommensurability created by definitional changes limited the number of previous occupational employment projections that could be evaluated.

Because the 2000 SOC will be used until its next revision in 2010, the evaluations of projections made for 2005 and 2006 also will face the same type of comparability problems. In addition, comparability problems will be created when the 1987 Standard Industry Classification is replaced with the 2002 North American Industry Classification System as the new industry structure of the Occupational Outlook Handbook. As a result, new evaluation methods will be necessary to circumvent these problems.

Occupations eliminated from the evaluation.   Only 338 of the 500 occupations for which projections were made from 1988 to 2000 were evaluated. Occupations were eliminated from the evaluation primarily for three reasons. First, all residual occupations, such as "all other managers," were dropped. Second, occupations whose definitions were not consistent between 1988 and 1998 due to changes in the occupational or industrial classification system were eliminated. Third, the list of occupations was confined to those employing more than 25,000 workers in 1988, because only those occupations were published in the original employment projections article that appeared in the November 1989 Monthly Labor Review.[1]

Other data errors.   The discussion in the text of the article, as well as in this technical note, has focused on errors in individual projections that can be traced to incorrectly forecasted changes in staffing patterns or incorrect industry projections. Also, comparability problems stemming from inconsistencies in the occupational classification system over time were highlighted. It is important to bear in mind, however, that other data problems exist and that differences in actual and projected employment levels are not always due to projection errors. Consequently, real employment trends in an occupation may not necessarily be measured by comparable surveys 10 years apart.[2] Moreover, although survey data are generally considered reliable, sampling and response errors certainly had an impact on the data in both the initial and the terminal years of the projection period evaluated.

Notes to the appendix

[1] See George Silvestri and John Lukasiewicz, "Projections of occupational employment, 1988–2000," *Monthly Labor Review*, November 1989, pp. 42–65.

[2] For four decades, the Bureau of Labor Statistics developed projections in which the target year always ended in a zero or a five.

Projections were prepared every other year, resulting in two, and sometimes three, sets of projections being prepared for the same target year. As a consequence, the projection horizon could be as short as 10 years or as long as 15 years. Beginning with the 1996–2006 projections presented in the November 1997 *Monthly Labor Review*, projections have been developed for a 10-year period only.

CES program: changes planned for hours and earnings series

Patricia M. Getz

The Current Employment Statistics (CES) program produces monthly estimates of nonfarm payroll employment, hours, and earnings for the Nation, States, and major metropolitan areas in considerable industry detail. These data are among the earliest and most closely watched economic indicator series. In addition, the CES publishes monthly series on women workers by industry.

Currently, CES average weekly hours and average hourly earnings series, and their derivatives, such as the index of aggregate hours, are limited to covering production and nonsupervisory workers in the private sector. A production worker concept is used for the goods-producing industries, and a nonsupervisory worker concept for the service-providing industries. The earnings are defined as "regular earnings" and, as such, they exclude bonuses and other irregular payments.

Plans for change

The Bureau of Labor Statistics plans two major changes to the data series available from CES. These changes follow several years of research, testing, and consultation with major data users. The principal aspects of the changes are:

- Expansion of the hours and earnings series to cover all employees rather than just production and nonsupervisory workers.
- Discontinuation of the women worker series.
- Potential addition of a total wages series, that will include nonwage

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cash payments such as bonuses and stock options.

Impetus for the changes

All-employee hours and earnings. Virtually all major CES data users have expressed interest in and support for broadening the scope of worker coverage for the CES hours and earnings series. By covering all employees rather than just the production and nonsupervisory workers, the new CES series will provide more comprehensive and therefore more valuable information about trends in the hours and earnings of nonfarm wage and salary workers. In addition, it will provide better information for other economic data series which use CES data as input, especially the BLS productivity series and the personal income segment of the national income and product accounts produced by the Bureau of Economic Analysis. Another impetus for the transition to an all employee definition is the increasing difficulty that many respondents have compiling information for the production and nonsupervisory worker definitions presently used by the CES program. Most payroll recordkeeping does not allow for the easy identification of workers defined by the CES categories of production and nonsupervisory workers. These categories simply are not meaningful to employers and records are not kept for these groupings of workers. This leads to a relatively high item nonresponse rate for payroll and hours data, compared with the all-employee data item. Pilot tests have indicated that most respondents would find it less burdensome to compile payroll and hours information for all employees than for the production/nonsupervisory worker categories.

Women workers. BLS plans to discontinue the collection and publication of women worker series concurrent with the start of all-employee payroll and

hours collection. Eliminating this data item will reduce the response burden for CES sample members at a time when they are being asked to add total payroll and hours information.

There is little demand for the CES women worker series; the major focus of CES data users is for information by industry and geography. CES provides a great amount of industry and geographic detail, but no other demographic breakouts beyond women workers. The Current Population Survey (CPS), which provides monthly data on the labor force and unemployment rate, is a much richer source for demographic information. The CPS is a large household survey which as a result of its detailed respondent interviews, supplies abundant information by gender, age, race, and other demographic characteristics.

Total wages. A third potential change is under consideration for the CES program—addition of a total wages series. A total wages series would include items such as bonuses, stock options, and employer contributions to 401(k) plans—items that currently are not included in the CES average hourly series. Both the currently published average hourly earnings series for production/nonsupervisory workers and the planned series for all employees, measure regular earnings—wages earned and paid each pay period. Bonuses and other nonwage cash payments are excluded unless earned and paid each pay period.

Because it would be a more comprehensive measure of worker compensation, a total wages series would be of particular interest to the Bureau of Economic Analysis for input to its personal income series and to government revenue forecasters who use compensation to predict tax revenues. Presently, BLS is evaluating the feasibility of adding total wages collection to the CES survey, in terms of

cost and operational issues as well as respondent burden considerations. A final decision has not been made on whether CES will publish a total wages series.

Timetable for introduction

All-employee hours and earnings. BLS plans to transition from production/nonsupervisory worker hours and earnings to all-employee hours and earnings in two stages. This plan will provide a multiyear overlap between the two series.

Stage 1 –The new hours and earnings series added for all employees will be published beginning in early 2006. The current production and nonsupervisory worker series also will continue to be published. The retaining of current concepts should make the transition smoother for data users and for BLS, especially given that there will not be historical time series data available for the new all-employee-based hours and earnings series.

Stage 2 –After the all-employee hours and earnings series become well established with users, and there is a sufficient history to permit seasonal adjustment, the production/nonsupervisory worker series will be discontinued. BLS tentatively plans to drop these series in 2009.

Elimination of women worker series. The women worker series will be discontinued after publication of the December 2004 estimates in early 2005. Respondents will be asked to begin reporting all-employee payroll and hours in early 2005 and to drop reporting of women workers.

Potential addition of a total wages series. BLS expects to decide by early 2004 whether to add this series to the CES program. If the decision is positive, the series will likely be added in early 2006, concurrent with the all-

employee average weekly hours and average hourly earnings series.

Concurrent seasonal adjustment for national CES survey

Chris Manning

The Current Employment Statistics (CES) survey, conducted by the Bureau of Labor Statistics, is a monthly survey of more than 400,000 business establishments. The CES program obtains payroll employment, hours, and earnings information and produces industry-based estimates for the Nation, States, and major metropolitan areas. The national CES estimates of employment, hours, and earnings are some of the most timely and sensitive economic indicators published by the Federal Government. Widely viewed as a key measure of the health of the economy, the estimates are closely tracked by both public and private policymakers alike.

Most CES data users are interested in the seasonally adjusted over-the-month employment changes as a primary measure of overall national economic trends. Therefore, accurate seasonal adjustment is an important component in the usefulness of these monthly data. While seasonally adjusted series go through several monthly revisions and an annual benchmark revision before they are finalized, the first published estimates are the most widely anticipated and analyzed. Thus, it is important to use the most efficient and reliable methods for seasonal adjustment of current months' data.

In the past, the CES program employed seasonal adjustment methodology that applied forecasted seasonal factors to the employment estimate. Twice a year,

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seasonal factors were forecasted for 6 months into the future and applied to the nonseasonally-adjusted estimates during the next 6 months. However, simultaneously with the CES survey's conversion to the North American Industry Coding System (NAICS) with the publication of May 2003 first preliminary estimates, the survey converted to concurrent seasonal adjustment. Under this methodology, new seasonal factors are calculated each month, using all relevant data up to and including the current month. This article compares the two seasonal adjustment methodologies, examines results from recent research evaluating each of them, and discusses some implications of the CES conversion to concurrent seasonal adjustment.

Background on CES estimates

One of the benefits of the CES program is the timeliness of its estimates. CES estimates are published each month after only 2½ weeks of data collection. The primary deadline for data receipts, referred to as "first closing," is the last Friday of the reference month, and preliminary estimates are generally published on the first Friday following the reference month. In order to incorporate additional sample responses received after the primary deadline, each estimate undergoes two monthly revisions before being finalized. The secondary cutoff, or "second closing," is usually 3 weeks after the primary deadline, and the third deadline, or "third closing," is 3 weeks after the second. Therefore, for any given reference month, second-closing estimates are published the following month, and third-closing estimates are published 2 months afterwards.

CES estimates also undergo annual revisions called *benchmarks*. Each year, the sample-based estimates for the previous year are adjusted to universe employment counts derived from State

unemployment insurance tax records. This adjustment constitutes the final estimate for all reference months in the benchmark period.

Customarily, the June CES publication incorporates annual benchmark revisions that include a recalculation of seasonally adjusted data for the most recent 5 years. After 5 years of seasonal adjustment revisions, figures are frozen. For example, the March 2002 benchmark revision, published in June 2003, provided revised seasonally adjusted data for 1998 through the first quarter of 2003. Beginning in 2004, the annual benchmark revision will be incorporated in February instead of June.

To seasonally adjust the estimates, the CES program uses X-12 ARIMA software developed by the U.S. Census Bureau. Under the old methodology, seasonal adjustment factors were recalculated semiannually, in April and November, and projected factors for the next 6 months were published in June and December of each year. Under the new methodology, seasonal factors are calculated each month, using all relevant data up to and including the current month. Projected seasonal factors are neither published nor used.

Research approach

During the last few years preceding the switch to concurrent seasonal adjustment, the Bureau of Labor Statistics researched the impact that a change in seasonal adjustment methodology would have both on the CES data and on data users. Each month, parallel to the monthly production of CES seasonally adjusted data with projected-factor methodology, the CES program would run concurrent seasonal adjustment for research purposes. The parallel tests were structured in such a way as to measure only the effect of incorporating additional months of data into the seasonal adjustment process. To do this, the Bureau kept as many variables as

possible constant.

For example, standard CES practice requires that 10 years of historical data be used as input to the X-12 ARIMA model. The same historical input data set was used for both seasonal adjustment runs. Therefore, any prior adjustments originally made to the data during production, such as adjustments to account for strikes or for editing and screening, were included in the research simulations as well. The only difference in inputs between the two runs was that concurrent adjustment also incorporated up to 5 months of additional estimates in calculating the seasonal factors.

In the parallel series, the incorporation of revised seasonal factors was handled within the normal CES monthly revisions procedures. CES methodology dictates that, with the calculation of first-closing estimates for a current month, the second- and third-closing estimates for the previous 2 months be revised on an unadjusted basis to incorporate further sample receipts. In the parallel series, the concurrent seasonally adjusted data were recalculated by using revised second- and third-closing estimates, mirroring the production process under the projected-factor methodology. Finally, all published data types were seasonally adjusted under both methods; however, because the all-employee series is the most closely watched series published by the CES program, it is the focus of this report.

Results

In this section, the two methods are compared in terms of (1) the smoothness of the seasonally adjusted series, (2) mean absolute revisions to the over-the-month changes evident from the first preliminary estimate to the benchmarked series, and (3) the variation between monthly revisions. With regard to the smoothness of the series, chart 1 compares the third-closing over-the-

month changes of the seasonally adjusted employment figures for total nonfarm employment from January 2001 to June 2002 for the two methodologies. The dashed line shows the third-closing over-the-month changes calculated under the projected-factor methodology (that is, what was published), while the solid line shows the same kind of changes for the concurrently adjusted series (that is, what the over-the-month changes would have been if the CES had been using concurrent seasonal adjustment at that time). As the graph illustrates, concurrent adjustment produces a slightly smoother seasonally adjusted series, with less variability in the over-the-month changes.

The following tabulation of the "smoothness ratio" for January 2001 through June 2002 underscores the smoothness of the concurrent seasonally adjusted employment series for total nonfarm plus all nine industry divisions, as defined and published under the 1987 Standard Industrial Classification (SIC) system:

SIC group	Smoothness ratio
Total nonfarm employment	0.67
Mining	.77
Construction	.47
Manufacturing	.87
Transportation and public utilities	78
Wholesale trade	.88
Retail trade	.56
Finance, insurance, and real estate	.68
Services	.58
Government	.67

The smoothness ratio is a measure of variability in the third-closing over-the-month change in the seasonally adjusted estimate. The calculation compares the sum of the squared over-the-month changes in the concurrent seasonally adjusted series with the sum of the squared over-the-month changes in the projected-factor seasonally adjusted series. A smoothness ratio below 1 indicates that concurrent seasonal

Chart 1. Third-closing over-the-month change, total nonfarm employment, January 2001–June 2002
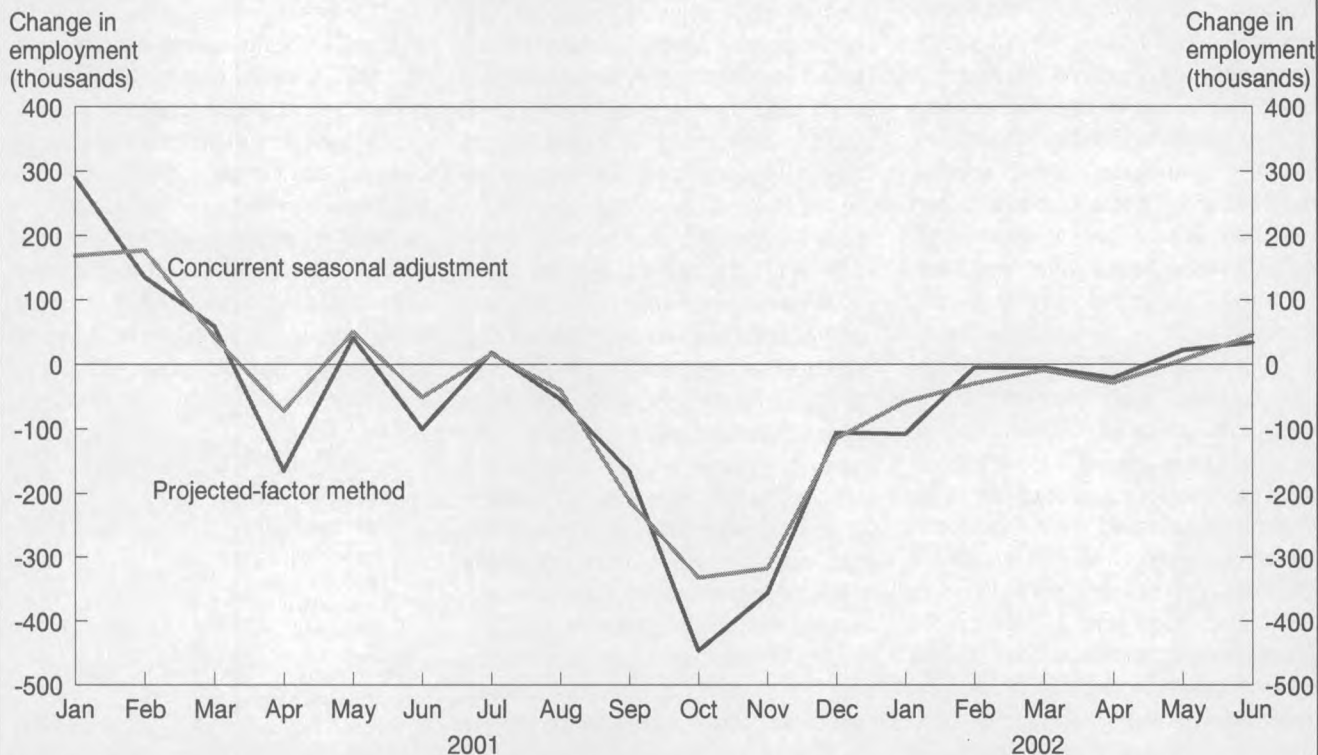
Chart 2. Over-the-month changes between revisions, first closing to second closing, seasonally adjusted total nonfarm all-employees series, March 1998–March 2002
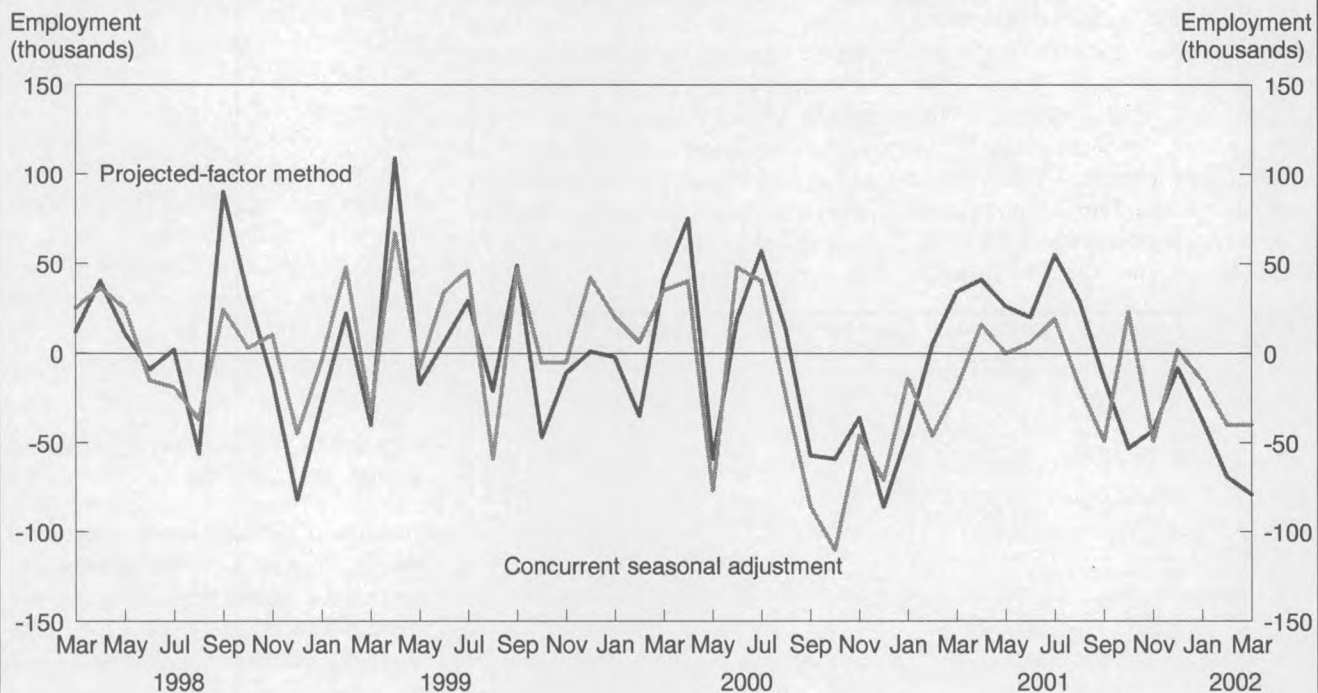
adjustment has less variability in the over-the-month changes than does a series adjusted under projected-factor methodology. As the tabulation illustrates, concurrent adjustment produces a smoother seasonally adjusted employment series for total nonfarm plus all nine industry divisions. These results, combined with the results shown in chart 1, indicate that concurrent seasonal adjustment produces employment series with less variability in the over-the-month changes.

To this point, the results examined have focused solely on estimates of seasonally adjusted over-the-month changes in employment. Also of interest is the revision to the estimate of the seasonally adjusted over-the-month change, both from first closing to the final benchmarked series and between monthly closings. Table 1 illustrates the size of the mean absolute revision to the over-the-month change from the first preliminary to the final benchmarked employment series for all nine major industry divisions and their topside aggregate, total nonfarm. In the table, the second column shows the mean absolute revision in the over-the-month change calculated under the projected-factor methodology for March 1998 through March 2001, while the third column shows the same variable calculated under the concurrent-adjustment methodology. The fourth column shows the difference between the two methodologies (concurrent adjustment minus

projected-factor adjustment). As the table indicates, CES employment estimates that are seasonally adjusted under the concurrent method have a smaller revision from first-closing estimates to final benchmarked series in eight of the nine industry divisions plus total nonfarm. Only in wholesale trade was the revision statistic larger for concurrent adjustment, and that by just 0.2 percent.

In addition to being concerned over a smaller revision between first closing and the final benchmarked series, economists and data users see revisions in the over-the-month changes between closings as potentially problematic. In particular, these monthly revisions between closings can increase under concurrent adjustment because the seasonal factors can change with each iteration of the monthly adjustment process. However, results indicate that, in addition to producing a smaller revision between first closing and the final benchmarked series, concurrent seasonal adjustment leads to equal or even less variability in the over-the-month changes between closings.

Chart 2 shows the revision to the over-the-month change between seasonally adjusted first-closing and second-closing total nonfarm employment estimates under both methods. The dashed line represents the revision to the over-the-month change between first and second closing published under the projected-factor methodology, while the solid line depicts the same revision for the concurrently adjusted series. The

graph illustrates that, in general, the concurrent methodology leads to slightly less variability in the seasonally adjusted over-the-month changes between revisions. Results were similar for revisions between first and third closing.

The following tabulation presents a comparison of mean and mean absolute revisions in over-the-month-changes between closings from March 1998 through March 2002 for the CES series seasonally adjusted under the projected-factor methodology and for the same series adjusted concurrently:

Type of revision	Projected-factor series	Concurrent series	Difference
First closing to second closing:			
Mean revision..	−4	−7	−3
Mean absolute revision	37	34	−3
First closing to third closing:			
Mean revision.	19	4	−15
Mean absolute revision	48	36	−12

As the tabulation shows, the mean revision and the mean absolute revision in the over-the-month change do not differ between first closing and second closing across the two methods. However, from first closing to third closing, both the mean revision and the mean absolute revision are smaller in the concurrently adjusted series. Combined with the information illustrated in chart 2, these results suggest that concurrent seasonal adjustment does not increase the size of revisions between closings.

Evaluation of concurrent seasonal adjustment

Concurrent seasonal adjustment has a number of advantages and at least one potential disadvantage. Perhaps the greatest advantage of concurrent seasonal adjustment is that it affords more accurate seasonal factors. Concurrent

Table 1.	Mean absolute revision in over-the-month changes in employment, March 1998–March 2001			
SIC group	Projected-factor series	Concurrent series	Difference	
Total nonfarm	77,973	64,973	−13,000	
Mining	1,892	1,865	−27	
Construction	22,892	17,838	−5,054	
Manufacturing	13,757	12,487	−1,270	
Transportation and public utilities	7,892	6,568	−1,324	
Wholesale trade	11,135	11,162	27	
Retail trade	32,162	21,946	−10,216	
Finance, insurance, and real estate	6,919	5,703	−1,216	
Services	38,784	29,703	−9,081	
Government	23,135	17,432	−5,703	

seasonal adjustment is technically superior to the projected-factor methodology because it takes into account the timeliest information available. Empirical results from the analysis set forth in this article illustrate the fact that seasonally adjusted CES data are closer to the final benchmarked series under concurrent adjustment than under the projected-factor methodology, leading to smaller revisions between first preliminary estimates and the final benchmark series. Furthermore, monthly revisions between first closing and third closing are slightly lower under concurrent adjustment.

Second, using concurrent seasonal adjustment will be especially advantageous during the first few years following the CES conversion to NAICS, because most of the NAICS historical data were reconstructed from the SIC-based sample. Only 2 years of NAICS history from a NAICS-based sample was available. Therefore, under the projected-factor method, in the first year of the NAICS conversion only two historical NAICS-based estimates per month would have been used to calculate projected seasonal factors. However, under the concurrent seasonal adjustment methodology, three actual NAICS-based estimates are used each month (the previous two years of NAICS-based estimates plus the current one). The additional observations are valuable because X-12 ARIMA weights the most recent years more heavily than the past in calculating seasonal factors.

Third, as mentioned earlier, the CES program traditionally revises two prior months of estimates with each current month's release. As part of the monthly production process under projected-factor methodology, non-seasonally-adjusted estimates were revised for the previous 2 months, and in the past, projected seasonal factors were applied to the revised estimates to calculate the new seasonally adjusted figures. Under concurrent seasonal adjustment, no additional revisions occur; non-seasonally-adjusted estimates for the previous 2 months are still revised as before, and the seasonally adjusted data for these months are based on these revisions.

Finally, one potential disadvantage of concurrent seasonal adjustment is that seasonal factors are not available ahead of time. As has been mentioned, the CES program traditionally calculated seasonal factors twice a year, and projected factors for the next 6 months were published in advance. Under concurrent seasonal adjustment, the program does *not* publish factors in advance, because the new seasonal factors are calculated each month. However, upon request, the Bureau does make available the specifications of the ARIMA model used by the CES program so that the seasonal adjustment run can be replicated if desired.

AFTER SEVERAL YEARS OF RESEARCH, the Current Employment Statistics program converted from projected-factor seasonal adjustment to concurrent seasonal adjustment with the publication of the May 2003 first preliminary estimates in June of that year. The research done with the national CES employment series indicates that the CES survey should benefit from the conversion to concurrent adjustment through smaller revisions to the over-the-month changes from the first closing estimates to the final benchmarked estimates. As the research indicated, concurrent adjustment did not increase the size of revisions between closings and actually reduced revisions from first closing to third closing, producing a smoother, more precise seasonally adjusted series. Expectations are that concurrent seasonal adjustment will continue to produce a smoother published series in the future.   ☐

Intra-regional differences in recession

Business cycle analysis most often focuses on national economies. But, to borrow an aphorism from the political arena, all economics are local. Theodore M. Crone recognizes this as he discusses recent economic trends and business cycles in Delaware, New Jersey, and Pennsylvania in the Federal Reserve Bank of Philadelphia *Business Review.* After using a statistical filter to separate trend from cycle in economic activity indexes for the three States, Crone describes the often significant differences that occur even in contiguous locales.

The most obvious difference in trend is the slower growth in that component of Pennsylvania's economy. This in part reflects the very slow growth of the labor force in the Commonwealth and an absolute decline in the trend component of economic activity during the early 1980s. That period was marked by severe recessions and widespread structural change that had a significant impact on a State economy so dominated by manufacturing industries as Pennsylvania's.

As Crone examines the cyclical component of economic activity, it also appears that Pennsylvania's cyclical downturns have been more severe than those of the Nation as a whole. On the other hand, New Jersey's downturns were less severe than the Nation's for the most part.

Delaware's cyclical pattern was very different, according to Crone: "Delaware suffered one long cyclical downturn between August 1979 and August 1982—a period that spanned two downturns for the Nation and for the other two States in the region. Despite the length of the cyclical downturn in Delaware in the early 1980s, the cyclical decline in Delaware was less severe than the decline at the national level between 1981 and 1983." More recently, Delaware has had longer *and* larger cyclical losses than the Nation. As Crone points out, the duration of a cyclical downturn does not always correspond to its depth.

Valuing the intangibles

In remarks to a Federal Reserve Bank of New York conference on statistical needs in the 21st century, Baruch Lev suggests that between one-half and two-thirds of the total market value of publicly held corporations may reflect the value of intangible assets—the concepts, ideas, research results, development projects, knowledge bases, and working methods that drive results in an information-based economy. Unfortunately, says Lev, today's accounting tools and standards do not themselves create very good information about investment in intangible assets. As a result, there is what he characterizes as a "significant deterioration" in the analytical value of important financial statements, a systematic undervaluation of firms that invest most heavily in creating intangible assets, and the misallocation of financial gains to persons with inside knowledge of the value of firms' intangible investments.

As a professor of finance and accounting, Lev's recommendations stress forming new standards for recognition of those aspects of intangible investment that should affect the main body of a firm's financial statements or, perhaps as second best, for clearly disclosing intangible investments and their impacts.

In a more recent working paper at the National Bureau of Economic research, Jason G. Cummins seeks to extend the frontier of research possible with the accounting information currently available. In order to explore alternatives to realized market value as the metric from which to subtract tangible book value to create a measure of intangibles, Cummings also uses analysts' profits forecasts, suitably discounted into the future, to create another measure of total valuation. This, in Cummings opinion, reduces the analytical problems introduced by the fluctuations of the stock market.

Cummins then constructs a sophisticated econometric model to estimate the separate impacts of tangible investment, information technology (IT) investment, and intellectual property investment on value. In his empirical approach, intangible capital is defined in terms of adjustment costs and is not a distinct input to production in the same sense as physical capital or labor. In Cummins' words, "Rather intangible capital is the glue that creates value from the usual factor inputs." The results of his estimation suggest that there is little, if any, intangible value created by investments in intellectual property or non-IT physical capital, but that intangible "organizational capital" created by it investment is rewarded with a 70-percent annual rate of return.

Brains and the city

The impact of a bachelor's degree on average individual economic outcomes has been quite well documented: Workers who have graduated from college are, on average, much less likely to be unemployed than are workers with less education and, when employed, have higher average earnings. Paul D. Gottlieb and Michael Fogarty, in a contribution to *Economic Development Quarterly*, ask if there are similar effects at the metropolitan area level of aggregation. They find that, at least at the extremes, there are.

In 1997, the most highly educated 10 metropolitan areas, as measured by the share of resident adults holding at least a bachelor's degree had a per capita income level about 20 percent higher than the average while the 10 metropolitan areas with the lowest proportions of the adult population holding college degrees had per capita incomes about 12 percent lower than the average. And, as has been the case in many studies of individual income, the gap had widened over time: in 1980 the most educated cities, according to Gottlieb and Fogarty, received a premium of about 12 percent and the least educated cities a penalty of only 3 percent. □

Women at Work: A Visual Essay

- Labor force participation
- Patterns
- Unemployment
- Full and part-time work
- Occupations
- Earnings
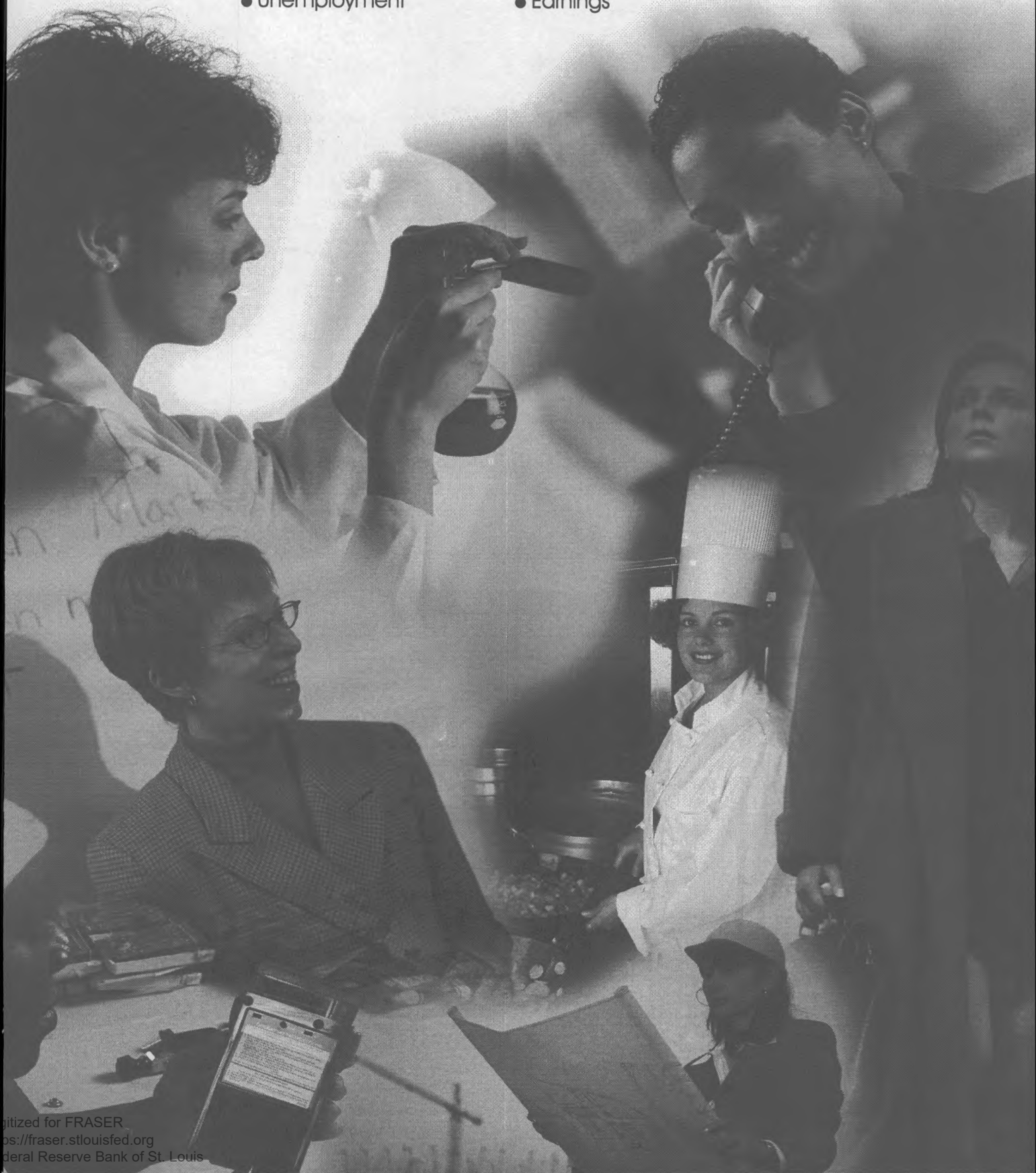
- The labor force participation rate for adult women rose dramatically during the 1970s and 1980s. Since then, growth in participation has slowed substantially.

- The participation rate for adult men has waned over time, though the decline appears to have leveled off in recent years. The long-term decline largely reflects the trend toward earlier retirement.

1. The rate of growth in women's labor force participation has slowed

Percent   Percent
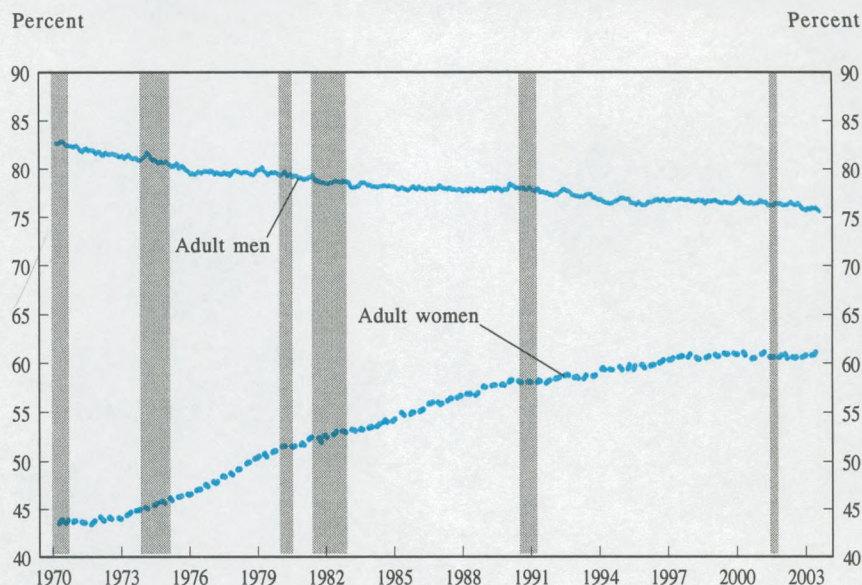
Shaded areas represent recessions.

SOURCE: Bureau of Labor Statistics

- The unemployment rates for adult men and adult women have tracked quite closely since the early 1980s. Prior to that time, the jobless rate for adult women tended to stay above that for men.

- The jobless rate for teenagers is much higher than that for adults, largely because they have less education and training, less experience, and tend to move in and out of the job market more frequently.

2. The unemployment rates for adult men and women have stayed quite close since the early 1980s
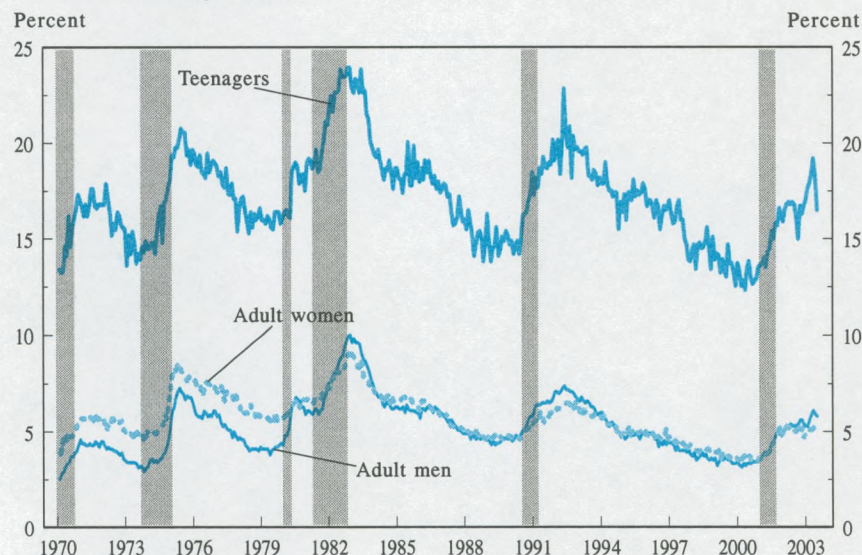
Percent   Percent

Shaded areas represent recessions.

SOURCE: Bureau of Labor Statistics

- Women are more than twice as likely as men to work part time—that is, fewer than 35 hours per week. In 2002, about 25 percent of employed women were part-time workers, compared with 11 percent of employed men.

- The proportion working part time changed relatively little for either women or men in the 1970s and 1980s. (The bump in 1994 reflects definitional and methodological revisions to the Current Population Survey.)

3. Women are more likely than men to work part time
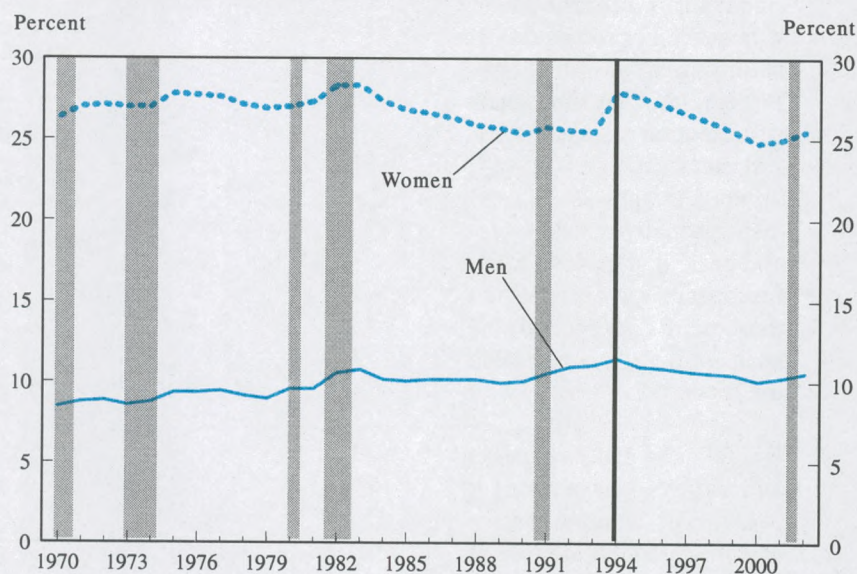
Shaded areas represent recessions. Beginning in 1994, data reflect the introduction of a major redesign of the Current Population Survey.

SOURCE: Bureau of Labor Statistics

- Among women who work at some time during the year, the proportion working year round (50–52 weeks) and full time (35 hours or more per week) has increased over the past several decades. Women have increasingly opted to work these schedules, partly due to economic necessity, but also due to movement into occupations that are typified by year-round, full-time work.

- The proportion for men—which is considerably higher than that for women—showed little definitive movement until the early 1980s. Since then, it too has trended upward.

4. Year-round, full-time work has risen rather steadily among women
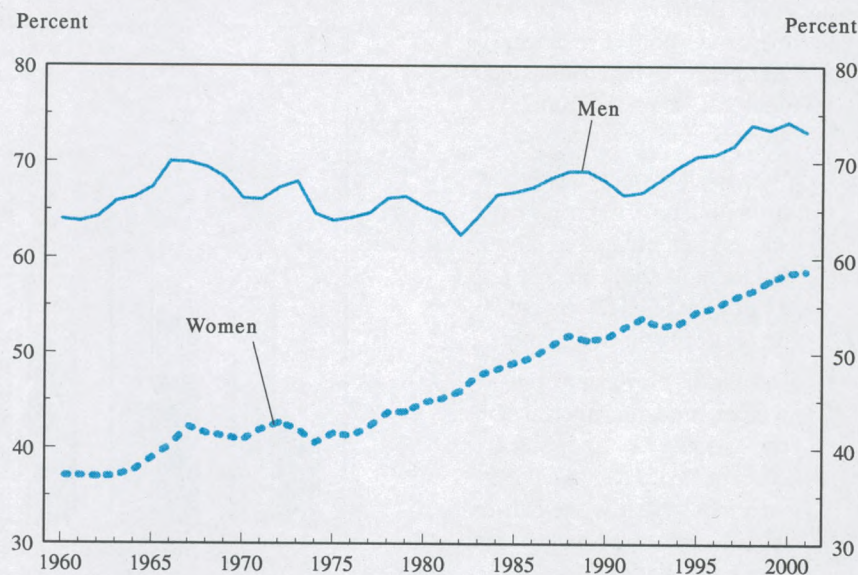
Data are collected in March and refer to the preceding calendar year.

SOURCE: Bureau of Labor Statistics

- In 1970, the impact of marriage and motherhood on women's labor force participation rates was strikingly evident. At that time, their participation reached its initial peak at ages 20–24, dropped at ages 25–34, and then gradually rose to a second peak at ages 45–54, before tapering off. When these points are plotted, the peaks and valleys resemble the letter "M."

- By 2002, this pattern of peaks and valleys was no longer evident, as women had increasingly added the role of worker to their more traditional family responsibilities. Indeed, women's labor force participation pattern by age now resembles that of men.

- Women have made significant inroads into managerial occupations. Between 1972 and 2002, the proportion of managerial jobs held by women more than doubled, increasing from 20 to 46 percent.

- Women still are underrepresented in many specific professions and overrepresented in others. For example, they comprise just 11 percent of engineers but 93 percent of registered nurses.

- Despite the movement of many women into managerial and professional jobs, they still are concentrated in clerical and service jobs. Nearly one-half of women workers are employed in three occupational groups—sales (retail and personal services), services, and administrative support—compared with about one-fifth of male workers.

5. **Women's labor force participation patterns are now more like those of men**
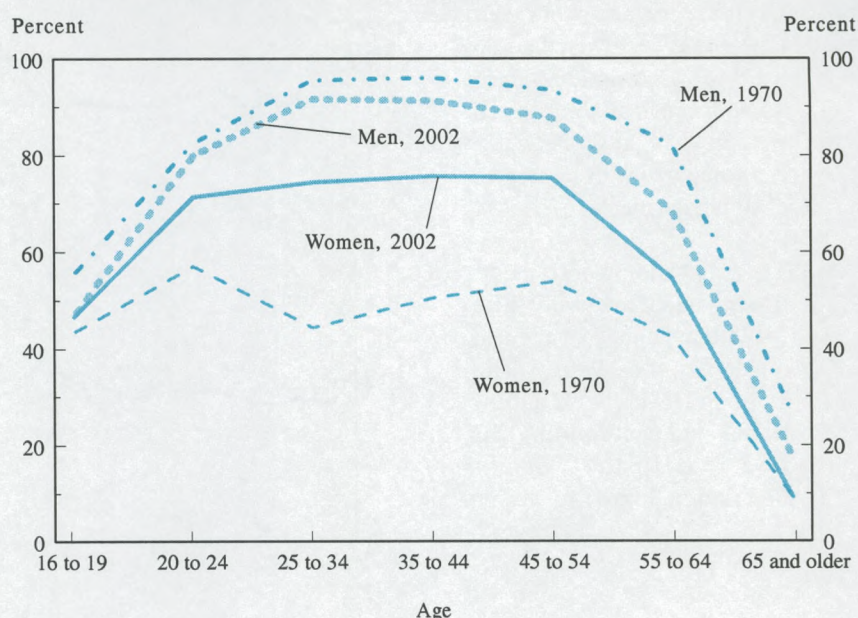
SOURCE: Bureau of Labor Statistics

6. **The proportion of managers who are women has grown markedly**
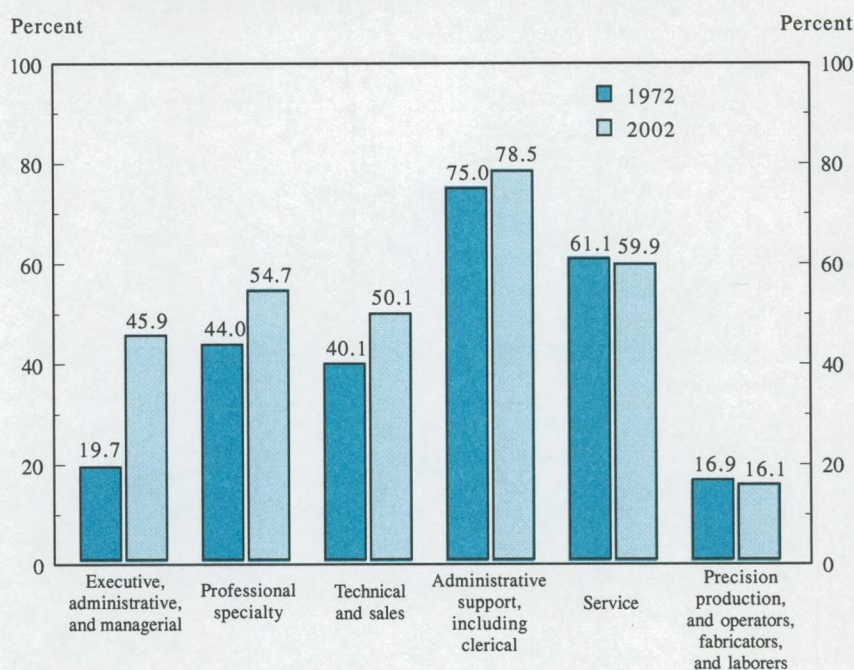
Women as a percent of total employment in major occupations.

SOURCE: Bureau of Labor Statistics

- The ratio of women's to men's earnings (78 percent in 2002) has risen sharply since 1979 (63 percent).

- The women's-to-men's earnings ratio for minority workers is higher than for whites. In 2002, black women earned 91 percent of what black men did; among Hispanics, the earnings ratio was 88 percent. In contrast, white women's earnings were 78 percent of white men's.

- The women's-to-men's earnings ratio has increased in every major age group over the 1979–2002 period. The ratio is highest in the youngest age categories.

- Care should be taken in interpreting these data, however, as they provide only a snapshot of earnings patterns in 2002. Older women faced a different social and economic climate at the start of their work lives than that which exists for young women today. Consequently, the lifetime earnings pattern of today's older women may not be a reliable guide to the lifetime earnings pattern of today's younger women.

7. In the 1980s and early 1990s, women's earnings increased substantially as a percent of men's

Percent   Percent

Earnings are median usual weekly earnings of full-time wage and salary workers.
SOURCE: Bureau of Labor Statistics

8. Women continue to earn less than men in every major age group
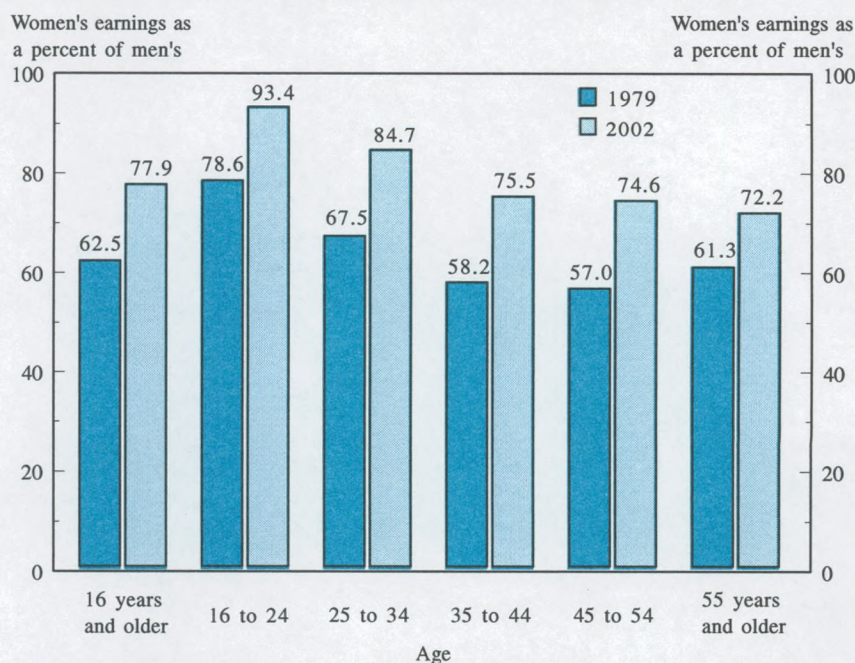
Women's earnings as   Women's earnings as
a percent of men's   a percent of men's

Earnings are median usual weekly earnings of full-time wage and salary workers.
SOURCE: Bureau of Labor Statistics

- Overall, real earnings for women 25 years and older increased by 28 percent from 1979–2002, while men's real earnings were little changed.

- Women with a high school diploma or more education experienced an increase in real earnings. For men, only college graduates saw an increase; all other education groups experienced a decline in real earnings.

- While women fared better than men over this time period, in part they were playing "catch up" to men. The growth in women's earnings reflects in large part the fact that the proportion of working women with a college education grew, more women moved into higher-paying managerial and professional jobs, and women began working year round in increasing numbers.

9.   The trend in real earnings since 1979 was more favorable for women than for men at all levels of education

Percent change in real earnings, 1979–2002
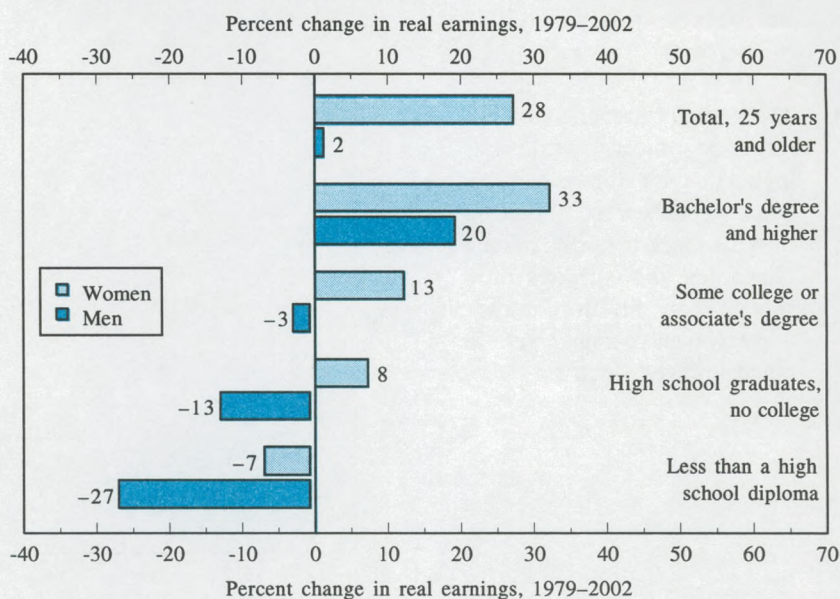
Change in median usual weekly earnings of full-time wage and salary workers age 25 and older, adjusted using the CPI–U–RS.

SOURCE: Bureau of Labor Statistics

Job problems of the poor

*Jobs for the Poor: Can Labor Demand
Policies Help?* By Timothy J. Bartik.
New York, Russell Sage Foundation,
and Kalamazoo, MI, W.E. Upjohn In-
stitute for Employment Research,
2001. 473 pp. $17.95/paperback.

Although the author poses the subtitle
of his work as a question, he is clearly
convinced that the employment prob-
lem of poor persons and families cannot
be solved without a labor demand policy
of, as it turns out, massive proportions.
In adapting the working-age population
to the requirements of the labor market,
the United States has chiefly relied on
supply-side policies, such as training,
education, the earned income tax credit,
and job development services at the lo-
cal level. These policies have not been
ineffective so much as expensive, and,
more importantly, they have not contrib-
uted very much to resolving the poor's
employment problem. The author's only
precedent for the magnitude of a de-
mand-side labor-market policy is the
Works Progress Administration, which
was created during the Great Depres-
sion of the 1930s, and at its peak gave
jobs to 3 million persons. In arguing for
a large-scale labor demand program,
Bartik cites or develops some disturb-
ing facts about the employment situa-
tion of the poor, basing himself mainly
upon data on unemployment and rates
of labor force participation.

Although the average unemployment
rate declined to about 4 percent during
the boom years of the 1990s, unemploy-
ment among poor Americans barely di-
minished (if Bartik's approach is fol-
lowed). Labor force participation, which
does not include working-age persons
neither employed nor looking for a job,
generally remained lower among poor
persons than among their non-poor
peers. They are less likely than the lat-
ter to hold full-time, year-round jobs.
They also account for a relatively large
proportion of high school dropouts or

high school graduates who do not go to
college.

In figuring the employment needs of
poor persons 25-54 years old (the most
active working-age range), Bartik begins
by calculating the changes between 1979
and 1998 in the employment-population
rates of high school dropouts and high
school graduates without a college de-
gree—classified by gender, race, and
marital status. For males, these rates
sharply decreased between the 2 years;
for females, the rates generally rose
somewhat, but they remained well be-
low those for white (non-Hispanic)
males in 1979 at the indicated educational
levels. Bartik's norm for job creation of
the poor are these 1979 employment
rates—which, if attained again, would
spell about 5.2 million additional jobs for
male and unmarried female poor persons
in their prime working age. Yet, this
would not exhaust the employment
needs of poor families: if every such
(non-elderly) family had one breadwin-
ner holding a full-time, year-round job,
altogether more than 8 million additional
jobs for the poor would be required at
the indicated educational levels. The fig-
ure may be viewed as a measure of un-
deremployment in the United States.

It is bolstered by such statistics as
the unemployment rate among former
welfare benefit recipients—31.4 percent
in 1998; among blacks, the official rate
was 8.9 percent, nearly twice the overall
rate; and in 50 of the Nation's 329 metro-
politan areas it was 6 percent or higher.

Moreover, Bartik reports, a large pro-
portion of workers found themselves
disadvantaged by an inability to match
their low skills or lack of education to
available jobs. Thirty-five to 45 percent
of high school dropouts are estimated
to have such "mismatch" problems. It is
not clear, however, if jobs can be adapted
to overcome these problems—unless
unceasing efforts are made on the sup-
ply side of the labor market (as Bartik
defines it). Be it noted that he does not
by any means dismiss such efforts.

Jobs for the poor are jobs in the

low-wage sectors of the economy.
Will low wages lift poor workers out
of poverty? To the extent that they
do not, Bartik would supplement them
by the refundable (earned income) tax
credit; he also counts food-stamp en-
titlements and, for former clients of the
welfare system, earnings disregards
(which allow phase-ins of partial ben-
efits to supplement earnings).

Yet, the threshold at which persons
or families are considered no longer
poor is defined meagerly. It was origi-
nally based on the lowest cost "nutri-
tionally adequate" diet, as calculated
by the Department of Agriculture; that
cost was then multiplied by three, on
the assumption that two-thirds of a
person's or family's income would go
for nonfood goods and services. Af-
ter 1968, however, the threshold was
determined simply by the annual
change in the Consumer Price Index
(as revealed subsequently).

In 1998, the poverty threshold for a
family of three—for example, a mother
and two children—was around $13,000.
The expenditure budgets of poor fami-
lies suggest that the official poverty
thresholds "underestimate [their] needs
by roughly 25 percent" (according to
Christopher Jencks in *Making Ends
Meet*, by Kathryn Edin and Laura Klein).
Edin and Klein have calculated (from a
limited survey) that expenditures of
"wage-reliant" mothers in the early 1990s
exceed their (low) wages by one-third.
However these extra expenditures are
covered, they are not covered by a "liv-
ing wage"—also discussed briefly by
Bartik, and praised by the message it
conveys that "working people should
not live in poverty." But he dismisses
the living-wage movement (confined by
urban legislators to the employees of
local contractors doing business in rela-
tively few cities) as limited—causing
firms subject to such ordinances to move
to other locations within metropolitan
areas.

And the earned income tax credit,
stressed by Bartik as an important low-

wage supplement, and unquestionably of importance to recipients, covers but a small part of the excess of needful expenditures over income (judging by the relevant data published in the Green Book 2000 by the U.S. House of Representatives). Bartik may be somewhat too optimistic in asserting that, together with (low) earnings, earnings supplements would be "surprisingly effective in bringing poor families out of poverty." Two considerations may be advanced regarding this statement. One is that the reservation wage of unemployed or nonemployed persons may often be calculated against needs rather than poverty thresholds plus supplements. More important perhaps is the consideration that the escape from poverty of which Bartik speaks depends on full-time, full-year jobs. Yet, he also notes that a large proportion of unemployed as well as nonemployed persons in their prime working age hold jobs but half the year. They are evidently unable to find steady work. He reports that, in 1995, 14 Harlem residents applied at every fast-food restaurant opening; three-quarters of them were still unemployed a year later, despite their willingness to accept minimum-wage jobs. He writes that "high unemployment rates appear to reflect a shortage of available jobs and lead to lengthy unemployment and nonemployment spells for some workers."

Bartik advocates a two-tier labor-demand policy—one to increase aggregate labor demand so as to ensure full employment, the other consisting of programs targeted on labor demand for poor persons. As to the first tier, he would subsidize employers for hiring new workers, regardless of such workers' economic status. He would give priority to high-unemployment local labor markets. The subsidies he proposes would especially favor small businesses and public and nonprofit employers.

As to the second tier, he would particularly address the employment problems of persons who tend to be outside the labor force, offering them supply-side services, such as training or mental healthcare. He would design subsidized job slots to encourage such workers to enter the regular job market, paying them below-market wages until they do so. There are other relevant proposals, including how to overcome political opposition, which need not detain us here.

Bartik's work is thoroughly researched, evidenced by numerous appendices and notes. It is definitive in its discussion of the numerous programs conducted since the 1970s to deal with the predicament of poor person's and families' employment problems. It is indispensable for anyone concerned with relieving poverty in America by creating truly full employment. It attests the devotion of the author to help resolve this great social problem.

—Horst Brand

formerly with the
Bureau of Labor Statistics

Current Labor Statistics

Notes on Current Labor Statistics

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of current and past experiences. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 43, and 47. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the March 2003 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2003*Review*. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 49 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see BLS *Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://www.bls.gov/cps/

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://www.bls.gov/ces/

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://www.bls.gov/lpc/

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
  p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
  r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation,**

prices, and productivity are presented in table 2. Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–24)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 60,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*. For a discussion of changes introduced in January 2003, see "Revisions to the Current Population Survey Effective in January 2003" in the February 2003 issue of *Employment and Earnings* (available on the BLS Web site at: **http://www.bls.gov/cps/rvcps03.pdf**).

Effective in January 2003, BLS began using the X-12 ARIMA seasonal adjustment program to seasonally adjust national labor force data. This program replaced the X-11 ARIMA program which had been used since January 1980. See "Revision of Seasonally Adjusted Labor Force Series in 2003," in the February 2003 issue of *Employment and Earnings* (available on the BLS Web site at **http:www.bls.gov/cps/cpsrs.pdf**) for a discussion of the introduction of the use of X-12 ARIMA for seasonal adjustment of the labor force data and the effects that it had on the data.

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 160,000 businesses and government agencies, which represent approximately 400,000 individual worksites and represent all industries except agriculture. The active CES sample covers approximately one-third of all nonfarm payroll workers. Industries are classified in accordance with the 2002 North American Industry Classification System. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in the goods-producing industries cover employees, up through the level of working supervisors, who engage directly in the manufacture or construction of the establishment's product. In private service-providing industries, data are collected for nonsupervisory workers, which include most employees except those in executive, managerial, and supervisory positions. Those workers mentioned in tables 11–16 include production workers in manufacturing and natural resources and mining; construction workers in construction; and nonsupervisory workers in all private service-providing industries. Production and nonsupervisory workers account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Table 17 provides an index on private nonfarm employment based on 278 industries, and a manufacturing index based on 84 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The March 2002 benchmark was introduced in June 2003 with the release of data for May 2003, published in the July 2003 issue of the *Review*. With the release in June, CES completed a conversion from the Standard Industrial Classification (SIC) system to the North American Industry Classification System (NAICS) and completed the transition from its original quota sample de-

sign to a probability-based sample design. The industry-coding update included reconstruction of historical estimates in order to preserve time series for data users. Normally 5 years of seasonally adjusted data are revised with each benchmark revision. However, with this release, the entire new time series history for all CES data series were re-seasonally adjusted due to the NAICS conversion, which resulted in the revision of all CES time series.

Also in June 2003, the CES program introduced concurrent seasonal adjustment for the national establishment data. Under this methodology, the first preliminary estimates for the current reference month and the revised estimates for the 2 prior months will be updated with concurrent factors with each new release of data. Concurrent seasonal adjustment incorporates all available data, including first preliminary estimates for the most current month, in the adjustment process. For additional information on all of the changes introduced in June 2003, see the the June 2003 issue of *Employment and Earnings* and "Recent changes in the national Current Employment Statistics survey," *Monthly Labor Review,* June 2003, pp. 3–13.

Revisions in State data (table 11) occurred with the publication of January 2003 data. For information on the revisions for the State data, see the March and May 2003 issues of *Employment and Earnings*, and "Recent changes in the State and Metropolitan Area CES survey," *Monthly Labor Review*, June 2003, pp. 14–19.

Beginning in June 1996, the BLS uses the X-12-ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review).* When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of

Current Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Covered employment and wage data (ES–202)

Description of the series

EMPLOYMENT, WAGE, AND ESTABLISHMENT DATA in this section are derived from the quarterly tax reports submitted to State employment security agencies by private and State and local government employers subject to State unemployment insurance (UI) laws and from Federal agencies subject to the Unemployment Compensation for Federal Employees (UCFE) program. Each quarter, State agencies edit and process the data and send the information to the Bureau of Labor Statistics.

The Covered Employment and Wages data, also referred as ES-202 data, are the most complete enumeration of employment and wage information by industry at the national, State, metropolitan area, and county levels. They have broad economic significance in evaluating labor market trends and major industry developments.

Definitions

In general, ES-202 monthly employment data represent the number of **covered workers** who worked during, or received pay for, the pay period that included the 12th day of the month. **Covered private industry employment** includes most corporate officials, executives, supervisory personnel, professionals, clerical workers, wage earners, piece workers, and part-time workers. It excludes proprietors, the unincorporated self-employed, unpaid family members, and certain farm and domestic workers. Certain types of nonprofit employers, such as religious organizations, are given a choice of coverage or exclusion in a number of States. Workers in these organizations are, therefore, reported to a limited degree.

Persons on paid sick leave, paid holiday, paid vacation, and the like, are included. Persons on the payroll of more than one firm during the period are counted by each UI-subject employer if they meet the employment definition noted earlier. The employment count excludes workers who earned no wages during the entire applicable pay period because of work stoppages, temporary layoffs, illness, or unpaid vacations.

Federal employment data are based on reports of monthly employment and quarterly wages submitted each quarter to State agencies for all Federal installations with employees covered by the Unemployment Compensation for Federal Employees (UCFE) program, except for certain national security agencies, which are omitted for security reasons. Employment for all Federal agencies for any given month is based on the number of persons who worked during or received pay for the pay period that included the 12th of the month.

An **establishment** is an economic unit, such as a farm, mine, factory, or store, that produces goods or provides services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity for which a single industrial classification may be applied. Occasionally, a single physical location encompasses two or more distinct and significant activities. Each activity should be reported as a separate establishment if separate records are kept and the various activities are classified under different four-digit SIC codes.

Most employers have only one establishment; thus, the establishment is the predominant reporting unit or statistical entity for reporting employment and wages data. Most employers, including State and local governments who operate more than one establishment in a State, file a Multiple Worksite Report each quarter, in addition to their quarterly UI report. The Multiple Worksite Report is used to collect separate employment and wage data for each of the employer's establishments, which are not detailed on the UI report. Some very small multi-establishment employers do not file a Multiple Worksite Report. When the total employment in an employer's secondary establishments (all establishments other than the largest) is 10 or fewer, the employer generally will file a consolidated report for all establishments. Also, some employers either cannot or will not report at the establishment level and thus aggregate establishments into one consolidated unit, or possibly several units, though not at the establishment level.

For the Federal Government, the reporting unit is the **installation**: a single location at which a department, agency, or other government body has civilian employees. Federal agencies follow slightly different criteria than do private employers when breaking down their reports by installation. They are permitted to combine as a single statewide unit: 1) all installations with 10 or fewer workers, and 2) all installations that have a combined total in the State of fewer than 50 workers. Also, when there are fewer than 25 workers in all secondary installations in a State, the secondary installations may be combined and reported with the major installation. Last, if a Federal agency has fewer than five employees in a State, the agency headquarters office (regional office, district office) serving each State may consolidate the employment and wages data for that State with the data reported to the State in which the headquarters is located. As a result of these reporting rules, the number of reporting units is always larger than the number of employers (or government agencies) but smaller than the number of actual establishments (or installations).

Data reported for the first quarter are tabulated into **size** categories ranging from worksites of very small size to those with 1,000 employees or more. The size category is determined by the establishment's March employment level. It is important to note that each establishment of a multi-establishment firm is tabulated separately into the appropriate size category. The total employment level of the reporting multi-establishment firm is not used in the size tabulation.

Covered employers in most States report total **wages** paid during the calendar quarter, regardless of when the services were performed. A few State laws, however, specify that wages be reported for, or based on the period during which services are performed rather than the period during which compensation is paid. Under most State laws or regulations, wages include bonuses, stock options, the cash value of meals and lodging, tips and other gratuities, and, in some States, employer contributions to certain deferred compensation plans such as 401(k) plans.

Covered employer contributions for old-age, survivors, and disability insurance (OASDI), health insurance, unemployment insurance, workers' compensation, and private pension and welfare funds are not reported as wages. Employee contributions for the same purposes, however, as well as money withheld for income taxes, union dues, and so forth, are reported even though they are deducted from the worker's gross pay.

Wages of covered Federal workers represent the gross amount of all payrolls for all pay periods ending within the quarter. This includes cash allowances, the cash equivalent of any type of remuneration, severance pay, withholding taxes, and retirement deductions. Federal employee remuneration generally covers the same types of services as for workers in private industry.

Average annual wages per employee for any given industry are computed by dividing total annual wages by annual average employment. A further division by 52 yields average weekly wages per employee. Annual pay data only approximate annual earnings because an individual may not be employed by the same employer all year or may work for more than one employer at a time.

Average weekly or annual pay is affected by the ratio of full-time to part-time workers as well as the number of individuals in high-paying and low-paying occupations. When average pay levels between States and industries are compared, these factors should be taken into consideration. For example, industries characterized by high proportions of part-time workers will show average wage levels appreciably less than the weekly pay levels of regular full-time employees in these industries. The opposite effect characterizes industries with low proportions of part-time workers, or industries that typically schedule heavy weekend and overtime work. Average wage data also may be influenced by work stoppages, labor turnover rates, retroactive payments, seasonal factors, bonus payments, and so on.

Notes on the data

Beginning with the release of data for 2001, publications presenting data from the Covered Employment and Wages (CEW) program have switched to the 2002 version of the North American Industry Classificatiion System (NAICS) as the basis for the assignment and tabulation of economic data by industry. NAICS is the product of a cooperative effort on the part of the statistical agencies of the United States, Canada, and Mexico. Due to difference in NAICS and Stan-

dard Industrial Classification (SIC) structures, industry data for 2001 is not comparable to the SIC-based data for earlier years.

Effective January 2001, the CEW program began assigning Indian Tribal Councils and related establishments to local government ownership. This BLS action was in response to a change in Federal law dealing with the way Indian Tribes are treated under the Federal Unemployment Tax Act. This law requires federally recognized Indian Tribes to be treated similarly to State and local governments. In the past the CEW program coded Indian Tribal Councils and related establishments in the private sector. As a result of the new law, CEW data reflects significant shifts in employment and wages between the private sector and local government from 2000 to 2001. Data also reflect industry changes. Those accounts previously assigned to civic and social organizations were assigned to tribal governments. There were no required industry changes for related establishments owned by these Tribal Councils. These tribal business establishments continued to be coded according to the economic activity of that entity.

To insure the highest possible quality of data, State employment security agencies verify with employers and update, if necessary, the industry, location, and ownership classification of all establishments on a 3-year cycle. Changes in establishment classification codes resulting from the verification process are introduced with the data reported for the first quarter of the year. Changes resulting from improved employer reporting also are introduced in the first quarter. For these reasons, some data, especially at more detailed geographic levels, may not be strictly comparable with earlier years.

The 2000 county data used to calculate the 2000–2001 changes were adjusted for changes in industry and county classification to make them comparable to data for 2001. As a result, the adjusted 2000 data differ to some extent from the data available on the Internet at:

http://www.bls.gov/cew/home.htm.

County definitions are assigned according to Federal Information Processing Standards Publications as issued by the National Institute of Standards and Technology. Areas shown as counties include those designated as independent cities in some jurisdictions and, in Alaska, those areas designated by the Census Bureau where counties have not been created. County data also are presented for the New England States for comparative purposes, even though townships are the more common designation used in New England

(and New Jersey).

For additional information on the covered employment and wage data, contact the Division of Administrative Statistics and Labor Turnover at (202) 691–6567.

Compensation and Wage Data

(Tables 1–3; 25–31)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed

employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of wages and compensation. For the bargaining status, region, and metropolitan/nonmetropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published be-

ginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://www.bls.gov/ect/

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by

employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet:

http://www.bls.gov/ebs/

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 31.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:

http://www.bls.gov/cba/

Price Data

(Tables 2; 32–42)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price in-

dexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 33. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION, contact the Division of Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods and services traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also

published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification, the three-digit level for the Standard Industrial Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. The trade weights currently used to compute both indexes relate to 2000.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

FOR ADDITIONAL INFORMATION, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 43–46)

Business and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, nonenergy materials, and purchased business services.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 43–46 describe the relationship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of

the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity indexes measure the relationship between output and inputs for selected industries and industry groups, and thus reflect trends in industry efficiency over time. Industry measures include labor productivity, multifactor productivity, compensation, and unit labor costs.

The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production workers and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Unit labor costs represent the labor compensation costs per unit of output produced, and are derived by dividing an index of labor compensation by an index of output. **Labor compensation** includes payroll as well as supplemental payments, including both legally required expenditures and payments for voluntary programs.

Multifactor productivity is derived by dividing an index of industry output by an index of the combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate pur-

chases. The measure of **capital input** used represents the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories. The measure of **intermediate purchases** is a combination of purchased materials, services, fuels, and electricity.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics and the Bureau of the Census, with additional data supplied by other government agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some trade and services industries, indexes of output per hour of all persons (including self-employed) are constructed. For some transportation industries, only indexes of output per employee are prepared.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 47–49)

Labor force and unemployment

Description of the series

Tables 47 and 48 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For further information on adjustments and comparability issues, see Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly*

Labor Review, June 2000, pp. 3-20.

Definitions

For the principal U.S. definitions of the **labor force, employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. An exception to this rule is that the Canadian statistics for 1976 onward are adjusted to cover ages 16 and older, whereas the age at which compulsory schooling ends remains at 15. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998, 1999, 2000), Canada (1976) France (1992), Germany (1991), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were

revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

BLS recently introduced a new adjusted series for Canada. Beginning with the data for 1976, Canadian data are adjusted to more closely approximate U.S. concepts. Adjustments are made to the unemployed and labor force to exclude: (1) 15-year-olds; (2) passive jobseekers (persons only reading newspaper ads as their method of job search); (3) persons waiting to start a new job who did not seek work in the past 4 weeks; and (4) persons unavailable for work due to personal or family responsibilities. An adjustment is made to include full-tine students looking for full-time work. The impact of the adjustments was to lower the annual average unemployment rate by 0.1–0.4 percentage point in the 1980s and 0.4–1.0 percentage point in the 1990s.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Germany, the data for 1991 onward refer to unified Germany. Data prior to 1991 relate to the former West Germany. The impact of including the former East Germany was to increase the unemployment rate from 4.3 to 5.6 percent in 1991.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 49 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 43 and 45 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 50–51)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the num-

ber of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

http://www.bls.gov/iif/

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at:

http://www.bls.gov/iif/

Where to find additional data

Current and historical statistics from Bureau of Labor Statistics surveys are available at the addresses listed on the inside back cover of this *Review*, or on the Internet at

http://www.bls.gov

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1. Labor market indicators

Selected indicators	2001	2002	2001			2002				2003	
			II	III	IV	I	II	III	IV	I	II
Employment data											
Employment status of the civilian noninstitutional population (household survey):[1]											
Labor force participation rate........................	66.8	66.6	66.8	66.7	66.8	66.6	66.7	66.6	66.5	66.3	66.4
Employment-population ratio.........................	63.7	62.7	63.8	63.5	63.0	62.8	62.8	62.8	62.5	62.4	62.3
Unemployment rate.......................................	4.7	5.8	4.4	4.8	5.6	5.6	5.9	5.8	5.9	5.8	6.2
Men..	4.8	5.9	4.5	4.9	5.7	5.7	6.0	5.9	6.1	6.0	6.5
16 to 24 years...	11.4	12.8	11.2	11.4	12.7	12.9	12.8	13.1	12.5	12.4	14.2
25 years and older..................................	3.6	4.7	3.4	3.7	4.4	4.5	4.8	4.7	4.9	4.9	5.3
Women..	4.7	5.6	4.3	4.8	5.5	5.5	5.7	5.6	5.7	5.5	5.7
16 to 24 years...	9.6	11.1	9.2	10.1	10.7	11.0	11.2	10.9	11.4	11.1	11.9
25 years and older..................................	3.7	4.6	3.4	3.8	4.4	4.4	4.8	4.6	4.6	4.4	4.6
Employment, nonfarm (payroll data), in thousands:[1]											
Total nonfarm..	131,826	130,376	132,180	131,712	130,920	130,523	130,403	130,239	130,338	130,225	129,984
Total private...	110,707	108,886	111,129	110,516	109,593	109,105	108,918	108,755	108,792	108,655	108,488
Goods-producing.....................................	23,873	22,619	24,118	23,684	23,226	22,880	22,673	22,537	22,389	22,213	22,093
Manufacturing..	16,441	15,306	16,661	16,243	15,833	15,517	15,369	15,246	15,085	14,926	14,744
Service-providing....................................	107,952	107,757	108,063	108,028	107,694	107,643	107,730	107,702	107,949	108,012	107,891
Average hours:											
Total private...	34.0	33.9	34.0	33.9	33.8	33.9	33.9	33.9	33.8	33.8	33.7
Manufacturing..	40.3	40.5	40.4	40.4	40.1	40.4	40.6	40.5	40.4	40.4	40.2
Overtime..	4.0	4.2	4.1	4.0	3.8	4.0	4.2	4.2	4.3	4.3	4.0
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)......	4.1	3.4	.9	1.2	.8	1.0	.9	.9	.6	1.4	.8
Private industry workers...........................	4.2	3.2	1.0	.9	.8	1.1	1.1	.6	.4	1.7	.8
Goods-producing[3]................................	3.8	3.7	.9	.7	.8	1.2	.9	.6	.9	1.8	.9
Service-providing[3]...............................	4.3	3.1	1.0	1.0	.8	1.1	1.2	.6	.2	1.5	.8
State and local government workers	4.2	4.1	.6	2.1	.6	.6	.4	2.2	.9	.7	.4
Workers by bargaining status (private industry):											
Union..	4.2	4.2	1.1	1.0	1.4	1.1	1.0	1.2	.9	1.6	1.2
Nonunion..	4.1	3.2	1.0	.9	.7	1.1	1.1	.5	.4	1.6	.8

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-providing industries include all other private sector industries.

NOTE: Beginning in January 2003, household survey data reflect revised population controls. Nonfarm data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	2001	2002	2001			2002				2003	
			II	III	IV	I	II	III	IV	I	II
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm..	4.1	3.4	0.9	1.2	0.8	1.0	0.9	0.9	0.6	1.4	0.8
Private nonfarm..	4.2	3.2	1.0	.9	.8	1.1	1.1	.6	.4	1.7	.8
Employment Cost Index—wages and salaries:											
Civilian nonfarm..	3.7	2.9	.9	1.0	.7	.9	.8	.7	.4	1.0	.6
Private nonfarm..	3.8	2.7	1.0	.8	.8	.9	1.0	.4	.3	1.1	.7
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items......	3.4	1.2	1.0	.2	−.9	.7	.5	.6	-.1	1.8	−.3
Producer Price Index:											
Finished goods..	−1.8	−1.2	.8	−.3	−3.2	1.1	.2	.2	-.1	3.7	−.8
Finished consumer goods...................................	−2.4	−1.6	1.0	−.3	−4.3	1.5	.4	.0	−.3	2.4	1.8
Capital equipment...	1.0	−.4	−7.1	−.1	.1	2.9	−.3	−.7	.6	.6	−.6
Intermediate materials, supplies, and components............	−.2	−1.2	.6	−1.0	−3.6	.9	1.1	1.1	.1	6.5	−2.1
Crude materials..	−8.8	−10.6	−6.6	−12.0	−12.2	8.0	37.1	1.9	6.5	28.0	−10.6
Productivity data[3]											
Output per hour of all persons:											
Business sector..	2.0	5.3	1.5	3.3	8.7	8.7	.8	5.9	1.5	2.7	7.2
Nonfarm business sector......................................	1.9	5.4	1.6	3.4	8.3	9.3	1.0	5.9	1.7	2.1	6.8
Nonfinancial corporations[4]...................................	2.0	5.8	4.7	4.4	10.8	5.0	5.5	3.1	3.8	4.3	8.1

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average					Four quarters ending				
	2002			2003		2002			2003	
	II	III	IV	I	II	II	III	IV	I	II
Average hourly compensation:[1]										
All persons, business sector........................	4.0	2.1	1.6	4.8	4.3	3.0	2.9	2.8	3.1	3.2
All persons, nonfarm business sector..	3.9	2.0	1.6	4.1	3.8	3.0	2.9	2.8	2.9	2.9
Employment Cost Index—compensation:										
Civilian nonfarm[2].....................................	.9	.9	.6	.8	1.4	4.0	3.7	3.4	3.9	3.7
Private nonfarm..	1.1	.6	.4	.8	1.7	4.0	3.7	3.2	3.8	3.5
Union..	1.0	1.2	.9	1.6	1.2	4.5	4.7	4.2	4.7	5.0
Nonunion...	1.1	.5	.4	1.6	.8	3.9	3.5	3.2	3.6	3.3
State and local governments...........................	.4	2.2	.9	.7	.4	3.6	3.8	4.1	4.2	4.1
Employment Cost Index—wages and salaries:										
Civilian nonfarm[2].....................................	.8	.7	.4	1.0	.6	3.5	3.2	2.9	2.9	2.7
Private nonfarm..	1.0	.4	.3	1.1	.7	3.6	3.2	2.7	3.0	2.6
Union..	.9	1.0	.8	.5	.7	4.2	4.3	3.5	3.3	3.0
Nonunion...	1.0	.4	.3	1.2	.7	3.5	3.1	2.7	2.9	2.5
State and local governments...........................	.3	1.8	.6	.4	.3	3.2	3.1	3.2	3.1	3.1

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
TOTAL															
Civilian noninstitutional population[1]	215,092	217,570	217,866	218,107	218,340	218,548	218,741	219,897	220,114	220,317	220,540	220,768	221,014	221,252	221,507
Civilian labor force	143,734	144,863	145,123	145,634	145,393	145,180	145,150	145,838	145,857	145,793	146,473	146,485	147,096	146,540	146,530
Participation rate	66.8	66.6	66.6	66.8	66.6	66.4	66.4	66.3	66.3	66.2	66.4	66.4	66.6	66.2	66.2
Employed	136,933	136,485	136,757	137,312	136,988	136,542	136,439	137,536	137,408	137,348	137,687	137,487	137,738	137,478	137,625
Employment-population ratio[2]	63.7	62.7	62.8	63.0	62.7	62.5	62.4	62.5	62.4	62.3	62.4	62.3	62.3	62.1	62.1
Unemployed	6,801	8,378	8,366	8,321	8,405	8,637	8,711	8,302	8,450	8,445	8,786	8,998	9,358	9,062	8,905
Unemployment rate	4.7	5.8	5.8	5.7	5.8	5.9	6.0	5.7	5.8	5.8	6.0	6.1	6.4	6.2	6.1
Not in the labor force	71,359	72,707	72,743	72,473	72,947	73,369	73,591	74,059	74,257	74,524	74,067	74,283	73,918	74,712	74,977
Men, 20 years and over															
Civilian noninstitutional population[1]	95,181	96,439	96,552	96,732	96,860	97,022	97,139	97,635	97,762	97,869	97,979	98,083	98,196	98,304	98,434
Civilian labor force	72,816	73,630	73,802	74,108	73,883	73,770	73,744	73,993	74,254	74,236	74,571	74,506	74,692	74,581	74,561
Participation rate	76.5	76.3	76.4	76.6	76.3	76.0	75.9	75.8	76.0	75.9	76.1	76.0	76.1	75.9	75.7
Employed	69,776	69,734	69,895	70,213	69,921	69,617	69,600	69,967	70,293	70,293	70,364	70,144	70,130	70,193	70,203
Employment-population ratio[2]	73.3	72.3	72.4	72.6	72.2	71.8	71.6	71.7	71.9	71.8	71.8	71.5	71.4	71.4	71.3
Unemployed	3,040	3,896	3,906	3,895	3,962	4,153	4,145	4,026	3,962	3,944	4,207	4,362	4,562	4,388	4,357
Unemployment rate	4.2	5.3	5.3	5.3	5.4	5.6	5.6	5.4	5.3	5.3	5.6	5.9	6.1	5.9	5.8
Not in the labor force	22,365	22,809	22,750	22,623	22,977	23,252	23,394	23,642	23,508	23,632	23,408	23,577	23,504	23,724	23,873
Women, 20 years and over															
Civilian noninstitutional population[1]	103,983	105,136	105,334	105,421	105,509	105,594	105,678	106,235	106,322	106,411	106,510	106,613	106,724	106,839	106,957
Civilian labor force	63,016	63,648	63,760	63,858	63,975	63,921	64,036	64,479	64,310	64,477	64,677	64,733	65,148	64,819	64,831
Participation rate	60.6	60.5	60.5	60.6	60.6	60.5	60.6	60.7	60.5	60.6	60.7	60.7	61.0	60.7	60.6
Employed	60,417	60,420	60,581	60,675	60,668	60,697	60,676	61,443	61,073	61,227	61,401	61,436	61,753	61,462	61,470
Employment-population ratio[2]	58.1	57.5	57.5	57.6	57.5	57.5	57.4	57.8	57.4	57.5	57.6	57.6	57.9	57.5	57.5
Unemployed	2,599	3,228	3,180	3,184	3,308	3,224	3,360	3,035	3,237	3,250	3,276	3,297	3,395	3,357	3,361
Unemployment rate	4.1	5.1	5.0	5.0	5.2	5.0	5.2	4.7	5.0	5.0	5.1	5.1	5.2	5.2	5.2
Not in the labor force	40,967	41,488	41,574	41,563	41,533	41,673	41,642	41,757	42,013	41,933	41,834	41,880	41,576	42,020	42,126
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,929	15,994	15,980	15,954	15,971	15,933	15,925	16,027	16,030	16,038	16,051	16,072	16,095	16,109	16,116
Civilian labor force	7,902	7,585	7,561	7,667	7,535	7,489	7,369	7,366	7,293	7,079	7,226	7,246	7,256	7,140	7,139
Participation rate	49.6	47.4	47.3	48.1	47.2	47.0	46.3	46.0	45.5	44.1	45.0	45.1	45.1	44.3	44.3
Employed	6,740	6,332	6,280	6,425	6,400	6,228	6,164	6,125	6,042	5,829	5,923	5,907	5,855	5,823	5,952
Employment-population ratio[2]	42.3	39.6	39.3	40.3	40.1	39.1	38.7	38.2	37.7	36.3	36.9	36.8	36.4	36.1	36.9
Unemployed	1,162	1,253	1,280	1,243	1,135	1,261	1,206	1,241	1,251	1,251	1,303	1,339	1,401	1,317	1,187
Unemployment rate	14.7	16.5	16.9	16.2	15.1	16.8	16.4	16.8	17.1	17.7	18.0	18.5	19.3	18.4	16.4
Not in the labor force	8,027	8,409	8,419	8,287	8,436	8,444	8,555	8,661	8,736	8,959	8,825	8,826	8,839	8,969	8,977
White[3]															
Civilian noninstitutional population[1]	178,111	179,783	179,979	180,146	180,306	180,450	180,580	180,460	180,599	180,728	180,873	181,021	181,184	181,341	181,512
Civilian labor force	119,399	120,150	120,449	120,502	120,479	120,345	120,093	120,084	120,166	120,200	120,575	120,420	120,881	120,623	120,669
Participation rate	67.0	66.8	66.9	66.9	66.8	66.7	66.5	66.5	66.5	66.5	66.7	66.5	66.7	66.5	66.5
Employed	114,430	114,013	114,250	114,373	114,294	114,128	113,910	113,995	114,135	114,089	114,286	113,882	114,203	114,044	114,141
Employment-population ratio[2]	64.2	63.4	63.5	63.5	63.4	63.2	63.1	63.2	63.2	63.1	63.2	62.9	63.0	62.9	62.9
Unemployed	4,969	6,137	6,199	6,129	6,184	6,218	6,184	6,089	6,031	6,111	6,289	6,539	6,678	6,580	6,528
Unemployment rate	4.2	5.1	5.1	5.1	5.1	5.2	5.1	5.1	5.0	5.1	5.2	5.4	5.5	5.5	5.4
Not in the labor force	58,713	59,633	59,530	59,644	59,828	60,104	60,487	60,376	60,432	60,528	60,298	60,601	60,303	60,717	60,843
Black or African American[3]															
Civilian noninstitutional population[1]	25,138	25,578	25,633	25,675	25,717	25,751	25,784	25,484	25,519	25,552	25,587	25,624	25,664	25,702	25,142
Civilian labor force	16,421	16,565	16,541	16,789	16,682	16,540	16,706	16,374	16,395	16,296	16,521	16,618	16,717	16,540	16,579
Participation rate	65.3	64.8	64.5	65.4	64.9	64.2	64.8	64.3	64.2	63.8	64.6	64.9	65.1	64.4	64.4
Employed	15,006	14,872	14,907	15,148	15,027	14,754	14,827	14,684	14,669	14,641	14,723	14,819	14,746	14,697	14,769
Employment-population ratio[2]	59.7	58.1	58.2	59.0	58.4	57.3	57.5	57.6	57.5	57.3	57.5	57.8	57.5	57.2	57.4
Unemployed	1,416	1,693	1,634	1,641	1,656	1,786	1,879	1,690	1,726	1,655	1,797	1,799	1,971	1,842	1,810
Unemployment rate	8.6	10.2	9.9	9.8	9.9	10.8	11.2	10.3	10.5	10.2	10.9	10.8	11.8	11.1	10.9
Not in the labor force	8,717	9,013	9,092	8,886	9,034	9,211	9,078	9,110	9,124	9,256	9,066	9,007	8,947	9,162	9,163

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.
Hispanic or Latino ethnicity															
Civilian noninstitutional population[1]	24,942	25,963	26,096	26,184	26,272	26,355	26,436	26,994	28	27,191	27,291	27,391	27,494	27,597	27,701
Civilian labor force	17,328	17,943	18,030	18,103	18,049	18,169	18,134	18,614	18,658	18,614	18,836	18,811	18,856	18,750	18,829
Participation rate	69.5	69.1	69.1	69.1	68.7	68.9	68.6	69.0	68.9	68.5	69.0	68.7	68.6	67.9	68.0
Employed	16,190	16,590	16,664	16,739	16,637	16,755	16,708	17,155	17,223	17,215	17,428	17,264	17,271	17,206	17,370
Employment-population ratio[2]	64.9	63.9	63.9	63.9	63.3	63.6	63.2	63.5	63.6	63.3	63.9	63.0	62.8	62.3	62.7
Unemployed	1,138	1,353	1,366	1,363	1,412	1,414	1,425	1,459	1,436	1,399	1,408	1,548	1,586	1,544	1,460
Unemployment rate	6.6	7.5	7.6	7.5	7.8	7.8	7.9	7.8	7.7	7.5	7.5	8.2	8.4	8.2	7.8
Not in the labor force	7,614	8,020	8,066	8,082	8,223	8,188	8,303	8,380	8,436	8,577	8,455	8,580	8,638	8,847	8,872

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

[3] Beginning in 2003, persons who selected this race group only; persons who selected more than one race group are not included. Prior to 2003, persons who reported more than one race were included in the group they identified as the main race.

NOTE: Estimates for the above race groups (white and black or African American) do not sum to totals because data are not presented for all races. In addition, persons whose ethnicity is identified as Hispanic or Latino may be of any race and, therefore, are classified by ethnicity as well as by race. Beginning in January 2003, data reflect revised population controls used in the household survey.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Characteristic															
Employed, 16 years and over	136,933	136,485	136,757	137,312	136,988	136,542	136,439	137,536	137,408	137,348	137,687	137,487	137,739	137,628	137,625
Men	73,196	72,903	73,023	73,402	73,151	72,773	72,690	72,994	73,249	73,064	73,182	72,981	73,071	73,043	73,195
Women	63,737	63,582	63,734	63,910	63,837	63,769	63,749	64,542	64,159	64,284	64,505	64,506	64,667	64,435	64,430
Married men, spouse present	44,007	44,116	44,235	44,129	44,245	44,093	44,005	44,401	44,587	44,415	44,552	44,542	44,371	44,739	44,620
Married women, spouse present	34,153	34,153	34,278	34,479	34,322	34,264	34,189	34,525	34,620	34,569	34,685	34,443	34,600	34,612	34,655
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,715	4,213	4,308	4,356	4,343	4,329	4,273	4,643	4,807	4,696	4,840	4,592	4,499	4,649	4,449
Slack work or business conditions	2,396	2,788	2,811	2,814	2,888	2,855	2,893	3,027	3,152	3,123	3,221	3,058	3,153	3,112	3,017
Could only find part-time work	1,006	1,124	1,153	1,177	1,133	1,159	1,110	1,297	1,275	1,192	1,266	1,265	1,257	1,304	1,186
Part time for noneconomic reasons	18,790	18,843	19,047	18,928	18,685	18,727	18,555	19,314	18,421	18,888	18,886	19,083	19,548	19,027	19,564
Nonagricultural industries:															
Part time for economic reasons	3,627	4,119	4,185	4,266	4,274	4,272	4,219	4,496	4,675	4,587	4,728	4,478	4,390	4,566	4,380
Slack work or business conditions	2,340	2,726	2,806	2,755	2,857	2,816	2,854	2,947	3,062	3,048	3,140	3,003	3,074	3,079	2,963
Could only find part-time work	997	1,114	1,143	1,172	1,122	1,158	1,097	1,267	1,257	1,178	1,258	1,234	1,237	1,276	1,179
Part time for noneconomic reasons	18,415	18,487	18,668	18,555	18,347	18,361	18,197	18,984	18,134	18,529	18,503	18,664	19,184	18,610	19,142

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Characteristic															
Total, 16 years and older........................	4.7	5.8	5.8	5.7	5.8	5.9	6.0	5.7	5.8	5.8	6.0	6.1	6.4	6.2	6.1
Both sexes, 16 to 19 years....................	14.7	16.5	16.9	16.2	15.1	16.8	16.4	16.8	17.1	17.7	18.0	18.5	19.3	18.4	16.6
Men, 20 years and older........................	4.2	5.3	5.3	5.3	5.4	5.6	5.6	5.4	5.3	5.3	5.6	5.9	6.1	5.9	5.8
Women, 20 years and older....................	4.1	5.1	5.0	5.0	5.2	5.0	5.2	4.7	5.0	5.0	5.1	5.1	5.2	5.2	5.2
White, total[1]......................................	4.2	5.1	5.1	5.1	5.1	5.2	5.1	5.1	5.0	5.1	5.2	5.4	5.5	5.5	5.4
Both sexes, 16 to 19 years...............	12.7	14.5	14.8	14.2	13.9	14.5	13.8	15.2	15.5	15.6	15.4	15.3	16.5	15.8	15.0
Men, 16 to 19 years......................	13.9	15.9	17.1	15.6	14.7	15.8	14.9	16.2	17.3	18.0	17.7	17.0	17.8	18.2	16.0
Women, 16 to 19 years....................	11.4	13.1	12.4	12.7	13.1	13.0	12.7	14.2	13.7	13.1	13.2	13.7	15.2	13.4	14.0
Men, 20 years and older..................	3.7	4.7	4.8	4.8	4.8	5.0	4.9	4.9	4.6	4.7	5.0	5.2	5.4	5.4	5.3
Women, 20 years and older...............	3.6	4.4	4.4	4.4	4.4	4.2	4.4	4.1	4.2	4.4	4.3	4.6	4.4	4.4	4.4
Black or African American, total[1].........	8.6	10.2	9.9	9.8	9.9	10.8	11.2	10.3	10.5	10.2	10.9	10.8	11.8	11.1	10.9
Both sexes, 16 to 19 years...............	29.0	29.8	30.1	28.0	23.9	30.5	33.2	30.4	30.2	33.4	33.1	37.0	39.3	36.0	30.0
Men, 16 to 19 years......................	30.4	31.3	31.3	34.4	24.9	30.0	34.5	33.2	38.1	45.2	37.7	43.1	36.5	37.7	27.4
Women, 16 to 19 years....................	27.5	28.3	28.9	21.5	22.7	31.0	32.1	28.0	22.2	23.1	29.3	32.0	41.7	34.5	32.4
Men, 20 years and older..................	8.0	9.5	9.1	9.4	9.9	10.6	10.5	10.3	10.1	9.3	10.4	11.2	11.3	10.2	10.4
Women, 20 years and older...............	7.0	8.8	8.5	8.1	8.5	9.0	9.7	8.4	9.0	8.7	9.2	8.0	9.7	9.7	9.7
Hispanic or Latino ethnicity................	6.6	7.5	7.6	7.5	7.8	7.8	7.9	7.8	7.7	7.5	7.5	8.2	8.4	8.2	7.8
Married men, spouse present.................	2.7	3.6	3.5	3.6	3.6	3.6	3.7	3.5	3.6	3.8	3.7	3.9	4.4	3.9	3.8
Married women, spouse present..........	3.1	3.7	3.6	3.6	3.8	3.8	3.8	3.3	3.6	3.7	3.6	3.7	3.9	3.9	3.8
Full-time workers..............................	4.7	5.9	5.8	5.8	5.9	6.1	6.1	5.8	5.9	5.9	6.1	6.3	6.5	6.3	6.2
Part-time workers..............................	5.1	5.2	5.4	5.3	5.2	5.1	5.3	5.4	5.5	5.5	5.4	5.6	5.9	5.5	5.3
Educational attainment[2]															
Less than a high school diploma............	7.2	8.4	8.5	7.9	8.7	9.0	9.0	8.5	8.8	8.5	8.2	9.2	9.7	8.7	9.4
High school graduates, no college[3]........	4.2	5.3	5.2	5.0	4.9	5.3	5.3	5.1	5.4	5.5	5.7	5.5	5.8	5.4	5.4
Some college or associate degree..........	3.3	4.5	4.3	4.6	4.7	4.8	5.0	4.8	4.7	4.8	4.7	4.8	4.9	5.0	4.7
Bachelor's degree and higher[4]...............	2.3	2.9	2.8	2.9	3.0	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1

[1] Beginning in 2003, persons who selected this race group only; persons who selected more than one race group are not included. Prior to 2003, persons who reported more than one race were included in the group they identified as the main race.

[2] Data refer to persons 25 years and older.

[3] Includes high school diploma or equivalent.

[4] Includes persons with bachelor's, master's, professional, and doctoral degrees.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Less than 5 weeks...........................	2,853	2,893	2,895	2,782	2,797	2,912	2,860	2,772	2,749	2,780	2,814	3,056	3,009	3,009	2,727
5 to 14 weeks.................................	2,196	2,580	2,505	2,558	2,515	2,532	2,547	2,577	2,565	2,473	2,630	2,605	2,936	2,699	2,595
15 weeks and over...........................	1,752	2,904	2,891	3,019	3,099	3,143	3,296	3,140	3,155	3,104	3,294	3,250	3,572	3,592	3,572
15 to 26 weeks...........................	951	1,369	1,361	1,359	1,374	1,317	1,392	1,457	1,281	1,316	1,392	1,321	1,536	1,633	1,637
27 weeks and over.......................	801	1,535	1,530	1,660	1,724	1,826	1,904	1,683	1,874	1,788	1,903	1,930	2,036	1,959	1,935
Mean duration, in weeks.................	13.1	16.6	16.3	17.8	17.6	17.9	18.4	18.4	18.6	18.0	19.6	19.2	19.8	19.3	19.0
Median duration, in weeks..............	6.8	9.1	8.7	9.5	9.6	9.4	9.6	9.8	9.4	9.6	10.2	10.1	12.3	10.0	9.6

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Job losers[1]	3,476	4,607	4,607	4,608	4,828	4,833	4,863	4,583	4,756	4,613	4,765	5,074	5,010	4,951	4,942
On temporary layoff	1,067	1,124	1,158	1,044	1,098	1,069	1,110	1,080	1,142	1,157	1,101	1,226	1,199	1,198	1,080
Not on temporary layoff	2,409	3,483	3,449	3,565	3,729	3,764	3,753	3,503	3,614	3,456	3,664	3,848	3,811	3,753	3,852
Job leavers	835	866	844	808	850	834	862	825	772	794	829	772	893	792	847
Reentrants	2,031	2,368	2,326	2,321	2,386	2,394	2,462	2,331	2,395	2,391	2,558	2,499	2,687	2,529	2,540
New entrants	459	536	587	542	494	586	534	616	579	626	642	634	648	670	628
Percent of unemployed															
Job losers[1]	51.1	55.0	55.1	55.7	56.4	55.9	55.8	54.9	55.9	54.8	54.2	56.5	54.2	55.4	55.6
On temporary layoff	15.7	13.4	13.8	12.6	12.8	12.4	12.7	12.9	13.4	13.7	12.5	13.7	13.0	13.4	12.1
Not on temporary layoff	35.4	41.6	41.2	42.1	43.6	43.5	43.0	41.9	42.5	41.0	41.7	42.9	41.3	42.0	43.4
Job leavers	12.3	10.3	10.1	9.8	9.9	9.6	9.9	9.9	9.1	9.4	9.4	8.6	9.7	8.9	8.8
Reentrants	29.9	28.3	27.8	28.0	27.9	27.7	28.2	27.9	28.2	28.4	29.1	27.8	29.1	28.3	28.6
New entrants	6.8	6.4	7.0	6.5	5.8	6.8	6.1	7.4	6.8	7.4	7.3	7.1	7.0	7.5	7.1
Percent of civilian labor force															
Job losers[1]	2.4	3.2	3.2	3.2	3.3	3.3	3.4	3.1	3.3	3.2	3.3	3.5	3.4	3.4	3.4
Job leavers	.6	.6	.6	.5	.6	.6	.6	.6	.5	.5	.6	.5	.6	.5	.5
Reentrants	1.4	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.6	1.7	1.7	1.8	1.7	1.7
New entrants	.3	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4

[1] Includes persons who completed temporary jobs.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Total, 16 years and older	4.7	5.8	5.8	5.7	5.8	5.9	6.0	5.7	5.8	5.8	6.0	6.1	6.4	6.2	6.1
16 to 24 years	10.6	12.0	12.1	11.9	11.8	12.2	11.9	11.8	11.9	11.7	12.7	13.1	13.5	13.0	12.3
16 to 19 years	14.7	16.5	16.9	16.2	15.1	16.8	16.4	16.8	17.1	17.7	18.0	18.5	19.3	18.4	16.6
16 to 17 years	17.2	18.8	19.3	19.4	16.2	19.4	17.6	18.3	17.9	16.7	18.7	18.5	21.6	20.8	18.7
18 to 19 years	13.1	15.1	16.2	14.0	14.3	15.3	15.5	15.9	15.9	17.7	17.8	19.0	17.9	17.1	15.9
20 to 24 years	8.3	9.7	9.6	9.6	10.1	9.8	9.7	9.3	9.3	8.9	10.1	10.5	10.7	10.3	10.3
25 years and older	3.7	4.6	4.6	4.6	4.7	4.8	4.8	4.6	4.7	4.7	4.9	4.9	5.1	5.0	5.0
25 to 54 years	3.8	4.8	4.7	4.7	4.9	5.1	5.0	4.7	4.9	5.0	4.9	5.0	5.3	5.1	5.1
55 years and older	3.0	3.8	4.0	3.9	3.9	3.7	4.2	4.1	3.8	3.8	4.2	4.5	4.6	4.3	4.1
Men, 16 years and older	4.8	5.9	6.0	5.9	5.9	6.2	6.2	6.0	6.0	6.0	6.3	6.5	6.8	6.6	6.4
16 to 24 years	11.4	12.8	13.3	13.1	12.3	12.8	12.6	12.4	12.5	12.4	13.8	14.3	14.3	14.5	12.7
16 to 19 years	16.0	18.1	19.3	18.3	16.0	18.0	17.5	18.2	19.5	20.8	20.6	20.8	20.1	20.9	16.9
16 to 17 years	19.1	21.1	23.1	21.5	17.2	21.2	18.5	19.3	19.1	18.0	21.4	21.5	23.8	22.8	20.7
18 to 19 years	14.0	16.4	18.1	16.3	15.2	16.1	16.7	17.6	19.3	21.5	20.1	20.9	17.7	19.5	15.3
20 to 24 years	9.0	10.2	10.3	10.5	10.4	10.2	10.2	9.7	9.2	8.7	10.7	11.4	11.7	11.7	10.8
25 years and older	3.6	4.7	4.7	4.6	4.8	5.1	5.0	4.9	4.9	4.9	5.1	5.2	5.5	5.2	5.3
25 to 54 years	3.7	4.8	4.8	4.7	4.9	5.3	5.2	5.0	5.0	5.0	5.2	5.3	5.5	5.3	5.5
55 years and older	3.2	4.1	4.1	4.1	4.0	4.0	4.4	4.4	4.2	4.3	4.6	4.8	5.5	4.6	4.4
Women, 16 years and older	4.7	5.6	5.5	5.5	5.7	5.6	5.8	5.3	5.6	5.5	5.6	5.7	5.9	5.7	5.8
16 to 24 years	9.6	11.1	10.7	10.5	11.3	11.5	11.3	11.1	11.3	11.0	11.5	11.8	12.5	11.3	12.0
16 to 19 years	13.4	14.9	14.4	14.0	14.1	15.6	15.2	15.5	14.8	14.6	15.5	16.2	18.5	16.0	16.4
16 to 17 years	15.2	16.6	15.5	17.4	15.2	17.4	16.6	17.3	16.8	15.5	16.2	15.8	19.5	18.9	16.7
18 t0 19 years	12.2	13.8	14.1	11.5	13.3	14.4	14.2	14.1	12.3	13.7	15.5	17.1	18.0	14.5	16.6
20 to 24 years	7.5	9.1	8.8	8.7	9.8	9.4	9.3	8.8	9.5	9.1	9.3	9.4	9.5	8.9	9.8
25 years and older	3.7	4.6	4.5	4.5	4.6	4.5	4.6	4.2	4.5	4.6	4.7	4.6	4.7	4.7	4.6
25 to 54 years	3.9	4.8	4.6	4.7	4.8	4.8	4.8	4.4	4.8	4.9	4.7	4.7	5.0	4.9	4.7
55 years and older[1]	2.7	3.6	4.3	3.6	3.5	3.2	3.8	4.1	3.3	3.3	3.4	3.6	3.7	4.2	4.5

[1] Data are not seasonally adjusted.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

10. Unemployment rates by State, seasonally adjusted

State	July 2002	June 2003[P]	July 2003[P]	State	July 2002	June 2003[P]	July 2003[P]
Alabama	6.0	5.7	5.7	Missouri	5.7	5.7	5.6
Alaska	8.0	7.9	7.9	Montana	4.6	4.7	4.7
Arizona	6.3	5.9	6.1	Nebraska	3.6	3.9	3.9
Arkansas	5.4	5.6	5.5	Nevada	5.5	5.3	5.4
California	6.7	6.8	6.7	New Hampshire	4.7	3.9	4.3
Colorado	5.7	5.8	5.7	New Jersey	6.0	5.8	6.1
Connecticut	4.4	4.9	5.2	New Mexico	5.6	5.9	6.1
Delaware	4.3	3.8	4.1	New York	6.2	6.1	6.1
District of Columbia	6.4	6.7	6.5	North Carolina	6.8	6.6	6.7
Florida	5.5	5.4	5.4	North Dakota	4.1	3.4	3.6
Georgia	5.2	4.9	5.0	Ohio	5.7	6.3	6.3
Hawaii	4.1	4.1	4.0	Oklahoma	4.5	5.8	5.6
Idaho	5.8	5.2	5.6	Oregon	7.4	8.5	8.2
Illinois	6.6	6.4	6.5	Pennsylvania	5.6	5.7	5.6
Indiana	5.1	4.7	5.4	Rhode Island	4.9	5.7	5.6
Iowa	4.1	4.2	4.6	South Carolina	5.8	6.6	7.0
Kansas	5.3	5.0	5.1	South Dakota	3.0	3.1	3.3
Kentucky	5.5	5.9	6.1	Tennessee	5.1	5.3	5.0
Louisiana	6.1	6.8	7.4	Texas	6.4	6.5	6.6
Maine	4.4	4.5	4.9	Utah	6.1	5.2	5.2
Maryland	4.3	4.3	4.6	Vermont	3.8	4.1	4.1
Massachusetts	5.4	5.6	5.4	Virginia	4.9	3.8	4.0
Michigan	6.2	7.2	7.4	Washington	7.3	7.8	7.5
Minnesota	4.4	4.5	4.6	West Virginia	6.3	6.3	6.8
Mississippi	6.8	7.1	7.3	Wisconsin	5.4	5.6	5.6
				Wyoming	4.1	4.2	4.1

[P] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted
[In thousands]

State	July 2002	June 2003[P]	July 2003[P]	State	July 2002	June 2003[P]	July 2003[P]
Alabama	2,101,280	2,152,730	2,155,212	Missouri	2,967,698	2,986,349	2,978,006
Alaska	322,934	344,860	344,981	Montana	463,249	477,415	477,579
Arizona	2,688,356	2,666,429	2,673,807	Nebraska	957,925	983,575	984,025
Arkansas	1,288,777	1,303,896	1,303,639	Nevada	1,127,346	1,115,688	1,112,944
California	17,415,671	17,651,753	17,661,134	New Hampshire	706,530	714,155	719,083
Colorado	2,438,966	2,469,704	2,478,187	New Jersey	4,366,094	4,415,026	4,441,798
Connecticut	1,774,532	17,811,359	1,786,536	New Mexico	880,080	900,878	902,473
Delaware	422,361	419,367	419,400	New York	9,380,551	9,377,498	9,372,663
District of Columbia	303,185	310,147	309,704	North Carolina	4,166,904	4,147,549	4,183,361
Florida	8,105,076	8,062,938	8,073,568	North Dakota	344,907	348,298	350,651
Georgia	4,298,322	4,387,108	4,385,696	Ohio	5,824,527	5,890,191	5,900,897
Hawaii	581,112	605,342	608,991	Oklahoma	1,681,102	1,723,904	1,715,174
Idaho	685,049	690,166	688,936	Oregon	1,833,477	1,852,381	1,848,687
Illinois	6,366,256	6,404,476	6,433,749	Pennsylvania	6,290,232	6,175,793	6,196,175
Indiana	3,189,546	3,204,166	3,225,356	Rhode Island	557,604	574,396	573,774
Iowa	1,669,830	1,642,070	1,644,294	South Carolina	1,967,803	2,030,911	2,034,109
Kansas	1,418,230	1,474,193	1,478,884	South Dakota	421,893	421,697	422,867
Kentucky	1,964,180	1,986,813	1,998,226	Tennessee	2,930,008	2,910,665	2,902,709
Louisiana	2,000,839	2,044,678	2,040,891	Texas	10,755,795	10,994,633	11,011,013
Maine	687,316	690,814	692,757	Utah	1,179,512	1,206,839	1,205,935
Maryland	2,900,001	2,923,349	2,934,161	Vermont	349,203	353,247	354,424
Massachusetts	3,494,261	3,448,648	3,448,801	Virginia	3,736,590	3,789,955	3,799,478
Michigan	4,988,433	5,130,391	5,133,605	Washington	3,107,460	3,103,380	3,113,305
Minnesota	2,923,599	2,926,862	2,940,540	West Virginia	802,210	802,832	808,832
Mississippi	1,299,241	1,330,833	1,336,318	Wisconsin	3,023,365	3,101,062	3,099,576
				Wyoming	269,783	276,357	276,016

[P] = preliminary.

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
TOTAL NONFARM.............	131826	130,376	130,224	130,289	130,408	130,409	130,198	130,356	130,235	130,084	130,062	129,986	129,903	129,870	129,805
TOTAL PRIVATE....................	110707	108.886	108.745	108.763	108.864	108.869	108.642	108.780	108.647	108.537	108.536	108.502	108.427	108.397	108.349
GOODS-PRODUCING...............	23873	22,619	22,527	22,497	22,435	22,409	22,323	22,288	22,191	22,159	22,119	22,098	22,061	21,982	21,972
Natural resources and															
mining..............................	606	581	575	573	572	573	572	568	569	565	564	566	569	566	564
Logging...............................	73.5	69.1	67.3	67.5	66.7	67.6	67.9	67.1	66.6	64.6	64.3	64.8	65.7	64.6	64.0
Mining................................	532.5	511.9	508.1	505.7	505.7	505.0	503.6	500.5	502.1	500.4	499.8	501.4	502.8	501.5	500.7
Oil amd gas extraction...........	123.7	122.5	122.0	121.4	121.5	122.0	121.6	122.1	121.8	122.9	124.4	125.2	125.7	127.0	124.8
Mining. except oil and gas[1].....	218.7	212.1	210.6	210.7	209.7	209.3	208.1	206.9	206.3	206.9	207.5	208.2	208.9	208.4	209.0
Coal mining........................	74.3	74.9	74.4	74.3	73.6	73.8	73.3	72.2	72.3	72.3	72.7	72.6	73.2	73.2	72.8
Support activities for mining....	190.1	177.2	175.5	173.6	174.5	173.7	173.9	171.5	174.0	170.6	167.9	168.0	168.2	166.1	166.9
Construction........................	6,826	6,732	6,719	6,728	6,720	6,745	6,731	6,738	6,700	6,720	6,760	6,786	6,800	6,804	6,823
Construction of buildings....	1.588.9	1.583.9	1.585.3	1.587.9	1.588.0	1.602.9	1.595.3	1.597.7	1.594.4	1.605.6	1.615.8	1.615.0	1.609.7	1.608.1	1.608.9
Heavy and civil engineering....	953.0	929.9	921.0	919.3	918.1	915.2	915.3	916.8	912.5	895.0	898.4	902.8	905.8	908.6	915.1
Speciality trade contractors.....	4283.9	4217.9	4212.9	4220.7	4214.2	4226.4	4220.7	4223.8	4193.2	4219.5	4245.5	4267.8	4284.1	4287.6	4299
Manufacturing.......................	16,441	15,306	15,233	15,196	15,143	15,091	15,020	14,982	14,922	14,874	14,795	14,746	14,692	14,612	14,585
Production workers..............	11.677	10.799	10,740	10,715	10,685	10,648	10,595	10,564	10,516	10,447	10,379	10,342	10,299	10,237	10,224
Durable goods........................	10,335	9,517	9,472	9,435	9,400	9,362	9,316	9,282	9,236	9,203	9,147	9,114	9,081	9,022	9,014
Production workers..............	7,163	6.551	6.517	6.492	6.474	6.447	6.417	6.392	6.355	6.314	6.267	6.244	6.221	6.188	6.204
Wood products....................	574.1	556.8	556.0	554.5	554.2	552.3	548.1	549.2	548.5	544.4	546.0	544.9	541.0	541.5	536.9
Nonmetallic mineral products	544.5	519.0	518.1	517.9	516.1	513.6	510.8	507.9	505.9	506.7	504.8	505.1	505.0	501.7	501.1
Primary metals....................	570.9	510.9	509.1	507.5	504.4	503.3	499.7	500.1	496.5	494.7	491.1	486.4	482.0	475.4	476.6
Fabricated metal products.......	1.676.4	1.547.8	1.542.3	1.537.8	1.532.0	1.523.7	1.516.0	1.508.0	1.497.5	1.495.3	1.489.4	1.482.3	1.470.7	1.467.4	1.468.7
Machinery..........................	1.368.3	1.237.4	1.228.7	1.223.8	1.219.6	1.216.1	1.212.4	1.206.5	1.201.6	1.194.8	1.187.4	1.181.2	1.175.8	1.170.9	1.171.9
Computer and electronic															
products[1]	1.748.8	1.521.3	1.503.5	1.492.9	1.483.9	1.477.0	1.462.2	1.448.5	1.438.2	1.432.1	1.423.6	1.413.0	1.407.7	1.394.3	1.394.0
Computer and peripheral															
equipment.....................	286.2	249.8	243.9	243.3	242.0	241.8	241.0	234.4	230.9	229.8	230.5	226.7	226.5	219.7	222.4
Communications equipment..	233.9	190.9	187.1	186.0	185.5	182.0	180.1	177.6	177.8	176.5	175.5	174.4	173.3	172.0	171.0
Semiconductors and															
electronic components........	645.4	531.4	525.5	519.2	513.9	507.6	503.7	498.8	496.0	494.1	492.0	487.7	485.1	482.7	479.7
Electronic instruments..........	475.1	450.6	447.2	445.8	444.1	442.5	441.3	441.4	438.7	436.5	433.5	431.5	429.9	427.8	429.0
Electrical equipment and															
appliances......................	556.9	498.9	494.9	492.0	489.1	486.8	485.2	482.4	479.8	477.5	474.8	469.3	467.7	466.1	461.6
Transportation equipment.......	1,937.9	1,828.5	1,824.0	1,818.0	1,815.5	1,808.7	1,804.7	1,806.5	1,800.7	1,792.5	1,771.9	1,777.6	1,774.3	1,757.3	1,764.8
Furniture and related															
products........................	642.4	604.6	604.3	599.8	596.9	594.2	589.1	587.0	582.9	582.0	576.4	576.4	574.1	576.2	572.3
Miscellaneous manufacturing	714.5	691.9	691.4	690.9	688.3	691.1	687.9	686.0	684.5	683.0	682.0	677.8	676.6	671.4	670.8
Nondurable goods...................	6,107	5,789	5,761	5,761	5,743	5,729	5,704	5,700	5,686	5,671	5,648	5,632	5,611	5,590	5,571
Production workers..............	4,514	4,249	4,223	4,223	4,211	4,201	4,178	4,172	4,161	4,133	4,112	4,098	4,078	4,058	4,044
Food manufacturing.................	1,551.2	1,525.1	1,514.5	1,518.0	1,520.0	1,520.0	1,518.5	1,517.1	1,514.7	1,513.3	1,512.3	1,512.4	1,517.4	1,511.9	1,520.9
Beverages and tobacco															
products........................	209.0	205.4	205.0	205.3	203.1	200.2	200.2	199.0	198.2	196.1	194.6	195.4	194.5	196.1	194.5
Textile mills........................	332.9	293.2	291.3	289.6	287.5	286.8	284.9	285.2	283.7	281.6	277.8	272.7	270.1	262.8	259.5
Textile product mills................	205.7	196.2	195.6	195.2	195.4	194.9	193.7	191.7	192.6	192.6	190.6	188.7	186.4	185.6	178.5
Apparel.............................	426.5	357.6	354.2	352.0	346.7	343.2	337.2	331.8	325.9	322.1	318.4	313.2	307.8	297.5	297.7
Leather and allied products......	58.0	49.9	48.9	48.7	48.6	47.7	47.3	46.7	46.0	45.8	44.8	44.4	43.3	43.5	43.0
Paper and paper products.......	577.6	549.8	548.9	547.7	545.6	544.6	541.5	539.7	538.5	535.1	534.1	531.9	530.6	528.0	526.2
Printing and related support															
activities........................	768.4	709.9	704.2	702.4	701.3	697.5	689.8	694.5	694.0	696.4	694.8	695.3	694.1	693.4	689.8
Petroleum and coal products...	121.1	119.1	118.6	119.2	118.7	119.4	119.7	120.4	120.4	120.3	119.2	119.3	118.4	118.1	117.1
Chemicals..........................	959.0	929.5	926.7	930.5	925.1	924.7	925.8	926.0	924.2	922.5	921.7	920.6	916.5	918.1	915.5
Plastics and rubber products..	897.4	853.5	853.3	852.2	851.0	850.1	845.4	848.0	847.4	845.1	839.2	837.7	831.7	834.9	828.6
SERVICE-PROVIDING..................	107,952	107,757	107,697	107,792	107,973	108,000	107,875	108,068	108,044	107,925	107,943	107,888	107,842	107,888	107,833
PRIVATE SERVICE-															
PROVIDING.........................	86,834	86,267	86,218	86,266	86,429	86,460	86,319	86,492	86,456	86,378	86,417	86,404	86,366	86,415	86,377
Trade, transportation,															
and utilities.........................	25,983	25,493	25,458	25,430	25,439	25,406	25,378	25,376	25,346	25,338	25,321	25,282	25,238	25,192	25,201
Wholesale trade.....................	5,772.7	5,641.0	5,624.4	5,625.2	5,618.9	5,604.9	5,603.9	5,596.0	5,596.2	5,594.0	5,590.8	5,582.0	5,570.6	5,556.6	5,550.8
Durable goods....................	3130.4	3007.2	2,991.1	2,995.7	2,990.8	2,984.3	2,978.7	2,967.9	2,967.0	2,961.2	2,957.7	2,952.2	2,947.5	2,938.4	2,934.7
Nondurable goods................	2031.3	2015.1	2015.7	2013.3	2010.1	2004.3	2009.6	2011.5	2010.7	2013.6	2013.3	2009.9	2004.1	2002.2	1998.4
Electronic markets and															
agents and brokers.............	611.1	618.8	617.6	616.2	618.0	616.3	615.6	616.6	618.5	619.2	619.8	619.9	619.0	616.0	617.7
Retail trade............................	15.238.6	15.047.2	15.033.3	15.016.0	15.025.2	15.014.0	15.005.6	15.009.2	14.987.3	14.994.7	14.999.6	14.979.0	14,964.2	14.945.1	14.959.1
Motor vehicles and parts															
dealers[1]........................	1,854.6	1,879.2	1,883.2	1,882.6	1,886.8	1,883.8	1,878.9	1,876.8	1,874.9	1,875.5	1,875.4	1,879.2	1,877.9	1,883.7	1,881.7
Automobile dealers...............	1,225.1	1,250.4	1,252.4	1,253.0	1,254.9	1,255.0	1,249.6	1,245.5	1,242.1	1,241.5	1,242.0	1,244.3	1,246.0	1,249.1	1,248.8
Furniture and home															
furnishings stores................	541.2	539.9	541.8	543.5	546.8	548.7	548.4	549.9	552.0	547.6	549.2	545.4	546.5	546.1	542.2
Electronics and appliance															
stores................................	554.5	528.8	525.0	524.6	526.4	529.3	529.8	531.6	526.9	524.8	525.2	523.8	522.9	520.0	519.8

See notes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
Building material and garden supply stores..........	1,151.8	1,179.1	1,185.2	1,182.2	1,184.2	1,184.2	1,183.9	1,190.6	1,183.6	1,181.8	1,189.0	1,188.5	1,194.2	1,193.3	1,203.1
Food and beverage stores.......	2,950.5	2,871.6	2,857.1	2,851.7	2,852.5	2,842.5	2,833.5	2,827.0	2,820.2	2,822.9	2,822.0	2,822.5	2,812.8	2,798.6	2,797.3
Health and personal care stores..........	951.5	946.6	947.7	949.7	949.2	949.5	952.5	956.8	960.1	962.6	966.2	965.7	967.9	967.8	965.0
Gasoline stations.................	925.3	903.6	902.2	903.6	903.6	903.7	904.2	905.2	905.0	907.1	910.9	908.8	908.6	902.3	907.3
Clothing and clothing accessories stores	1,321.1	1,307.8	1,311.7	1,304.4	1,307.4	1,304.5	1,308.5	1,291.2	1,279.7	1,282.8	1,288.3	1,280.7	1,277.5	1,274.7	1,276.9
Sporting goods, hobby, book, and music stores.......	679.2	660.1	662.7	657.8	655.3	650.1	637.8	653.5	652.6	650.8	646.3	645.2	642.0	641.0	638.6
General merchandise stores1.	2,842.2	2,820.7	2,809.0	2,809.2	2,809.1	2,817.5	2,827.6	2,834.2	2,838.8	2,846.4	2,835.8	2,833.1	2,831.0	2,831.7	2,846.3
Department stores..............	1,768.3	1,709.8	1,695.0	1,694.5	1,696.6	1,712.0	1,727.5	1,720.9	1,718.6	1,710.6	1,695.5	1,690.3	1,689.9	1,683.9	1,693.6
Miscellaneous store retailers...	993.3	962.5	961.0	960.8	960.8	957.2	954.6	952.4	949.1	949.8	948.6	944.1	941.8	939.7	940.3
Nonstore retailers................	473.5	447.3	446.7	445.9	443.1	443.0	445.9	440.0	444.4	442.6	442.7	442.0	440.6	446.2	440.6
Transportation and warehousing..........	4,372.0	4,205.3	4,200.4	4,188.4	4,194.6	4,188.9	4,170.7	4,174.6	4,166.7	4,153.8	4,136.3	4,128.5	4,113.9	4,100.6	4,101.0
Air transportation...............	615.3	559.3	561.1	559.0	556.3	556.3	553.9	551.3	545.8	537.3	525.6	516.4	510.0	499.4	503.0
Rail transportation..............	226.7	218.1	216.3	215.5	215.1	216.8	216.3	215.7	215.3	215.3	216.5	216.1	217.2	217.2	214.8
Water transportation.............	54.0	51.6	50.8	50.4	50.4	50.3	50.3	50.6	50.5	50.1	49.9	50.3	50.1	50.3	49.2
Truck transportation..............	1,386.8	1,339.1	1,332.9	1,330.4	1,336.2	1,333.2	1,331.9	1,327.6	1,324.3	1,328.1	1,324.4	1,324.4	1,326.9	1,325.2	1,330.3
Transit and ground passenger transportation.................	374.8	371.5	372.7	364.7	365.1	363.3	360.8	358.0	357.5	351.9	353.0	350.4	345.4	347.8	346.6
Pipeline transportation...........	45.4	41.5	40.7	40.5	40.4	40.2	40.2	40.0	39.8	40.2	40.3	40.3	39.7	40.2	38.9
Scenic and sightseeing transportation.................	29.1	25.9	26.9	26.7	26.2	25.7	25.6	24.0	25.6	27.1	28.5	29.1	29.4	29.1	29.3
Support activities for transportation.................	539.2	526.7	527.6	525.1	528.1	528.2	531.2	527.7	527.9	525.9	522.7	527.8	523.2	520.9	517.5
Couriers and messengers......	587.0	558.0	556.8	558.6	557.5	556.3	545.0	561.4	558.9	563.3	561.6	560.8	560.9	560.4	558.7
Warehousing and storage	513.8	513.6	514.6	517.5	519.3	518.6	515.5	518.3	521.1	514.6	513.8	512.9	510.6	510.1	512.1
Utilities...................	599.4	599.8	600.0	600.1	600.6	598.3	597.3	596.4	595.9	595.3	594.6	592.3	589.5	589.5	590.4
Information...................	3,629	3,420	3,401	3,383	3,392	3,382	3,353	3,328	3,308	3,305	3,303	3,294	3,285	3,279	3,264
Publishing industries, except Internet...............	1,020.7	969.4	966.9	965.1	964.7	962.6	962.2	954.0	955.3	953.5	950.8	947.2	945.1	942.0	942.2
Motion picture and sound recording industries.......	376.8	387.1	387.1	384.0	394.7	394.3	381.6	377.8	367.0	369.3	371.1	373.4	371.7	374.7	367.8
Broadcasting, except Internet..	344.6	333.8	332.0	330.5	330.3	331.0	332.1	327.2	325.0	325.7	325.0	324.4	324.2	322.2	322.9
Internet publishing and broadcasting.................	45.5	34.8	34.9	33.9	34.2	33.0	32.9	33.0	33.3	33.6	33.8	33.5	34.0	35.6	34.3
Telecommunications.............	1,302.1	1,200.9	1,188.8	1,180.2	1,177.7	1,174.9	1,162.5	1,158.7	1,151.4	1,146.9	1,145.0	1,138.1	1,132.5	1,128.4	1,122.5
ISPs, search portals, and data processing.................	493.6	447.4	444.5	443.1	444.0	439.1	435.8	430.3	429.5	430.4	431.3	431.4	462.1	431.1	429.0
Other information services......	46.1	46.6	47.2	46.3	46.5	46.9	45.8	46.5	46.3	46.0	46.0	45.5	45.1	45.4	45.3
Financial activities...................	7,807	7,843	7,830	7,851	7,872	7,880	7,889	7,902	7,916	7,930	7,956	7,971	7,972	7,984	7,979
Finance and insurance............	5773.1.	5,814.9	5,804.0	5,820.8	5,841.1	5,851.1	5,861.0	5,872.4	5,885.2	5,894.8	5,912.0	5,923.2	5,923.3	5,927.7	5,925.7
Monetary authorities— central bank.......................	23.0	23.1	23.1	23.0	22.9	23.0	22.7	22.7	22.3	22.3	22.2	22.2	22.1	22.1	22.0
Credit intermediation and related activities[1]...............	2,597.7	2,682.3	2,682.3	2,696.5	2,714.0	2,722.8	2,729.1	2,734.9	2,741.9	2,752.3	2,765.8	2,781.8	2,783.5	2,790.3	2,789.8
Depository credit intermediation[1].................	1,701.2	1,738.2	1,739.6	1,741.4	1,745.6	1,748.3	1,751.3	1,755.1	1,757.1	1,762.3	1,764.4	1,767.9	1,768.5	1,770.4	1,771.7
Commercial banking...........	1,258.4	1,284.7	1,285.3	1,285.7	1,288.8	1,291.2	1,292.8	1,296.1	1,297.5	1,300.4	1,300.6	1,302.4	1,302.3	1,302.5	1,304.1
Securities, commodity contracts, investments.........	830.5	800.8	795.7	797.6	796.9	798.2	799.4	802.3	803.1	799.3	798.8	796.9	796.7	796.8	794.8
Insurance carriers and related activities.................	2,233.7	2,223.1	2,218.5	2,219.0	2,222.2	2,222.7	2,225.7	2,228.5	2,233.9	2,236.8	2,241.8	2,239.4	2,238.9	2,236.7	2,236.2
Funds, trusts, and other financial vehicles.................	88.3	85.6	84.4	84.7	85.1	84.4	84.1	84.0	84.0	84.1	83.4	82.9	82.1	81.8	82.9
Real estate and rental and leasing.........................	2,034.5	2,027.8	2,026.0	2,030.4	2,031.1	2,029.2	2,028.3	2,029.2	2,030.6	2,034.7	2,044.2	2,047.8	2,048.6	2,055.9	2,053.6
Real estate......................	1,339.5	1,347.7	1,342.3	1,350.7	1,354.4	1,357.3	1,355.7	1,353.8	1,356.9	1,359.9	1,366.4	1,367.3	1,365.2	1,371.1	1,370.5
Rental and leasing services....	666.3	652.3	655.7	652.1	648.9	644.9	645.8	648.7	646.7	647.0	649.4	651.4	654.2	655.4	653.6
Lessors of nonfinancial intangible assets..........	28.7	27.8	28.0	27.6	27.8	27.0	26.8	26.7	27.0	27.8	28.4	29.2	29.2	29.4	29.5
Professional and business services...................	16,476	16,010	16,008	16,008	16,036	16,014	15,972	16,015	16,043	15,980	15,989	16,002	16,006	16,081	16,058
Professional and technical services[1]......................	6,902.2	6,715.0	6,704.8	6,714.8	6,738.3	6,731.9	6,716.9	6,745.3	6,790.5	6,758.4	6,742.2	6,698.1	6,674.9	6,654.6	6,652.1
Legal services.................	1,091.3	1,111.8	1,111.0	1,116.2	1,121.7	1,120.6	1,120.2	1,119.8	1,124.1	1,125.7	1,127.5	1,125.2	1,125.7	1,124.0	1,121.2
Accounting and bookkeeping services......................	872.2	867.1	873.1	876.4	882.7	884.3	872.6	910.6	941.2	913.5	899.3	866.0	848.9	848.4	850.3
Architectural and engineering services.................	1,274.7	1,251.1	1,248.5	1,248.8	1,251.3	1,252.1	1,252.5	1,238.6	1,247.9	1,246.0	1,242.9	1,241.4	1,236.0	1,240.0	1,238.5

See notes at end of table.

[In thousands]

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug[p]
Computer systems design and related services..........	1,297.8	1,162.7	1,154.5	1,150.7	1,153.4	1,150.1	1,142.7	1,142.8	1,144.3	1,144.5	1,151.9	1,146.6	1,142.0	1,131.6	1,123.6
Management and technical consulting services............	746.2	731.8	735.8	736.1	734.0	733.4	739.8	734.8	736.2	735.5	732.9	734.0	731.8	731.3	735.9
Management of companies and enterprises....................	1,779.0	1,711.1	1,704.6	1,706.0	1,703.9	1,699.0	1,694.2	1,696.8	1,697.1	1,697.9	1,697.0	1,696.0	1,690.8	1,698.5	1,691.1
Administrative and waste services..............................	7,794.9	7,583.8	7,598.2	7,587.3	7,594.0	7,583.0	7,561.0	7,572.9	7,555.7	7,523.3	7,549.4	7,608.3	7,639.8	7,733.5	7,714.5
Administrative and support services[1]	7,477.6	7,266.8	7,281.6	7,273.6	7,279.2	7,271.1	7,244.9	7,255.5	7,239.9	7,207.8	7,230.5	7,288.6	7,323.0	7,410.8	7,396.8
Employment services[1]	3,437.1	3,248.8	3,268.8	3,255.2	3,260.8	3,256.8	3,259.2	3,292.7	3,287.8	3,245.9	3,242.2	3,291.7	3,318.3	3,404.5	3,379.0
Temporary help services.....	2,337.7	2,185.7	2,219.1	2,202.1	2,192.6	2,174.4	2,159.4	2,170.2	2,151.6	2,135.9	2,131.2	2,177.6	2,207.9	2,253.2	2,244.5
Business support services....	779.7	757.0	743.0	742.8	749.1	755.8	757.0	746.0	743.8	746.5	748.1	747.9	747.8	744.6	749.6
Services to buildings and dwellings..................	1,606.2	1,597.3	1,604.6	1,611.0	1,606.7	1,601.0	1,591.7	1,585.8	1,580.4	1,576.4	1,587.4	1,596.3	1,601.8	1,611.9	1,615.0
Waste management and remediation services...........	317.3	316.9	316.6	313.7	314.8	311.9	316.1	317.4	315.8	315.5	318.9	319.7	316.8	322.7	318.1
Educational and health services...............................	15,645	16,184	16,241	16,273	16,315	16,357	16,373	16,405	16,430	16,452	16,483	16,509	16,503	16,503	16,512
Educational services...............	2,510.6	2,650.6	2,665.5	2,671.3	2,681.3	2,690.3	2,695.1	2,700.0	2,707.4	2,711.5	2,708.8	2,718.1	2,689.7	2,683.3	2,674.1
Health care and social assistance..........................	13,134.0	13,533.2	13,575.4	13,601.4	13,633.3	13,666.5	13,677.5	13,704.5	13,722.6	13,740.5	13,774.2	13,790.7	13,813.2	13,819.5	13,837.4
Ambulatory health care services[1]	4,461.5	4,633.4	4,649.4	4,675.0	4,692.0	4,708.5	4,712.5	4,718.5	4,727.6	4,739.1	4,753.7	4,764.8	4,777.4	4,789.9	4,790.0
Offices of physicians...........	1,911.2	1,982.6	1,993.0	2,001.3	2,009.0	2,017.7	2,022.1	2,023.4	2,031.5	2,037.4	2,041.7	2,045.9	2,050.2	2,056.4	2,055.2
Outpatient care centers........	399.7	409.7	409.5	411.1	412.2	412.3	412.2	412.0	411.8	412.1	412.8	413.1	414.7	413.7	413.9
Home health care services....	638.6	675.1	674.5	681.9	687.9	689.6	693.0	694.2	693.0	698.6	702.9	705.3	709.0	713.5	712.2
Hospitals.............................	4,050.9	4,153.1	4,165.4	4,173.7	4,179.0	4,187.0	4,190.4	4,197.8	4,204.7	4,210.9	4,214.0	4,218.1	4,227.0	4,228.1	4,236.6
Nursing and residential care facilities[1]	2,675.8	2,743.2	2,746.1	2,751.7	2,757.1	2,763.4	2,766.1	2,770.1	2,770.8	2,776.4	2,784.4	2,787.9	2,790.7	2,784.8	2,789.4
Nursing care facilities..........	1,546.8	1,573.7	1,575.0	1,579.6	1,580.8	1,580.9	1,579.2	1,582.0	1,582.5	1,582.7	1,586.2	1,587.0	1,589.6	1,584.8	1,584.0
Social assistance[1]	1,945.9	2,003.5	2,014.5	2,001.0	2,005.2	2,007.6	2,008.5	2,018.1	2,019.5	2,014.1	2,022.1	2,019.9	2,018.1	2,016.7	2,021.4
Child day care services........	714.6	734.2	740.8	725.7	726.2	725.9	725.2	727.1	729.0	724.5	724.9	724.9	722.7	728.4	731.2
Leisure and hospitality...........	12,036	11,969	11,940	11,975	12,032	12,069	12,019	12,132	12,084	12,050	12,043	12,026	12,039	12,060	12,048
Arts, entertainment, and recreation......................	1,824.4	1,778.0	1,751.2	1,772.9	1,790.1	1,806.2	1,817.8	1,835.6	1,809.5	1,781.8	1,764.8	1,759.2	1,758.4	1,757.4	1,763.0
Performing arts and spectator sports..............	382.3	357.9	342.9	353.6	360.9	369.1	367.2	358.7	358.4	359.0	356.7	348.8	346.5	338.2	347.0
Museums, historical sites, zoos, and parks..............	115.0	112.5	110.7	111.4	111.2	111.2	110.5	111.6	111.2	109.9	108.4	109.8	109.8	110.9	109.9
Amusements, gambling, and recreation.........................	1,327.1	1,307.6	1,297.6	1,307.9	1,318.0	1,325.9	1,340.1	1,365.3	1,339.9	1,312.9	1,299.7	1,300.6	1,302.1	1,308.3	1,306.1
Accommodations and food services....................	10,211.3	10,191.2	10,189.2	10,201.7	10,241.6	10,262.5	10,200.8	10,296.1	10,274.8	10,267.7	10,278.6	10,266.7	10,280.4	10,302.6	10,284.6
Accommodations..................	1,852.2	1,779.4	1,762.4	1,778.2	1,789.1	1,802.3	1,805.2	1,812.0	1,801.7	1,788.4	1,769.0	1,763.6	1,769.1	1,784.6	1,769.3
Food services and drinking places...........................	8,359.1	8,411.7	8,426.8	8,423.5	8,452.5	8,460.6	8,395.6	8,484.1	8,473.1	8,479.3	8,509.6	8,503.1	8,511.3	8,518.0	8,515.3
Other services......................	5,258	5,348	5,340	5,346	5,343	5,352	5,335	5,334	5,329	5,323	5,322	5,320	5,323	5,316	5,315
Repair and maintenance........	1,256.5	1,240.6	1,237.5	1,233.7	1,230.4	1,236.3	1,224.3	1,218.6	1,215.3	1,213.8	1,215.6	1,215.1	1,218.6	1,218.9	1,222.7
Personal and laundry services	1,255.0	1,246.7	1,247.5	1,240.0	1,237.5	1,236.2	1,232.7	1,235.6	1,234.8	1,229.5	1,227.0	1,226.3	1,225.0	1,223.7	1,223.3
Membership associations and organizations....................	2,746.4	2,860.7	2,854.8	2,871.9	2,875.3	2,879.7	2,878.2	2,879.4	2,879.0	2,880.0	2,879.1	2,878.7	2,879.5	2,873.8	2,869.3
Government...........................	21,118	21,489	21,479	21,526	21,544	21,540	21,556	21,576	21,588	21,547	21,526	21,484	21,476	21,473	21,456
Federal...............................	2,764	2,767	2,765	2,774	2,781	2,782	2,778	2,786	2,791	2,789	2,769	2,761	2,749	2,750	2,746
Federal, except U.S. Postal Service................................	1,891.0	1,922.5	1,926.9	1,937.7	1,947.5	1,954.2	1,956.4	1,960.3	1,966.2	1,964.8	1,946.0	1,937.0	1,928.2	1,929.3	1,930.6
U.S. Postal Service...............	873.0	844.8	838.4	836.1	833.6	827.3	821.7	825.3	824.8	823.9	823.0	823.6	821.1	820.3	815.6
State...................................	4,905	5,006	5,013	4,993	4,984	4,983	4,984	4,974	4,979	4,958	4,952	4,941	4,925	4,917	4,919
Education.............................	2,112.9	2,218.8	2,232.5	2,212.5	2,203.0	2,203.0	2,202.5	2,196.8	2,205.1	2,188.7	2,186.5	2,180.8	2,174.3	2,171.8	2,177.0
Other State government........	2,791.8	2,787.4	2,780.3	2,780.5	2,780.8	2,780.0	2,781.0	2,777.3	2,773.4	2,769.7	2,765.3	2,759.9	2,751.1	2,145.3	2,742.0
Local....................................	13,449	13,716	13,701	13,759	13,779	13,775	13,794	13,816	13,818	13,800	13,805	13,782	13,802	13,806	13,791
Education.............................	7,479.3	7,657.2	7,673.7	7,683.9	7,691.5	7,697.0	7,698.1	7,708.5	7,712.4	7,693.6	7,703.5	7,689.1	7,718.0	7,718.0	7,728.6
Other local government..........	5,970.0	6,058.5	6,027.3	6,075.1	6,087.7	6,077.9	6,095.8	6,107.6	6,105.7	6,106.5	6,101.1	6,092.6	6,083.5	6,086.7	6,062.6

[1] Includes other industries not shown separately.

p = preliminary.

NOTE: Data reflect the conversion to the 2002 version of the North American industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision. preliminary.

13. Average weekly hours of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
TOTAL PRIVATE............................	34.0	33.9	33.9	33.9	33.8	33.8	33.8	33.8	33.7	33.8	33.7	33.7	33.7	33.7	33.7
GOODS-PRODUCING..........................	39.9	39.9	39.9	40.0	39.7	39.7	39.8	40.0	39.6	39.9	39.5	39.7	39.8	39.7	39.7
Natural resources and mining............	44.6	43.2	43.3	43.0	43.0	42.3	43.0	43.1	43.3	44.2	43.4	43.8	43.7	43.7	43.7
Construction.................................	38.7	38.4	38.5	38.7	38.2	38.0	38.2	38.9	37.6	38.7	37.9	38.5	38.4	38.4	38.6
Manufacturing..............................	40.3	40.5	40.5	40.5	40.3	40.4	40.5	40.4	40.4	40.4	40.1	40.2	40.3	40.3	40.2
Overtime hours........................	4.0	4.2	4.2	4.2	4.2	4.3	4.3	4.4	4.3	4.1	4.0	4.1	4.0	4.0	4.0
Durable goods...........................	40.6	40.8	40.7	40.8	40.6	40.6	40.9	40.8	40.7	40.6	40.3	40.5	40.7	40.7	40.5
Overtime hours........................	3.9	4.2	4.2	4.2	4.3	4.3	4.3	4.4	4.3	4.1	4.0	4.1	4.1	4.1	4.1
Wood products............................	40.2	39.9	39.8	39.9	39.9	39.8	39.9	40.0	39.9	40.1	40.0	39.9	40.3	40.3	40.4
Nonmetallic mineral products............	41.6	42.0	42.1	42.0	41.9	41.6	41.9	42.1	42.0	42.6	42.0	42.4	42.2	42.2	42.1
Primary metals...........................	42.4	42.4	42.3	42.1	42.4	42.2	42.6	42.4	42.5	42.6	42.2	42.2	42.0	41.9	41.8
Fabricated metal products...............	40.6	40.6	40.7	40.7	40.6	40.4	40.5	40.6	40.5	40.5	40.4	40.6	40.5	40.5	40.5
Machinery.................................	40.9	40.5	40.6	40.5	40.5	40.6	40.5	40.5	40.9	40.5	40.6	40.6	40.9	40.8	40.6
Computer and electronic products.....	39.8	39.7	39.6	40.3	39.3	40.2	40.5	39.9	39.8	40.3	40.1	40.5	40.5	40.4	41.2
Electrical equipment and appliances..	39.8	40.1	40.2	40.0	39.9	40.2	40.6	40.3	40.8	40.6	40.0	40.3	41.0	41.0	40.4
Transportation equipment...............	41.9	42.5	42.4	42.6	42.4	42.2	42.4	42.5	42.2	41.4	41.2	41.2	41.4	41.3	40.7
Furniture and related products..........	38.3	39.2	38.8	38.8	38.7	38.7	39.9	38.8	38.6	38.2	37.9	38.4	38.9	38.9	39.1
Miscellaneous manufacturing............	38.8	38.6	38.4	38.5	38.8	38.6	38.8	38.9	38.6	38.3	38.0	38.1	38.6	38.4	38.3
Nondurable goods.......................	39.1	40.1	40.1	39.9	39.9	40.0	40.0	39.8	39.9	40.0	39.8	39.7	39.7	39.4	39.6
Overtime hours........................	4.1	4.2	4.3	4.1	4.1	4.2	4.4	4.3	4.3	4.2	4.1	4.0	3.9	3.9	3.9
Food manufacturing.......................	39.6	39.6	39.6	39.4	39.4	39.5	39.4	39.1	39.1	39.6	39.4	39.3	39.4	38.9	39.2
Beverage and tobacco products........	40.9	39.4	39.4	37.9	39.4	39.0	38.5	39.3	39.3	39.4	39.6	39.0	39.0	38.8	38.9
Textile mills...............................	40.0	40.7	40.5	40.2	40.0	40.1	40.4	39.2	40.0	39.5	39.1	38.4	38.6	37.4	38.7
Textile product mills......................	38.6	39.2	38.2	38.9	38.9	38.7	39.3	39.2	39.2	39.0	38.5	39.0	39.1	39.6	39.9
Apparel....................................	36.0	36.7	36.9	36.9	35.8	36.5	36.3	36.2	36.0	35.9	35.4	35.4	35.0	34.5	34.7
Leather and allied products..............	36.4	37.5	37.3	37.9	38.5	38.9	39.0	39.3	39.4	39.7	39.3	39.3	38.8	39.8	39.0
Paper and paper products...............	42.1	41.9	41.9	41.8	41.5	41.5	41.8	41.6	41.8	41.8	41.6	41.4	41.4	41.3	41.2
Printing and related support activities...	38.7	38.4	38.5	38.4	38.5	38.4	38.5	38.5	38.3	38.5	38.0	37.9	38.1	38.0	38.0
Petroleum and coal products............	43.8	43.0	42.7	42.9	43.5	43.6	44.0	43.9	45.1	45.8	44.3	44.2	42.2	44.2	44.2
Chemicals.................................	41.9	42.3	42.5	42.5	42.5	42.6	42.3	42.3	42.8	42.7	42.4	42.2	42.2	42.1	42.3
Plastics and rubber products............	40.0	40.6	40.7	40.4	40.5	40.3	40.3	40.2	40.3	40.2	40.0	40.3	40.4	39.8	32.4
PRIVATE SERVICE-PROVIDING................................	32.5	32.5	32.5	32.6	32.5	32.5	32.5	32.4	32.4	32.5	32.4	32.4	32.4	32.3	32.4
Trade, transportation, and utilities...............................	33.5	33.6	33.5	33.7	33.6	33.6	33.5	33.5	33.4	33.4	33.4	33.4	33.4	33.3	33.5
Wholesale trade.........................	38.4	38.0	38.0	38.0	37.8	37.9	37.8	37.6	37.7	37.8	37.8	37.8	37.8	37.7	37.8
Retail trade...............................	30.7	30.9	30.8	30.9	30.9	30.8	30.8	30.8	30.7	30.9	30.8	30.8	30.8	30.6	30.8
Transportation and warehousing.........	36.7	36.8	36.6	37.1	36.9	37.0	37.0	36.9	36.7	36.8	36.5	36.6	36.6	36.8	36.8
Utilities....................................	41.4	40.9	40.9	41.0	41.0	41.1	41.2	41.2	41.2	41.4	41.0	40.9	41.0	41.0	40.8
Information...............................	36.9	36.5	36.4	36.3	36.5	36.6	36.4	35.9	36.2	36.3	36.2	36.4	36.4	36.4	36.4
Financial activities........................	35.8	35.6	35.6	35.6	35.5	35.6	35.7	35.6	35.6	35.6	35.5	35.6	35.5	35.4	35.5
Professional and business services..........................	34.2	34.2	34.2	34.4	34.2	34.2	34.2	34.3	34.3	34.2	34.0	34.1	34.1	34.1	33.9
Education and health services............	32.3	32.4	32.6	32.5	32.5	32.5	32.4	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.7
Leisure and hospitality......................	25.8	25.8	25.7	25.9	25.9	25.9	25.8	25.8	25.6	25.7	25.6	25.6	25.5	25.4	35.4
Other services................................	32.3	32.0	32.0	32.1	32.0	32.0	31.9	31.8	31.9	31.9	31.8	31.8	31.8	31.7	31.7

[1] Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

p = preliminary.

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
TOTAL PRIVATE															
Current dollars..........................	$14.53	16.29	$15.02	$15.05	$15.10	$15.14	$15.20	$15.22	$15.29	$15.29	$15.30	$15.35	$15.38	$15.44	$15.46
Constant (1982) dollars..............	8.11	8.24	8.24	8.24	8.26	8.27	8.30	8.28	8.26	8.22	8.27	8.31	8.30	8.32	8.30
GOODS-PRODUCING............................	15.78	16.33	16.38	16.44	16.48	16.52	16.60	16.63	16.65	16.68	16.71	16.76	16.76	16.82	16.87
Natural resources and mining.............	17.00	17.22	17.27	17.29	17.21	17.48	17.37	17.45	17.45	17.54	17.67	17.55	17.60	17.61	17.66
Construction...	18.00	18.51	18.57	18.65	18.66	18.69	18.81	18.77	18.84	18.83	18.90	18.95	18.96	18.98	18.99
Manufacturing.....................................	14.76	15.29	15.34	15.38	15.45	15.48	15.55	15.59	15.63	15.64	15.63	15.68	15.72	15.74	15.05
Excluding overtime..........................	14.06	14.54	14.58	14.62	14.68	14.70	14.77	14.78	14.84	14.88	14.89	14.92	14.98	14.99	15.01
Durable goods...............................	15.38	16.01	16.08	16.12	16.19	16.25	16.28	16.33	16.35	16.34	16.33	16.37	16.42	16.41	16.51
Nondurable goods.........................	13.75	14.15	14.19	14.22	14.29	14.29	14.41	14.44	14.50	14.55	14.56	14.61	14.63	14.70	14.70
PRIVATE SERVICE-															
PROVIDING............................	14.16	14.56	14.63	14.67	14.72	14.76	14.81	14.82	14.92	14.91	14.91	14.97	15.00	15.06	15.08
Trade,transportation, and															
utilities...	13.70	14.02	14.06	14.10	14.13	14.17	14.19	14.21	14.29	14.26	14.24	14.31	14.34	14.41	14.40
Wholesale trade...............................	16.77	16.97	17.02	17.05	17.09	17.14	17.13	17.16	17.25	17.22	17.25	17.29	17.34	17.36	17.40
Retail trade..	11.29	11.67	11.71	11.75	11.77	11.79	11.83	11.85	11.88	11.85	11.83	11.90	11.92	11.97	11.96
Transportation and warehousing.......	15.33	15.77	15.80	15.83	15.92	16.02	16.02	16.05	16.22	16.22	16.18	16.25	16.30	16.43	16.36
Utilities...	23.58	23.94	24.08	24.09	23.96	24.02	24.09	24.05	24.19	24.36	24.33	24.48	24.62	24.67	24.93
Information...	19.80	20.23	20.13	20.43	20.49	20.55	20.74	20.70	20.79	20.90	20.97	21.09	21.13	21.21	21.32
Financial activities...............................	15.59	16.17	16.34	16.40	16.51	16.51	16.56	16.69	16.77	16.78	16.93	17.02	17.17	17.38	17.34
Professional and business															
services..	16.33	16.81	16.86	16.89	16.99	17.04	17.09	17.02	17.17	17.20	17.23	17.24	17.22	17.22	17.26
Education and health															
services..	14.64	15.22	15.33	15.36	15.42	15.45	15.52	15.57	15.61	15.63	15.57	15.64	15.67	15.73	15.78
Leisure and hospitality.......................	8.35	8.57	8.60	8.61	8.62	8.66	8.73	8.71	8.77	8.72	8.71	8.73	8.75	8.77	8.76
Other services.....................................	13.27	13.72	13.80	13.81	13.86	13.89	13.94	13.98	14.03	14.02	13.98	13.97	13.98	14.00	13.99

[1] Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

p = preliminary.

NOTE: Data reflect the conversion to the 2002 version of the North American industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision.

15. Average hourly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug[p]
TOTAL PRIVATE.............................	$14.53	$14.95	$14.92	$15.11	$15.12	$15.16	$15.26	$15.27	$15.35	$15.34	$15.31	$15.31	$15.34	$15.32	$15.36
Seasonally adjusted..................	–	–	15.02	15.05	15.10	15.14	15.20	15.22	15.29	15.29	15.30	15.35	15.38	15.44	15.49
GOODS-PRODUCING...........................	15.78	16.33	16.42	16.53	16.55	16.55	16.66	16.56	16.54	16.59	16.66	16.71	16.78	16.86	16.91
Natural resources and mining...........	17.00	17.22	17.18	17.32	17.25	17.45	17.40	17.49	17.43	17.58	17.76	17.47	17.52	17.59	17.60
Construction.................................	18.00	18.51	18.64	18.79	18.79	18.70	18.90	18.68	18.69	18.73	18.83	18.85	18.90	19.01	19.05
Manufacturing...............................	14.76	15.29	15.30	15.41	15.45	15.51	15.65	15.61	15.62	15.62	15.63	15.64	15.69	15.70	15.77
Durable goods............................	15.38	16.01	16.04	16.16	16.20	16.29	16.39	16.34	16.34	16.33	16.30	16.33	16.40	16.30	16.48
Wood products	11.99	12.33	12.42	12.42	12.37	12.43	12.49	12.52	12.51	12.51	12.48	12.57	12.70	12.81	12.78
Nonmetallic mineral products	14.86	15.39	15.44	15.54	15.59	15.46	15.55	15.62	15.48	15.52	15.69	15.73	15.70	15.82	15.81
Primary metals	17.06	17.68	17.69	17.84	17.93	17.99	18.09	18.05	17.96	17.86	18.03	17.93	18.02	18.23	18.11
Fabricated metal products	14.19	14.68	14.70	14.79	14.78	14.85	14.97	14.95	14.92	14.97	14.94	14.92	14.92	14.98	15.04
Machinery	15.49	15.93	15.92	16.05	15.97	16.06	16.20	16.11	16.16	16.19	16.20	16.23	16.33	16.41	16.35
Computer and electronic products ...	15.42	16.19	16.31	16.34	16.24	16.26	16.41	16.32	16.55	16.55	16.59	16.56	16.75	16.83	16.79
Electrical equipment and appliances	13.78	13.97	13.96	14.01	14.02	14.03	14.16	14.18	14.25	14.25	14.25	14.19	14.28	14.22	14.45
Transportation equipment	19.48	20.64	20.61	20.83	21.13	21.41	21.42	21.22	21.16	21.07	20.94	21.08	21.20	20.70	21.32
Furniture and related products	12.14	12.62	12.75	12.77	12.74	12.79	12.93	12.93	12.91	12.93	12.89	12.90	12.96	13.04	13.05
Miscellaneous manufacturing	12.46	12.91	12.99	13.05	13.01	13.06	13.08	13.12	13.14	13.22	13.20	13.19	13.13	13.30	13.24
Nondurable goods........................	13.75	14.15	14.15	14.25	14.27	14.31	14.48	14.47	14.49	14.53	14.57	14.56	14.58	14.76	14.67
Food manufacturing	12.18	12.54	12.58	12.61	12.66	12.61	12.81	12.70	12.66	12.70	12.72	12.71	12.70	12.85	12.77
Beverages and tobacco products	17.67	17.68	17.40	17.61	17.62	17.60	18.04	17.68	17.53	17.69	17.70	17.93	17.56	17.84	17.57
Textile mills	11.40	11.73	11.80	11.76	11.70	11.71	11.83	11.99	11.92	11.92	11.95	11.95	11.92	11.95	11.94
Textile product mills	10.60	10.96	11.09	11.11	11.02	11.07	11.20	11.12	11.11	10.98	11.14	11.13	11.18	11.31	11.47
Apparel	8.82	9.10	9.13	9.16	9.15	9.19	9.30	9.30	9.33	9.45	9.47	9.49	9.47	9.62	9.75
Leather and allied products	10.69	11.01	11.00	10.87	11.01	11.23	11.51	11.53	11.62	11.62	11.76	11.71	11.59	11.52	11.70
Paper and paper products	16.38	16.89	16.92	17.09	17.09	17.09	17.26	17.21	17.22	17.22	17.38	17.38	17.23	17.56	17.45
Printing and related support activities	14.48	14.93	15.01	15.15	15.15	15.19	15.35	15.28	15.32	15.33	15.35	15.26	15.26	15.47	15.40
Petroleum and coal products	22.90	23.06	22.97	23.33	23.46	23.35	23.65	23.58	24.29	24.17	23.92	23.36	25.53	23.35	23.02
Chemicals	17.57	17.97	17.94	18.11	18.00	18.29	18.34	18.28	18.29	18.33	18.35	18.46	18.55	18.59	18.60
Plastics and rubber products	13.21	13.55	13.52	13.62	13.66	13.70	13.81	13.91	13.95	14.00	14.07	14.09	14.18	14.34	14.25
PRIVATE SERVICE-PROVIDING	14.16	14.56	14.49	14.71	14.72	14.77	14.88	14.92	15.04	15.00	14.94	14.92	14.94	14.90	14.93
Trade, transportation, and utilities.........................	13.70	14.02	13.98	14.17	14.13	14.12	14.12	14.24	14.36	14.34	14.31	14.28	14.33	14.31	14.33
Wholesale trade	16.77	16.97	16.94	17.12	17.05	17.14	17.22	17.18	17.32	17.29	17.26	17.24	17.33	17.28	17.32
Retail trade	11.29	11.67	11.64	11.81	11.78	11.73	11.76	11.88	11.92	11.90	11.90	11.88	11.91	11.90	11.90
Transportation and warehousing	15.33	15.77	15.79	15.86	15.94	16.03	16.04	16.02	16.26	16.21	16.21	16.19	16.40	16.40	16.36
Utilities	23.58	23.94	23.84	24.28	23.93	24.12	24.26	24.02	24.16	24.41	24.47	24.52	24.58	24.56	24.77
	19.80	20.23	20.00	20.56	20.59	20.67	20.90	20.79	20.88	20.88	20.98	21.01	21.03	21.00	21.21
Financial activities............................	15.59	16.17	16.25	16.47	16.48	16.49	16.64	16.70	16.95	16.89	16.93	16.97	17.16	17.26	17.31
Professional and business services......................................	16.33	16.81	16.68	16.91	16.89	17.01	17.28	17.14	17.40	17.36	17.21	17.18	17.25	17.08	17.06
Education and health services......................................	14.64	15.22	15.31	15.39	15.42	15.46	15.55	15.61	15.61	15.62	15.56	15.58	15.61	15.70	15.77
Leisure and hospitality	8.35	8.57	8.52	8.62	8.65	8.69	8.81	8.74	8.80	8.73	8.69	8.72	8.69	8.66	8.67
Other services..................................	13.27	13.72	13.74	13.84	13.86	13.88	14.01	14.00	14.02	14.02	13.99	13.99	13.97	13.89	13.90

[1] Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry

Industry	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
TOTAL PRIVATE...................	$493.20	$506.22	$510.26	$516.76	$511.06	$510.89	$520.37	$510.02	$517.30	518.49.	$511.35	$515.95	$523.09	$516.28	$522.24
Seasonally adjusted..........	–	–	509.18	510.20	510.38	511.73	513.76	514.44	515.27	516.80	515.61	517.30	518.31	518.78	521.00
GOODS-PRODUCING...............	630.04	651.60	660.08	667.81	662.00	657.04	668.07	654.12	645.06	658.62	654.74	665.06	672.88	664.28	678.09
Natural resources and mining............	757.92	743.11	750.77	753.42	748.65	732.90	748.20	743.33	747.75	777.00	765.46	766.93	776.14	756.37	776.16
Construction.........................	695.89	711.61	732.55	738.45	727.17	706.86	710.64	707.97	678.45	715.49	708.01	731.38	737.10	741.39	754.38
Manufacturing.....................	595.19	618.87	621.18	628.73	625.73	629.71	644.78	625.96	626.36	629.49	623.64	628.73	635.45	621.72	633.95
Durable goods.....................	624.54	652.83	652.83	664.18	659.34	664.63	681.82	661.77	660.14	663.00	655.26	663.00	672.40	650.37	669.09
Wood products	481.36	491.98	499.28	504.25	497.27	490.99	499.60	490.78	490.39	497.90	497.95	505.31	520.70	518.81	521.42
Nonmetallic mineral products....	618.79	646.74	657.74	666.67	659.46	643.14	645.33	640.42	634.68	651.84	655.84	677.24	673.53	666.02	675.09
Primary metals......................	723.95	749.08	746.52	758.20	758.44	762.78	783.30	765.32	759.71	760.84	760.87	760.23	760.44	747.43	753.38
Fabricated metal products........	576.60	596.44	598.29	604.91	601.55	604.40	619.76	605.48	601.28	604.79	599.09	605.75	608.74	596.20	609.12
Machinery............................	632.77	645.81	644.76	650.03	645.19	653.64	670.68	650.84	657.71	658.93	654.48	662.18	671.16	656.40	662.18
Computer and electronic products..............................	613.07	642.86	642.61	661.77	639.86	660.16	681.02	647.90	657.04	668.62	660.28	667.37	680.05	669.83	688.39
Electrical equipment and appliances............................	548.00	560.09	557.00	561.80	562.20	571.02	591.89	564.61	575.71	577.13	570.00	569.02	588.34	568.80	579.45
Transportation equipment.......	817.08	877.84	875.93	895.69	898.03	901.36	921.06	895.48	886.60	874.41	864.82	874.82	888.28	821.79	871.99
Furniture and related products..............................	464.57	494.14	498.53	499.31	491.76	494.97	522.37	493.93	494.45	493.93	488.53	491.49	505.44	507.26	515.48
Miscellaneous manufacturing......................	483.44	499.09	498.82	503.73	506.09	506.73	515.35	505.12	504.58	508.97	500.28	502.54	506.82	504.07	505.77
Nondurable goods...................	548.41	567.11	570.25	575.70	572.23	576.69	586.44	571.57	572.36	579.75	575.52	576.58	580.28	577.12	582.40
Food manufacturing................	481.67	496.78	503.20	506.92	505.13	505.66	513.68	491.49	487.41	496.57	493.54	496.96	500.38	498.58	504.42
Beverages and tobacco products............................	721.68	697.09	690.78	679.75	695.99	689.92	699.95	675.38	669.65	686.37	695.61	704.65	695.38	701.11	688.74
Textile mills.........................	456.64	476.70	480.26	476.28	466.83	469.57	480.30	467.61	472.03	473.22	472.03	461.27	463.69	436.18	462.08
Textile product mills...............	408.56	429.49	435.84	431.07	426.47	426.20	449.12	431.46	429.96	431.51	431.12	432.96	441.61	449.01	459.95
Apparel..............................	317.15	333.77	338.72	338.00	327.57	337.27	338.52	332.01	333.08	340.20	336.19	336.90	336.90	329.97	339.30
Leather and allied products........	388.83	413.05	412.50	413.06	426.09	440.22	451.19	447.36	456.67	463.64	468.05	459.03	454.33	449.28	455.13
Paper and paper products........	690.06	707.36	707.26	724.62	712.65	716.07	735.28	714.22	711.19	716.35	717.79	714.32	717.46	721.72	715.86
Printing and related support activities.................	560.89	573.42	580.89	590.85	586.31	587.85	597.12	580.64	582.16	591.74	580.23	573.78	578.35	583.22	586.74
Petroleum and coal products...........................	1,003.34	992.05	971.63	1,014.86	1,022.86	1,025.07	1,040.60	1,039.88	1,095.48	1,109.40	1,052.48	1,006.82	1,047.09	1,041.41	1,008.28
Chemicals............................	735.54	759.57	760.66	773.30	765.00	784.64	786.79	769.59	780.98	780.86	776.21	777.17	786.52	777.06	784.92
Plastics and rubber products...........................	528.69	549.57	548.91	554.33	554.60	552.11	566.21	556.40	558.00	561.40	561.39	569.24	572.87	560.69	570.00
PRIVATE SERVICE-PROVIDING............................	460.32	473.10	475.27	482.49	476.93	478.55	488.06	477.44	488.80	487.50	481.07	481.92	490.03	484.25	486.72
Trade, transportation, and utilities........................	459.53	471.09	475.32	481.78	473.36	470.20	478.67	467.07	476.75	478.96	475.09	476.95	487.22	483.68	485.79
Wholesale trade......................	643.45	643.99	645.41	657.41	642.79	649.61	657.80	639.10	654.70	655.29	647.25	651.67	663.74	649.73	658.16
Retail trade..........................	346.16	360.53	365.50	368.47	361.65	357.77	366.91	356.40	362.37	364.14	362.95	365.90	373.97	372.47	373.97
Transportation and warehousing.......................	562.70	580.68	582.65	591.58	586.59	593.11	603.10	581.53	593.49	595.64	586.80	590.94	604.36	603.52	606.96
Utilities...............................	977.18	978.44	975.06	1,005.19	985.92	996.16	997.09	987.22	992.98	1,003.25	1,005.72	1,000.42	1,010.24	1,006.96	1,013.09
Information.........................	731.11	739.41	730.00	754.55	753.59	758.59	769.12	742.20	760.03	757.94	753.18	758.46	773.90	764.40	774.17
Financial activities.................	558.02	575.43	576.88	596.21	581.74	585.40	604.03	587.84	611.90	608.04	595.94	599.04	621.19	607.55	612.77
Professional and business services...............	557.84	574.59	573.79	585.09	577.64	580.04	596.16	579.33	598.56	597.18	585.14	584.12	598.58	580.72	581.75
Education and health services....................	473.39	493.02	499.11	503.25	499.61	502.45	506.93	507.33	508.89	509.21	502.59	503.23	510.45	510.25	515.68
Leisure and hospitality............	215.19	221.15	226.63	224.12	222.31	221.60	227.30	217.63	224.40	224.36	219.86	222.36	226.81	226.89	228.02
Other services.....................	428.64	439.65	442.43	445.65	443.52	442.77	449.72	442.40	445.84	447.24	443.48	443.48	447.04	441.70	443.41

[1] Data relate to production workers in natural resouces and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classifification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision.

Dash indicates data not available. p = preliminary.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 278 industries											
Over 1-month span:												
1999	56.3	64.7	56.7	65.8	64.2	61.9	63.3	59.9	57.6	64.4	69.1	64.4
2000	65.5	60.3	65.5	58.8	47.7	61.7	65.5	52.9	52.3	54.1	57.7	53.2
2001	52.3	49.6	48.6	36.5	41.4	38.1	35.6	38.5	39.0	35.6	37.8	36.0
2002	40.5	37.0	37.6	41.0	41.7	43.7	39.0	41.7	43.3	43.9	42.4	37.2
2003	44.2	36.7	44.1	46.9	43.3	37.2	41.6	38.5				
Over 3-month span:												
1999	61.5	64.9	61.0	65.8	66.4	69.1	66.9	64.4	62.2	62.9	66.7	69.6
2000	70.1	66.0	68.3	68.3	58.5	56.3	58.1	62.2	55.9	53.1	54.0	58.3
2001	54.9	50.7	50.5	43.5	37.2	39.7	36.2	35.8	34.5	32.2	31.7	30.9
2002	34.4	38.3	36.5	35.4	36.7	38.8	39.7	41.4	38.1	39.0	37.8	34.9
2003	36.0	35.6	36.0	41.2	43.0	40.6	37.6	33.5				
Over 6-month span:												
1999	66.9	64.9	63.7	64.0	65.6	65.8	66.7	66.2	69.4	68.7	66.4	66.5
2000	67.6	68.7	71.4	71.9	68.5	66.2	67.3	60.4	58.3	55.0	61.0	55.2
2001	53.2	51.4	50.7	47.1	42.8	38.8	37.6	34.5	31.1	32.9	31.3	31.7
2002	30.6	29.9	31.1	31.3	33.3	35.8	36.9	37.4	37.8	39.9	38.3	35.8
2003	37.4	36.5	35.1	34.7	37.4	36.5	37.9	35.1				
Over 12-month span:												
1999	70.5	68.7	68.2	68.0	68.3	68.3	68.0	68.0	67.8	69.1	68.3	69.1
2000	70.9	69.2	73.2	71.0	69.8	71.0	70.0	70.3	70.3	65.6	63.8	62.1
2001	59.5	59.5	53.4	49.3	48.6	45.0	43.3	43.9	39.9	37.8	37.1	34.9
2002	33.6	31.7	30.2	30.2	30.4	30.6	30.8	31.8	31.5	30.0	33.5	33.3
2003	33.8	33.3	34.5	35.4	36.5	35.4	34.9	33.5				
	Manufacturing payrolls, 84 industries											
Over 1-month span:												
1999	42.3	38.7	33.3	39.3	52.4	34.5	50.0	40.5	41.7	50.6	56.0	51.8
2000	50.6	53.6	54.8	42.9	39.9	53.6	62.5	28.6	24.4	35.1	41.1	38.7
2001	24.4	22.0	24.4	14.3	14.3	19.6	14.3	13.7	17.9	16.7	16.7	9.5
2002	19.0	22.6	20.8	33.9	30.4	32.1	34.5	25.0	31.0	19.6	21.4	25.0
2003	36.3	19.0	27.4	20.2	30.4	25.6	30.4	24.4				
Over 3-month span:												
1999	33.9	40.5	37.5	35.7	41.7	43.5	42.3	38.1	41.1	44.6	49.4	56.5
2000	54.2	54.8	58.3	51.8	41.7	41.1	54.8	48.2	29.2	25.6	25.0	42.3
2001	34.5	24.4	17.9	14.3	11.9	14.3	10.7	7.7	8.3	9.5	8.9	8.3
2002	11.9	11.9	16.7	20.2	21.4	20.2	28.6	25.6	25.6	17.9	14.9	10.7
2003	14.9	15.5	19.6	16.7	17.9	14.3	20.2	23.8				
Over 6-month span:												
1999	37.5	32.7	30.4	33.3	36.9	38.1	38.1	34.5	40.5	46.4	41.1	48.2
2000	47.0	51.2	56.5	57.1	49.4	47.6	56.0	44.0	36.9	35.1	34.5	31.0
2001	23.8	24.4	20.8	17.9	14.9	11.9	13.7	9.5	8.3	6.5	6.5	6.0
2002	7.7	8.9	7.7	8.9	12.5	16.7	19.6	19.6	23.8	17.9	16.7	13.7
2003	13.7	14.3	12.5	11.9	12.5	15.5	14.9	14.3				
Over 12-month span:												
1999	35.7	32.1	29.8	32.1	32.7	32.1	34.5	32.1	33.3	39.3	41.1	42.9
2000	41.7	39.3	47.0	50.0	46.4	52.4	51.8	49.4	46.4	40.5	35.1	33.3
2001	29.8	32.1	20.8	19.0	13.1	12.5	10.7	11.9	11.9	10.1	8.3	6.0
2002	7.1	6.0	6.0	7.1	7.7	5.4	6.0	8.9	7.7	9.5	13.1	13.1
2003	13.7	15.5	16.7	13.1	15.5	16.1	11.3	13.1				

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

Data for the two most recent months are preliminary.

18. Establishment size and employment covered under UI, private ownership, by Supersector, first quarter 2001

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers[1]	5 to 9 workers	10 to 19 workers	20 to 49 workers	50 to 99 workers	100 to 249 workers	250 to 499 workers	500 to 999 workers	1,000 or more workers
Total all industries[2]										
Establishments, first quarter	7,665,968	4,526,062	1,304,741	858,606	598,438	208,084	121,189	31,149	11,678	6,021
Employment, March	108,932,804	6,886,752	8,633,337	11,588,220	18,104,061	14,323,060	18,158,276	10,611,556	7,917,065	12,710,477
Natural resources and mining										
Establishments, first quarter	127,969	74,644	23,304	15,169	9,501	2,935	1,700	499	167	50
Employment, March	1,566,104	110,942	154,199	203,845	285,486	200,360	254,358	172,011	109,973	74,930
Construction										
Establishments, first quarter	765,649	494,254	127,017	75,983	47,230	13,591	6,040	1,176	293	65
Employment, March	6,481,334	714,992	832,978	1,020,982	1,410,131	925,178	890,282	390,630	197,146	99,015
Manufacturing										
Establishments, first quarter	398,837	148,682	67,510	60,267	58,942	28,633	22,490	7,636	3,198	1,479
Employment, March	16,806,452	255,376	453,750	830,685	1,836,858	2,009,224	3,456,620	2,622,512	2,166,352	3,175,075
Trade, transportation, and utilities										
Establishments, first quarter	1,840,104	969,760	376,578	244,890	153,450	53,110	32,898	6,970	1,813	635
Employment, March	25,518,430	1,629,626	2,507,906	3,278,074	4,630,611	3,670,363	4,888,033	2,343,794	1,191,894	1,378,129
Information										
Establishments, first quarter	150,855	84,672	20,636	17,119	14,772	6,698	4,475	1,476	674	333
Employment, March	3,692,948	113,812	137,426	234,492	457,236	465,567	685,746	507,063	462,533	629,073
Financial activities										
Establishments, first quarter	716,808	458,390	128,266	71,615	37,529	11,731	6,084	1,808	897	488
Employment, March	7,623,126	750,421	843,311	952,198	1,121,825	801,994	917,250	621,240	609,199	1,005,688
Professional and business services										
Establishments, first quarter	1,238,267	825,617	173,773	107,694	73,807	29,139	19,405	5,654	2,177	1,001
Employment, March	16,441,289	1,170,098	1,140,772	1,451,932	2,245,729	2,022,745	2,951,873	1,933,668	1,480,878	2,043,594
Education and health services										
Establishments, first quarter	679,762	321,428	155,333	96,121	61,097	22,789	15,989	3,721	1,690	1,594
Employment, March	14,712,829	603,470	1,027,913	1,291,605	1,836,799	1,589,809	2,383,443	1,274,120	1,178,727	3,526,943
Leisure and hospitality										
Establishments, first quarter	627,875	249,542	104,548	110,374	117,264	33,939	9,463	1,725	667	353
Employment, March	11,590,048	390,258	705,222	1,542,760	3,560,715	2,263,935	1,344,217	586,269	453,703	742,969
Other services										
Establishments, first quarter	954,627	750,261	115,619	55,756	24,254	5,498	2,630	484	102	23
Employment, March	4,187,740	977,871	752,689	734,980	703,687	372,499	384,044	160,249	66,660	35,061

[1] Includes establishments that reported no workers in March 2001.

[2] Includes data for unclassified establishments, not shown separately.

NOTE: Detail may not add to totals due to rounding. Data reflect the movement of Indian Tribal Council establishments from private industry to the public sector. See Notes on Current Labor Statistics.

19. Annual data: establishments, employment, and wages covered under UI and UCFE by ownership

Year	Average establishments	Average annual employment	Total annual wages (in thousands)	Average annual wages per employee	Average weekly wage
Total covered (UI and UCFE)					
1992	6,532,608	107,413,728	$2,781,676,477	$25,897	$498
1993	6,679,934	109,422,571	2,884,472,282	26,361	507
1994	6,826,677	112,611,287	3,033,676,678	26,939	518
1995	7,040,677	115,487,841	3,215,921,236	27,846	536
1996	7,189,168	117,963,132	3,414,514,808	28,946	557
1997	7,369,473	121,044,432	3,674,031,718	30,353	584
1998	7,634,018	124,183,549	3,967,072,423	31,945	614
1999	7,820,860	127,042,282	4,235,579,204	33,340	641
2000	7,879,116	129,877,063	4,587,708,584	35,323	679
2001	7,984,529	129,635,800	4,695,225,123	36,219	697
UI covered					
1992	6,485,473	104,288,324	$2,672,081,827	$25,622	$493
1993	6,632,221	106,351,431	2,771,023,411	26,055	501
1994	6,778,300	109,588,189	2,918,684,128	26,633	512
1995	6,990,594	112,539,795	3,102,353,355	27,567	530
1996	7,137,644	115,081,246	3,298,045,286	28,658	551
1997	7,317,363	118,233,942	3,553,933,885	30,058	578
1998	7,586,767	121,400,660	3,845,494,089	31,676	609
1999	7,771,198	124,255,714	4,112,169,533	33,094	636
2000	7,828,861	127,005,574	4,454,966,824	35,077	675
2001	7,933,536	126,883,182	4,560,511,280	35,943	691
Private industry covered					
1992	6,308,719	89,349,803	$2,282,598,431	$25,547	$491
1993	6,454,381	91,202,971	2,365,301,493	25,934	499
1994	6,596,158	94,146,344	2,494,458,555	26,496	510
1995	6,803,454	96,894,844	2,658,927,216	27,441	528
1996	6,946,858	99,268,446	2,837,334,217	28,582	550
1997	7,121,182	102,175,161	3,071,807,287	30,064	578
1998	7,381,518	105,082,368	3,337,621,699	31,762	611
1999	7,560,567	107,619,457	3,577,738,557	33,244	639
2000	7,622,274	110,015,333	3,887,626,769	35,337	680
2001	7,724,965	109,304,802	3,952,152,155	36,157	695
State government covered					
1992	58,801	4,044,914	$112,405,340	$27,789	$534
1993	59,185	4,088,075	117,095,062	28,643	551
1994	60,686	4,162,944	122,879,977	29,518	568
1995	60,763	4,201,836	128,143,491	30,497	586
1996	62,146	4,191,726	131,605,800	31,397	604
1997	65,352	4,214,451	137,057,432	32,521	625
1998	67,347	4,240,779	142,512,445	33,605	646
1999	70,538	4,296,673	149,011,194	34,681	667
2000	65,096	4,370,160	158,618,365	36,296	698
2001	64,583	4,452,237	168,358,331	37,814	727
Local government covered					
1992	117,923	10,892,697	$277,045,557	$25,434	$489
1993	118,626	11,059,500	288,594,697	26,095	502
1994	121,425	11,278,080	301,315,857	26,717	514
1995	126,342	11,442,238	315,252,346	27,552	530
1996	128,640	11,621,074	329,105,269	28,320	545
1997	130,829	11,844,330	345,069,166	29,134	560
1998	137,902	12,077,513	365,359,945	30,251	582
1999	140,093	12,339,584	385,419,781	31,234	601
2000	141,491	12,620,081	408,721,690	32,387	623
2001	143,989	13,126,143	440,000,795	33,521	645
Federal Government covered (UCFE)					
1992	47,136	3,125,404	$109,594,650	$35,066	$674
1993	47,714	3,071,140	113,448,871	36,940	710
1994	48,377	3,023,098	114,992,550	38,038	731
1995	50,083	2,948,046	113,567,881	38,523	741
1996	51,524	2,881,887	116,469,523	40,414	777
1997	52,110	2,810,489	120,097,833	42,732	822
1998	47,252	2,782,888	121,578,334	43,688	840
1999	49,661	2,786,567	123,409,672	44,287	852
2000	50,256	2,871,489	132,741,760	46,228	889
2001	50,993	2,752,619	134,713,843	48,940	941

NOTE: Detail may not add to totals due to rounding. Data reflect the movement of Indian Tribal Council establishments from private industry to the public sector. See Notes on Current Labor Statistics.

20. Annual data: establishments, employment, and wages covered under UI and UCFE, by State

State	Average establishments 2001	Average establishments 2000-2001 change	Average annual employment 2001	Average annual employment 2000-2001 change	Total annual wages (in thousands) 2001	Total annual wages (in thousands) 2000-2001 change	Average weekly wage 2001	Average weekly wage 2000-2001 change
Total United States	7,984,529	154,540	129,635,800	-185,779	$4,695,225,123	$109,884,920	$697	$18
Alabama	112,356	30	1,854,462	-23,500	55,822,097	1,284,088	579	21
Alaska	19,287	467	283,033	7,479	10,237,292	553,237	696	20
Arizona	118,706	3,546	2,243,652	22,942	74,963,072	2,546,248	643	16
Arkansas	72,814	587	1,127,151	-3,731	30,725,592	963,862	524	18
California	1,065,699	74,645	14,981,757	138,284	619,146,651	7,497,476	795	3
Colorado	153,824	5,347	2,201,379	14,728	83,547,602	2,274,669	730	15
Connecticut	108,201	414	1,665,607	-9,121	78,272,099	2,095,243	904	29
Delaware	25,253	505	406,736	482	15,629,636	787,067	739	36
District of Columbia	28,414	9	635,749	-1,535	35,543,559	1,790,086	1,075	56
Florida	454,077	9,367	7,153,589	92,606	225,713,701	9,933,356	607	19
Georgia	230,232	5,219	3,871,763	-10,941	136,039,438	3,195,926	676	18
Hawaii	35,439	1,412	557,146	3,961	17,412,210	469,266	601	12
Idaho	46,480	1,084	571,314	8,137	15,864,510	263,832	534	1
Illinois	319,588	-2,723	5,886,248	-54,259	230,054,835	4,050,811	752	20
Indiana	151,376	-1,328	2,871,236	-63,392	91,246,189	183,520	611	14
Iowa	91,006	-5,825	1,429,543	-13,432	41,223,534	919,492	555	18
Kansas	80,521	52	1,319,667	5,984	39,792,114	1,221,387	580	15
Kentucky	108,025	302	1,736,575	-26,160	52,133,417	1,367,028	577	23
Louisiana	115,807	-2,386	1,869,966	827	54,473,146	2,345,871	560	24
Maine	46,206	1,344	593,166	2,472	17,092,043	750,886	554	22
Maryland	147,158	622	2,421,899	16,392	92,644,873	5,096,016	736	36
Massachusetts	191,824	6,848	3,276,224	21,104	147,348,234	3,574,494	865	16
Michigan	259,556	5,809	4,476,659	-107,880	167,385,129	-2,295,158	719	7
Minnesota	156,031	487	2,609,669	1,325	95,479,188	3,107,396	704	23
Mississippi	63,207	-748	1,111,255	-25,520	28,806,869	151,385	499	14
Missouri	163,121	138	2,652,876	-23,960	86,009,694	2,000,438	623	19
Montana	40,477	2,136	383,905	4,862	9,672,371	472,112	485	18
Nebraska	52,653	836	883,920	1,516	25,083,293	646,745	546	13
Nevada	49,635	1,770	1,043,748	25,919	34,569,506	1,717,063	637	16
New Hampshire	46,070	171	610,192	3,685	21,650,267	582,754	682	14
New Jersey	256,536	-13,793	3,876,194	-1,221	171,793,642	2,443,618	852	12
New Mexico	48,439	522	729,422	12,293	20,935,825	1,216,191	552	23
New York	538,898	9,822	8,423,312	-47,446	393,598,666	9,383,346	899	27
North Carolina	224,426	2,208	3,805,498	-57,272	121,866,007	1,858,872	616	19
North Dakota	23,326	38	311,632	2,412	8,011,085	378,510	494	19
Ohio	285,567	4,705	5,434,769	-77,865	180,885,154	1,681,299	640	15
Oklahoma	90,603	1,574	1,463,622	11,771	41,004,250	1,821,743	539	20
Oregon	111,073	2,150	1,596,753	-11,175	53,018,365	317,098	639	9
Pennsylvania	331,405	16,187	5,552,366	-5,535	194,211,696	5,158,632	673	19
Rhode Island	33,636	311	468,952	1,351	15,758,369	507,610	646	19
South Carolina	114,979	5,613	1,786,899	-33,210	52,275,679	986,967	563	21
South Dakota	27,365	221	364,715	598	9,337,014	306,302	492	15
Tennessee	125,165	140	2,625,746	-41,005	82,762,402	1,275,641	606	18
Texas	494,088	4,509	9,350,770	62,437	337,047,962	12,484,223	693	21
Utah	68,607	2,470	1,050,674	6,551	31,600,715	1,082,204	578	16
Vermont	24,156	287	298,020	1,558	9,011,468	439,492	581	25
Virginia	195,639	3,048	3,436,172	8,411	126,222,350	5,662,779	706	30
Washington	221,450	1,775	2,689,507	-14,921	100,746,663	413,740	720	7
West Virginia	46,620	-186	685,754	-845	19,187,832	726,836	538	21
Wisconsin	148,227	2,374	2,717,660	-18,388	85,713,725	1,733,629	607	17
Wyoming	21,288	429	237,278	6,446	6,654,092	459,596	539	23
Puerto Rico	51,733	-633	1,007,919	-18,234	19,884,381	578,173	379	17
Virgin Islands	3,236	-17	44,330	1,981	1,294,885	120,936	562	29

NOTE: Detail may not add to totals due to rounding.

21.   Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 249 largest U.S. counties

County[1]	Employment			Average annual pay	
	2001	Percent change, 2000-2001[2]	Ranked by percent change, 2000-2001[3]	2001	Percent change, 2000-2001[2]
United States[4]	129,635,800	-.1	–	36,219	2.5
Jefferson, AL	380,680	-1.0	197	35,453	4.2
Madison, AL	156,169	1.3	54	37,089	3.5
Mobile, AL	167,000	-1.5	212	29,502	3.1
Montgomery, AL	129,878	-.9	192	29,979	3.8
Anchorage, AK	133,842	3.1	16	37,998	3.7
Maricopa, AZ	1,561,773	1.2	61	35,689	1.6
Pima, AZ	326,917	-.6	170	30,690	5.1
Pulaski, AR	240,754	-.7	175	32,261	4.7
Alameda, CA	697,181	-.1	135	46,489	3.1
Contra Costa, CA	337,444	.7	80	44,744	5.7
Fresno, CA	322,084	-.1	136	27,878	6.5
Kern, CA	242,232	1.5	49	30,106	5.3
Los Angeles, CA	4,103,370	.6	87	40,891	3.1
Marin, CA	111,939	1.3	55	43,547	2.2
Monterey, CA	166,186	.8	75	31,735	5.9
Orange, CA	1,411,944	1.6	46	40,252	2.6
Placer, CA	116,185	6.1	1	34,773	4.1
Riverside, CA	491,535	4.2	8	29,971	2.8
Sacramento, CA	588,426	3.0	18	39,173	3.8
San Bernardino, CA	545,113	2.8	21	30,995	3.6
San Diego, CA	1,218,982	2.0	37	38,418	2.3
San Francisco, CA	586,085	-3.3	246	61,068	6.1
San Joaquin, CA	204,504	1.9	39	30,818	5.3
San Mateo, CA	369,868	.1	120	62,288	-7.2
Santa Barbara, CA	177,234	.8	76	33,626	3.2
Santa Clara, CA	1,002,637	-2.3	233	65,931	-13.5
Santa Cruz, CA	102,669	.9	64	35,022	-2.2
Solano, CA	121,402	3.0	19	33,496	5.7
Sonoma, CA	194,922	2.1	32	36,145	1.1
Stanislaus, CA	164,473	2.2	30	29,591	4.9
Tulare, CA	132,878	.0	130	24,732	4.2
Ventura, CA	293,208	1.5	50	37,783	1.9
Adams, CO	146,043	.6	88	34,753	4.0
Arapahoe, CO	285,963	-.2	144	44,999	-2.7
Boulder, CO	184,755	3.2	13	44,310	-2.8
Denver, CO	461,996	-.6	171	46,134	4.0
El Paso, CO	240,100	.9	65	34,391	4.1
Jefferson, CO	210,375	.1	121	37,819	4.5
Larimer, CO	121,880	2.3	29	33,248	2.6
Fairfield, CT	421,211	-1.0	198	63,163	3.3
Hartford, CT	497,280	-.5	163	45,050	3.2
New Haven, CT	363,265	-1.1	201	39,483	2.9
New London, CT	124,684	1.6	47	38,505	4.8
New Castle, DE	282,318	.2	112	42,849	5.8
Washington, DC	635,734	-.2	145	55,909	5.6
Alachua, FL	119,148	.7	81	26,917	2.9
Brevard, FL	184,725	1.7	43	32,798	2.2
Broward, FL	663,954	2.1	33	33,966	2.2
Collier, FL	110,230	5.9	2	30,839	2.9
Duval, FL	436,663	1.8	41	33,721	2.9
Escambia, FL	121,285	.8	77	28,610	7.1
Hillsborough, FL	595,768	1.8	42	32,874	3.7
Lee, FL	171,902	4.5	5	29,432	4.6
Leon, FL	142,981	.9	66	30,287	3.5
Manatee, FL	118,788	5.2	4	26,629	4.4
Miami-Dade, FL	993,834	1.6	48	34,524	3.6
Orange, FL	602,668	.2	113	32,218	3.5
Palm Beach, FL	499,688	3.9	9	35,957	2.1
Pinellas, FL	448,788	3.3	12	31,742	1.5
Polk, FL	184,471	.1	122	28,890	3.6
Sarasota, FL	147,206	4.5	6	29,030	1.9
Seminole, FL	145,147	2.2	31	31,951	3.6
Volusia, FL	142,478	-.2	146	26,064	3.9
Chatham, GA	122,608	-.2	147	30,549	3.0
Clayton, GA	114,982	-.3	151	38,301	4.2
Cobb, GA	301,520	-.1	137	40,174	3.6
Dekalb, GA	305,903	-.7	176	39,648	2.7
Fulton, GA	754,870	.1	123	47,761	1.5
Gwinnett, GA	289,538	2.9	20	39,405	.9
Richmond, GA	104,694	-.9	193	29,431	2.9

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 249 largest U.S. counties

County[1]	Employment			Average annual pay	
	2001	Percent change, 2000-2001[2]	Ranked by percent change, 2000-2001[3]	2001	Percent change, 2000-2001[2]
Honolulu, HI	409,669	.4	99	32,531	2.1
Ada, ID	182,309	2.7	23	33,081	-4.0
Cook, IL	2,630,768	-1.5	213	44,108	2.8
Du Page, IL	580,938	-.2	148	43,470	2.1
Kane, IL	194,374	-.1	138	33,362	3.7
Lake, IL	316,150	-.3	152	43,970	3.2
Peoria, IL	102,764	-1.8	223	33,288	6.1
Sangamon, IL	145,195	.2	114	36,259	4.3
Will, IL	145,570	.1	124	34,280	6.1
Winnebago, IL	139,815	-2.9	241	31,951	1.4
Allen, IN	183,329	-2.3	234	32,830	1.7
Elkhart, IN	113,524	-6.8	249	30,797	1.5
Lake, IN	194,624	-1.9	226	32,017	1.4
Marion, IN	591,406	-1.3	210	37,885	3.8
St. Joseph, IN	124,967	-3.1	244	30,769	3.7
Vanderburgh, IN	109,418	.1	125	30,494	3.1
Linn, IA	119,914	-1.7	219	34,649	1.6
Polk, IA	263,469	-.2	149	34,944	3.8
Johnson, KS	292,984	2.4	27	37,204	-.1
Sedgwick, KS	249,863	.1	126	33,937	3.8
Shawnee, KS	100,462	.3	105	30,513	3.9
Fayette, KY	167,714	-2.4	237	32,237	5.0
Jefferson, KY	431,347	-1.7	220	34,688	4.1
Caddo, LA	120,877	1.3	56	29,354	2.0
East Baton Rouge, LA	243,392	-1.1	202	30,397	3.9
Jefferson, LA	213,911	-.4	160	29,326	4.6
Lafayette, LA	119,294	4.5	7	32,364	8.2
Orleans, LA	263,427	.1	127	32,880	3.7
Cumberland, ME	168,147	1.3	57	32,327	5.1
Anne Arundel, MD	200,174	2.8	22	37,190	4.9
Baltimore, MD	360,128	.2	115	36,240	6.2
Howard, MD	132,935	1.3	58	40,191	6.1
Montgomery, MD	449,881	.9	67	45,893	5.0
Prince Georges, MD	304,022	.5	94	38,986	5.2
Baltimore City, MD	381,155	.4	100	40,508	5.0
Bristol, MA	218,818	-1.1	203	32,012	4.1
Essex, MA	306,111	.2	116	39,242	.5
Hampden, MA	204,824	.9	68	33,357	3.6
Middlesex, MA	850,295	1.4	52	51,734	.0
Norfolk, MA	327,067	.7	82	44,173	2.2
Plymouth, MA	166,471	.8	78	34,929	3.4
Suffolk, MA	602,983	.1	128	58,906	4.0
Worcester, MA	321,044	.3	106	37,299	-.9
Genesee, MI	160,442	-3.0	242	35,995	-.9
Ingham, MI	174,290	-.3	153	35,753	2.3
Kalamazoo, MI	116,728	-1.7	221	33,908	3.8
Kent, MI	339,510	-1.8	224	34,570	1.7
Macomb, MI	326,600	-3.2	245	40,481	-1.0
Oakland, MI	755,451	-1.4	211	45,038	1.2
Ottawa, MI	115,880	-2.5	239	32,246	.9
Washtenaw, MI	195,562	.2	117	40,249	.2
Wayne, MI	848,463	-2.4	238	42,968	1.2
Anoka, MN	109,521	-.3	154	34,585	1.9
Dakota, MN	155,662	1.3	59	35,683	3.8
Hennepin, MN	863,674	-.8	186	45,495	3.8
Ramsey, MN	333,380	.0	131	40,400	3.4
Hinds, MS	134,285	-.9	194	31,138	1.8
Greene, MO	140,739	-.9	195	28,065	4.1
Jackson, MO	384,942	-2.3	235	37,405	3.7
St. Louis, MO	641,151	-.8	187	38,929	2.1
St. Louis City, MO	245,192	-2.2	231	40,834	5.8
Douglas, NE	325,629	-.7	177	32,866	1.6
Lancaster, NE	148,200	.9	69	29,352	2.9
Clark, NV	720,184	3.2	14	32,648	1.6
Washoe, NV	193,571	2.4	28	34,231	4.5
Hillsborough, NH	192,712	.0	132	39,320	.3
Rockingham, NH	130,917	.7	83	36,642	2.3
Atlantic, NJ	141,240	.9	70	32,555	4.8
Bergen, NJ	453,626	1.5	51	46,828	1.1
Burlington, NJ	187,398	3.6	11	38,776	3.1

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 249 largest U.S. counties

County[1]	Employment			Average annual pay	
	2001	Percent change, 2000-2001[2]	Ranked by percent change, 2000-2001[3]	2001	Percent change, 2000-2001[2]
Camden, NJ	199,869	.5	95	36,530	4.0
Essex, NJ	361,569	-.5	164	46,526	4.2
Hudson, NJ	237,253	.0	133	47,638	.4
Mercer, NJ	215,524	2.6	25	46,831	4.9
Middlesex, NJ	399,332	1.3	60	47,726	2.7
Monmouth, NJ	240,757	3.2	15	40,399	1.8
Morris, NJ	277,653	.4	101	53,829	-11.0
Ocean, NJ	133,657	3.7	10	31,034	1.9
Passaic, NJ	175,108	-1.1	204	39,192	3.8
Somerset, NJ	176,713	1.7	44	55,769	1.8
Union, NJ	236,609	-.1	139	46,204	2.0
Bernalillo, NM	309,166	.7	84	31,663	4.9
Albany, NY	229,957	-.5	165	37,848	5.7
Bronx, NY	214,227	.4	102	34,248	4.3
Dutchess, NY	112,912	2.5	26	38,748	7.4
Erie, NY	454,839	-1.1	205	32,103	1.9
Kings, NY	439,343	-.1	140	31,952	3.9
Monroe, NY	393,783	-.7	178	36,597	3.3
Nassau, NY	593,368	-.8	188	40,599	1.4
New York, NY	2,342,338	-1.5	214	74,883	3.2
Oneida, NY	108,686	-1.8	225	28,381	4.0
Onondaga, NY	249,754	-1.1	206	33,469	3.0
Orange, NY	120,903	.7	85	30,218	2.9
Queens, NY	478,661	-.7	179	36,963	5.7
Rockland, NY	107,348	.4	103	38,720	3.9
Suffolk, NY	581,938	.1	129	38,706	2.2
Westchester, NY	404,974	-.4	161	48,716	3.5
Buncombe, NC	105,378	-.3	155	28,701	3.8
Cumberland, NC	106,381	-2.8	240	26,981	3.3
Durham, NC	169,609	.3	107	48,076	-2.6
Forsyth, NC	180,155	-.7	180	34,693	2.0
Guilford, NC	274,077	-2.0	229	33,217	3.1
Mecklenburg, NC	514,036	.3	108	41,775	3.1
Wake, NC	385,777	.9	71	36,996	4.6
Butler, OH	126,863	-.5	166	32,325	2.6
Cuyahoga, OH	796,353	-1.6	217	37,533	2.8
Franklin, OH	702,628	.2	118	36,090	3.2
Hamilton, OH	559,852	-1.1	207	38,339	2.0
Lorain, OH	103,115	-3.5	247	32,194	.6
Lucas, OH	234,678	-1.7	222	33,088	2.6
Mahoning, OH	108,769	-3.7	248	26,860	3.5
Montgomery, OH	298,982	-1.5	215	34,783	.7
Stark, OH	173,888	-1.6	218	29,197	2.4
Summit, OH	261,098	-2.1	230	33,416	2.1
Oklahoma, OK	415,507	.4	104	30,161	3.2
Tulsa, OK	342,502	.6	89	32,771	5.2
Clackamas, OR	133,997	-.2	150	33,699	3.7
Lane, OR	137,574	-1.9	227	28,983	4.0
Marion, OR	126,999	-.6	172	28,785	2.4
Multnomah, OR	444,393	-1.1	208	37,668	2.4
Washington, OR	228,453	1.4	53	42,222	-5.0
Allegheny, PA	711,532	.3	109	38,086	3.7
Berks, PA	165,263	-.7	181	32,807	2.5
Bucks, PA	246,491	.6	90	35,239	3.5
Chester, PA	217,148	.6	91	44,216	1.0
Cumberland, PA	122,649	-.6	173	33,996	3.6
Dauphin, PA	173,292	.3	110	34,855	3.5
Delaware, PA	214,106	1.0	63	38,494	4.5
Erie, PA	128,893	-2.3	236	29,293	3.3
Lancaster, PA	218,415	-.3	156	31,493	2.2
Lehigh, PA	172,860	.2	119	35,564	.8
Luzerne, PA	141,944	-.8	189	28,924	3.8
Montgomery, PA	485,822	.5	96	44,366	1.3
Philadelphia, PA	658,827	-.7	182	40,813	2.8
Westmoreland, PA	134,128	-.4	162	28,827	3.0
York, PA	165,879	-1.0	199	31,936	3.3
Providence, RI	288,650	-.7	183	34,566	3.5
Charleston, SC	180,711	-1.0	200	29,013	4.8
Greenville, SC	226,362	-3.0	243	32,622	4.3
Richland, SC	205,841	-.5	167	30,591	3.3

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 249 largest U.S. counties

County[1]	Employment			Average annual pay	
	2001	Percent change, 2000-2001[2]	Ranked by percent change, 2000-2001[3]	2001	Percent change, 2000-2001[2]
Spartanburg, SC	117,262	-2.2	232	31,856	4.1
Minnehaha, SD	106,717	1.1	62	29,205	3.5
Davidson, TN	434,006	-.1	141	35,509	1.9
Hamilton, TN	187,724	-.3	157	31,240	2.2
Knox, TN	203,470	.6	92	30,765	2.2
Shelby, TN	496,647	-.5	168	35,791	4.2
Bexar, TX	655,195	.9	72	31,032	3.7
Cameron, TX	111,374	2.1	34	22,142	2.7
Collin, TX	181,007	5.7	3	41,338	2.0
Dallas, TX	1,550,835	-.6	174	44,909	1.2
Denton, TX	122,552	.9	73	30,788	5.1
El Paso, TX	248,407	-1.2	209	25,847	3.1
Harris, TX	1,864,100	1.7	45	43,751	4.5
Hidalgo, TX	168,610	3.1	17	22,313	2.8
Jefferson, TX	118,764	-1.9	228	32,570	4.1
Lubbock, TX	118,042	2.1	35	26,577	1.1
Nueces, TX	143,470	.7	86	29,406	4.3
Tarrant, TX	709,162	.5	97	37,287	5.2
Travis, TX	534,861	-.7	184	41,698	.9
Salt Lake, UT	530,497	-.1	142	33,210	3.2
Utah, UT	143,423	.5	98	28,266	1.3
Arlington, VA	159,170	.3	111	55,390	4.8
Chesterfield, VA	107,721	-.1	143	32,957	3.4
Fairfax, VA	542,984	2.7	24	52,641	2.1
Henrico, VA	169,827	2.0	38	37,869	4.8
Norfolk, VA	146,414	.8	79	33,504	4.1
Richmond, VA	164,906	-.7	185	40,173	4.0
Virginia Beach, VA	166,007	.9	74	26,750	5.3
Clark, WA	114,716	2.1	36	33,125	3.0
King, WA	1,146,191	-.9	196	47,186	-.6
Pierce, WA	238,600	-1.5	216	31,261	4.7
Snohomish, WA	209,657	-.3	158	36,388	3.6
Spokane, WA	190,057	.0	134	29,310	-1.5
Kanawha, WV	111,552	-.8	190	31,601	4.8
Brown, WI	141,950	-.3	159	32,631	3.5
Dane, WI	279,208	1.9	40	34,097	3.9
Milwaukee, WI	522,022	-.8	191	35,736	2.9
Waukesha, WI	224,721	.6	93	37,092	3.7
San Juan, PR	324,791	-.5	169	22,179	4.1

[1] Includes areas not officially designated as counties. See Notes on Current Labor Statistics.

[2] Percent changes were computed from annual employment and pay data adjusted for noneconomic county reclassifications. See Notes on Current Labor Statistics.

[3] Rankings for percent change in employment are based on the 249 counties that are comparable over the year.

[4] Totals for the United States do not include data for Puerto Rico.

Note: Data pertain to workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs. The 248 U.S. counties comprise 66.2 percent of the total covered workers in the United States.

22. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1993	1994[1]	1995	1996	1997[1]	1998[1]	1999[1]	2000[1]	2001	2002
Civilian noninstitutional population...........	194,838	196,814	198,584	200,591	203,133	205,220	207,753	212,577	215,092	217,570
Civilian labor force.................................	129,200	131,056	132,304	133,943	136,297	137,673	139,368	142,583	143,734	144,863
Labor force participation rate..............	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.1	66.8	66.6
Employed..	120,259	123,060	124,900	126,708	129,558	131,463	133,488	136,891	136,933	136,485
Employment-population ratio.........	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.4	63.7	62.7
Unemployed.....................................	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,692	6,801	8,378
Unemployment rate........................	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8
Not in the labor force............................	65,638	65,758	66,280	66,647	66,836	67,547	68,385	69,994	71,359	72,707

[1] Not strictly comparable with prior years.

23. Annual data: Employment levels by industry

[In thousands]

Industry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total private employment............................	91,855	95,016	97,866	100,169	103,113	106,021	108,686	110,996	110,707	108,886
Total nonfarm employment......................	110,844	114,291	117,298	119,708	122,770	125,930	128,993	131,785	131,826	130,376
Goods-producing....................................	22,219	22,774	23,156	23,410	23,886	24,354	24,465	24,649	23,873	22,619
Natural resources and mining................	666	659	641	637	654	645	598	599	606	581
Construction..	4,779	5,095	5,274	5,536	5,813	6,149	6,545	6,787	6,826	6,732
Manufacturing......................................	16,744	17,021	17,241	17,237	17,419	17,560	17,322	17,263	16,441	15,306
Private service-providing..........................	69,636	72,242	74,710	76,759	79,227	81,667	84,221	86,346	86,834	86,267
Trade, transportation, and utilities...........	22,378	23,128	23,834	24,239	24,700	25,186	25,771	26,225	25,983	25,493
Wholesale trade................................	5,093.2	5,247.3	5,433.1	5,522.0	5,663.9	5,795.2	5,892.5	5,933.2	5,772.7	5,641.0
Retail trade..	13,020.5	13,490.8	13,896.7	14,142.5	14,388.9	14,609.3	14,970.1	15,279.8	15,238.6	15,047.2
Transportation and warehousing.........	3,553.8	3,701.0	3,837.8	3,935.3	4,026.5	4,168.0	4,300.3	4,410.3	4,372.0	4,205.3
Utilities..	710.7	689.3	666.2	639.6	620.9	613.4	608.5	601.3	599.4	599.8
Information..	2,668	2,738	2,843	2,940	3,084	3,218	3,419	3,631	3,629	3,420
Financial activities..............................	6,709	6,867	6,827	6,969	7,178	7,462	7,648	7,687	7,807	7,843
Professional and business services.....	11,495	12,174	12,844	13,462	14,335	15,147	15,957	16,666	16,476	16,010
Education and health services............	12,303	12,807	13,289	13,683	14,087	14,446	14,798	15,109	15,645	16,184
Leisure and hospitality........................	9,732	10,100	10,501	10,777	11,018	11,232	11,543	11,862	12,036	11,969
Other services....................................	4,350	4,428	4,572	4,690	4,825	4,976	5,087	5,168	5,258	5,348
Government..	18,989	19,275	19,432	19,539	19,664	19,909	20,307	20,790	21,118	21,489

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data. See "Notes on the data" for a description of the most recent benchmark revision.

24. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Private sector:										
Average weekly hours...............................	34.3	34.5	34.3	34.3	34.5	34.5	34.3	34.3	34.0	33.9
Average hourly earnings (in dollars)........................	11.03	11.32	11.64	12.03	12.49	13.00	13.47	14.00	14.53	14.95
Average weekly earnings (in dollars)........................	378.40	390.73	399.53	412.74	431.25	448.04	462.49	480.41	493.20	506.22
Goods-producing:										
Average weekly hours...............................	40.6	41.1	40.8	40.8	41.1	40.8	40.8	40.7	39.9	39.9
Average hourly earnings (in dollars)........................	12.28	12.63	12.96	13.38	13.82	14.23	14.71	15.27	15.78	16.33
Average weekly earnings (in dollars)........................	498.82	519.58	528.62	546.48	568.43	580.99	599.99	621.86	630.04	651.60
Natural resources and mining										
Average weekly hours...............................	44.9	45.3	45.3	46.0	46.2	44.9	44.2	44.4	44.6	43.2
Average hourly earnings (in dollars)........................	14.12	14.41	14.78	15.10	15.57	16.20	16.33	16.55	17.00	17.22
Average weekly earnings (in dollars)........................	634.77	653.14	670.32	695.07	720.11	727.28	721.74	734.92	757.92	743.11
Construction:										
Average weekly hours...............................	38.4	38.8	38.8	38.9	38.9	38.8	39.0	39.2	38.7	38.4
Average hourly earnings (in dollars)........................	14.04	14.38	14.73	15.11	15.67	16.23	16.80	17.48	18.00	18.51
Average weekly earnings (in dollars)........................	539.81	558.53	571.57	588.48	609.48	629.75	655.11	685.78	695.89	711.61
Manufacturing:										
Average weekly hours...............................	41.1	41.7	41.3	41.3	41.7	41.4	41.4	41.3	40.3	40.5
Average hourly earnings (in dollars)........................	11.70	12.04	12.34	12.75	13.14	13.45	13.85	14.32	14.76	15.29
Average weekly earnings (in dollars)........................	480.80	502.12	509.26	526.55	548.22	557.12	573.17	590.65	595.19	618.87
Private service-providing:										
Average weekly hours...............................	32.5	32.7	32.6	32.6	32.8	32.8	32.7	32.7	32.5	32.5
Average hourly earnings (in dollars)........................	10.60	10.87	11.19	11.57	12.05	12.59	13.07	13.60	14.16	14.56
Average weekly earnings (in dollars)........................	345.03	354.97	364.14	376.72	394.77	412.78	427.30	445.00	460.32	473.10
Trade, transportation, and utilities:										
Average weekly hours...............................	34.1	34.3	34.1	34.1	34.3	34.2	33.9	33.8	33.5	33.6
Average hourly earnings (in dollars)........................	10.55	10.80	11.10	11.46	11.90	12.39	12.82	13.31	13.70	14.02
Average weekly earnings (in dollars)........................	359.33	370.38	378.79	390.64	407.57	423.30	434.31	449.88	459.53	471.09
Wholesale trade:										
Average weekly hours...............................	38.5	38.8	38.6	38.6	38.8	38.6	38.6	38.8	38.4	38.0
Average hourly earnings (in dollars)........................	12.57	12.93	13.34	13.80	14.41	15.07	15.62	16.28	16.77	16.97
Average weekly earnings (in dollars)........................	484.46	501.17	515.14	533.29	559.39	582.21	602.77	631.40	643.45	643.99
Retail trade:										
Average weekly hours...............................	30.7	30.9	30.8	30.7	30.9	30.9	30.8	30.7	30.7	30.9
Average hourly earnings (in dollars)........................	8.36	8.61	8.85	9.21	9.59	10.05	10.45	10.86	11.29	11.67
Average weekly earnings (in dollars)........................	484.46	501.17	515.14	533.29	559.39	582.21	602.77	631.40	643.45	643.99
Transportation and warehousing:										
Average weekly hours...............................	38.9	39.5	38.9	39.1	39.4	38.7	37.6	37.4	36.7	36.8
Average hourly earnings (in dollars)........................	12.71	12.84	13.18	13.45	13.78	14.12	14.55	15.05	15.33	15.77
Average weekly earnings (in dollars)........................	494.36	507.27	513.37	525.60	542.55	546.86	547.97	562.31	562.70	580.68
Utilities:										
Average weekly hours...............................	42.1	42.3	42.3	42.0	42.0	42.0	42.0	42.0	41.4	40.9
Average hourly earnings (in dollars)........................	17.95	18.66	19.19	19.78	20.59	21.48	22.03	22.75	23.58	23.94
Average weekly earnings (in dollars)........................	756.35	789.98	811.52	830.74	865.26	902.94	924.59	955.66	977.18	978.44
Information:										
Average weekly hours...............................	36.0	36.0	36.0	36.4	36.3	36.6	36.7	36.8	36.9	36.5
Average hourly earnings (in dollars)........................	14.86	15.32	15.68	16.30	17.14	17.67	18.40	19.07	19.80	20.23
Average weekly earnings (in dollars)........................	535.25	551.28	564.98	592.68	622.40	646.52	675.32	700.89	731.11	739.41
Financial activities:										
Average weekly hours...............................	35.5	35.5	35.5	35.5	35.7	36.0	35.8	35.9	35.8	35.6
Average hourly earnings (in dollars)........................	11.36	11.82	12.28	12.71	13.22	13.93	14.47	14.98	15.59	16.17
Average weekly earnings (in dollars)........................	403.02	419.20	436.12	451.49	472.37	500.95	517.57	537.37	558.02	575.43
Professional and business services:										
Average weekly hours...............................	34.0	34.1	34.0	34.1	34.3	34.3	34.4	34.5	34.2	34.2
Average hourly earnings (in dollars)........................	11.96	12.15	12.53	13.00	13.57	14.27	14.85	15.52	16.33	16.81
Average weekly earnings (in dollars)........................	406.20	414.16	426.44	442.81	465.51	490.00	510.99	535.07	557.84	574.59
Education and health services:										
Average weekly hours...............................	32.0	32.0	32.0	31.9	32.2	32.2	32.1	32.2	32.3	32.4
Average hourly earnings (in dollars)........................	11.21	11.50	11.80	12.17	12.56	13.00	13.44	13.95	14.64	15.22
Average weekly earnings (in dollars)........................	359.08	368.14	377.73	388.27	404.65	418.82	431.35	449.29	473.39	493.02
Leisure and hospitality:										
Average weekly hours...............................	25.9	26.0	25.9	25.9	26.0	26.2	26.1	26.1	25.8	25.8
Average hourly earnings (in dollars)........................	6.32	6.46	6.62	6.82	7.13	7.48	7.76	8.11	8.35	8.57
Average weekly earnings (in dollars)........................	163.45	168.00	171.43	176.48	185.81	195.82	202.87	211.79	215.19	221.15
Other services:										
Average weekly hours...............................	32.6	32.7	32.6	32.5	32.7	32.6	32.5	32.5	32.3	32.0
Average hourly earnings (in dollars)........................	9.90	10.18	10.51	10.85	11.29	11.79	12.26	12.73	13.27	13.72
Average weekly earnings (in dollars)........................	322.69	332.44	342.36	352.62	368.63	384.25	398.77	413.41	428.64	439.65

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data.

25. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

| Series | 2001 | | | 2002 | | | | 2003 | | Percent change | |
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2003	
Civilian workers[2]	153.8	155.6	156.8	158.4	159.9	161.3	162.2	164.5	165.8	0.8	3.7
Workers, by occupational group:											
White-collar workers	156.0	157.7	158.9	160.5	162.1	163.5	164.3	166.7	167.9	.7	3.6
Professional specialty and technical	154.3	156.7	157.5	158.5	159.3	161.4	162.4	164.1	165.0	.5	3.6
Executive, adminitrative, and managerial	158.6	159.6	161.2	163.7	165.6	166.3	166.7	171.1	172.0	.5	3.9
Administrative support, including clerical	156.8	158.8	160.0	162.0	163.3	164.9	166.1	168.3	170.0	1.0	4.1
Blue-collar workers	149.3	151.1	152.0	153.7	155.1	156.4	157.5	159.8	161.4	1.0	4.1
Service occupations	153.3	155.0	156.9	158.4	159.4	161.3	162.2	164.1	165.0	.5	3.5
Workers, by industry division:											
Goods-producing	152.2	153.2	154.4	156.3	157.7	158.7	169.2	163.1	164.6	.9	4.4
Manufacturing	152.6	153.3	154.6	156.6	158.1	159.1	160.5	164.0	165.4	.9	4.6
Service-producing	154.4	156.4	157.6	159.1	160.7	162.2	162.8	165.0	166.2	.7	3.4
Services	155.4	158.1	159.0	160.2	161.1	163.2	163.9	165.3	166.3	.6	3.2
Health services	154.6	156.7	158.3	160.5	161.8	163.1	164.5	166.4	167.6	.7	3.6
Hospitals	155.6	158.2	160.0	162.3	163.8	165.7	167.6	169.9	170.8	.5	4.3
Educational services	152.2	156.1	156.6	157.1	157.4	161.6	162.8	163.6	164.2	.4	4.3
Public administration[3]	151.9	153.8	155.2	156.5	157.5	160.2	161.7	163.4	164.3	.6	4.3
Nonmanufacturing	154.0	156.0	157.2	158.7	160.2	161.7	162.4	164.5	165.8	.8	3.5
Private industry workers	154.5	155.9	157.2	158.9	160.7	161.6	162.3	165.0	166.4	.8	3.5
Excluding sales occupations	154.4	156.0	157.2	159.0	160.5	161.6	162.4	165.1	166.6	.9	3.8
Workers, by occupational group:											
White-collar workers	157.4	158.7	160.1	161.9	163.8	164.6	165.2	168.1	169.4	.8	3.4
Excluding sales occupations	158.1	159.6	160.9	162.8	164.3	165.3	165.9	169.1	170.4	.8	3.7
Professional specialty and technical occupations	157.5	159.2	160.3	161.5	162.5	163.6	164.4	166.5	167.7	.7	3.2
Executive, adminitrative, and managerial occupations	159.4	160.2	161.8	164.4	166.6	167.0	167.2	172.1	173.1	.6	3.9
Sales occupations	154.5	155.0	156.7	157.7	161.6	161.6	161.9	163.5	165.1	1.0	2.2
Administrative support occupations, including clerical	157.7	159.5	160.8	162.8	164.2	165.6	166.7	169.0	170.9	1.1	4.1
Blue-collar workers	149.3	151.0	151.9	153.6	155.1	156.3	157.3	159.7	161.4	1.1	4.1
Precision production, craft, and repair occupations	149.7	151.8	152.5	153.7	155.7	156.9	157.8	160.0	162.0	1.3	4.0
Machine operators, assemblers, and inspectors	149.1	150.4	151.5	153.6	154.7	155.4	156.7	159.9	161.1	.8	4.1
Transportation and material moving occupations	143.9	145.6	146.3	148.7	149.6	151.0	151.8	153.2	155.1	1.2	3.7
Handlers, equipment cleaners, helpers, and laborers	153.4	154.9	156.5	158.7	159.9	161.4	162.9	164.9	166.8	1.2	4.3
Service occupations	151.3	152.6	154.8	156.4	157.4	159.0	159.8	161.7	162.6	.6	3.3
Production and nonsupervisory occupations[4]	152.7	154.3	155.5	157.1	158.7	159.7	160.5	162.6	164.1	.9	3.4
Workers, by industry division:											
Goods-producing	152.1	153.1	154.4	156.2	157.6	158.6	160.1	163.0	164.5	.9	4.4
Excluding sales occupations	151.5	152.5	153.7	155.5	156.9	157.9	159.2	162.4	163.8	.9	4.4
White-collar occupations	156.5	156.8	158.1	160.1	161.9	162.9	164.3	167.8	169.2	.8	4.5
Excluding sales occupations	155.0	155.3	156.5	158.4	160.2	161.1	162.3	166.3	167.5	.7	4.6
Blue-collar occupations	149.3	150.8	151.9	153.6	154.8	155.9	157.3	159.9	161.5	1.0	4.3
Construction	150.3	151.7	153.0	154.1	155.2	156.3	157.9	159.1	161.1	1.3	3.8
Manufacturing	152.6	153.3	154.6	156.6	158.1	159.1	160.5	164.0	165.4	.9	4.6
White-collar occupations	156.0	156.0	156.9	159.1	161.1	162.2	163.3	167.1	168.7	1.0	4.7
Excluding sales occupations	154.0	153.8	154.7	156.7	158.6	159.6	160.7	165.1	166.4	.8	4.9
Blue-collar occupations	150.0	151.3	152.7	154.6	155.8	156.7	158.3	161.6	162.8	.7	4.5
Durables	153.1	154.0	155.3	156.9	158.3	158.9	160.6	164.4	165.5	.7	4.5
Nondurables	151.6	152.0	153.2	156.0	157.5	159.2	160.3	163.1	164.9	1.1	4.7
Service-producing	155.3	156.9	158.2	159.9	161.8	162.7	163.1	165.6	167.0	.8	3.2
Excluding sales occupations	156.0	157.8	159.0	160.9	162.4	163.5	164.0	166.6	168.0	.8	3.4
White-collar occupations	157.4	159.0	160.3	162.1	164.0	164.7	165.1	167.9	169.2	.8	3.2
Excluding sales occupations	159.1	160.9	162.2	164.1	165.6	166.5	167.0	169.9	171.3	.8	3.4
Blue-collar occupations	148.7	150.9	151.4	153.2	155.2	156.6	156.9	158.7	160.8	1.3	3.6
Service occupations	150.8	152.2	154.2	155.9	157.0	158.5	159.3	161.1	162.0	.6	3.2
Transportation and public utilities	152.4	153.5	155.5	157.3	158.9	160.8	161.7	163.2	165.4	1.3	4.1
Transportation	146.9	148.2	151.1	152.5	153.9	155.4	156.1	157.8	158.9	.7	3.2
Public utilities	159.8	160.7	161.5	163.9	165.5	168.2	169.2	170.5	174.2	2.2	5.3
Communications	161.1	162.8	163.4	166.0	166.1	169.0	170.1	171.3	175.5	2.5	5.7
Electric, gas, and sanitary services	158.1	158.1	159.1	161.3	164.8	167.2	168.1	169.5	172.6	1.8	4.7
Wholesale and retail trade	152.6	153.7	155.5	156.5	159.5	159.6	159.7	161.3	162.5	.7	1.9
Excluding sales occupations	153.9	155.4	157.1	157.5	160.0	160.3	160.4	161.8	162.7	.6	1.7
Wholesale trade	157.8	158.6	159.5	161.9	166.3	165.9	166.7	169.5	171.3	1.1	3.0
Excluding sales occupations	158.5	160.0	160.6	162.3	164.4	166.1	167.2	168.4	169.9	.9	3.3
Retail trade	149.7	150.9	153.2	153.5	155.6	156.0	155.8	156.6	157.4	.5	1.2
General merchandise stores	149.4	149.7	150.9	152.4	154.2	156.1	155.1	156.4	159.2	1.8	3.2
Food stores	148.2	149.7	151.7	152.9	154.5	156.3	156.3	157.5	158.6	.7	2.7

See footnotes at end of table.

[June 1989 = 100]

Series	2001			2002				2002		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2003	
Finance, insurance, and real estate............................	159.5	160.9	161,3	165.2	167.3	168.0	168.5	176.7	178.3	0.9	6.6
Excluding sales occupations...................................	163.1	164.7	165.0	169.8	171.3	172.1	173.1	182.0	184.0	1.1	7.4
Banking, savings and loan, and other credit agencies.	172.7	175.4	174.5	182.1	184.2	184.6	185.3	204.3	206.3	1.0	12.0
Insurance..	159.3	159.9	161.3	164.0	166.1	167.1	167.9	172.1	173.9	2.5	4.7
Services..	157.8	160.0	161.0	162.6	163.7	164.9	165.4	167.1	168.4	.8	2.9
Business services..	163.0	165.2	166.2	166.3	166.6	167.2	167.5	168.5	169.2	.4	1.6
Health services..	154.7	156.8	158.4	160.6	162.0	163.2	164.4	166.5	167.9	.8	3.6
Hospitals...	155.9	158.4	160.3	162.8	164.5	166.2	168.1	170.8	171.9	.6	4.5
Educational services......................................	162.6	166.4	167.6	168.5	169.0	173.5	175.2	176.3	177.1	.5	4.8
Colleges and universities...............................	162.6	166.2	167.5	168.1	168.4	172.0	173.7	174.5	175.4	.5	4.2
Nonmanufacturing...	154.7	156.3	157.6	159.3	161.1	162.0	162.5	164.9	166.4	.9	3.3
White-collar workers..	157.5	159.0	160.5	162.2	164.1	164.8	165.3	168.0	169.3	.8	3.2
Excluding sales occupations...........................	159.1	160.9	162.3	164.2	165.7	166.6	167.1	170.0	171.4	.8	3.4
Blue-collar occupations....................................	148.1	150.2	150.6	152.2	154.0	155.4	155.9	157.5	159.7	1.4	3.7
Service occupations..	150.7	152.1	154.1	155.9	156.9	158.4	159.2	161.1	162.0	.6	3.3
State and local government workers............................	151.2	154.3	155.2	156.1	156.7	160.1	161.5	162.6	163.2	.4	4.1
Workers, by occupational group:											
White-collar workers...	150.4	153.7	154.4	155.2	155.7	159.3	160.7	161.7	162.2	.3	4.1
Professional specialty and technical..............................	149.2	152.8	153.2	153.6	154.1	158.1	159.4	160.2	160.8	.4	4.3
Executive, administrative, and managerial....................	153.7	156.4	157.6	159.5	159.6	162.3	163.8	165.3	165.7	.2	3.7
Administrative support, including clerical......................	151.6	154.2	155.6	156.9	158.0	161.0	162.4	163.8	164.4	.4	4.1
Blue-collar workers..	149.0	151.5	153.2	154.0	154.7	158.4	159.8	161.3	161.7	.2	4.5
Workers, by industry division:											
Services...	150.6	154.4	154.9	155.5	155.9	159.7	160.9	161.8	162.3	.3	4.1
Services excluding schools[5]................................	151.9	154.5	156.1	157.9	158.7	161.0	162.8	164.0	164.2	.1	3.5
Health services..	154.4	157.1	158.5	160.4	161.4	163.5	165.5	166.4	166.7	.2	3.3
Hospitals...	154.7	157.4	159.1	160.7	161.8	164.1	166.2	167.0	167.3	.2	3.4
Educational services......................................	150.1	154.1	154.5	154.8	155.1	159.2	160.3	161.1	161.7	.4	4.3
Schools..	150.5	154.4	154.8	155.1	155.4	159.6	160.7	161.4	162.0	.4	4.2
Elementary and secondary..............................	149.0	152.8	153.1	153.4	153.6	157.7	158.8	159.4	160.0	.4	4.2
Colleges and universities...............................	154.3	153.8	159.6	160.0	160.4	164.7	165.8	167.0	167.5	.3	4.4
Public administration[3].......................................	151.9	151.9	155.2	156.5	157.9	160.2	161.7	163.4	164.3	.6	4.3

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

26. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	2001			2002				2003		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	June 2003	
Civilian workers[1].........................	150.8	152.3	153.4	154.8	156.1	157.2	157.8	159.3	160.3	0.6	2.7
Workers, by occupational group:											
White-collar workers........................	153.1	154.5	155.6	157.0	158.4	159.6	160.1	161.9	162.9	.6	2.8
Professional specialty and technical...........................	152.-	154.2	155.1	155.6	156.2	158.0	158.6	159.3	160.1	.5	2.5
Executive, adminitrative, and managerial....................	155.8	156.7	158.1	160.7	162.6	163.5	163.8	167.9	169.0	.7	3.9
Administrative support, including clerical....	152,7	154.6	155.7	157.3	158.4	159.6	160.6	161.8	163.1	.8	3.0
Blue-collar workers.........................	146.0	147.6	148.5	149.7	151.0	151.9	152.6	153.8	154.8	.7	2.5
Service occupations.......................	149.7	151.2	153.0	154.2	155.1	`56.2	156.9	158.0	158.7	.4	2.3
Workers, by industry division:											
Goods-producing............................	147,6	149.5	150.5	151.8	153.1	153.9	155.1	156.3	157.5	.8	2.9
Manufacturing............................	150.0	150.7	151.7	153.1	154.5	155.4	156.5	158.0	159.0	.6	2.9
Service-producing...........................	151.7	153.4	154.5	155.9	157.2	156.4	158.8	160.5	161.4	.6	2.7
Services..................................	153.6	156.2	157.1	158.1	158.8	160.7	161.1	161.9	162.8	.6	2.5
Health services.........................	151.8	153.7	155.5	157.3	158.5	159.6	160.9	162.0	163.2	.7	3.0
Hospitals..............................	151.2	15.5	155.5	157.2	158.6	160.3	162.2	163.5	164.4	.6	3.7
Educational services.....................	151.0	154.6	155.1	155.3	155.6	159.3	160.1	160.4	160.7	.2	3.3
Public administration[2].....................	148.7	150.3	151.6	152.5	153.4	154.8	155.8	157.2	158.0	.5	3.0
Nonmanufacturing..........................	149.7	152.6	153.8	155.0	156.4	157.5	158.0	159.6	160.5	.6	2.6
Private industry workers.....................	150.9	152.1	153.3	154.7	156.3	157.0	157.5	159.3	160.4	.7	2.6
Excluding sales occupations....................	150.8	152.2	153.3	154.9	156.1	157.0	157.9	159.4	160.5	.7	2.6
Workers, by occupational group:											
White-collar workers........................	153.8	154.8	156.1	157.7	159.4	160.0	l60.4	162.6	163.8	.7	2.8
Excluding sales occupations................	154.4	155.7	156.9	158.6	160.0	169.8	160.8	163.6	164.8	.7	3.0
Professional specialty and technical occupations..........	153.2	154.8	155.9	156.7	157.4	158.2	158.5	159.5	160.5	.6	2.0
Executive, adminitrative, and managerial occupations..	156.5	157.2	158.6	161.3	163.6	164.3	164.5	169.1	170.3	.7	4.1
Sales occupations.........................	151.5	151.2	152.6	153.6	157.0	156.9	156.8	158.1	159.3	.8	1.5
Administrative support occupations, including clerical...	153.6	155.3	156.5	158.2	159.2	160.3	161.3	162.6	164.0	.9	3.0
Blue-collar workers.........................	145.9	147.5	148.3	149.6	150.9	151.7	152.4	153.6	154.6	.7	2.5
Precision production, craft, and repair occupations.......	145.7	147.7	148,4	149.2	151.0	151.8	152.3	153.4	154.7	.8	2.5
Machine operators, assemblers, and inspectors............	146.9	148.1	149.0	150.5	151.6	152.0	153.2	154.7	155.3	.4	2.4
Transportation and material moving occupations..........	140.7	142.1	142.8	144.8	145.2	146.3	146.9	147.8	149.0	.8	2.6
Handlers, equipment cleaners, helpers, and laborers....	149.8	151.0	152.4	154.2	155.1	156.0	157.2	158.4	159.0	.4	2.5
Service occupations..............................	147.5	148.7	150.6	152.0	152.8	153.9	154.4	155.5	156.1	.4	2.2
Production and nonsupervisory occupations[3]................	149.0	150.3	151.5	152.7	154.0	154.7	155.2	156.4	157.4	.6	2.2
Workers, by industry division:											
Goods-producing...........................	148.6	149.5	150.5	151.7	153.1	153.9	155.0	156.3	157.4	.7	2.8
Excluding sales occupations.....................	147.8	148.7	149.7	150.9	152.2	153.0	154.0	155.4	156.5	.7	2.8
White-collar occupations.....................	152.3	152.6	153.6	155.0	156.6	157.9	158.6	160.0	161.4	.9	3.1
Excluding sales occupations.................	150.5	150.8	151.7	152.9	154.5	155.4	156.3	158.0	159.2	.8	3.0
Blue-collar occupations.....................	146.1	147.4	148.4	149.6	150.7	151.5	152.6	153.8	154.8	.7	2.7
Construction...............................	143.9	145.1	146.3	147.0	148.2	149.0	150.2	150.6	152.4	1.2	2.8
Manufacturing..............................	150.0	150.7	151.7	153.1	154.4	155.4	156.5	158.0	159.0	.6	2.9
White-collar occupations..................	152.7	152.8	153.3	154.9	156.6	157.7	158.6	160.1	161.6	.9	3.2
Excluding sales occupations...............	150.5	150.5	151.0	152.3	153.9	155.0	155.9	157.7	158.9	.8	3.2
Blue-collar occupations...................	147.8	149.1	150.3	151.7	152.8	153.5	154.7	156.3	156.9	.4	2.7
Durables..................................	150.5	151.5	151.7	153.9	155.3	156.0	157.3	158.8	159.7	.6	2.8
Nondurables...............................	149.0	149.3	153.9	151.9	153.1	154.4	155.2	156.6	157.8	.8	3.1
Service-producing.............................	151.9	153.2	151.9	156.1	157.7	158.4	158.6	160.6	161.7	.7	2.5
Excluding sales occupations..................	152.6	154.2	156.1	157.2	158.5	159.3	159.6	161.7	162.8	.7	2.7
White-collar occupations...................	154.0	155.2	157.2	158.2	159.9	160.5	160.7	163.0	164.1	.7	2.6
Excluding sales occupations................	155.6	157.2	158.2	160.4	161.6	162.5	162.8	165.3	166.5	.7	3.0
Blue-collar occupations....................	145.3	147.5	148.1	149.4	151.1	151.8	152.0	153.2	154.3	.7	2.1
Service occupations........................	147.2	148.4	149.4	151.6	152.4	153.5	154.1	155.1	155.6	.3	2.1
Transportation and public utilities...............	145.7	146.7	149.2	150.5	152.1	153.4	154.1	154.8	155.6	.5	2.3
Transportation............................	141.6	142.6	145.7	147.4	148.6	149.6	150.1	150.5	150.6	.1	1.3
Public utilities............................	151.0	152.0	153.6	154.3	156.4	158.2	159.3	160.4	162.1	1.1	3.6
Communications........................	151.8	153.3	155.2	155.3	157.1	159.6	160.7	161.9	163.4	.9	4.0
Electric, gas, and sanitary services...........	149.9	150.4	151.7	153.0	155.5	156.5	157.4	158.6	160.4	1.1	3.2
Wholesale and retail trade....................	150.1	150.6	152.1	153.0	155.7	155.5	155.5	156.7	157.5	.5	1.2
Excluding sales occupations.................	151.9	153.1	–	–	–	–	–	–	–	–	–
Wholesale trade...........................	154.5	154.1	154.8	157.2	161.3	160.4	161.0	163.4	164.7	.8	2.1
Excluding sales occupations...............	156.5	157.4	157.9	159.4	161.2	162.6	163.7	163.9	165.2	.8	2.5
Retail trade...............................	147.8	148.8	150.7	150.9	152.7	152.9	152.7	153.1	153.8	.5	.7
General merchandise stores...............	145.5	145.7	146.5	147.9	148.9	150.1	149.2	149.8	152.0	1.5	2.1
Food stores.............................	144.5	145.7	146.7	148.0	148.9	150.1	150.3	151.0	151.6	.4	1.8

See footnotes at end of table.

26. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	2001			2002				2003		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	June 2003	
Finance, insurance, and real estate...............................	154.6	155.8	156.0	160.3	162.0	162.4	162.6	171.1	172.4	0.8	6.4
Excluding sales occupations..............................	157.6	159.1	159.1	164.5	165.7	166.1	167.3	176.7	178.5	1.0	7.7
Banking, savings and loan, and other credit agencies.	170.8	173.2	171.7	181.2	182.8	182.7	183.9	206.4	208.7	1.1	14.2
Insurance..	153.3	153.6	155.0	157.1	158.6	159.6	159.1	161.6	163.0	.9	2.8
Services...	155.0	157.1	158.2	159.5	160.3	161.5	161.7	162.8	164.0	.7	2.3
Business services...	160.8	162.8	163.7	164.0	164.0	164.6	164.8	165.6	166.4	.5	1.5
Health services..	151.8	153.6	155.4	157.3	158.4	159.9	160.7	161.9	163.2	.8	3.0
Hospitals...	151.0	153.3	155.4	157.1	158.6	160.2	162.1	163.6	164.6	.6	3.8
Educational services...	156.1	159.6	160.5	161.2	161.2	165.2	166.5	167.1	167.5	.4	4.0
Colleges and universities................................	155.0	158.4	159.6	159.9	159.9	163.1	164.3	164.4	165.1	.4	3.3
Nonmanufacturing...	150.9	152.2	153.5	155.0	156.5	157.2	157.5	159.4	160.5	.7	2.6
White-collar workers..	153.8	155.0	156.4	158.0	159.6	160.2	160.5	162.8	163.9	.7	2.7
Excluding sales occupations..............................	155.3	156.9	158.3	160.1	161.3	162.1	162.5	164.9	166.1	.7	3.0
Blue-collar occupations...	143.9	145.8	146.4	147.5	149.0	149.8	150.2	151.1	152.4	.9	2.3
Service occupations...	147.1	148.2	150.1	151.4	152.3	153.4	154.0	155.0	155.5	.3	2.1
State and local government workers...............................	151.2	154.3	155.2	156.1	156.7	160.1	161.5	162.6	163.2	.3	3.1
Workers, by occupational group:											
White-collar workers..	149.8	152.7	153.3	153.9	154.4	157.4	158.4	158.9	159.2	.2	3.1
Professional specialty and technical.............................	149.8	153.0	153.4	153.6	154.1	157.5	158.4	158.8	159.1	.2	3.2
Executive, administrative, and managerial....................	151.5	153.9	155.1	156.6	156.8	159.0	160.1	160.9	161.0	.1	2.7
Administrative support, including clerical......................	147.6	149.8	150.9	151.9	152.8	155.1	156.0	156.9	157.2	.2	2.9
Blue-collar workers...	146.5	149.1	150.8	151.6	152.1	154.5	155.1	156.2	156.5	.2	2.9
Workers, by industry division:											
Services..	150.2	153.7	154.2	154.6	155.0	158.4	159.2	159.5	159.8	.2	3.1
Services excluding schools[4]...................................	150.7	153.2	154.9	156.7	157.3	159.1	160.3	161.4	161.8	.2	2.9
Health services..	151.9	154.2	155.8	157.8	158.6	160.5	162.2	162.9	163.5	.4	3.0
Hospitals...	151.8	154.2	155.7	157.7	158.8	160.6	162.5	163.1	163.8	.4	3.1
Educational services...	150.0	153.6	154.0	154.2	154.5	158.1	158.9	159.1	159.3	.1	3.1
Schools..	150.2	153.8	154.1	154.3	154.6	158.3	159.0	159.2	159.5	.2	3.2
Elementary and secondary...........................	149.5	152.8	153.1	153.4	153.6	157.4	158.1	158.2	158.5	.2	3.2
Colleges and universities.............................	151.8	156.5	156.7	156.8	157.3	160.7	161.6	162.1	162.1	.0	3.1
Public administration[2]..	148.7	150.3	151.6	152.5	153.4	154.8	155.8	157.2	158.0	.5	3.0

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

27. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	2001			2002				2003		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2003	
Private industry workers...	163.2	165.2	166.7	169.3	171.6	173.1	174.6	179.6	182.0	1.3	6.1
Workers, by occupational group:											
White-collar workers...	167.4	169.5	171.2	173.5	176.1	177.2	178.5	183.6	185.5	1.0	5.3
Blue-collar workers...	156.7	158.3	159.2	162.2	164.0	166.2	167.8	172.7	176.1	2.0	7.4
Workers, by industry division:											
Goods-producing...	159.6	160.8	162.6	165.8	167.4	168.8	171.0	178.0	180.2	1.2	7.6
Service-producing..	164.6	167.1	168.4	170.7	173.3	174.9	175.9	179.9	182.3	1.3	5.2
Manufacturing...	157.9	158.5	160.4	163.7	165.5	166.8	168.9	176.9	179.0	1.2	8.2
Nonmanufacturing..	164.9	167.4	168.6	171.1	173.5	175.2	176.3	180.3	182.8	1.4	5.4

28. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	2001			2002				2003	2003	Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	June 2003	
COMPENSATION											
Workers, by bargaining status[1]											
Union..	149.5	151.0	153.1	154.8	156.3	158.1	159.5	162.1	164.1	1.2	5.0
Goods-producing..........................	149.3	150.6	151.6	153.4	154.7	156.2	157.8	161.4	163.4	1.2	5.6
Service-producing........................	149.5	151.2	154.2	156.0	157.6	159.9	161.1	162.6	164.6	1.2	4.4
Manufacturing..............................	148.8	149.9	151.4	153.4	154.6	155.9	157.9	162.3	163.8	.9	6.0
Nonmanufacturing........................	149.4	151.1	153.5	155.0	156.6	158.8	159.9	161.4	163.7	1.4	4.5
Nonunion......................................	155.3	156.7	157.8	159.6	161.4	162.5	162.8	165.4	166.8	.8	3.3
Goods-producing..........................	153.1	154.0	155.3	157.2	158.6	159.5	160.8	163.6	164.9	.8	4.0
Service-producing........................	155.9	157.5	158.6	160.3	162.2	162.9	163.3	165.9	167.2	.8	3.1
Manufacturing..............................	153.7	154.4	155.5	157.6	159.1	160.1	161.3	164.5	165.8	.8	4.2
Nonmanufacturing........................	155.4	157.0	158.2	159.9	161.7	162.4	162.9	165.4	166.7	.8	3.1
Workers, by region[1]											
Northeast......................................	153.7	155.2	156.3	158.3	159.9	160.5	161.3	163.8	165.2	.9	3.3
South..	152.3	153.5	154.6	156.2	157.6	158.9	159.0	160.6	161.6	.6	2.5
Midwest (formerly North Central)...	156.0	157.4	158.6	161.1	162.2	163.5	164.6	169.0	170.4	.8	4.8
West..	156.0	157.6	159.4	160.4	162.9	163.8	165.0	167.3	169.5	1.3	4.1
Workers, by area size[1]											
Metropolitan areas........................	154.6	156.0	157.4	159.1	160.9	161.8	162.5	165.2	166.6	.8	3.5
Other areas...................................	153.7	154.8	155.6	157.5	158.5	160.0	169.8	163.5	165.0	.9	4.1
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union..	143.7	145.1	147.4	148.4	149.8	151.3	152.5	153.3	154.3	.7	3.0
Goods-producing..........................	144.2	145.3	146.3	147.2	158.6	150.0	151.2	152.4	153.9	1.0	3.6
Service-producing........................	143.7	145.4	148.9	150.0	151.4	152.9	154.1	154.6	155.1	.3	2.4
Manufacturing..............................	145.5	146.7	148.0	149.0	150.2	151.6	153.1	154.6	155.9	.8	3.8
Nonmanufacturing........................	142.7	144.3	147.1	148.1	149.6	151.1	152.1	152.5	153.5	.7	2.6
Nonunion......................................	152.2	153.4	154.4	155.9	157.5	158.1	158.5	160.4	161.5	.7	2.5
Goods-producing..........................	150.3	151.1	152.1	153.5	154.8	155.5	156.6	157.8	158.9	.7	2.6
Service-producing........................	152.7	154.1	155.1	156.7	158.3	158.9	159.0	161.2	162.3	.7	2.5
Manufacturing..............................	151.6	152.2	153.1	154.7	156.1	156.8	157.8	159.3	160.2	.6	2.6
Nonmanufacturing........................	152.0	153.3	154.4	155.9	157.5	158.1	158.3	160.4	161.5	.7	2.5
Workers, by region[1]											
Northeast......................................	149.2	150.6	151.7	153.5	154.9	155.1	155.7	157.3	158.4	.7	2.3
South..	149.3	150.2	151.2	152.5	153.6	154.7	154.6	155.3	156.1	.5	1.6
Midwest (formerly North Central)...	152.3	153.6	154.7	157.1	158.5	159.2	160.2	164.1	165.0	.5	4.1
West..	152.9	154.3	156.0	156.4	158.7	159.3	160.1	161.3	163.1	1.1	2.8
Workers, by area size[1]											
Metropolitan areas........................	151.2	152.4	153.7	155.1	156.7	157.4	157.9	159.6	160.7	.7	2.6
Other areas...................................	148.8	149.7	150.5	151.7	152.6	153.8	154.8	156.8	158.0	.8	3.5

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

29. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's)...............................	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care...........................	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance...........................	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan..................	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time.............................	10	9	9	10	11	10	8	9	–	–
Average minutes per day............	–	25	26	27	29	26	30	29		
Paid rest time..............................	75	76	73	72	72	71	67	68	–	–
Average minutes per day............	–	25	26	26	26	26	28	26		
Paid funeral leave..........................	–	–	–	88	85	84	80	83	80	81
Average days per occurrence.........	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays...............................	99	99	99	99	96	97	92	91	89	89
Average days per year................	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave.......................	20	24	23	25	24	22	21	21	22	20
Average days per year................	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations..............................	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave...................	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave....................	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	..	–	–	–	–	–	–	84	93
Insurance plans										
Participants in medical care plans.........	97	97	97	95	90	92	83	82	77	76
Percent of participants with coverage for:										
Home health care...........................	–	–	46	66	76	75	81	86	78	85
Extended care facilities....................	58	62	62	70	79	80	80	82	73	78
Physical exam..............................	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage.............................	26	27	36	43	44	47	51	61	67	69
Average monthly contribution..........	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage...........................	46	51	58	63	64	66	69	76	78	80
Average monthly contribution..........	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans........	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance..................................	69	72	74	72	78	71	71	76	77	74
Survivor income benefits..................	–	–	–	10	8	7	6	5	7	6
Retiree protection available..............	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans..........................	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans..........................	54	51	51	49	46	43	45	44	–	–
Participants in short-term disability plans [1]	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans..........	84	84	82	76	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65.......................	55	58	63	64	59	62	55	52	52	52
Early retirement available.................	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years..............	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula................	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security..............	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans.................	–	-	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements........	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans.....................	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]	–	–	–	5	12	23	36	52	38	32
Premium conversion plans................				–			–		5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability bene-fits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

30. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	1992	1994	1996	1987	1990	1992	1994
Scope of survey (in 000's).............................	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care..	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance..	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan...............................	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time..	8	9	–	–	17	11	10	–
Average minutes per day...........................	37	37	–	–	34	36	34	–
Paid rest time...	48	49	–	–	58	56	53	–
Average minutes per day...........................	27	26	–	–	29	29	29	–
Paid funeral leave..	47	50	50	51	56	63	65	62
Average days per occurrence.....................	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays...	84	82	82	80	81	74	75	73
Average days per year[1]............................	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave......................................	11	12	13	14	38	39	38	38
Average days per year................................	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations...	88	88	88	86	72	67	67	66
Paid sick leave [2].......................................	47	53	50	50	97	95	95	94
Unpaid leave..	17	18	–	–	57	51	59	–
Unpaid paternity leave.................................	8	7	–	–	30	33	44	–
Unpaid family leave......................................	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans...................	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care.......................................	79	80	–	–	76	82	87	84
Extended care facilities..............................	83	84	–	–	78	79	84	81
Physical exam...	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage...	42	47	52	52	35	38	43	47
Average monthly contribution..........................	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage..	67	73	76	75	71	65	72	71
Average monthly contribution..........................	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans...................	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance......................................	78	76	79	77	67	67	74	64
Survivor income benefits............................	1	1	2	1	1	1	1	2
Retiree protection available........................	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans......................................	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans......................................	6	26	26	–	14	21	22	21
Participants in short-term disability plans [2].............	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans..........	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65...................	54	50	–	47	92	89	92	92
Early retirement available............................	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years..............	7	4	–	–	33	16	10	13
Terminal earnings formula...........................	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security..............	49	46	–	44	18	8	10	49
Participants in defined contribution plans................	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements.................................	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans.................................	1	2	3	4	5	5	5	5
Reimbursement accounts [3].........................	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	–

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave.

Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

31. Work stoppages involving 1,000 workers or more

Measure	Annual totals		2002					2003^p							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Number of stoppages:															
Beginning in period............................	29	19	1	3	1	2	1	1	0	2	1	1	1	0	2
In effect during period........................	30	20	3	3	3	2	1	2	0	2	1	1	1	1	2
Workers involved:															
Beginning in period (in thousands).....	99	46	3.5	13.7	1.2	4.3	1.4	17.5	.0	4.0	4.0	1.3	4.0	.0	3.2
In effect during period (in thousands).	102	47	6.2	13.7	13.5	4.3	1.4	18.8	.0	4.0	4.0	4.0	4.0	4.0	3.2
Days idle:															
Number (in thousands).......................	1,151	6,596	50.6	40.3	133.4	23.9	28.6	48.8	0.0	18.5	40.0	40.0	16.0	12.0	10.9
Percent of estimated working time¹....	.00	.00	.00	.00	.00	.00	.00	.00	(²)	.00	.00	.00	(²)	(²)	(²)

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in "Total economy measures of strike idleness,"

Monthly Labor Review, October 1968, pp.54–56.

[2] Less than 0.005.

p = preliminary.

32. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2002					2003						
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS														
All items...............................	177.1	179.9	180.7	181.0	181.0	181.3	180.9	181.7	183.1	184.2	183.8	183.5	183.9	184.6
All items (1967 = 100)...................	530.4	538.8	541.2	542.1	543.2	543.1	541.9	544.2	548.5	551.8	550.5	549.7	550.9	553.0
Food and beverages.....................	173.6	176.8	176.6	176.9	177.1	177.4	177.8	178.1	178.9	179.2	179.0	179.4	180.3	180.9
Food................................	173.1	176.2	176.0	176.4	176.5	176.8	177.3	177.5	178.3	178.6	178.4	178.8	179.7	180.4
Food at home.........................	173.4	175.6	174.9	175.2	175.1	175.5	176.1	176.7	177.6	177.7	177.3	177.8	178.9	179.7
Cereals and bakery products...........	193.8	198.0	198.6	198.4	198.9	198.3	197.3	199.8	201.8	202.1	201.9	203.0	204.5	204.5
Meats, poultry, fish, and eggs........	161.3	162.1	162.2	161.8	161.3	162.1	162.4	161.6	164.7	164.8	165.2	164.7	168.2	169.7
Dairy and related products[1].........	167.1	168.1	167.2	166.3	166.5	167.1	167.3	166.4	167.2	167.1	165.8	165.4	164.7	167.5
Fruits and vegetables.................	212.2	220.9	217.0	218.4	217.4	219.8	224.9	227.1	223.3	223.6	221.3	226.2	226.6	224.9
Nonalcoholic beverages and beverage materials............................	139.2	139.2	137.6	140.2	140.5	139.1	139.8	140.6	140.8	140.3	140.5	140.3	138.4	139.7
Other foods at home..................	159.6	160.8	160.6	160.8	160.9	161.1	161.1	161.8	162.2	162.6	162.1	162.1	167.7	163.2
Sugar and sweets....................	155.7	159.0	159.9	159.6	159.9	158.5	159.1	169.7	161.8	162.5	161.4	162.3	162.7	162.5
Fats and oils.......................	155.7	155.4	154.1	154.1	155.9	153.4	152.8	155.8	158.7	157.5	156.1	157.6	156.3	157.7
Other foods........................	176.0	177.1	176.9	177.0	177.0	178.3	178.2	178.2	177.9	178.6	178.5	177.8	179.0	179.4
Other miscellaneous foods[1,2]......	108.9	109.2	109.3	109.7	109.8	110.3	110.2	109.7	110.5	110.1	110.4	110.1	111.3	109.9
Food away from home[1]................	173.9	178.3	178.8	179.2	179.6	179.8	180.1	179.9	180.7	181.0	181.1	181.5	182.2	182.6
Other food away from home[1,2]........	113.4	117.7	118.1	118.8	119.1	119.7	119.8	119.9	120.2	120.4	120.4	120.5	121.3	121.4
Alcoholic beverages...................	179.3	183.6	184.2	183.9	184.7	185.1	184.9	185.8	185.9	186.6	186.4	186.7	187.2	187.1
Housing................................	176.4	180.3	209.6	181.5	181.4	181.2	181.1	182.3	183.2	184.3	184.1	184.5	185.9	186.1
Shelter..............................	200.6	208.1	200.2	209.2	201.3	209.6	209.5	210.9	211.6	212.1	212.1	212.8	213.8	214.3
Rent of primary residence.............	192.1	199.7	200.2	200.7	201.3	202.0	202.5	203.3	203.7	204.1	204.5	204.9	205.6	206.1
Lodging away from home...............	118.6	118.3	123.6	117.6	117.0	113.2	109.2	114.3	117.6	119.7	118.7	121.4	124.8	125.1
Owners' equivalent rent of primary residence[3]......	206.3	214.7	215.4	216.2	216.8	217.3	217.9	218.5	218.7	218.9	218.9	219.1	219.6	220.1
Tenants' and household insurance[1,2]......	106.2	108.7	109.6	110.0	110.0	111.4	112.3	113.9	114.1	114.0	114.2	114.3	115.6	115.8
Fuels and utilities...................	150.2	143.6	146.8	147.2	144.4	143.6	144.2	146.1	148.3	154.5	153.1	153.7	159.4	159.2
Fuels..............................	135.4	127.2	130.7	131.0	127.9	127.0	127.5	129.5	131.9	138.5	136.8	137.5	143.6	143.0
Fuel oil and other fuels.............	129.3	115.5	112.1	115.2	119.3	121.8	125.6	136.6	156.3	169.0	147.9	137.0	130.5	130.7
Gas (piped) and electricity..........	142.4	134.4	138.5	138.7	134.9	133.7	134.1	135.6	136.9	143.5	143.0	144.5	151.6	151.0
Household furnishings and operations....	129.1	128.3	128.1	128.1	128.0	127.8	127.0	127.4	127.7	127.1	127.2	126.3	126.1	125.5
Apparel................................	127.3	124.0	120.5	124.6	126.8	125.5	121.5	118.1	120.6	123.6	123.9	122.5	116.2	117.2
Men's and boys' apparel...............	125.7	121.7	118.3	120.1	122.8	123.2	119.3	116.1	117.3	121.0	120.8	119.5	113.8	113.4
Women's and girls' apparel............	119.3	115.8	111.0	118.0	120.5	118.0	113.1	107.6	112.4	117.2	117.8	115.5	106.1	107.9
Infants' and toddlers' apparel[1].....	129.2	126.4	124.3	126.2	127.7	127.5	125.3	121.1	122.3	124.1	123.4	123.6	117.9	120.8
Footwear.............................	123.0	121.4	119.7	121.6	123.0	122.7	120.7	119.7	119.8	119.8	119.9	119.7	117.5	117.8
Transportation.........................	154.3	152.9	153.9	154.0	154.9	155.2	154.2	155.5	158.9	161.0	159.3	157.2	156.8	158.3
Private transportation.................	150.0	148.8	149.7	150.0	151.1	151.5	150.4	151.8	155.3	157.3	155.5	153.1	152.4	154.1
New and used motor vehicles[2]........	101.3	99.2	98.7	98.7	98.9	98.8	98.7	98.2	98.0	98.0	97.8	97.4	96.5	96.0
New vehicles.......................	142.1	140.0	138.1	138.7	139.5	140.4	140.6	139.7	139.2	139.3	138.7	138.1	137.7	136.8
Used cars and trucks[1].............	158.7	152.0	153.4	152.2	150.7	148.8	148.5	148.3	148.4	148.5	148.4	147.9	145.7	143.3
Motor fuel.........................	124.7	116.6	121.5	121.7	124.5	124.4	119.7	126.3	140.4	148.1	140.6	131.3	130.6	139.0
Gasoline (all types)................	124.0	116.0	120.9	121.1	123.9	123.8	119.1	125.7	139.7	147.4	139.9	130.6	130.0	138.4
Motor vehicle parts and equipment....	104.8	106.9	107.7	107.4	106.9	107.2	107.0	107.8	108.2	107.9	107.7	107.8	107.6	107.9
Motor vehicle maintenance and repair....	183.5	190.2	191.0	191.4	191.8	192.8	193.3	193.7	194.5	194.3	194.6	194.9	196.0	195.7
Public transportation...................	210.6	207.4	209.4	206.5	203.4	202.3	203.0	202.2	203.6	206.1	207.2	211.6	216.7	213.8
Medical care...........................	272.8	285.6	287.3	287.7	289.2	290.5	291.3	292.6	293.7	294.2	294.6	295.5	297.6	298.4
Medical care commodities..............	247.6	256.4	257.7	257.9	258.3	259.1	259.5	260.3	260.4	261.4	261.6	261.8	263.6	264.1
Medical care services.................	278.8	292.9	294.7	295.2	297.1	298.5	299.4	300.8	302.3	302.6	303.1	304.2	306.4	307.2
Professional services.................	246.5	253.9	254.9	254.8	256.0	256.5	257.0	257.8	258.8	259.1	259.8	261.1	260.9	261.7
Hospital and related services.........	338.3	367.8	371.3	373.3	376.7	380.7	382.4	385.7	388.2	388.7	388.7	388.9	394.7	398.6
Recreation[2].........................	104.9	1-6.2	106.3	106.2	106.4	106.4	106.5	106.9	107.2	107.4	107.4	107.6	107.7	107.7
Video and audio[1,2]..................	101.5	102.6	102.4	102.3	102.6	103.0	103.2	103.4	103.8	103.7	103.8	103.8	103.7	103.7
Education and communication[2].........	105.2	107.9	108.9	109.5	109.4	109.3	109.2	109.7	109.7	109.4	109.0	108.6	108.9	110.1
Education[2]..........................	118.5	126.0	127.1	129.6	129.9	130.0	130.0	130.6	131.0	131.1	131.2	131.4	132.6	136.2
Educational books and supplies.......	295.9	317.6	319.6	323.2	323.2	324.0	323.3	329.5	332.8	333.2	332.3	332.5	335.0	338.5
Tuition, other school fees, and child care....	341.1	362.1	365.6	372.8	373.8	374.1	374.0	375.5	376.3	376.5	377.1	377.7	381.2	392.1
Communication[1,2]....................	93.3	92.3	93.2	92.5	92.2	91.8	91.8	92.0	91.9	91.3	90.5	89.8	89.4	89.0
Information and information processing[1,2]......	92.3	90.8	91.5	90.7	90.4	90.0	90.0	90.3	90.1	89.5	88.6	87.9	87.5	87.0
Telephone services[1,2]............	99.3	99.7	100.6	100.1	99.9	99.8	99.9	100.4	100.5	99.7	98.7	98.1	98.1	97.8
Information and information processing other than telephone services[1,4]......	21.3	18.3	18.3	17.8	17.7	17.3	17.2	17.1	16.9	16.8	16.7	16.4	16.0	15.7
Personal computers and peripheral equipment[1,2]......	29.5	22.2	22.0	21.1	20.7	20.0	19.7	19.5	19.1	19.0	18.7	18.0	17.2	16.7
Other goods and services...............	282.6	293.2	295.9	297.0	295.4	295.6	295.8	296.5	297.5	297.3	298.1	298.1	299.2	299.6
Tobacco and smoking products...........	425.2	461.5	478.2	485.8	470.6	470.4	472.5	472.4	472.7	467.2	467.9	465.6	469.1	471.8
Personal care[1]......................	170.5	174.7	174.9	174.9	175.3	175.5	175.4	175.9	176.7	177.2	177.7	177.9	178.4	178.4
Personal care products[1].............	155.1	154.7	154.3	154.4	154.6	154.2	153.4	153.0	153.3	153.3	154.1	153.6	154.2	153.5
Personal care services[1].............	184.3	188.4	189.1	189.2	189.3	189.9	189.9	190.6	190.9	191.7	192.5	193.0	193.2	193.9

See footnotes at end of table.

32. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Miscellaneous personal services..................	263.1	274.4	275.4	275.2	276.0	276.6	276.9	278.1	280.4	281.4	282.0	282.7	283.8	284.1	284.3
Commodity and service group:															
Commodities........................	150.7	149.7	149.6	150.2	150.7	150.6	149.7	150.0	152.0	153.1	152.2	150.9	150.4	150.0	150.9
Food and beverages.............	173.6	176.8	176.6	176.9	177.1	177.4	177.8	178.1	178.9	179.2	179.0	179.4	180.2	180.3	180.9
Commodities less food and beverages.............	137.2	134.2	134.0	134.8	135.5	135.2	133.6	133.9	136.4	138.0	136.7	134.6	133.6	132.9	133.9
Nondurables less food and beverages............	147.1	145.1	145.4	147.2	148.4	148.0	145.2	146.1	151.2	154.5	152.3	148.9	147.4	146.6	149.2
Apparel	127.3	124.0	120.5	124.6	126.8	125.5	121.5	118.1	120.6	123.6	123.9	122.5	119.5	116.2	117.2
Nondurables less food, beverages, and apparel............	163.4	162.2	164.8	165.2	166.0	166.0	163.9	167.4	174.1	177.8	173.9	169.2	168.6	169.2	173.0
Durables..........................	124.6	121.4	120.7	120.6	120.6	120.5	120.2	119.9	119.7	119.5	119.2	118.5	118.0	117.4	116.7
Services..............................	203.4	209.8	211.5	211.5	211.7	211.8	211.9	213.1	214.0	215.1	215.1	215.9	216.8	217.6	218.0
Rent of shelter[3].......................	208.9	216.7	218.3	217.9	218.4	218.2	218.1	219.5	220.3	220.9	220.8	221.5	221.7	222.6	223.1
Transporation services...................	201.9	209.1	210.1	210.1	210.9	212.0	212.0	212.3	213.4	214.2	215.3	216.3	217.1	218.0	217.2
Other services...........................	238.0	246.4	248.2	249.1	249.7	249.9	250.2	251.4	252.4	252.6	252.5	252.8	253.0	253.7	255.5
Special indexes:															
All items less food........................	177.8	180.5	181.5	181.8	182.2	182.1	181.6	182.4	183.9	185.2	184.7	184.3	184.5	184.6	185.3
All items less shelter.....................	169.7	170.8	171.3	171.9	172.2	172.3	171.7	172.3	174.0	175.3	174.7	174.1	174.3	174.2	175.0
All items less medical care...................	171.9	174.3	175.0	175.3	175.6	175.6	175.1	175.9	177.3	178.4	178.0	177.7	177.9	178.0	178.7
Commodities less food................	138.9	136.0	135.9	136.7	137.3	137.0	135.6	135.8	138.3	139.8	138.6	136.5	135.5	134.9	135.9
Nondurables less food..................	149.1	147.4	147.7	149.3	150.6	150.2	147.6	148.4	153.3	156.5	154.3	151.1	151.1	149.0	151.5
Nondurables less food and apparel..............	164.1	163.3	165.8	166.1	166.9	166.9	165.0	168.2	174.4	177.7	174.2	169.9	169.4	170.0	173.4
Nondurables............................	160.6	161.1	161.2	162.2	163.0	162.9	161.6	162.2	165.3	167.2	165.9	164.3	163.9	163.5	165.2
Services less rent of shelter[3]...............	212.3	217.5	219.5	220.0	219.9	220.2	220.5	221.6	222.8	224.4	224.6	225.5	227.2	228.0	228.4
Services less medical care services..........	196.6	202.5	204.2	204.1	204.2	204.3	204.3	205.5	206.4	207.4	207.5	208.2	209.1	209.8	210.3
Energy....................................	129.3	121.7	125.8	126.1	125.8	125.3	123.3	127.5	135.4	142.6	138.1	134.0	136.5	136.8	140.6
All items less energy....................	183.5	187.7	188.1	188.4	188.8	188.9	188.6	189.0	189.7	190.2	190.2	190.3	190.3	190.5	190.8
All items less food and energy..................	186.1	190.5	191.0	191.3	191.8	191.8	191.4	191.8	192.5	193.0	193.1	193.2	193.0	193.2	193.5
Commodities less food and energy............	145.3	143.7	142.8	143.6	143.9	143.6	142.5	141.7	142.1	142.6	142.5	141.7	140.8	139.9	139.7
Energy commodities............	125.2	117.1	121.5	122.0	124.8	124.9	120.7	127.5	142.1	150.1	141.7	132.3	130.9	131.3	139.2
Services less energy...................	209.6	217.5	219.0	218.9	219.5	219.8	219.8	221.0	221.9	222.4	222.5	223.1	223.5	224.3	224.9
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items...	173.5	175.9	176.6	177.0	177.3	177.4	177.0	177.7	179.2	180.3	179.8	179.4	179.6	179.6	180.6
All items (1967 = 100).....................	516.8	523.9	526.0	527.3	528.2	528.4	527.2	529.2	533.7	537.1	535.5	534.3	534.3	535.0	537.1
Food and beverages.....................	173.0	176.1	175.9	176.2	176.3	176.6	177.1	177.4	178.3	178.5	178.3	178.7	179.5	179.6	180.2
Food.......................................	172.5	176.5	175.3	175.7	175.7	176.0	176.5	176.8	177.7	177.9	177.7	178.1	178.9	179.1	179.7
Food at home...........................	172.4	175.1	174.0	174.3	174.2	174.5	175.1	175.7	176.7	176.8	176.4	176.8	177.9	178.0	178.8
Cereals and bakery products..........................	193.6	197.1	198.5	198.4	198.9	198.2	197.1	199.9	201.9	202.1	201.8	202.9	203.7	204.4	204.5
Meats, poultry, fish, and eggs.........................	161.2	162.0	162.0	161.5	161.2	162.1	162.3	161.5	164.5	164.8	165.2	164.6	167.0	168.2	169.5
Dairy and related products[1].....................	167.1	167.2	167.0	166.1	166.4	166.9	167.2	166.3	167.1	166.7	165.6	165.1	163.5	164.4	167.0
Fruits and vegetables.....................	210.8	222.9	216.2	217.5	216.2	218.0	222.9	225.7	221.8	222.2	220.0	224.3	225.7	225.3	223.8
Nonalcoholic beverages and beverage materials...........	138.4	138.6	136.9	139.6	139.9	138.6	139.1	139.9	140.1	139.5	139.6	139.7	139.6	137.5	138.9
Other foods at home...............	159.1	160.4	160.1	160.3	160.3	160.7	160.6	161.3	161.9	162.1	161.7	161.7	163.0	162.3	162.6
Sugar and sweets................	155.6	158.8	159.6	159.5	159.5	158.2	158.9	160.4	161.3	162.1	160.9	162.1	162.4	162.3	162.1
Fats and oils.....................	155.4	155.3	154.0	155.2	155.8	153.4	152.9	155.7	158.7	157.7	156.2	157.6	156.5	156.2	157.7
Other foods.......................	176.3	177.6	177.3	177.2	177.2	178.8	178.5	178.5	178.5	178.9	179.0	187.1	180.5	179.4	179.7
Other miscellaneous foods[1,2].........	109.1	109.7	109.9	110.1	110.1	111.0	110.7	110.1	110.9	110.5	110.9	110.5	112.1	111.6	110.0
Food away from home[1].........	173.8	178.2	178.7	179.0	179.4	179.7	180.0	179.8	180.5	181.0	181.0	181.4	181.7	182.1	182.4
Other food away from home[1,2].......................	113.6	118.1	118.9	119.3	119.6	120.0	120.1	120.2	120.4	120.7	120.8	120.8	121.3	121.4	121.6
Alcoholic beverages....................	178.8	183.3	183.8	183.4	184.3	184.6	184.7	185.5	185.7	186.8	186.6	186.8	186.8	187.0	186.9
Housing..	172.1	175.7	176.9	177.0	176.9	176.9	176.9	177.9	178.7	179.9	179.7	180.0	180.9	181.4	181.6
Shelter..	194.5	201.9	202.9	203.0	203.5	203.7	203.9	204.9	205.5	205.9	205.9	206.4	206.5	207.2	207.7
Rent of primary residence...............	191.5	199.0	199.6	200.0	200.6	201.3	201.9	202.6	203.0	203.4	203.7	204.1	204.4	204.8	205.3
Lodging away from home[2].............	118.4	118.4	122.9	117.7	117.7	114.0	109.6	114.3	118.0	120.4	119.0	122.2	122.6	125.0	125.2
Owners' equivalent rent of primary residence[3]	187.6	195.1	195.7	196.4	196.9	197.4	198.0	198.5	198.6	198.8	198.8	199.0	199.0	199.4	199.9
Tenants' and household insurance[1,2]	106.4	108.7	109.7	110.1	110.1	111.2	112.3	113.7	113.9	113.8	114.0	114.0	115.0	115.4	115.7
Fuels and utilities..........................	149.5	142.9	146.2	146.5	143.6	143.0	143.5	145.3	147.4	153.6	152.4	153.0	158.6	158.9	158.7
Fuels......................................	134.2	126.1	129.6	129.9	126.7	126.0	126.4	128.3	130.5	137.0	135.7	136.3	142.2	142.4	141.9
Fuel oil and other fuels.............	129.2	115.0	111.3	114.5	118.6	121.0	125.0	135.8	155.7	167.9	146.9	136.1	131.6	129.6	129.6
Gas (piped) and electricity..........	141.5	133.4	137.4	137.6	133.8	132.9	133.2	134.7	136.0	142.6	142.3	143.5	150.3	150.6	150.1
Household furnishings and operations............	125.8	124.4	124.2	123.9	123.9	123.7	123.0	123.2	123.5	122.8	122.8	122.0	121.9	121.9	121.4
Apparel..	126.1	123.1	119.6	123.5	125.5	124.6	120.9	117.3	119.4	122.5	122.8	121.5	118.7	115.2	116.1
Men's and boys' apparel...............	125.8	121.7	118.2	119.8	122.3	122.7	118.8	115.7	116.8	120.6	120.4	119.1	116.2	113.4	112.9
Women's and girls' apparel..............	117.3	114.6	109.6	116.8	119.3	117.2	112.3	106.7	111.0	116.4	116.4	114.2	110.4	105.0	106.9
Infants' and toddlers' apparel[1].....................	130.9	128.6	126.8	128.4	129.5	129.7	127.2	122.4	123.6	125.8	125.5	125.7	122.9	120.3	122.9
Footwear..................................	123.1	121.2	119.6	121.4	122.3	122.5	120.8	119.5	119.3	119.6	119.8	119.9	118.5	116.9	117.2
Transportation..	153.6	151.8	153.0	153.1	154.0	154.2	153.0	154.6	158.2	160.3	158.5	156.2	155.7	155.5	157.1
Private transportation.....................	150.8	149.0	150.2	150.4	151.4	151.6	150.4	152.0	155.7	157.8	155.9	153.3	152.8	152.5	154.2
New and used motor vehicles[2].............	101.9	99.4	99.1	99.0	99.0	98.7	98.5	98.2	97.9	98.0	97.7	96.9	96.9	96.3	95.7

See footnotes at end of table.

32. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
New vehicles..	143.2	141.1	139.1	139.8	140.7	141.5	141.7	140.9	140.3	140.4	139.7	139.1	138.4	137.7	137.9
Used cars and trucks[1]................................	159.8	152.8	154.2	153.1	151.5	149.7	149.3	149.2	149.2	149.2	149.2	148.7	148.1	146.4	144.0
Motor fuel..	124.9	117.0	121.8	122.1	124.9	124.8	120.0	126.7	140.9	148.5	140.8	131.5	130.4	130.9	139.4
Gasoline (all types).....................................	124.2	116.4	121.3	121.6	124.4	124.3	119.4	126.1	140.3	147.8	140.2	130.9	129.8	130.4	138.9
Motor vehicle parts and equipment................	104.0	106.1	107.0	106.7	106.2	106.5	106.3	107.1	107.5	107.2	107.1	107.2	107.1	107.0	107.3
Motor vehicle maintenance and repair...........	185.1	191.7	192.5	192.9	193.3	194.3	195.0	195.4	196.2	196.0	196.3	196.5	196.8	197.7	197.3
Public transportation.....................................	204.9	202.6	204.5	201.9	199.2	198.5	199.2	198.1	199.8	202.0	203.0	208.5	210.8	212.8	210.5
Medical care...	271.8	284.6	286.3	286.7	288.3	289.6	290.6	291.8	293.0	293.5	293.7	294.6	295.5	296.7	297.4
Medical care commodities.............................	242.7	251.1	252.3	252.5	252.8	253.5	254.0	254.8	255.1	256.1	256.2	256.4	256.7	258.2	258.6
Medical care services...................................	278.5	292.5	294.5	294.9	296.9	298.4	299.5	300.9	302.3	302.7	303.0	304.1	305.1	306.3	307.0
Professional services.................................	248.7	256.0	256.9	256.8	258.2	258.7	259.2	260.0	261.0	261.3	261.9	263.3	263.5	264.1	263.9
Hospital and related services......................	333.8	363.2	367.1	368.9	372.6	376.7	379.1	382.2	384.8	385.3	384.9	385.0	388.1	390.9	394.2
Recreation[2]...	103.6	104.6	104.7	104.4	194.6	104.5	104.7	105.1	105.4	105.4	105.4	105.5	105.5	105.6	105.7
Video and audio[1,2].......................................	100.9	102.0	101.6	101.4	101.8	102.2	102.4	102.7	103.0	102.9	103.0	103.0	102.9	102.9	102.9
Education and communication[2]......................	105.3	107.6	108.6	109.1	109.0	108.8	108.8	109.2	109.2	108.9	108.4	108.0	107.8	108.2	109.1
Education[2]...	118.7	125.9	126.9	129.3	129.6	129.7	129.7	130.3	130.7	130.8	130.9	131.1	131.8	132.3	135.5
Educational books and supplies...................	299.9	318.5	320.4	323.9	324.2	325.0	324.5	330.6	333.6	333.9	333.4	333.6	335.5	336.3	339.6
Tuition, other school fees, and child care......	334.7	354.8	357.7	364.9	365.7	366.0	366.0	367.2	368.0	368.2	368.8	369.3	371.1	372.6	382.1
Communication[1,2].......................................	94.5	93.7	94.6	93.9	93.6	93.3	93.2	93.5	93.4	92.8	92.0	91.3	90.7	90.9	90.5
Information and information processing[1,2].....	93.8	92.7	93.4	92.4	92.4	92.0	93.0	92.3	92.2	91.6	90.7	90.0	89.6	89.6	89.1
Telephone services[1,2]...............................	99.4	99.9	100.8	100.3	100.2	100.1	100.1	100.7	100.7	99.9	98.9	98.3	97.7	98.3	98.0
Information and information processing other than telephone services[1,4]................	22.1	19.0	18.9	18.5	18.3	17.9	17.8	17.7	17.5	17.4	17.4	17.0	16.8	16.5	16.3
Personal computers and peripheral equipment[1,2]..	29.1	21.8	21.7	20.8	20.4	19.7	19.3	19.1	18.6	18.6	18.5	17.8	16.9	16.9	16.3
Other goods and services.............................	289.5	302.0	306.0	307.8	304.9	305.0	305.1	305.6	306.4	305.6	306.4	306.0	306.0	307.5	308.0
Tobacco and smoking products......................	426.1	463.2	480.7	488.4	473.1	472.8	474.3	474.3	474.8	469.1	469.8	464.8	464.8	470.5	473.2
Personal care[1]...	170.3	174.1	174.3	174.4	174.8	174.9	174.7	175.2	175.7	176.1	176.7	176.9	177.2	177.5	177.4
Personal care products[1]..............................	155.7	155.5	155.1	155.2	155.5	155.0	154.2	154.8	154.0	153.8	154.6	154.2	154.4	154.8	154.3
Personal care services[1]..............................	184.9	189.1	189.8	190.0	190.1	190.6	190.7	189.1	191.6	192.4	193.2	193.6	193.5	193.9	194.6
Miscellaneous personal services..................	262.8	274.0	275.2	274.9	275.9	276.6	276.7	277.9	279.9	281.1	281.6	282.4	283.9	284.0	284.4
Commodity and service group:															
Commodities..	151.4	150.4	150.4	151.0	151.4	151.3	150.3	150.7	152.8	154.0	153.0	151.6	151.1	150.7	151.6
Food and beverages.....................................	173.0	176.1	175.9	176.2	176.3	176.6	177.1	177.4	178.3	178.5	178.3	178.7	179.5	179.6	180.2
Commodities less food and beverages...........	138.7	135.5	135.6	136.4	136.9	136.5	135.0	135.5	138.0	139.6	138..2	136.0	135.0	134.2	135.4
Nondurables less food and beverages...........	149.0	147.0	147.7	149.4	159.6	150.2	147.3	148.3	153.8	157.3	154.8	151.1	149.6	148.7	151.7
Apparel..	126.1	123.1	119.6	123.5	125.5	124.6	120.9	117.3	119.4	122.5	122.8	121.5	118.7	115.2	116.1
Nondurables less food, beverages, and apparel..	166.3	165.3	168.5	169.1	169.7	169.6	167.2	171.0	178.7	182.6	178.3	173.0	172.3	173.0	177.4
Durables..	125.3	121.8	121.3	121.1	121.0	120.6	120.4	120.1	119.9	119.8	119.4	118.8	118.3	117.6	116.9
Services..	199.6	205.9	207.3	207.6	207.8	208.1	208.3	209.4	210.2	211.2	211.3	212.0	212.9	213.6	214.0
Rent of shelter[3]..	187.3	194.5	195.5	195.5	196.1	196.2	196.3	197.3	197.9	198.3	198.3	198.8	198.9	199.5	200.0
Transportation services..............................	199.1	207.7	208.6	208.8	210.0	211.4	211.7	212.2	213.2	213.9	215.0	216.1	216.7	217.4	216.8
Other services..	233.7	241.6	243.4	244.1	244.6	244.8	245.1	246.2	247.1	247.0	246.8	246.8	247.2	247.9	249.3
Special indexes:															
All items less food.......................................	173.6	175.8	176.7	177.1	177.5	177.5	177.0	177.7	179.3	180.6	180.0	179.5	179.5	179.6	180.3
All items less shelter....................................	167.6	168.3	168.9	169.5	169.7	169.7	169.1	169.7	171.5	172.9	172.2	171.4	171.7	171.5	172.3
All items less medical care...........................	169.1	171.1	171.8	172.2	172.5	172.5	172.1	172.7	174.2	175.4	174.8	174.4	174.5	174.5	175.2
Commodities less food.................................	140.2	137.3	137.4	138.1	138.6	138.3	136.8	137.1	139.7	141.4	140.0	137.9	136.9	136.1	137.2
Nondurables less food..................................	150.8	149.2	149.8	151.5	152.6	152.3	149.6	150.5	155.8	159.2	156.8	153.2	151.8	151.0	151.0
Nondurables less food and apparel................	166.7	166.1	169.2	169.6	179.3	170.2	168.0	171.6	178.7	182.3	178.4	173.5	172.8	173.5	177.5
Nondurables...	161.4	161.4	162.2	163.2	163.9	163.9	162.6	163.2	166.5	168.5	167.1	165.3	164.9	164.6	166.4
Services less rent of shelter[3].......................	188.5	193.1	194.9	195.3	195.2	195.6	195.9	196.9	197.9	199.5	199.7	200.4	202.2	202.8	203.1
Services less medical care services..............	193.1	198.9	200.4	200.6	200.7	200.9	201.1	202.1	202.9	204.0	204.0	204.7	205.2	206.2	206.6
Energy..	128.7	120.9	125.0	125.3	125.2	124.8	122.6	126.9	135.1	142.2	137.7	133.2	135.6	135.9	140.0
All items less energy....................................	179.8	183.6	183.8	184.3	184.7	184.8	184.6	184.8	185.5	185.9	185.8	185.9	185.9	185.9	186.2
All items less food and energy.......................	181.7	185.6	186.0	186.5	186.9	187.0	186.7	186.9	187.5	188.0	188.0	188.0	187.7	187.7	187.9
Commodities less food and energy.............	146.1	144.4	143.7	144.4	144.5	144.1	143.1	142.2	142.6	143.1	143.0	142.2	141.3	140.3	140.1
Energy commodities...................................	125.3	17.3	121.8	122.2	125.1	125.2	120.7	127.6	142.1	150.0	141.7	132.3	131.0	131.4	139.5
Services less energy...................................	206.0	213.9	215.1	215.4	216.1	216.5	216.7	217.7	218.5	218.8	219.0	219.6	219.8	220.5	221.0

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

Dash indicates data not available.

NOTE: Index applied to a month as a whole, not to any specific date.

33. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

	Pricing sched-ule[1]	All Urban Consumers 2003						Urban Wage Earners 2003					
		Mar.	Apr.	May	June	July	Aug.	Mar.	Apr.	May	June	July	Aug.
U.S. city average	M	184.2	183.8	183.5	183.7	183.9	184.6	180.3	179.8	179.4	179.6	179.6	180.3
Region and area size[2]													
Northeast urban	M	193.0	192.6	192.7	192.8	193.5	194.3	189.8	189.4	189.2	189.2	190.0	190.7
Size A—More than 1,500,000	M	194.6	194.4	194.6	194.9	195.5	196.6	190.0	189.8	189.8	190.0	190.8	191.8
Size B/C—50,000 to 1,500,000[3]	M	115.0	114.4	114.2	113.9	114.5	114.4	115.2	114.5	114.2	113.9	114.5	114.5
Midwest urban[4]	M	178.6	177.8	177.7	178.4	178.1	178.8	174.1	173.1	172.9	173.7	173.3	174.1
Size A—More than 1,500,000	M	180.7	179.7	179.7	180.7	180.5	181.2	175.4	174.3	174.2	175.1	174.8	175.5
Size B/C—50,000 to 1,500,000[3]	M	113.6	113.2	113.0	113.2	113.1	113.6	113.1	112.6	112.4	112.7	112.5	113.0
Size D—Nonmetropolitan (less than 50,000)	M	173.0	171.7	171.7	172.6	171.4	172.1	170.6	169.3	169.3	170.1	169.1	169.8
South urban	M	177.5	177.4	176.8	177.2	177.3	177.9	175.0	174.7	174.0	174.3	174.3	174.8
Size A—More than 1,500,000	M	179.1	178.9	178.6	179.0	179.1	179.8	176.5	176.3	175.7	176.2	176.2	177.0
Size B/C—50,000 to 1,500,000[3]	M	113.3	113.3	112.8	113.1	113.1	113.4	112.5	112.3	111.8	112.0	111.9	112.1
Size D—Nonmetropolitan (less than 50,000)	M	175.4	175.5	174.7	174.9	175.0	175.9	175.7	175.4	174.6	174.8	174.6	174.5
West urban	M	189.3	188.8	188.5	188.1	188.4	189.2	184.7	184.2	183.8	183.3	183.4	184.2
Size A—More than 1,500,000	M	192.1	191.7	191.2	190.9	190.9	191.7	185.9	185.4	185.0	184.5	154.3	185.3
Size B/C—50,000 to 1,500,000[3]	M	115.4	114.9	114.7	114.4	115.1	115.5	115.1	114.7	114.4	114.1	114.6	114.8
Size classes:													
A[5]	M	168.4	168.0	167.9	168.2	168.3	169.0	166.8	166.3	166.1	166.3	166.3	167.2
B/C[3]	M	114.0	113.7	113.4	113.4	113.6	113.9	113.5	113.1	112.7	112.8	112.9	113.1
D	M	176.9	176.3	176.1	176.4	184.1	177.1	175.6	174.9	174.5	174.9	174.4	175.3
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI	M	184.8	183.4	183.4	184.1	184.1	184.5	179.0	177.4	177.3	178.0	177.8	178.3
Los Angeles–Riverside–Orange County, CA	M	188.2	187.6	186.4	186.3	186.3	186.9	181.6	180.9	179.9	179.6	179.6	180.5
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	197.1	196.7	196.8	196.9	197.7	199.1	192.1	191.8	191.7	191.9	192.8	194.1
Boston–Brockton–Nashua, MA–NH–ME–CT	1	202.8	–	202.3	–	203.0	–	202.3	–	201.8	–	202.2	–
Cleveland–Akron, OH	1	175.4	–	175.1	–	176.0	–	167.1	–	166.3	–	167.0	–
Dallas–Ft Worth, TX	1	176.8	–	176.9	–	176.5	–	176.5	–	176.4	–	175.9	–
Washington–Baltimore, DC–MD–VA–WV[7]	1	115.9	–	115.7	–	116.8	–	115.5	–	115.1	–	116.2	–
Atlanta, GA	2	–	182.1	–	181.5	–	179.7	–	179.2	–	178.7	–	179.4
Detroit–Ann Arbor–Flint, MI	2	–	182.2	–	182.8	–	183.6	–	176.4	–	176.7	–	177.5
Houston–Galveston–Brazoria, TX	2	–	162.5	–	162.5	–	164.1	–	160.9	–	160.7	–	162.5
Miami–Ft. Lauderdale, FL	2	–	180.6	–	179.4	–	180.9	–	178.4	–	176.8	–	178.3
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	–	187.2	–	189.7	–	191.1	–	186.3	–	187.8	–	189.2
San Francisco–Oakland–San Jose, CA	2	–	197.3	–	196.3	–	196.3	–	193.6	–	192.2	–	192.3
Seattle–Tacoma–Bremerton, WA	2	–	192.3	–	191.7	–	194.4	–	187	–	185.7	–	188.2

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:

M—Every month.

1—January, March, May, July, September, and November.

2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the CPI Detailed Report: Anchorage, AK; Cincinnati, OH–KY–IN; Kansas City, MO–KS; Milwaukee–Racine, W Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Port-land–Salem, OR–WA; St Louis MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each loca index has a smaller sample size and is, therefore, subject to substantially more samplin and other measurement error. As a result, local area indexes show greater volatility tha the national index, although their long-term trends are similar. Therefore, the Bureau c Labor Statistics strongly urges users to consider adopting the national average CPI fc use in their escalator clauses. Index applies to a month as a whole, not to any specifi date.

Dash indicates data not available.

34. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Consumer Price Index for All Urban Consumers:										
All items:										
Index..	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.2	177.1	179.9
Percent change..	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4	2.8	1.6
Food and beverages:										
Index..	141.6	144.9	148.9	153.7	157.7	161.1	164.6	168.4	173.6	176.8
Percent change..	2.1	2.3	2.8	3.2	2.6	2.2	2.2	2.3	3.1	1.8
Housing:										
Index..	141.2	144.8	148.5	152.8	156.8	160.4	163.9	169.6	176.4	180.3
Percent change..	2.7	2.5	2.6	2.9	2.6	2.3	2.2	3.5	4.0	2.2
Apparel:										
Index..	133.7	133.4	132.0	131.7	132.9	133.0	131.3	129.6	127.3	124.0
Percent change..	1.4	–.2	–1.0	–.2	.9	.1	–1.3	–1.3	–1.8	–2.6
Transportation:										
Index..	130.4	134.3	139.1	143.0	144.3	141.6	144.4	153.3	154.3	152.9
Percent change..	3.1	3.0	3.6	2.8	0.9	–1.9	2.0	6.2	0.7	–.9
Medical care:										
Index..	201.4	211.0	220.5	228.2	234.6	242.1	250.6	260.8	272.8	285.6
Percent change..	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1	4.6	4.7
Other goods and services:										
Index..	192.9	198.5	206.9	215.4	224.8	237.7	258.3	271.1	282.6	293.2
Percent change..	5.2	2.9	4.2	4.1	4.4	5.7	8.7	5.0	4.2	3.8
Consumer Price Index for Urban Wage Earners and Clerical Workers:										
All items:										
Index..	142.1	145.6	149.8	154.1	157.6	159.7	163.2	168.9	173.5	175.9
Percent change..	2.8	2.5	2.9	2.9	2.3	1.3	2.2	3.5	2.7	1.4

35. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2002					2003							
	2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	July[p]	Aug.
Finished goods...................................	140.7	138.8	138.8	139.1	140.7	139.7	139.0	140.8	142.3	144.2	142.1	142.0	143.1	143.0	143.5
Finished consumer goods......................	141.5	139.4	139.6	140.0	141.6	140.4	139.6	141.9	144.0	146.3	143.8	143.7	145.1	145.0	145.7
Finished consumer foods......................	141.3	140.0	139.3	138.7	139.2	139.2	139.5	142.0	142.3	142.8	144.0	144.6	145.3	145.0	146.2
Finshed consumer goods excluding foods.........................	141.4	138.8	139.3	140.2	142.2	140.5	139.3	141.6	144.4	147.4	143.5	143.0	144.7	144.7	145.1
Nondurable goods less food...............	142.8	139.8	141.5	142.8	143.8	142.0	140.6	143.8	147.9	151.7	146.9	146.3	149.0	149.1	149.7
Durable goods...............................	133.9	133.0	131.0	131.1	134.8	133.6	132.8	133.2	133.1	134.4	132.5	132.4	131.8	131.6	131.6
Capital equipment................................	139.7	139.1	138.2	138.3	139.9	139.5	139.1	139.3	139.2	139.9	139.1	139.0	139.0	139.3	139.3
Intermediate materials, supplies, and components...................	128.7	127.8	128.4	129.3	129.7	129.7	129.4	131.1	133.5	136.2	133.0	132.5	133.4	133.7	134.0
Materials and components for manufacturing.............................	127.4	126.1	126.5	126.9	127.4	127.6	127.2	127.9	129.5	130.1	129.4	129.3	129.6	129.4	130.0
Materials for food manufacturing............	124.3	123.2	123.1	123.9	124.3	125.0	126.9	128.9	129.6	129.0	129.6	130.8	134.4	133.7	135.5
Materials for nondurable manufacturing...	131.8	129.2	130.3	131.5	132.9	132.8	131.4	133.4	138.1	140.1	137.6	137.0	137.0	136.6	137.9
Materials for durable manufacturing.........	125.2	124.7	125.3	125.9	125.9	126.3	126.2	126.1	126.8	126.9	126.7	128.8	127.3	127.3	127.9
Components for manufacturing...............	126.3	126.1	125.9	125.9	125.8	126.0	125.9	125.8	125.8	126.0	126.0	126.1	125.9	126.0	125.9
Materials and components for construction......	150.6	151.3	152.1	152.1	151.7	151.2	151.1	151.4	152.1	152.3	152.9	152.9	153.2	153.7	153.7
Processed fuels and lubricants..................	104.5	96.3	97.6	100.6	101.6	101.2	100.9	106.9	113.6	124.8	110.8	108.1	111.5	113.0	113.6
Containers..	153.1	152.1	151.5	152.5	153.3	153.4	153.2	153.4	153.7	153.8	154.0	153.9	153.9	153.7	153.6
Supplies..	138.6	138.9	139.3	139.6	139.5	139.6	139.6	140.1	140.7	141.2	141.3	141.5	141.4	141.6	141.4
Crude materials for further processing...	121.3	108.1	108.7	110.9	112.6	116.1	118.1	127.3	134.0	152.2	128.0	130.9	136.8	133.0	131.4
Foodstuffs and feedstuffs.......................	106.2	99.5	99.7	100.7	99.9	99.4	100.5	105.6	106.3	105.7	107.0	111.0	110.0	107.4	111.5
Crude nonfood materials.......................	127.3	111.4	112.1	115.4	119.0	125.3	128.2	140.4	151.7	184.4	140.6	142.4	153.7	149.1	142.9
Special groupings:															
Finished goods, excluding foods...............	140.4	138.3	138.4	139.0	140.8	139.6	138.7	140.3	142.1	144.3	141.5	141.1	142.2	142.3	142.6
Finished energy goods............................	96.8	88.8	91.3	93.0	94.5	91.3	90.7	95.3	101.7	107.4	100.0	98.9	103.5	103.5	104.3
Finished goods less energy.....................	147.5	147.3	146.5	146.4	147.9	147.6	147.0	147.9	147.9	148.6	148.2	148.3	148.3	148.3	148.7
Finished consumer goods less energy......	150.8	150.8	150.0	149.9	151.3	151.0	150.2	151.5	151.6	152.3	152.1	152.3	152.3	152.2	152.7
Finished goods less food and energy........	150.0	150.2	149.3	149.5	151.3	150.9	149.9	150.3	151.0	151.0	150.0	150.0	149.7	149.8	149.9
Finished consumer goods less food and energy.....	156.9	157.6	156.8	157.1	159.1	158.6	157.2	157.7	157.6	158.4	157.4	157.4	157.0	156.9	157.0
Consumer nondurable goods less food and energy.....	175.1	177.5	177.9	178.3	178.5	178.9	176.7	177.4	177.3	177.7	177.5	177.6	177.4	177.5	177.6
Intermediate materials less foods and feeds........	130.5	128.5	129.0	130.0	130.4	130.3	130.0	131.7	134.2	137.0	133.7	133.1	133.9	134.2	134.6
Intermediate foods and feeds...................	115.9	115.5	116.8	118.0	117.4	117.5	118.8	120.4	121.2	121.0	121.2	122.8	125.1	124.8	125.1
Intermediate energy goods.....................	104.1	95.9	97.0	100.4	101.6	101.0	100.0	105.8	113.2	124.2	110.1	107.1	110.5	112.3	113.5
Intermediate goods less energy................	135.1	134.5	135.0	135.3	135.4	135.5	135.5	136.1	137.1	137.6	137.3	137.5	137.6	137.5	137.7
Intermediate materials less foods and energy.....	136.4	135.8	136.2	136.5	136.6	136.7	136.6	137.1	138.1	138.7	138.4	138.5	138.5	138.4	138.6
Crude energy materials...........................	122.8	102.0	101.2	105.9	111.3	120.0	124.0	140.1	153.9	200.2	138.8	141.4	157.9	151.0	139.9
Crude materials less energy.....................	112.2	108.7	110.0	110.6	109.9	109.8	110.5	115.1	116.9	116.5	117.0	120.0	118.9	117.3	121.7
Crude nonfood materials less energy.........	130.6	135.7	140.3	140.0	139.3	139.8	139.9	143.0	148.3	148.1	146.7	146.5	145.4	146.5	146.5

36. Producer Price Indexes for the net output of major industry groups

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		2002					2003							
		2001	2002	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	July[p]	Aug.[p]
–	**Total mining industries**............................	114.3	96.6	95.9	100.1	104.5	110.5	113.8	126.0	137.4	169.1	124.5	126.3	138.3	133.2	125.2
10	Metal mining..........................	70.8	93.6	73.2	73.6	72.8	74.2	74.5	78.0.	78.5	76.8	73.9	77.8	79.1	78.7	80.6
12	Coal mining (12/85 = 100)............................	91.3	93.9	93.4	92.8	93.4	93.6	93.1	93.2	93.4	93.7	94.8	94.6	94.1	93.4	94.0
13	Oil and gas extraction (12/85 = 100)................	127.5	107.0	106.0	112.8	119.5	128.8	133.9	152.5	170.2	220.0	150.2	152.7	171.3	163.6	150.7
14	Mining and quarrying of nonmetallic minerals, except fuels......................	141.0	143.5	143.5	143.5	143.7	143.8	144.2	144.9	145.4	145.9	146.3	146.4	146.7	146.7	146.7
–	**Total manufacturing industries**...................	134.6	133.7	133.7	135.0	135.6	134.6	134.0	135.7	137.6	138.7	136.3	135.8	136.2	136.5	137.0
20	Food and kindred products..........................	132.8	132.0	131.3	136.1	131.6	131.6	132.6	133.9	134.5	134.8	135.1	135.7	137.3	137.2	137.7
21	Tobacco manufactures................................	386.1	401.9	408.5	408.5	408.6	409.2	380.3	379.7	379.8	380.9	375.5	376.4	376.1	376.3	376.3
22	Textile mill products.................................	116.9	115.8	115.5	115.6	115.6	115.8	116.1	115.3	115.2	115.1	115.2	115.3	115.5	115.4	115.7
23	Apparel and other finished products made from fabrics and similar materials.......	125.8	125.1	125.3	125.1	125.1	125.1	124.8	124.7	124.7	124.9	124.9	124.9	124.9	124.9	124.9
24	Lumber and wood products, except furniture......................	156.2	155.3	155.9	155.3	154.6	154.1	154.2	154.4	155.7	155.3	156.0	156.4	157.3	160.3	160.9
25	Furniture and fixtures.................................	145.1	146.3	146.6	147.0	147.2	147.0	146.8	147.0	147.1	147.2	147.3	147.4	147.5	147.5	147.5
26	Paper and allied products..........................	146.2	143.7	143.5	144.1	144.6	145.1	144.9	144.8	144.9	144.9	145.1	145.3	145.0	144.8	144.7
27	Printing, publishing, and allied industries.......	188.7	193.0	193.2	193.4	193.6	194.0	194.1	196.4	196.7	196.7	197.0	197.3	197.2	197.2	197.8
28	Chemicals and allied products.....................	158.4	157.3	158.6	158.7	159.5	159.7	159.3	160.9	162.3	165.2	166.7	165.8	165.2	164.9	164.5
29	Petroleum refining and related products.........	105.3	98.8	103.2	109.6	117.5	106.7	102.4	116.5	138.0	145.9	118.7	111.0	115.4	118.1	124.0
30	Rubber and miscellaneous plastics products..	125.9	125.5	125.9	126.3	126.3	125.8	125.8	126.3	127.2	128.1	129.1	129.2	129.0	128.8	128.8
31	Leather and leather products.......................	141.3	141.1	142.0	141.9	141.8	142.1	142.5	142.4	142.4	142.4	142.7	142.2	141.8	142.4	142.5
32	Stone, clay, glass, and concrete products......	136.0	137.1	137.4	137.6	137.4	137.3	137.3	137.6	137.8	137.7	138.1	138.0	137.7	138.2	138.0
33	Primary metal industries..............................	116.1	116.2	117.1	117.9	118.0	118.3	118.1	117.9	118.0	118.0	117.8	117.8	118.3	117.6	118.1
34	Fabricated metal products, except machinery and transportation equipment.............................	131.0	131.7	132.0	132.1	132.1	132.0	132.2	132.4	132.5	132.7	132.7	132.7	132.7	132.9	132.9
35	Machinery, except electrical...........................	118.0	117.2	116.8	116.8	116.8	116.6	116.5	116.5	116.2	116.0	116.1	116.0	116.2	116.1	116.0
36	Electrical and electronic machinery, equipment, and supplies.........................	107.0	105.7	105.5	105.4	105.1	105.0	104.3	104.2	103.8	104.0	104.0	104.0	103.6	103.7	102.5
37	Transportation..	137.9	137.3	135.0	135.1	139.4	138.3	137.6	138.1	138.3	139.8	137.5	137.5	136.7	136.6	137.0
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks.....................	127.3	128.5	128.4	128.7	128.8	128.8	128.8	129.4	129.8	129.7	129.9	129.8	130.0	130.0	130.0
39	Miscellaneous manufacturing industries industries (12/85 = 100)............................	132.4	133.3	133.4	133.5	133.6	133.5	133.8	133.7	134.0	133.8	133.9	133.9	133.9	134.3	134.3
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)...................	123.1	124.5	125.0	125.1	125.5	125.9	125.9	126.5	126.8	127.3	127.4	127.4	127.5	127.8	128.3
43	U.S. Postal Service (06/89 = 100)...................	143.4	150.2	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
44	Water transportation (12/92 = 100)................	129.8	134.6	135.3	139.0	141.0	141.3	142.2	142.9	140.7	140.9	139.9	147.6	147.8	151.1	151.1
45	Transportation by air (12/92 = 100)................	157.2	157.8	158.0	158.6	160.1	159.4	159.8	161.4	160.2	161.8	162.2	162.0	162.4	163.3	162.9
46	Pipelines, except natural gas (12/92 = 100).....	110.3	111.9	112.5	112.5	112.7	112.3	111.8	110.6	110.6	111.0	110.6	111.8	111.9	111.9	111.9

37. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Finished goods										
Total........................	124.7	125.5	127.9	131.3	131.8	130.7	133.0	138.0	140.7	138.8
Foods.......................	125.7	126.8	129.0	133.6	134.5	134.3	135.1	137.2	141.3	140.0
Energy.....................	78.0	77.0	78.1	83.2	83.4	75.1	78.8	94.1	96.8	88.8
Other.......................	135.8	137.1	140.0	142.0	142.4	143.7	146.1	148.0	150.0	150.2
Intermediate materials, supplies, and components										
Total........................	116.2	118.5	124.9	125.7	125.6	123.0	123.2	129.2	129.7	127.8
Foods.......................	115.6	118.5	119.5	125.3	123.2	123.2	120.8	119.2	124.3	123.3
Energy.....................	84.6	83.0	84.1	89.8	89.0	80.8	84.3	101.7	104.1	95.9
Other.......................	123.8	127.1	135.2	134.0	134.2	133.5	133.1	136.6	136.4	135.8
Crude materials for further processing										
Total........................	102.4	101.8	102.7	113.8	111.1	96.8	98.2	120.6	121.3	108.1
Foods.......................	108.4	106.5	105.8	121.5	112.2	103.9	98.7	100.2	106.2	99.5
Energy.....................	76.7	72.1	69.4	85.0	87.3	68.6	78.5	122.1	122.8	101.8
Other.......................	94.1	97.0	105.8	105.7	103.5	84.5	91.1	118.0	101.8	100.8

38. U.S. export price indexes by Standard International Trade Classification

[2000 = 100]

SITC Rev. 3	Industry	2002					2003							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
0	**Food and live animals**........................	103.4	107.7	106.4	106.7	105.8	105.6	106.1	105.9	105.5	108.0	107.5	107.2	107.4
01	Meat and meat preparations..................	88.7	89.8	89.1	87.8	90.3	90.4	95.4	96.4	97.9	101.5	102.9	105.2	109.4
04	Cereals and cereal preparations...........	119.9	133.4	130.5	131.7	126.3	123.0	123.2	122.2	120.0	124.2	118.5	115.4	115.7
05	Vegetables, fruit, and nuts, prepared fresh or dry..........	98.2	98.9	97.8	98.9	98.3	100.6	97.4	95.1	96.0	96.9	99.6	101.2	98.2
2	**Crude materials, inedible, except fuels**............	97.9	97.3	96.8	98.3	98.5	99.8	101.0	102.3	103.6	104.5	103.9	103.4	102.4
22	Oilseeds and oleaginous fruits..............	113.5	114.1	107.2	116.9	116.2	119.4	116.6	116.6	118.9	127.4	122.7	124.8	109.2
24	Cork and wood.......................................	88.8	90.0	90.7	90.7	90.3	90.9	91.1	91.2	91.3	91.0	90.4	90.7	91.0
25	Pulp and waste paper............................	89.6	86.5	88.5	87.8	85.2	82.6	86.4	88.9	90.4	89.9	90.1	85.4	85.8
26	Textile fibers and their waste................	93.1	94.2	94.2	96.4	98.3	100.2	101.6	105.0	106.0	104.2	103.2	106.2	107.0
28	Metalliferous ores and metal scrap........	97.9	93.9	94.1	91.8	96.3	99.6	104.6	105.8	107.8	105.8	109.0	114.7	119.9
3	**Mineral fuels, lubricants, and related products**............	97.3	102.8	109.3	104.5	99.5	112.0	124.1	130.1	107.5	102.5	107.8	109.8	114.7
32	Coal, coke, and briquettes....................	114.3	114.0	114.0	114.0	113.7	113.7	113.7	113.9	111.9	112.2	112.1	111.1	111.1
33	Petroleum, petroleum products, and related materials....	92.0	98.0	105.8	99.6	92.2	108.1	122.9	130.2	102.8	96.4	102.7	105.7	112.6
5	**Chemicals and related products, n.e.s.**	96.4	96.8	97.1	96.8	96.6	97.9	99.2	100.6	101.4	100.9	100.8	100.1	100.5
54	Medicinal and pharmaceutical products..........	101.3	101.3	101.3	101.2	101.2	102.1	104.1	104.1	103.9	103.9	104.8	105.8	105.5
55	Essential oils; polishing and cleaning preparations........	97.5	97.4	97.3	97.2	97.3	95.4	96.0	96.2	95.3	95.2	95.3	97.4	97.5
57	Plastics in primary forms	93.1	92.9	97.3	93.5	92.9	95.1	97.1	99.5	100.5	97.6	96.6	95.0	94.9
58	Plastics in nonprimary forms.................	96.5	96.9	97.6	97.7	95.9	97.1	97.5	97.2	98.4	98.5	98.8	98.5	98.6
59	Chemical materials and products, n.e.s.	98.2	98.3	98.6	98.5	98.8	100.6	100.6	100.7	101.5	100.9	101.6	102.1	102.2
6	**Manufactured goods classified chiefly by materials.....**	99.0	99.1	99.1	99.0	99.0	99.0	99.4	99.4	99.8	99.7	100.0	99.9	99.8
62	Rubber manufactures, n.e.s.	105.1	205.9	105.7	105.4	105.6	107.1	108.8	108.4	108.6	108.5	110.1	110.1	109.3
64	Paper, paperboard, and articles of paper, pulp, and paperboard........	96.2	96.3	96.8	96.6	96.8	97.3	97.2	96.7	96.9	97.3	98.3	98.1	97.8
66	Nonmetallic mineral manufactures. n.e.s.	102.2	102.2	101.4	101.3	101.3	100.5	100.4	100.2	100.3	100.3	100.4	100.4	100.2
68	Nonferrous metals.................................	84.9	84.4	83.4	83.2	83.5	82.2	83.3	84.3	82.0	79.4	80.3	79.7	80.7
7	**Machinery and transport equipment**............	98.8	98.7	98.7	98.7	98.5	98.6	98.6	98.5	98.5	98.5	97.9	98.0	97.9
71	Power generating machinery and equipment..........	104.6	104.6	104.7	105.2	105.1	106.5	106.8	106.9	107.1	107.1	107.2	107.5	107.5
72	Machinery specialized for particular industries.......	102.0	101.8	101.8	101.7	101.7	102.2	102.2	102.2	102.5	102.4	102.6	102.8	102.8
74	General industrial machines and parts, n.e.s., and machine parts................	102.3	102.3	102.2	102.3	101.6	102.0	102.3	102.1	102.2	102.2	102.4	102.2	102.2
75	Computer equipment and office machines......	90.3	89.3	89.1	88.6	88.6	88.8	89.1	88.6	88.8	88.9	88.3	88.0	87.6
76	Telecommunications and sound recording and reproducing apparatus and equipment........	96.3	96.4	96.3	96.3	96.2	95.4	95.4	95.0	94.2	94.1	93.8	93.4	93.6
77	Electrical machinery and equipment........	93.5	93.6	93.3	93.4	92.9	92.3	92.1	92.2	92.1	92.0	89.9	89.9	89.7
78	Road vehicles.......................................	100.6	100.6	100.9	100.9	101.0	101.2	101.1	100.9	101.1	101.0	101.1	101.4	101.3
87	**Professional, scientific, and controlling instruments and apparatus**........	101.5	101.4	101.6	101.5	101.7	101.9	101.9	101.5	101.6	101.9	102.2	102.3	102.3

39. U.S. import price indexes by Standard International Trade Classification

[2000 = 100]

Rev. 3	Industry	2002					2003							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
0	**Food and live animals**...	96.6	98.8	97.6	97.6	98.8	100.4	100.0	101.2	101.6	99.8	99.4	100.4	99.1
01	Meat and meat preparations..	105.4	103.4	102.0	101.2	106.8	101.7	107.4	108.5	108.8	110.3	102.9	106.9	107.8
03	Fish and crustaceans, mollusks, and other aquatic invertebrates..	83.0	84.9	81.4	82.0	82.5	81.1	82.0	81.4	84.3	83.4	81.3	83.6	81.2
05	Vegetables, fruit, and nuts, prepared fresh or dry...........	105.0	106.7	107.5	106.2	105.6	111.5	104.7	110.7	108.5	103.9	108.9	107.7	105.8
07	Coffee, tea, cocoa, spices, and manufactures thereof..	84,5	93.5	94.3	98.6	99.9	104.0	106.7	100.2	100.5	99.1	94.8	95.4	96.9
1	**Beverages and tobacco**...	102.5	102.6	102.4	102.5	102.7	103.0	103.3	104.0	104.5	104.6	103.9	104.0	103.9
11	Beverages..	102.2	102.2	102.1	102.2	102.4	102.3	102.7	103.0	103.6	103.8	103.7	103.8	103.7
2	**Crude materials, inedible, except fuels**......................	96.8	96.4	95.7	94.9	94.5	95.2	97.4	98.5	98.4	98.8	99.5	100.6	100.4
24	Cork and wood..	101.8	98.3	96.3	96.0	94.0	94.7	96.8	95.0	93.4	94.0	94.4	100.0	99.3
25	Pulp and waste paper..	82.3	82.3	82.3	80.5	78.9	77.9	80.3	86.5	92.6	95.3	95.3	93.6	91.9
28	Metalliferous ores and metal scrap...............................	95.2	93.3	93.8	93.9	94.7	95.5	99.1	99.9	99.5	99.3	99.7	100.3	102.9
29	Crude animal and vegetable materials, n.e.s.	97.5	104.0	101.6	99.9	101.4	103.6	102.3	102.6	102.3	103.5	104.9	98.8	96.2
3	**Mineral fuels, lubricants, and related products**...........	91.1	96.3	97.0	90.4	94.9	109.6	121.2	126.0	101.6	96.0	101.5	105.2	107.9
33	Petroleum, petroleum products, and related materials....	92.9	97.8	97.7	89.8	94.2	108.1	119.8	118.1	98.6	92.6	97.3	102.4	106.6
34	Gas, natural and manufactured....................................	72.7	81.1	87.3	92.1	97.0	117.8	129.3	185.9	120.5	119.0	130.1	122.8	113.5
5	**Chemicals and related products, n.e.s.**	98.9	98.7	98.3	98.0	98.2	99.1	99.8	101.1	100.4	99.0	100.1	100.1	99.3
52	Inorganic chemicals..	100.2	100.1	101.5	102.5	102.5	104.2	106.5	110.8	107.5	105.8	106.4	106.4	106.5
53	Dying, tanning, and coloring materials...........................	96.8	96.6	95.8	95.9	96.7	96.5	97.5	97.6	97.8	98.0	98.0	98.0	98.3
54	Medicinal and pharmaceutical products.........................	100.0	99.6	99.5	99.3	99.2	101.8	101.5	101.3	101.5	101.2	102.5	103.1	103.1
55	Essential oils; polishing and cleaning preparations..........	101.2	98.4	98.4	98.8	99.2	97.2	97.9	98.4	99.2	98.9	99.4	99.0	91.7
57	Plastics in primary forms...	96,4	97.9	96.4	96.0	94.8	97.3	97.9	99.3	99.5	101.7	106.1	105.1	103.3
58	Plastics in nonprimary forms..	99.5	99.5	99.4	99.5	99.6	100.2	100.1	100.4	100.6	100.8	100.8	101.7	101.8
59	Chemical materials and products, n.e.s.	93.5	92.4	91.0	90.8	91.6	92.1	93.1	97.6	96.7	93.2	92.3	93.6	93.3
6	**Manufactured goods classified chiefly by materials**.....	93.1	93.5	93.5	93.6	93.7	93.2	94.2	94.1	94.1	93.7	94.5	94.9	95.5
62	Rubber manufactures, n.e.s.	98.2	99.3	99.3	99.4	99.3	99.1	99.1	99.0	99.2	99.1	99.2	98.5	98.5
64	Paper, paperboard, and articles of paper, pulp, and paperboard..	92.7	93.7	93.3	93.3	93.0	92.6	92.6	93.0	93.6	93.2	93.4	93.2	94.8
66	Nonmetallic mineral manufactures, n.e.s.	97.5	97.5	97.6	97.6	97.7	97.6	97.7	97.6	97.6	97.5	97.9	97.9	97.9
68	Nonferrous metals..	77.7	76.4	76.0	76.6	77.3	76.1	79.2	80.0	78.5	75.8	78.1	78.1	79.1
69	Manufactures of metals, n.e.s.	98.6	98.6	98.5	98.3	98.3	97.5	98.0	97.9	97.5	97.6	98.3	98.5	98.7
7	**Machinery and transport equipment**............................	96.9	96.7	96.4	96.2	96.1	96.0	95.9	95.8	95.8	95.7	95.7	95.6	95.5
72	Machinery specialized for particular industries................	99.2	98.3	98.5	98.7	99.2	99.4	100.3	100.7	100.6	100.6	101.4	102.5	102.1
74	General industrial machines and parts, n.e.s., and machine parts..	98.4	98.4	98.5	98.6	98.6	98.6	99.4	99.8	100.0	100.0	100.7	100.8	100.6
75	Computer equipment and office machines.......................	86.9	86.4	84.9	84.6	84.2	83.9	83.3	82.7	82.8	82.1	81.7	80.8	80.8
76	Telecommunications and sound recording and reproducing apparatus and equipment.........................	93.1	92.8	92.3	91.1	92.0	91.7	90.4	90.0	89.5	89.4	89.2	88.5	88.5
77	Electrical machinery and equipment...............................	96.7	96.5	96.0	95.9	95.6	95.4	95.7	95.3	95.5	95.2	95.4	95.6	95.5
78	Road vehicles...	100.3	100.3	100.8	100.5	100.5	100.4	100.6	100.6	100.6	100.7	100.7	100.7	100.7
85	Footwear..	99.5	99.4	99.4	99.4	99.6	99.5	99.6	99.8	99.6	99.7	100.0	99.9	99.8
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	98.8	98.4	98.5	98.3	98.5	98.8	99.2	99.4	99.6	99.3	100.0	100.1	99.7

40. U.S. export price indexes by end-use category

[2000 = 100]

Category	2002					2003							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
ALL COMMODITIES...............................	98.5	98.8	98.7	98.8	98.6	98.9	99.5	99.7	99.6	99.7	99.6	99.5	99.4
Foods, feeds, and beverages...................	106.1	109.8	107.6	109.6	108.7	108.7	108.3	108.2	108.5	111.8	111.3	110.9	109.0
Agricultural foods, feeds, and beverages...............	106.7	110.7	108.2	110.4	109.5	109.4	108.8	108.1	108.6	112.1	111.2	111.1	109.1
Nonagricultural (fish, beverages) food products.....	100.7	101.3	102.1	102.0	102.3	102.8	104.6	110.0	108.0	110.2	113.1	109.3	109.4
Industrial supplies and materials........................	95.5	95.9	96.4	96.1	96.0	97.3	99.2	100.6	100.1	99.4	100.1	99.8	100.1
Agricultural industrial supplies and materials..........	97.7	98.4	98.4	100.1	101.9	103.3	103.8	104.8	104.6	103.5	104.4	104.7	105.2
Fuels and lubricants.....................................	88.0	92.9	94.0	91.6	91.3	96.2	103.8	108.0	96.3	94.5	97.1	96.7	99.9
Nonagricultural supplies and materials, excluding fuel and building materials.................	96.5	96.4	96.8	96.5	96.4	97.3	98.8	99.9	100.7	100.2	100.7	100.3	100.2
Selected building materials...............................	95.4	96.2	96.6	96.6	96.2	96.1	96.5	96.4	96.6	96.5	96.3	97.5	98.0
Capital goods...	98.5	98.4	98.3	98.3	98.1	98.2	98.4	98.3	98.3	98.3	97.7	97.7	97.7
Electric and electrical generating equipment..........	102.0	102.0	102.1	102.0	101.9	101.9	101.5	101.6	101.5	101.5	101.6	101.6	101.4
Nonelectrical machinery..................................	96.2	96.0	95.8	95.7	95.4	95.4	95.7	95.6	95.6	95.5	94.7	94.6	94.5
Automotive vehicles, parts, and engines.................	101.1	101.1	101.4	101.4	101.3	101.5	101.6	101.5	101.6	101.5	101.6	101.8	101.7
Consumer goods, excluding automotive.................	99.3	99.3	99.4	99.3	99.3	99.1	99.4	99.4	99.3	99.4	99.6	99.6	99.4
Nondurables, manufactured............................	98.7	98.7	98.8	98.6	98.7	98.2	98.9	98.7	98.5	98.5	98.8	98.8	98.7
Durables, manufactured...............................	99.7	99.6	99.6	99.7	99.6	99.5	99.6	99.7	99.8	99.9	100.1	100.1	99.8
Agricultural commodities................................	105.2	108.6	106.6	108.7	108.2	108.3	107.9	107.5	107.9	110.6	110.0	110.0	108.4
Nonagricultural commodities..........................	97.9	98.0	98.1	98.0	97.8	98.2	98.8	99.1	99.0	98.8	98.7	98.7	98.7

41. U.S. import price indexes by end-use category

[2000 = 100]

Category	2002					2003							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
ALL COMMODITIES...................................	94.8	95.5	95.5	94.6	95.2	96.9	98.5	99.1	96.0	95.3	96.1	96.6	96.8
Foods, feeds, and beverages.................................	96.9	99.7	100.0	99.9	100.2	101.3	101.2	102.6	102.5	101.3	100.7	101.6	101.2
Agricultural foods, feeds, and beverages...............	102.0	105.4	106.1	105.8	106.0	107.9	107.8	109.6	108.9	107.5	107.1	107.7	107.4
Nonagricultural (fish, beverages) food products.....	86.0	87.3	86.6	87.1	87.5	86.8	87.4	86.9	88.4	87.7	86.6	88.1	87.8
Industrial supplies and materials...........................	92.6	95.2	95.4	92.3	94.6	101.3	107.4	109.7	97.6	95.3	98.1	99.9	101.2
Fuels and lubricants....................................	90.7	96.2	96.7	89.8	94.7	109.1	120.9	125.2	99.3	94.9	100.1	103.2	105.6
Petroleum and petroleum products.................	91.8	97.1	97.0	89.0	94.0	107.7	119.9	118.6	96.3	91.5	96.1	100.4	104.3
Paper and paper base stocks......................	89.3	90.5	90.1	89.7	89.1	88.6	89.2	91.0	93.5	94.1	93.6	93.6	94.8
Materials associated with nondurable supplies and materials...........................	99.1	99.4	99.7	99.7	100.1	101.5	102.4	104.2	103.5	102.5	103.0	103.0	102.4
Selected building materials...........................	99.2	97.6	96.9	96.4	95.0	95.6	96.9	96.3	95.4	96.2	96.7	101.8	103.0
Unfinished metals associated with durable goods...	88.6	89.7	88.9	90.5	91.5	90.5	93.3	92.8	91.7	89.9	92.2	92.2	92.9
Nonmetals associated with durable goods.............	97.0	96.9	96.9	96.9	97.1	96.9	97.4	97.9	97.1	97.3	98.2	98.3	98.1
Capital goods...	94.9	94.7	94.0	94.0	93.9	93.9	93.8	93.7	93.8	93.6	93.8	93.7	93.6
Electric and electrical generating equipment..........	95.9	95.7	95.2	94.8	94.9	95.3	95.5	95.5	95.6	96.1	96.6	96.9	96.7
Nonelectrical machinery..................................	93.9	93.7	92.9	92.9	92.8	92.7	92.6	92.5	92.5	92.2	92.3	92.2	92.0
Automotive vehicles, parts, and engines.................	100.2	100.3	100.7	100.4	100.5	100.3	100.5	100.5	100.5	100.6	100.7	100.6	100.7
Consumer goods, excluding automotive.................	98.2	98.1	98.1	97.9	98.0	98.0	97.9	97.9	97.9	97.9	98.1	98.1	97.9
Nondurables, manufactured............................	99.6	99.5	99.5	99.3	99.7	99.7	99.5	99.7	99.9	99.8	99.9	100.0	99.8
Durables, manufactured...............................	97.0	96.8	96.8	96.7	96.5	96.4	96.4	96.2	96.1	96.2	96.5	96.2	96.1
Nonmanufactured consumer goods....................	95.6	95.4	95.4	95.2	95.4	95.5	95.5	95.7	95.6	95.6	96.2	95.7	95.6

42. U.S. international price Indexes for selected categories of services

[2000 = 100]

Category	2001			2002				2003	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June
Air freight (inbound).................................	95.1	94.9	95.2	93.9	98.3	100.3	105.9	108.8	109.5
Air freight (outbound)................................	98.0	97.6	97.9	95.9	98.4	97.3	95.4	97.2	95.4
Air passenger fares (U.S. carriers)...........................	106.4	107.6	103.5	103.3	110.7	114.3	107.9	112.0	119.3
Air passenger fares (foreign carriers)......................	103.8	110.2	100.8	99.4	110.9	118.5	107.2	111.7	123.2
Ocean liner freight (inbound)...............................	100.8	98.1	93.6	91.7	90.3	93.5	93.3	94.0	116.2

43. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	2000			2001				2002				2003	
	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Business													
Output per hour of all persons	116.6	116.8	117.5	117.4	117.8	118.8	121.3	123.9	124.1	125.9	126.4	127.2	129.5
Compensation per hour	131.9	134.6	135.9	137.4	138.2	139.1	139.8	141.0	142.4	143.1	143.7	145.4	146.9
Real compensation per hour	110.1	111.4	111.7	111.9	111.6	112.1	112.8	113.4	113.5	113.5	113.4	113.7	114.7
Unit labor costs	113.1	115.3	115.6	117.1	117.3	117.1	115.2	113.8	114.7	113.6	113.7	114.2	113.5
Unit nonlabor payments	113.8	111.0	111.9	112.0	113.3	115.1	117.0	119.7	118.8	120.9	122.1	122.3	124.3
Implicit price deflator	113.4	113.7	114.3	115.2	115.8	116.4	115.9	116.0	116.2	116.3	116.8	117.2	117.4
Nonfarm business													
Output per hour of all persons	116.1	116.4	117.0	116.9	117.4	118.3	120.7	123.4	123.7	125.5	126.0	126.7	128.8
Compensation per hour	131.4	134.2	135.3	136.7	137.4	138.2	138.9	140.2	141.5	142.2	142.8	144.2	145.6
Real compensation per hour	109.7	111.0	111.2	111.3	111.0	111.4	112.1	112.8	112.9	112.8	112.7	112.8	113.7
Unit labor costs	113.1	115.3	115.6	117.0	117.1	116.8	115.1	1,113.6	114.4	113.3	113.3	113.8	113.0
Unit nonlabor payments	115.3	112.6	113.3	113.5	114.9	116.8	119.0	121.5	121.2	123.1	124.3	124.5	126.4
Implicit price deflator	113.9	114.3	114.8	115.7	116.3	116.8	116.5	116.4	116.8	116.9	117.3	117.7	117.9
Nonfinancial corporations													
Output per hour of all employees	118.2	119.4	119.4	118.7	120.0	121.3	124.5	126.0	127.7	128.7	129.9	131.3	133.9
Compensation per hour	127.7	130.3	131.6	131.2	132.6	133.8	134.7	135.9	137.3	138.2	139.2	141.0	142.3
Real compensation per hour	106.6	107.8	108.1	106.8	107.1	107.8	108.7	109.4	109.5	109.7	109.9	110.2	111.1
Total unit costs	107.5	108.6	109.8	110.8	111.3	111.7	109.8	109.5	109.4	109.6	109.3	109.3	107.9
Unit labor costs	108.0	109.1	110.2	110.6	110.4	110.3	108.2	107.9	107.5	107.4	107.1	107.3	106.3
Unit nonlabor costs	106.3	107.1	108.9	111.6	113.5	115.5	114.1	114.0	114.5	115.4	115.2	114.6	112.2
Unit profits	118.8	109.5	98.6	93.1	95.4	97.9	107.6	107.6	107.8	104.6	110.1	112.2	125.3
Unit nonlabor payments	109.5	107.7	106.3	106.9	108.9	111.0	112.4	112.4	112.8	112.6	113.9	114.0	115.5
Implicit price deflator	108.5	108.6	108.9	109.3	109.9	110.5	109.6	109.4	109.3	109.1	109.4	109.6	109.4
Manufacturing													
Output per hour of all persons	134.9	135.4	135.9	135.2	135.8	137.8	139.9	142.9	144.8	147.2	147.0	148.5	149.8
Compensation per hour	129.3	132.2	131.5	132.0	133.6	135.0	136.7	138.3	140.5	141.3	142.4	144.6	146.5
Real compensation per hour	107.9	109.4	108.0	107.5	107.9	108.8	110.3	111.3	112.0	112.1	112.4	113.1	114.4
Unit labor costs	95.9	97.7	96.8	97.6	98.4	97.9	97.7	96.8	97.0	96.0	96.9	97.4	97.7

44. Annual indexes of multifactor productivity and related measures, selected years

[1996 = 100, unless otherwise indicated]

Item	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Private business													
Productivity:													
Output per hour of all persons........................	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	105.9	107.7	111.0	112.4
Output per unit of capital services......................	103.3	99.7	96.5	98.0	98.7	100.4	99.8	100.0	100.3	99.3	98.2	96.6	92.8
Multifactor productivity..................................	88.8	95.5	94.5	96.7	97.1	98.2	98.4	100.0	101.2	102.5	103.4	105.0	103.9
Output...	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.5	115.7	120.4	120.2
Inputs:													
Labor input..	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.5	106.1	109.0	110.1	109.5
Capital services...	57.6	83.8	85.7	87.5	89.7	92.5	96.0	100.0	104.9	111.3	117.9	124.5	129.6
Combined units of labor and capital input...............	67.0	87.5	87.4	88.7	91.1	94.6	97.3	100.0	104.0	107.1	111.9	114.7	115.7
Capital per hour of all persons........................	73.4	90.4	94.6	96.8	96.6	96.2	97.5	100.0	101.9	105.8	109.7	114.8	121.1
Private nonfarm business													
Productivity:													
Output per hour of all persons........................	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	102.0	104.7	107.1	110.3	111.6
Output per unit of capital services......................	107.6	100.4	97.0	98.2	99.0	100.4	100.0	100.0	100.0	99.0	97.6	95.9	92.0
Multifactor productivity..................................	91.0	95.8	94.8	96.7	97.2	98.2	98.6	100.0	101.0	102.2	102.9	104.4	103.3
Output...	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.5	115.7	120.2	120.1
Inputs:													
Labor input..	70.7	89.2	87.9	89.0	91.8	95.4	97.8	100.0	103.6	106.4	109.5	110.6	110.1
Capital services...	55.4	83.2	85.1	87.0	89.4	92.2	95.8	100.0	105.1	111.7	118.5	125.4	130.5
Combined units of labor and capital input...............	65.9	87.2	87.0	88.4	91.0	94.5	97.2	100.0	104.1	108.1	112.4	115.2	116.3
Capital per hour of all persons........................	71.8	89.9	94.3	96.5	96.3	96.1	97.6	100.0	101.9	105.8	109.7	115.0	121.3
Manufacturing (1996 = 100)													
Productivity:													
Output per hour of all persons........................	62.1	82.3	84.2	88.6	90.3	93.0	96.6	100.0	104.2	109.3	114.9	119.5	–
Output per unit of capital services......................	97.4	97.5	93.6	96.0	97.0	99.7	100.6	100.0	101.8	101.9	102.3	101.1	–
Multifactor productivity..................................	81.2	93.1	92.2	93.8	94.8	97.4	99.2	100.0	103.3	105.4	108.1	110.1	–
Output...	64.4	83.2	81.6	65.5	88.3	93.0	96.9	100.0	106.0	111.0	115.7	118.6	–
Inputs:													
Hours of all persons....................................	103.7	101.1	96.9	96.5	97.8	99.9	100.4	100.0	101.8	101.5	100.7	99.3	–
Capital services...	66.2	85.3	87.2	89.1	91.1	93.2	96.4	100.0	104.1	108.9	113.1	117.3	–
Energy..	86.3	93.2	93.4	93.3	96.7	99.9	102.1	100.0	98.5	105.0	101.8	104.6	–
Nonenergy materials....................................	63.6	78.3	79.2	84.6	87.1	90.0	93.0	100.0	102.0	110.0	114.9	115.9	–
Purchased business services...........................	67.3	84.8	84.4	91.7	94.1	96.2	100.5	100.0	104.5	103.1	104.4	105.5	–
Combined units of all factor inputs........................	79.3	89.4	88.4	91.2	93.1	95.5	97.7	100.0	102.6	105.3	107.0	107.7	–

45. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1980	1990	1994	1995	1996	1997	1998	1999	2000	2001	2002
Business													
Output per hour of all persons..	49.5	67.1	80.3	95.3	101.7	102.3	105.1	107.4	110.2	113.0	116.5	118.8	125.1
Compensation per hour...........................	13.9	23.5	54.1	90.7	104.4	106.5	109.9	113.2	119.4	124.8	133.5	138.6	142.5
Real compensation per hour.................................	60.7	78.6	88.9	96.3	99.7	99.4	99.8	100.7	104.8	107.2	111.0	112.1	113.5
Unit labor costs..	28.0	35.1	67.3	95.2	102.6	104.1	104.6	105.4	108.4	110.4	114.6	116.7	113.9
Unit nonlabor payments..	25.1	31.7	61.7	94.0	106.4	109.4	113.2	117.0	114.3	113.7	111.8	114.3	120.4
Implicit price deflator...............................	27.0	33.9	65.2	94.8	104.0	106.0	107.7	109.7	110.6	111.6	113.5	115.8	116.3
Nonfarm business													
Output per hour of all persons................................	52.4	68.8	81.7	95.3	101.8	102.7	105.3	107.4	110.2	112.8	116.1	118.3	124.7
Compensation per hour............................	14.5	23.7	54.3	90.5	104.3	106.5	109.8	113.0	119.1	124.3	133.0	137.8	141.7
Real compensation per hour................................	63.2	79.0	89.3	96.1	99.6	99.4	99.7	100.5	104.5	106.8	110.6	111.4	112.8
Unit labor costs....................................	27.6	34.4	66.4	93.7	106.9	110.4	113.4	117.9	115.5	115.3	113.3	116.1	122.5
Unit nonlabor payments..	24.5	31.3	60.6	93.6	106.9	110.4	113.5	118.0	115.7	115.5	113.5	116.4	122.5
Implicit price deflator...........................	26.5	33.3	64.3	94.5	104.1	106.1	107.6	109.8	110.8	112.1	114.1	116.3	116.9
Nonfinancial corporations													
Output per hour of all employees............................	55.4	70.4	81.1	95.5	103.1	104.1	107.5	108.4	111.7	114.7	118.7	121.1	128.1
Compensation per hour............................	15.6	25.3	56.5	90.9	104.2	106.1	108.9	110.3	115.9	121.0	129.1	133.0	137.7
Real compensation per hour................................	68.1	84.4	92.9	96.5	99.5	99.0	98.9	98.1	101.6	104.0	107.3	107.6	109.6
Total unit costs....................................	26.8	34.8	68.4	95.9	101.1	102.0	101.2	101.5	103.3	104.9	108.2	110.9	109.4
Unit labor costs....................................		35.9	69.6	95.2	101.0	101.9	101.4	101.8	103.8	105.5	108.8	109.9	107.5
Unit nonlabor costs..................................	23.3	31.9	65.1	98.0	101.3	102.2	100.6	100.9	102.2	103.4	106.7	113.7	114.8
Unit profits..	50.2	44.4	68.8	94.3	131.7	139.0	152.2	156.9	141.7	131.5	111.6	98.5	107.5
Unit nonlabor payments..	30.2	35.1	66.0	97.1	109.0	111.6	113.8	115.2	112.3	110.6	108.0	109.8	112.9
Implicit price deflator...........................	28.8	35.6	68.4	95.8	103.7	105.1	105.5	106.2	106.6	107.2	108.5	109.8	109.3
Manufacturing													
Output per hour of all persons................................	41.8	54.2	70.1	92.9	105.0	109.0	112.8	117.6	123.3	129.7	134.9	137.1	145.5
Compensation per hour............................	14.9	23.7	55.6	90.8	105.6	107.9	109.4	111.5	117.4	122.1	131.1	134.3	140.6
Real compensation per hour................................	65.0	79.2	91.4	96.4	101.0	100.6	99.4	99.1	103.0	104.9	109.0	108.6	112.0
Unit labor costs....................................	35.6	43.8	79.3	97.8	100.7	99.0	96.9	94.8	95.2	94.1	97.2	97.9	96.7
Unit nonlabor payments..	26.8	29.3	80.2	99.8	102.8	106.9	109.9	110.0	103.7	104.9	107.0	–	–
Implicit price deflator...........................	30.2	35.0	79.9	99.0	102.0	103.9	104.8	104.1	100.4	100.7	103.2	–	–

Dash indicates data not available.

46. Annual indexes of output per hour for selected NAICS industries, 1990-2001

[1997=100]

NAICS	Industry	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	Mining												
21	Mining..	86.1	86.9	95.4	96.3	99.6	101.8	101.8	100.0	103.5	111.1	109.2	107.4
211	Oil and gas extraction............................	78.4	78.8	81.9	85.1	90.3	95.5	98.9	100.0	101.6	107.9	114.5	116.6
212	Mining, except oil and gas.....................	79.3	80.0	86.8	89.9	93.0	94.0	96.0	100.0	104.6	105.9	106.8	109.0
2121	Coal mining..	68.1	69.3	75.3	79.9	83.9	88.2	94.9	100.0	106.5	110.3	115.8	114.4
2122	Metal ore mining.................................	79.9	82.7	91.7	102.2	104.1	98.5	95.3	100.0	109.5	112.7	124.4	131.8
2123	Nonmetallic mineral mining and quarrying...........	92.3	89.5	96.1	93.6	96.9	97.3	97.1	100.0	101.2	101.2	96.2	99.4
	Utilities												
2211	Power generation and supply.....................	71.2	73.8	74.1	78.7	83.0	88.6	95.5	100.0	103.8	104.1	107.0	106.4
2212	Natural gas distribution.........................	71.4	72.7	75.8	79.8	82.2	89.0	96.1	100.0	99.1	103.1	113.4	110.2
	Manufacturing												
3111	Animal food.......................................	90.1	89.3	90.2	90.2	87.3	94.0	87.5	100.0	109.4	109.5	109.7	127.2
3112	Grain and oilseed milling.........................	89.0	91.3	91.2	94.0	94.8	99.1	91.4	100.0	107.6	114.1	112.5	117.4
3113	Sugar and confectionery products..................	91.0	93.8	90.6	92.6	93.9	94.2	98.3	100.0	104.0	107.2	112.1	109.8
3114	Fruit and vegetable preserving and specialty.......	86.4	89.7	90.7	93.9	95.0	97.2	98.2	100.0	106.8	108.5	109.9	117.2
3115	Dairy products....................................	90.9	92.1	95.5	94.0	95.5	99.0	98.2	100.0	99.2	94.5	96.1	96.3
3116	Animal slaughtering and processing...............	94.6	97.0	101.6	101.0	97.6	98.7	94.4	100.0	99.9	100.4	101.9	102.8
3117	Seafood product preparation and packaging....	117.5	112.0	115.3	113.9	114.1	108.4	116.2	100.0	117.0	130.2	137.6	147.3
3118	Bakeries and tortilla manufacturing..............	92.6	92.2	95.4	96.0	96.7	99.7	97.8	100.0	103.6	105.5	105.2	106.2
3119	Other food products..............................	92.0	93.6	96.0	102.9	100.3	101.2	103.1	100.0	107.0	108.8	110.3	103.4
3121	Beverages..	86.5	90.0	93.7	93.1	97.7	99.6	101.2	100.0	98.6	92.4	90.7	91.8
3122	Tobacco and tobacco products....................	81.4	77.3	79.6	73.7	89.8	97.5	99.4	100.0	98.1	92.1	98.0	100.0
3131	Fiber, yarn, and thread mills.....................	73.9	74.7	80.1	84.6	87.2	92.0	98.7	100.0	102.2	104.6	102.6	110.5
3132	Fabric mills.......................................	75.0	77.7	81.5	85.0	91.9	95.8	98.0	100.0	103.9	109.8	110.2	109.1
3133	Textile and fabric finishing mills.................	81.7	80.4	83.7	86.0	87.8	84.5	85.0	100.0	100.6	101.7	104.0	109.7
3141	Textile furnishings mills..........................	88.1	88.6	92.8	93.7	90.0	92.5	93.2	100.0	99.9	101.2	106.6	106.9
3149	Other textile product mills........................	91.1	89.9	92.0	90.2	94.7	95.8	96.3	100.0	97.0	110.5	110.5	105.0
3151	Apparel knitting mills.............................	85.6	88.7	93.5	102.6	104.5	109.5	122.0	100.0	96.6	102.0	110.4	108.2
3152	Cut and sew apparel.............................	70.1	72.0	73.2	76.6	80.4	85.5	90.7	100.0	104.0	118.8	127.8	131.8
3159	Accessories and other apparel...................	100.9	97.3	98.7	99.0	104.6	112.4	112.6	100.0	110.8	103.3	104.9	114.8
3161	Leather and hide tanning and finishing............	60.8	56.6	76.7	83.1	75.9	78.6	91.5	100.0	98.0	101.6	110.0	109.7
3162	Footwear...	77.1	74.7	83.1	81.7	90.4	95.6	103.4	100.0	100.9	116.8	124.1	142.7
3169	Other leather products...........................	102.5	100.2	97.0	94.3	80.0	73.2	79.7	100.0	109.2	100.4	107.6	114.1
3211	Sawmills and wood preservation.................	79.2	81.6	86.1	82.6	85.1	91.0	96.2	100.0	100.8	105.4	106.5	109.0
3212	Plywood and engineered wood products...........	102.3	107.4	114.7	109.1	105.8	101.8	101.2	100.0	105.6	99.9	100.6	104.8
3219	Other wood products.............................	105.4	104.7	104.2	103.0	99.2	100.3	100.7	100.0	101.6	105.3	104.0	104.7
3221	Pulp, paper, and paperboard mills................	88.5	88.1	92.2	92.6	97.4	101.9	97.4	100.0	103.0	111.3	115.6	117.2
3222	Converted paper products........................	90.4	93.5	93.5	96.3	97.5	97.0	98.2	100.0	102.5	101.5	101.8	100.9
3231	Printing and related support activities.............	96.7	95.4	101.4	100.2	98.4	98.8	99.6	100.0	100.5	103.5	105.0	105.7
3241	Petroleum and coal products.....................	76.7	75.8	79.1	84.6	85.7	90.2	94.8	100.0	102.2	108.0	113.2	112.2
3251	Basic chemicals..................................	91.5	90.2	89.5	90.0	95.2	92.4	90.1	100.0	102.7	114.8	118.4	111.0
3252	Resin, rubber, and artificial fibers................	75.7	74.8	80.7	83.8	93.4	95.9	93.3	100.0	105.4	108.9	108.1	103.8
3253	Agricultural chemicals............................	84.6	81.0	81.3	85.6	87.4	90.7	92.1	100.0	98.8	87.6	91.4	91.1
3254	Pharmaceuticals and medicines..................	91.4	92.7	88.1	88.1	92.4	96.3	99.9	100.0	92.9	94.6	93.4	97.3
3255	Paints, coatings, and adhesives..................	85.1	85.9	87.6	90.9	94.1	92.7	98.3	100.0	99.1	98.8	98.5	102.1
3256	Soap, cleaning compounds, and toiletries..........	83.2	84.2	83.4	87.0	88.6	93.9	95.7	100.0	96.6	91.2	99.3	102.6
3259	Other chemical products and preparations........	76.6	78.0	84.7	90.6	92.6	94.4	94.2	100.0	99.4	109.2	120.0	111.3
3261	Plastics products.................................	84.7	86.3	90.4	91.7	94.4	94.4	97.0	100.0	103.4	109.3	111.3	113.1
3262	Rubber products..................................	83.0	83.9	84.8	90.3	90.2	92.9	94.3	100.0	100.5	101.4	103.8	104.1
3271	Clay products and refractories....................	89.2	87.4	91.5	91.8	96.6	97.3	102.7	100.0	101.1	103.4	103.5	97.6
3272	Glass and glass products.........................	80.0	79.3	84.5	86.1	87.6	88.7	96.7	100.0	102.6	108.6	109.8	105.2
3273	Cement and concrete products....................	95.0	93.7	94.9	96.5	95.9	98.2	100.6	100.0	103.4	104.3	100.4	97.1
3274	Lime and gypsum products.......................	84.1	82.7	88.5	90.1	87.8	88.8	92.4	100.0	113.1	102.7	97.0	100.1
3279	Other nonmetallic mineral products...............	79.8	81.4	90.2	89.3	90.5	91.7	96.5	100.0	98.8	95.5	95.6	96.8
3311	Iron and steel mills and ferroalloy production.....	69.6	67.2	74.1	81.7	87.2	89.7	94.1	100.0	101.7	106.5	108.5	106.7
3312	Steel products from purchased stee...............	83.7	86.2	89.6	95.8	100.0	100.2	100.2	100.0	100.2	94.0	96.1	97.0
3313	Alumina and aluminum production................	91.9	93.3	96.8	96.0	100.3	96.8	95.9	100.0	101.1	104.3	97.8	96.9
3314	Other nonferrous metal production................	95.7	95.8	98.7	101.8	105.1	103.0	105.6	100.0	111.1	108.8	103.1	100.5
3315	Foundries..	85.1	84.4	85.7	89.7	91.4	93.1	96.2	100.0	101.5	104.7	103.8	109.4
3321	Forging and stamping............................	88.6	86.5	91.7	94.6	93.7	94.2	97.6	100.0	103.7	110.9	121.3	121.8
3322	Cutlery and hand tools...........................	85.1	85.4	87.2	91.7	94.4	97.8	104.4	100.0	100.0	107.8	105.8	110.2
3323	Architectural and structural metals................	87.8	89.2	92.6	93.4	95.1	93.8	94.2	100.0	101.0	101.8	101.0	100.7
3324	Boilers, tanks, and shipping containers..............	90.4	92.6	95.3	94.8	100.5	97.8	100.7	100.0	101.3	98.9	97.7	98.2
3325	Hardware...	84.4	83.8	86.9	89.6	95.7	97.3	102.6	100.0	101.0	106.5	115.8	114.6
3326	Spring and wire products.........................	85.2	88.4	90.9	95.3	91.5	99.5	102.8	100.0	111.6	112.9	114.6	110.6
3327	Machine shops and threaded products..............	78.8	79.6	87.2	86.9	91.5	98.8	100.0	100.0	99.3	103.8	107.3	107.4

See note at end of table.

Continued—Annual indexes of output per hour for selected NAICS industries, 1990–2001

NAICS	Industry	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
3328	Coating, engraving, and heat treating metals	81.6	77.9	86.7	91.7	96.4	102.6	102.8	100.0	101.5	101.3	105.8	104.7
3329	Other fabricated metal products	86.6	85.9	90.5	92.0	94.9	97.0	98.7	100.0	102.2	100.2	100.7	98.0
3331	Agriculture, construction, and mining machinery	82.9	77.3	79.6	84.1	91.0	95.7	96.0	100.0	104.3	95.1	101.2	99.5
3332	Industrial machinery	80.6	81.1	79.5	84.9	90.0	97.9	98.8	100.0	94.4	105.2	129.7	104.6
3333	Commercial and service industry machinery	91.6	89.8	96.6	101.9	101.2	103.2	106.5	100.0	107.8	111.3	101.6	94.4
3334	HVAC and commercial refrigeration equipment	88.8	88.2	90.8	93.8	97.3	96.6	97.8	100.0	106.6	110.4	108.3	110.8
3335	Metalworking machinery	85.3	82.2	89.3	89.2	93.9	98.9	98.1	100.0	99.0	100.4	106.4	102.0
3336	Turbine and power transmission equipment	85.0	84.4	81.2	84.7	93.2	92.0	97.8	100.0	106.4	113.2	116.9	130.1
3339	Other general purpose machinery	86.0	85.2	85.2	89.9	91.5	94.5	95.0	100.0	103.1	105.6	113.0	109.4
3341	Computer and peripheral equipment	14.3	15.8	20.6	27.9	35.9	51.2	72.6	100.0	138.7	190.3	225.2	237.0
3342	Communications equipment	47.3	49.3	59.3	62.1	70.1	74.6	84.3	100.0	102.7	134.0	165.5	155.2
3343	Audio and video equipment	75.5	82.8	92.1	98.8	108.5	140.0	104.7	100.0	103.1	116.2	123.3	126.3
3344	Semiconductors and electronic components	21.4	24.5	29.6	34.1	43.1	63.4	81.8	100.0	125.3	174.5	233.3	231.6
3345	Electronic instruments	76.0	80.4	83.0	85.8	88.8	96.7	97.6	100.0	101.3	105.0	114.2	116.0
3346	Magnetic media manufacturing and reproduction	86.6	91.2	93.0	96.8	106.1	106.7	103.8	100.0	105.4	106.8	104.0	98.6
3351	Electric lighting equipment	87.2	88.4	93.7	90.7	94.5	92.1	95.4	100.0	103.7	102.4	101.8	105.4
3352	Household appliances	76.5	76.6	82.4	89.0	95.1	92.8	93.3	100.0	105.2	104.4	117.6	122.6
3353	Electrical equipment	73.5	72.7	78.7	85.7	88.9	98.0	100.1	100.0	99.6	98.8	100.6	100.9
3359	Other electrical equipment and components	75.3	74.3	81.7	86.9	89.5	92.1	95.9	100.0	105.6	115.1	120.6	113.7
3361	Motor vehicles	86.0	82.4	91.2	89.8	90.2	88.6	91.0	100.0	113.2	123.2	110.4	108.9
3362	Motor vehicle bodies and trailers	75.9	71.7	88.2	96.3	97.8	97.2	98.5	100.0	102.5	103.2	98.6	99.4
3363	Motor vehicle parts	75.7	74.7	82.6	88.6	91.8	92.4	93.1	100.0	104.8	110.5	112.6	114.7
3364	Aerospace products and parts	87.7	92.0	94.0	98.1	93.7	93.7	98.0	100.0	118.5	118.1	101.0	114.8
3365	Railroad rolling stock	77.2	80.0	81.1	82.3	83.1	82.0	80.9	100.0	102.9	116.0	117.7	124.7
3366	Ship and boat building	99.7	92.7	98.6	101.4	99.0	93.2	94.1	100.0	100.3	112.3	120.1	119.9
3369	Other transportation equipment	62.6	62.1	88.3	99.7	93.3	92.8	99.8	100.0	110.6	113.1	131.0	146.9
3371	Household and institutional furniture	87.7	88.1	92.8	93.7	93.9	97.0	99.4	100.0	102.5	103.5	102.6	106.1
3372	Office furniture and fixtures	80.9	78.8	86.3	88.0	83.4	84.5	85.6	100.0	100.3	98.5	100.2	97.1
3379	Other furniture-related products	88.1	88.6	88.4	90.5	93.6	94.5	96.7	100.0	107.2	102.5	100.1	105.3
3391	Medical equipment and supplies	81.2	83.1	88.1	91.1	90.8	95.0	100.0	100.0	108.9	109.6	114.2	119.0
3399	Other miscellaneous manufacturing	90.2	90.7	90.0	92.3	93.1	96.0	99.6	100.0	102.1	105.3	113.1	110.9
	Wholesale trade												
42	Wholesale trade	78.3	79.5	86.5	89.6	91.4	93.1	95.9	100.0	104.8	111.6	114.7	116.6
423	Durable goods	65.6	66.1	75.0	80.4	84.2	88.5	93.5	100.0	106.3	116.6	121.2	119.7
4231	Motor vehicles and parts	76.6	73.3	82.2	88.0	94.1	93.6	94.9	100.0	104.7	119.8	114.0	114.1
4232	Furniture and furnishings	82.4	87.2	92.0	95.9	93.3	96.8	97.0	100.0	97.5	100.8	105.5	105.4
4233	Lumber and construction supplies	115.0	113.2	119.6	113.9	112.0	103.6	102.9	100.0	102.9	104.9	101.7	108.6
4234	Commercial equipment	32.7	36.1	46.6	54.3	58.4	72.1	85.3	100.0	122.4	150.2	160.6	158.9
4235	Metals and minerals	108.1	109.1	116.0	117.4	114.3	103.8	104.0	100.0	102.4	96.0	99.1	101.9
4236	Electric goods	47.4	48.2	51.9	59.6	68.6	79.6	88.0	100.0	105.9	126.2	151.7	148.1
4237	Hardware and plumbing	96.3	93.3	102.6	99.8	105.8	101.0	100.6	100.0	103.5	107.8	111.1	102.6
4238	Machinery and supplies	76.2	72.0	77.8	82.6	84.1	88.8	93.4	100.0	104.2	101.4	104.1	102.7
4239	Miscellaneous durable goods	91.8	98.7	114.1	114.9	107.3	100.0	101.4	100.0	101.8	112.6	116.7	116.1
424	Nondurable goods	98.2	99.6	103.0	102.8	101.6	99.6	99.2	100.0	102.8	104.1	103.5	106.9
4241	Paper and paper products	81.3	85.7	96.8	97.5	101.7	99.1	96.6	100.0	100.5	105.6	105.5	109.0
4242	Druggists' goods	84.7	89.2	93.9	90.9	94.2	96.4	98.8	100.0	99.6	101.7	96.8	101.2
4243	Apparel and piece goods	104.9	104.2	100.7	98.2	104.2	92.5	99.1	100.0	104.1	103.5	102.6	102.4
4244	Grocery and related products	96.6	98.4	103.8	105.2	103.3	103.0	99.9	100.0	101.9	103.6	105.2	109.4
4245	Farm product raw materials	75.9	80.9	80.9	80.0	77.5	85.7	89.6	100.0	100.4	114.3	119.0	120.1
4246	Chemicals	107.3	106.7	112.6	110.1	110.6	102.2	100.1	100.0	99.3	98.0	95.8	93.7
4247	Petroleum	97.4	107.1	118.3	119.2	115.9	108.7	105.9	100.0	115.0	112.0	108.9	108.4
4248	Alcoholic beverages	109.4	111.2	107.4	105.5	105.9	102.4	104.4	100.0	109.6	110.0	111.0	111.5
4249	Miscellaneous nondurable goods	107.2	98.1	93.8	97.5	94.8	96.1	98.7	100.0	101.7	99.6	106.2	104.2
42511	Business to business electronic markets	69.2	70.7	78.5	83.1	86.8	89.1	94.3	100.0	104.3	123.4	143.3	168.9
42512	Wholesale trade agents and brokers	71.2	74.5	83.5	87.3	89.2	92.9	97.8	100.0	104.9	110.5	116.5	114.2
	Retail trade												
44-45	Retail trade	83.8	84.0	87.5	90.2	93.5	95.0	98.0	100.0	104.3	110.0	114.4	117.4
441	Motor vehicle and parts dealers	90.1	88.8	92.9	94.2	97.1	97.2	98.9	100.0	102.6	106.4	107.4	109.1
4411	Automobile dealers	91.9	90.7	94.6	95.8	97.9	97.1	98.9	100.0	102.6	106.4	106.9	108.0
4412	Other motor vehicle dealers	72.7	75.6	82.6	87.7	92.9	93.0	98.6	100.0	106.0	113.0	108.6	112.4
4413	Auto parts, accessories, and tire stores	87.3	86.3	91.4	92.4	97.0	99.0	98.8	100.0	105.7	110.0	112.0	109.3
442	Furniture and home furnishings stores	81.3	81.7	88.8	88.9	90.8	94.4	99.5	100.0	101.7	109.5	115.5	116.5
4421	Furniture stores	82.1	83.5	88.9	89.0	88.9	92.5	97.8	100.0	102.1	108.2	114.8	119.2
4422	Home furnishings stores	79.9	79.0	88.4	88.5	93.2	96.6	101.7	100.0	101.3	111.2	116.6	113.5
443	Electronics and appliance stores	45.1	48.4	56.1	64.7	77.0	88.8	94.7	100.0	123.8	153.6	180.1	202.7
444	Building material and garden supply stores	82.3	80.7	84.6	88.5	94.2	94.1	97.8	100.0	106.7	112.2	113.1	115.7

See note at end of table.

46. Continued—Annual indexes of output per hour for selected NAICS industries, 1990-2001

[1997=100]

NAICS	Industry	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
4441	Building material and supplies dealers..............	83.6	81.1	85.2	89.6	95.3	95.1	97.8	100.0	107.6	113.5	113.8	115.2
4442	Lawn and garden equipment and supplies stores	75.6	78.6	81.5	82.6	87.7	87.7	97.6	100.0	101.3	103.7	108.5	119.7
445	Food and beverage stores.........................	108.8	108.3	108.8	106.8	105.3	103.1	100.7	100.0	99.9	103.6	105.1	107.7
4451	Grocery stores.....................................	107.9	108.0	108.4	107.0	105.7	103.5	101.0	100.0	100.3	104.3	104.9	107.5
4452	Specialty food stores.............................	141.4	132.3	128.7	121.0	114.1	107.3	98.3	100.0	94.7	99.4	105.3	110.8
4453	Beer, wine and liquor stores......................	100.1	100.2	101.0	94.4	92.9	96.2	103.1	100.0	105.8	99.8	111.1	110.4
446	Health and personal care stores...................	92.9	92.3	91.3	92.6	92.3	93.1	95.7	100.0	103.9	106.9	111.5	112.4
447	Gasoline stations..................................	88.5	89.3	92.2	95.9	99.1	101.5	100.3	100.0	105.6	110.6	106.5	110.0
448	Clothing and clothing accessories stores...........	70.2	71.1	75.9	79.4	83.7	91.6	98.1	100.0	105.4	112.9	120.3	123.7
4481	Clothing stores...................................	69.8	72.2	78.0	80.0	82.5	90.7	97.4	100.0	106.7	113.4	120.9	125.3
4482	Shoe stores.......................................	73.7	73.1	78.2	79.2	88.3	93.7	102.4	100.0	97.8	104.9	109.6	115.8
4483	Jewelry, luggage, and leather goods stores.......	68.6	64.5	65.0	77.1	85.0	94.1	97.3	100.0	107.7	119.2	128.6	124.1
451	Sporting goods, hobby, book, and music stores	81.2	86.1	84.1	84.7	88.4	92.7	95.4	100.0	108.2	114.1	120.8	124.4
4511	Sporting goods and musical instrument stores	79.6	85.6	82.4	83.0	86.8	92.3	93.9	100.0	112.2	119.6	129.2	131.4
4512	Book, periodical, and music stores................	84.4	86.8	87.4	88.1	91.4	93.5	98.2	100.0	101.2	104.1	105.7	110.8
452	General merchandise stores.......................	75.3	79.0	83.0	88.5	90.6	92.1	96.9	100.0	105.1	113.0	120.1	124.3
4521	Department stores.................................	84.1	88.3	91.6	95.0	95.1	94.5	98.3	100.0	100.8	104.3	106.5	104.1
4529	Other general merchandise stores.................	61.5	64.8	69.6	77.9	82.7	87.5	94.5	100.0	113.5	129.6	146.2	162.6
453	Miscellaneous store retailers......................	68.0	65.4	74.0	80.4	87.8	89.5	95.6	100.0	106.8	107.7	109.2	107.7
4531	Florists...	75.2	76.0	85.1	91.4	85.4	83.5	96.1	100.0	101.2	117.3	115.6	121.1
4532	Office supplies, stationery and gift stores........	62.0	63.5	71.8	77.9	89.2	90.9	93.4	100.0	111.1	114.6	122.0	136.1
4533	Used merchandise stores..........................	80.8	79.0	87.8	88.6	86.9	89.9	96.9	100.0	111.3	105.9	112.6	103.6
4539	Other miscellaneous store retailers................	75.7	65.9	74.5	81.4	90.3	90.6	97.8	100.0	103.6	100.3	97.2	84.4
454	Nonstore retailers.................................	55.3	56.2	62.2	66.5	75.3	80.1	91.5	100.0	113.4	126.6	155.0	161.8
4541	Electronic shopping and mail-order houses........	43.5	46.7	50.6	58.3	62.9	71.9	84.4	100.0	118.2	141.5	159.8	177.5
4542	Vending machine operators........................	97.6	95.8	95.1	92.8	94.1	89.3	96.9	100.0	114.1	119.8	131.2	115.0
4543	Direct selling establishments......................	83.2	80.0	87.4	87.2	99.9	98.4	105.4	100.0	96.7	92.2	110.0	105.5
	Transportation and warehousing												
481	Air transportation.................................	77.5	78.2	81.4	84.7	90.8	95.3	98.8	100.0	97.6	98.2	98.2	91.9
482111	Line-haul railroads................................	69.8	75.3	82.3	85.7	88.6	92.0	98.4	100.0	102.1	107.5	115.4	123.1
48412	General freight trucking, long-distance..............	88.5	92.5	97.5	95.6	98.1	95.4	95.7	100.0	99.1	102.1	105.2	103.3
491	U.S. Postal service................................	96.1	95.8	96.5	99.0	98.5	98.3	96.7	100.0	101.4	102.4	104.9	106.1
	Information												
5111	Newspaper, book, and directory publishers.......	97.2	95.8	95.3	94.9	92.8	93.3	92.8	100.0	105.1	109.4	110.3	107.6
5112	Software publishers...............................	41.3	44.2	61.6	68.5	79.1	83.2	93.7	100.0	115.7	115.5	111.1	109.4
51213	Motion picture and video exhibition.................	113.5	113.0	108.2	107.8	105.8	101.5	100.8	100.0	99.8	102.0	106.5	104.6
5151	Radio and television broadcasting..................	100.9	101.1	103.2	102.4	106.1	106.3	103.1	100.0	100.6	101.8	103.4	98.2
5152	Cable and other subscription programming.......	102.1	97.6	99.3	96.8	95.4	98.1	96.2	100.0	100.1	99.4	95.9	91.7
5171	Wired telecommunications carriers.................	65.5	70.8	76.8	81.7	85.8	90.6	97.5	100.0	106.9	114.6	122.3	124.3
5172	Wireless telecommunications carriers...............	76.0	73.5	85.6	94.8	97.1	98.3	103.0	100.0	114.2	133.9	138.2	171.6
	Finance and insurance												
52211	Commercial banking...............................	80.7	83.2	83.4	90.2	92.7	95.9	99.1	100.0	98.4	101.5	105.1	102.3
	Real estate and rental and leasing												
532111	Passenger car rental..............................	89.8	97.8	104.4	106.1	107.9	101.1	108.9	100.0	102.1	114.4	113.3	113.4
53212	Truck, trailer and RV rental and leasing.............	72.2	73.1	70.9	76.2	83.0	91.2	97.1	100.0	104.7	108.8	104.8	102.9
	Professional, scientific, and technical services												
	Advertising agencies..............................	79.8	74.5	86.1	89.5	90.1	88.6	96.5	100.0	94.3	111.2	116.7	118.1
54181	**Accomodation and food services**												
	Traveler accommodations.........................	102.8	100.2	108.7	105.5	108.0	107.2	105.4	100.0	100.3	102.2	107.1	103.2
7211	Food services and drinking places.................	103.4	102.2	101.6	102.4	101.1	100.9	99.4	100.0	101.3	101.7	104.4	104.9
722	Full-service restaurants...........................	99.7	98.2	97.4	97.8	98.2	96.9	96.5	100.0	100.1	99.4	101.1	101.1
7221	Limited-service eating places......................	104.0	103.1	102.6	105.7	104.0	105.0	102.5	100.0	102.7	103.5	107.0	109.2
7222	Special food services..............................	107.2	106.8	106.3	103.8	101.1	99.3	97.6	100.0	102.1	106.0	111.7	108.4
7223	Drinking places, alcoholic beverages...............	125.7	121.2	121.4	112.7	102.6	104.5	102.4	100.0	100.0	99.4	100.3	98.1
7224													
	Other services (except public administration)												
8111	Automotive repair and maintenance................	92.8	86.5	90.0	91.2	96.7	102.9	98.9	100.0	105.3	106.6	108.1	109.3
81211	Hair, nail and skin care services...................	81.6	79.8	85.6	84.3	88.7	92.4	97.1	100.0	102.7	103.7	102.9	107.9
81221	Funeral homes and funeral services...............	96.1	94.3	104.7	100.4	103.6	100.4	97.9	100.0	103.8	100.5	94.4	93.7
8123	Drycleaning and laundry services..................	95.5	93.2	94.9	93.8	95.7	98.9	101.5	100.0	105.0	109.5	114.1	120.7
81292	Photofinishing.....................................	117.3	115.6	116.2	123.6	124.9	114.7	103.2	100.0	99.4	106.8	107.4	113.6

NOTE: Data reflect the conversion to the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable to the SIC-based data.

47. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		2001				2002			
	2001	2002	I	II	III	IV	I	II	III	IV
United States........	4.8	5.8	4.2	4.5	4.8	5.6	5.6	5.9	5.7	5.9
Canada.................	6.4	7.0	6.2	6.3	6.5	6.8	7.1	6.9	7.0	6.9
Australia.............	6.7	6.3	6.5	6.8	6.8	6.8	6.6	6.3	6.2	6.1
Japan[1].................	5.1	5.4	4.8	4.9	5.2	5.5	5.3	5.4	5.5	5.5
France[1]................	8.5	8.8	8.5	8.4	8.5	8.6	8.7	8.7	8.9	8.9
Germany[1]............	8.0	8.4	7.9	8.0	8.0	8.1	8.2	8.4	8.5	8.6
Italy[2]....................	9.6	9.1	10.0	9.7	9.5	9.4	9.2	9.1	9.1	9.0
Sweden[1]..............	5.0	5.2	5.1	5.0	5.0	5.1	5.0	5.0	5.2	5.4
United Kingdom[1]..	5.1	5.2	5.1	5.0	5.1	5.2	5.1	5.2	5.3	5.1

[1] Preliminary for 2002 for Japan, France, Germany, Sweden, and the United Kingdom.

[2] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France and Germany are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures.

See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries, 1959-2002* (Bureau of Labor Statistics, Apr. 14, 2003), on the Internet at

http://www.bls.gov/fls/home.htm

Monthly and quarterly unemployment rates, updated monthly, are also on this site.

48. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries
[Numbers in thousands]

Employment status and country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Civilian labor force											
United States	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	142,583	143,734	144,863
Canada	14,177	14,308	14,400	14,517	14,669	14,958	15,237	15,536	15,789	16,027	16,475
Australia	8,557	8,613	8,771	8,995	9,115	9,204	9,339	9,466	9,678	9,817	9,964
Japan	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,090	66,990	66,870	66,240
France	24,440	24,480	24,670	24,750	25,000	25,130	25,440	25,800	26,050	26,340	–
Germany	39,010	39,100	39,070	38,980	39,140	39,420	39,750	39,800	39,750	39,780	–
Italy	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130	23,340	23,540	23,750
Netherlands	6,920	7,020	7,150	7,200	7,390	7,530	7,610	7,830	8,130	8,290	–
Sweden	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430	4,489	4,530	4,542
United Kingdom	28,410	28,050	27,990	28,040	28,140	28,270	28,380	28,610	28,780	28,870	–
Participation rate[1]											
United States	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.1	66.8	66.9
Canada	65.9	65.5	65.2	64.9	64.7	65.0	65.4	65.8	65.9	66.0	66.8
Australia	63.9	63.5	63.9	64.6	64.6	64.3	64.3	64.2	64.7	64.7	64.7
Japan	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4	62.0	61.6	60.8
France	55.6	55.4	55.5	55.4	55.6	55.5	55.9	56.3	56.5	56.8	–
Germany	58.2	57.7	57.4	57.1	57.1	57.3	57.7	57.6	57.4	57	–
Italy	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8	48.1	48.3	48.6
Netherlands	57.5	58.0	58.6	58.7	60.0	60.8	61.0	62.4	64.4	65.4	–
Sweden	65.7	64.5	63.7	64.1	64.0	63.3	62.8	62.8	63.8	63.7	63.6
United Kingdom	63.1	62.5	62.3	62.3	62.3	62.4	62.5	62.7	62.8	62.7	–
Employed											
United States	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	136,891	136,933	136,485
Canada	12,672	12,770	13,027	13,271	13,380	13,705	14,068	14,456	14,827	14,997	15,325
Australia	7,660	7,699	7,942	8,256	8,364	8,444	8,618	8,808	9,068	9,157	9,334
Japan	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,920	63,790	63,470	62,650
France	22,000	21,710	21,750	21,950	22,040	22,170	22,580	23,070	23,670	24,100	–
Germany	36,390	35,990	35,760	35,780	35,640	35,510	36,060	36,360	36,540	36,590	–
Italy	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460	20,840	21,270	21,580
Netherlands	6,550	6,570	6,660	6,730	6,950	7,160	7,310	7,580	7,900	8,090	–
Sweden	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117	4,229	4,303	4,308
United Kingdom	25,530	25,120	25,320	25,600	25,850	26,290	26,600	26,890	27,200	27,400	–
Employment-population ratio[2]											
United States	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.4	63.7	62.7
Canada	58.9	58.5	59.0	59.4	59.1	59.7	60.4	61.3	62.1	61.9	62.4
Australia	57.2	56.8	57.8	59.2	59.3	59.0	59.3	59.8	60.6	60.4	60.6
Japan	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4	59.0	58.4	57.5
France	50.1	49.1	49.0	49.1	49.0	49.0	49.6	50.4	51.4	51.9	–
Germany	54.2	53.2	52.6	52.4	52.0	51.6	52.3	52.6	52.7	52.6	–
Italy	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3	42.9	43.6	44.1
Netherlands	54.5	54.2	54.6	54.9	56.4	57.8	58.6	60.4	62.6	63.9	–
Sweden	62.0	58.5	57.6	58.3	57.7	56.9	57.6	58.4	60.1	60.5	60.3
United Kingdom	56.7	56.0	56.4	56.9	57.3	58.1	58.6	59.0	59.4	59.5	–
Unemployed											
United States	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,692	6,801	8,378
Canada	1,505	1,539	1,373	1,246	1,289	1,252	1,169	1,080	962	1,031	1,150
Australia	897	914	829	739	751	760	721	658	611	661	629
Japan	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170	3,200	3,400	3,590
France	2,430	2,770	2,920	2,800	2,970	2,960	2,870	2,730	2,380	2,240	–
Germany	2,620	3,110	3,320	3,200	3,510	3,910	3,690	3,440	3,210	3,190	–
Italy	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670	2,500	2,270	2,160
Netherlands	370	440	490	480	440	370	300	250	220	200	–
Sweden	255	415	426	404	440	445	368	313	260	227	234
United Kingdom	2,880	2,930	2,670	2,440	2,290	1,980	1,780	1,720	1,580	1,470	–
Unemployment rate											
United States	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8
Canada	10.6	10.8	9.5	8.6	8.8	8.4	7.7	7.0	6.1	6.4	7.0
Australia	10.5	10.6	9.4	8.2	8.2	8.3	7.7	7.0	6.3	6.7	6.3
Japan	2.2	2.5	2.9	3.2	3.4	3.4	4.i	4.7	4.8	5.1	5.4
France	9.9	11.3	11.8	11.3	11.9	11.8	11.3	10.6	9.1	8.5	8.8
Germany	6.7	8.0	8.5	8.2	9.0	9.9	9.3	8.6	8.1	8.0	8.4
Italy	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5	10.7	9.6	9.1
Netherlands	5.3	6.3	6.9	6.7	6.0	4.9	3.9	3.2	2.7	2.4	–
Sweden	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1	5.8	5.0	5.2
United Kingdom	10.1	10.4	9.5	8.7	8.1	7.0	6.3	6.0	5.5	5.1	5.2

[1] Labor force as a percent of the working-age population.

[2] Employment as a percent of the working-age population.

NOTE: See notes on the data for information on breaks in series.

For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics*, *Ten Countries*, 1959–2001 (Bureau of Labor Statistics, Apr. 14, 2003), on the Internet at **http://www.bls.gov/fls/home.htm**

Dash indicates data are not available.

49. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000	2001
Output per hour														
United States	–	–	70.5	96.9	97.9	102.1	107.3	113.8	117.0	121.3	126.5	135.3	142.9	145.6
Canada	37.8	54.9	72.9	93.4	95.3	105.8	110.8	112.4	109.7	113.5	113.1	116.0	118.4	116.1
Japan	13.8	37.5	63.2	94.4	99.0	101.7	103.3	111.0	116.1	121.0	121.2	126.9	134.1	128.1
Belgium	18.0	32.9	65.4	96.8	99.1	102.5	108.4	113.2	117.0	127.0	129.2	129.5	133.4	134.1
Denmark	29.9	52.7	90.4	99.1	99.4	100.8	–	–	–	–	–	–	–	–
France	22.0	43.1	66.8	93.8	97.0	100.6	108.2	113.9	114.6	121.9	127.7	132.7	142.5	146.3
Germany	29.2	52.0	77.2	99.0	98.3	101.8	109.5	112.2	113.9	119.4	120.3	120.4	127.9	128.2
Italy	23.6	44.3	74.2	95.8	95.9	101.4	104.9	108.0	108.1	109.9	110.0	109.9	113.0	115.0
Netherlands	18.5	37.9	68.8	98.5	99.6	101.6	113.2	118.2	120.2	122.3	125.0	128.5	133.8	–
Norway	37.4	58.8	77.5	97.6	98.2	99.6	99.6	100.7	102.5	102.0	99.9	103.6	104.5	105.3
Sweden	27.3	52.2	73.1	94.6	95.5	107.3	119.4	121.9	124.5	132.3	139.5	149.7	158.0	160.4
United Kingdom	30.0	43.2	54.3	89.2	93.8	103.9	107.1	104.9	103.8	105.2	107.0	111.6	118.0	119.8
Output														
United States	–	–	75.8	101.6	98.3	103.5	111.1	118.4	121.3	127.9	133.1	141.2	147.0	141.3
Canada	33.4	58.9	83.6	106.0	99.0	105.9	114.1	119.6	119.6	127.7	132.8	141.0	148.8	143.9
Japan	10.7	39.2	60.4	97.1	102.0	96.3	94.9	98.9	103.0	106.5	100.2	101.9	107.6	99.1
Belgium	30.7	57.6	78.2	101.0	100.7	97.0	101.4	104.2	106.6	113.8	116.4	118.0	122.2	121.7
Denmark	40.8	68.0	91.4	102.8	101.5	95.6	105.6	111.6	106.7	115.2	115.7	115.1	122.9	126.7
France	31.0	64.1	88.7	99.1	99.8	95.7	100.3	104.9	104.6	109.7	115.0	118.7	124.1	126.3
Germany	41.5	70.9	85.3	99.1	102.3	92.4	95.1	95.2	92.5	95.7	97.2	95.8	101.7	101.8
Italy	23.0	48.1	84.4	99.4	99.3	96.5	102.4	107.2	105.4	108.8	110.7	110.5	113.9	114.6
Netherlands	31.5	59.1	76.8	99.9	100.4	98.4	104.6	108.1	108.7	111.5	114.8	118.1	123.7	–
Norway	57.4	90.6	104.4	100.9	99.0	101.7	104.6	107.3	110.3	114.2	113.7	113.6	110.2	108.9
Sweden	45.9	80.7	90.7	110.1	104.1	101.9	117.1	128.4	131.1	138.0	147.6	157.8	168.7	167.4
United Kingdom	67.3	90.2	87.2	105.4	100.0	101.4	106.1	107.8	108.5	109.9	110.8	111.1	113.3	110.7
Total hours														
United States	92.1	104.4	107.5	104.8	100.4	101.4	103.6	104.0	103.6	105.4	105.2	104.4	102.8	97.1
Canada	88.3	107.1	114.6	113.5	103.9	100.1	103.0	106.4	109.0	112.4	117.5	121.5	125.6	123.9
Japan	77.8	104.4	95.6	102.9	103.1	94.7	91.9	89.1	88.7	88.0	82.7	80.3	80.2	77.4
Belgium	170.7	174.7	119.7	104.3	101.5	94.7	93.6	92.0	91.1	89.6	90.1	91.1	91.7	90.7
Denmark	136.5	129.0	101.1	103.7	102.1	94.8	–	–	–	–	–	–	–	–
France	140.8	148.5	132.9	105.6	102.9	95.1	92.7	92.1	91.3	90.0	90.0	89.4	87.1	86.3
Germany	142.3	136.3	110.5	100.1	104.1	90.8	86.8	84.9	81.2	80.1	80.7	79.6	79.5	78.8
Italy	97.6	108.5	113.8	103.7	103.6	95.2	97.6	99.3	97.5	99.0	100.6	100.5	100.7	99.7
Netherlands	170.5	156.1	111.7	101.4	100.9	96.8	92.4	91.5	90.4	91.1	91.8	92.0	92.5	–
Norway	153.6	153.9	134.7	103.4	100.8	102.1	105.0	106.6	107.6	112.0	113.7	109.6	105.4	103.4
Sweden	168.3	154.7	124.0	116.4	109.0	94.9	98.1	105.3	105.3	104.3	105.8	105.4	106.8	104.3
United Kingdom	224.6	208.8	160.5	118.1	106.6	97.6	99.1	102.7	104.5	104.5	103.6	99.6	96.0	92.4
Compensation per hour														
United States	14.9	23.7	55.6	90.8	95.6	102.7	105.6	107.9	109.4	111.5	117.4	122.1	131.1	133.1
Canada	10.0	17.1	47.6	88.3	95.0	102.0	103.7	106.0	107.0	109.3	110.5	112.3	113.9	117.8
Japan	4.3	16.4	58.5	90.5	96.4	102.8	104.9	108.3	109.2	112.9	115.8	115.2	114.5	115.0
Belgium	5.4	13.7	52.5	90.1	97.3	104.8	106.1	109.2	110.9	114.9	116.6	118.3	121.1	125.9
Denmark	4.6	13.3	49.6	92.7	95.9	104.6	–	–	–	–	–	–	–	–
France	4.3	10.4	40.9	90.9	96.4	102.6	106.0	110.0	112.1	112.0	112.6	116.3	120.8	126.6
Germany	8.1	20.7	53.6	89.4	91.5	106.4	111.7	117.5	122.3	124.7	126.5	129.3	133.5	137.7
Italy	1.8	5.3	30.4	87.6	94.2	105.7	106.8	111.3	119.0	123.0	122.2	124.6	127.8	132.6
Netherlands	6.4	20.2	64.4	90.9	95.3	103.8	108.2	110.7	113.0	115.8	120.6	124.0	131.0	–
Norway	4.7	11.8	39.0	92.3	97.5	101.5	104.4	109.2	113.6	118.7	125.7	133.0	140.0	147.6
Sweden	4.1	10.7	37.3	87.8	95.5	97.4	100.0	106.5	114.4	119.4	124.4	129.3	131.8	137.2
United Kingdom	3.0	6.1	32.1	82.9	93.8	104.6	106.7	107.9	109.5	113.9	120.5	129.6	135.2	140.4
Unit labor costs: National currency basis														
United States	–	–	78.8	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.7	91.4
Canada	26.4	31.1	65.2	94.6	99.6	96.4	93.6	94.3	97.5	96.2	97.7	96.8	96.1	101.5
Japan	31.3	43.8	92.5	95.9	97.4	101.1	101.5	97.6	94.0	93.3	95.5	90.8	85.4	89.8
Belgium	30.1	41.7	80.3	93.0	98.1	102.3	97.9	96.4	94.7	90.5	90.2	91.4	90.8	93.9
Denmark	15.4	25.2	54.9	93.5	96.5	103.7	96.2	96.4	103.7	99.7	102.9	105.4	101.8	101.7
France	19.4	24.0	61.3	96.9	99.3	101.9	97.9	96.6	97.8	91.9	88.2	87.7	84.8	86.5
Germany	27.8	39.8	69.4	90.3	93.1	104.5	102.0	104.7	107.4	104.4	105.2	107.4	104.4	106.6
Italy	7.5	11.9	41.0	91.5	98.2	104.3	101.9	103.0	110.0	111.9	111.1	113.4	113.1	115.4
Netherlands	34.6	53.3	93.7	92.3	95.6	102.1	95.6	93.7	94.0	94.7	96.5	96.6	97.9	–
Norway	12.7	20.1	50.3	94.6	99.2	101.9	104.8	108.4	110.8	116.4	125.7	128.4	134.0	140.1
Sweden	15.0	20.6	51.0	92.9	100.0	90.8	83.8	87.4	91.9	90.2	89.2	86.3	83.4	85.5
United Kingdom	9.8	14.1	59.0	92.9	100.1	100.8	99.7	102.9	105.5	108.2	112.7	116.2	114.5	117.2
Unit labor costs: U.S. dollar basis														
United States	–	–	78.8	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.7	91.4
Canada	32.9	36.0	67.4	98.0	105.1	90.3	82.8	83.0	86.4	84.0	79.6	78.8	78.2	79.2
Japan	11.0	15.5	51.8	83.8	91.7	115.4	125.9	131.7	109.6	97.7	92.4	101.2	100.4	93.6
Belgium	19.4	27.0	88.3	89.5	92.3	95.1	94.2	105.2	98.4	81.2	79.9	77.6	66.8	67.0
Denmark	13.4	20.2	58.8	91.2	91.0	96.5	91.4	104.0	108.0	91.0	92.7	91.0	75.9	73.7
France	21.0	23.0	76.8	94.1	93.1	95.2	93.4	103.5	101.2	83.3	79.1	75.4	63.2	62.5
Germany	10.4	17.1	59.6	87.3	87.5	98.7	98.2	114.2	111.5	94.0	93.3	91.4	76.9	76.2
Italy	15.0	23.3	59.0	94.1	97.5	81.6	77.9	77.9	87.9	80.9	78.8	76.9	66.4	65.7
Netherlands	16.1	25.9	82.9	89.1	89.9	96.6	92.4	102.7	98.1	85.3	85.5	82.1	72.1	–
Norway	11.1	17.5	63.3	94.0	95.0	89.2	92.3	106.4	106.6	102.1	103.5	102.2	94.5	96.8
Sweden	16.9	23.1	70.2	91.3	96.3	67.8	63.2	71.3	79.8	68.8	65.3	60.8	53.0	48.2
United Kingdom	15.6	19.1	77.7	93.9	100.1	85.6	86.4	91.9	93.2	100.4	105.7	106.4	98.3	95.5

NOTE: Data for Germany for years before 1991 are for the former West Germany. Data for 1991 onward are for unified Germany. Dash indicates data not available.

50. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]												
	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]	2001[4]
PRIVATE SECTOR[5]													
Total cases	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3	6.1	5.7
Lost workday cases	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0	3.0	2.8
Lost workdays	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]													
Total cases	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3	7.1	7.3
Lost workday cases	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9	3.4	3.6	3.6
Lost workdays	100.9	112.2	108.3	126.9	–	–	–	–	–	–	–	–	–
Mining													
Total cases	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9	4.4	4.7	4.0
Lost workday cases	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9	2.7	3.0	2.4
Lost workdays	137.2	119.5	129.6	204.7	–	–	–	–	–	–	–	–	–
Construction													
Total cases	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8	8.6	8.3	7.9
Lost workday cases	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0	4.2	4.1	4.0
Lost workdays	143.3	147.9	148.1	161.9	–	–	–	–	–	–	–	–	–
General building contractors:													
Total cases	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4	8.0	7.8	6.9
Lost workday cases	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9	3.7	3.9	3.5
Lost workdays	137.3	137.6	132.0	142.7	–	–	–	–	–	–	–	–	–
Heavy construction, except building:													
Total cases	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2	7.8	7.6	7.8
Lost workday cases	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1	3.8	3.7	4.0
Lost workdays	147.1	144.6	160.1	165.8	–	–	–	–	–	–	–	–	–
Special trades contractors:													
Total cases	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1	8.9	8.6	8.2
Lost workday cases	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1	4.4	4.3	4.1
Lost workdays	144.9	153.1	151.3	168.3	–	–	–	–	–	–	–	–	–
Manufacturing													
Total cases	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7	9.2	9.0	8.1
Lost workday cases	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7	4.6	4.5	4.1
Lost workdays	113.0	120.7	121.5	124.6	–	–	–	–	–	–	–	–	–
Durable goods:													
Total cases	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7	10.1	–	8.8
Lost workday cases	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0	4.8	–	4.3
Lost workdays	116.5	123.3	122.9	126.7	–	–	–	–	–	–	–	–	–
Lumber and wood products:													
Total cases	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2	13.0	12.1	10.6
Lost workday cases	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8	6.7	6.1	5.5
Lost workdays	177.5	172.5	172.0	165.8	–	–	–	–	–	–	–	–	–
Furniture and fixtures:													
Total cases	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4	11.5	11.2	11.0
Lost workday cases	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7	5.9	5.9	5.7
Lost workdays	–	–	–	128.4	–	–	–	–	–	–	–	–	–
Stone, clay, and glass products:													
Total cases	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8	10.7	10.4	10.1
Lost workday cases	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0	5.4	5.5	5.1
Lost workdays	149.8	160.5	156.0	152.2	–	–	–	–	–	–	–	–	–
Primary metal industries:													
Total cases	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0	12.9	12.6	10.7
Lost workday cases	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0	6.3	6.3	5.3
Lost workdays	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–	–	11.1
Fabricated metal products:													
Total cases	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9	12.6	11.9	11.1
Lost workday cases	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5	6.0	5.5	5.3
Lost workdays	147.6	155.7	146.6	144.0	–	–	–	–	–	–	–	–	–
Industrial machinery and equipment:													
Total cases	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5	8.5	8.2	11.0
Lost workday cases	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0	3.7	3.6	6.0
Lost workdays	86.8	88.9	86.6	87.7	–	–	–	–	–	–	–	–	–
Electronic and other electrical equipment:													
Total cases	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9	5.7	5.7	5.0
Lost workday cases	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8	2.8	2.9	2.5
Lost workdays	77.5	79.4	83.0	81.2	–	–	–	–	–	–	–	–	–
Transportation equipment:													
Total cases	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6	13.7	13.7	12.6
Lost workday cases	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6	6.4	6.3	6.0
Lost workdays	138.6	153.7	166.1	186.6	–	–	–	–	–	–	–	–	–
Instruments and related products:													
Total cases	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0	4.0	4.5	4.0
Lost workday cases	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9	1.8	2.2	2.0
Lost workdays	55.4	57.8	64.4	65.3	–	–	–	–	–	–	–	–	–
Miscellaneous manufacturing industries:													
Total cases	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1	8.4	7.2	6.4
Lost workday cases	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9	4.0	3.6	3.2
Lost workdays	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

50. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 workers[3]												
	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]	2001[4]
Nondurable goods:													
Total cases	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2	7.8	7.8	6.8
Lost workday cases	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3	4.2	4.2	3.8
Lost workdays	107.8	116.9	119.7	121.8	–	–	–	–	–	-	–	–	–
Food and kindred products:													
Total cases	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6	12.7	12.4	10.9
Lost workday cases	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5	7.3	7.3	6.3
Lost workdays	174.7	202.6	207.2	211.9	–	–	–	–	–	-	–	–	–
Tobacco products:													
Total cases	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4	5.5	6.2	6.7
Lost workday cases	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.4	2.2	3.1	4.2
Lost workdays	64.2	62.3	52.0	42.9	–	–	–	–	–	-	–	–	–
Textile mill products:													
Total cases	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	7.4	6.4	6.0	5.2
Lost workday cases	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4	3.2	3.2	2.7
Lost workdays	81.4	85.1	88.3	87.1	–	–	–	–	–	-	–	–	–
Apparel and other textile products:													
Total cases	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2	5.8	6.1	5.0
Lost workday cases	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6	2.8	3.0	2.4
Lost workdays	80.5	92.1	99.9	104.6	–	–	–	–	–	-	–	–	–
Paper and allied products:													
Total cases	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1	7.0	6.5	6.0
Lost workday cases	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7	3.7	3.4	3.2
Lost workdays	132.9	124.8	122.7	125.9	–	–	–	–	–	-	–	–	–
Printing and publishing:													
Total cases	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4	5.0	5.1	4.6
Lost workday cases	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8	2.6	2.6	2.4
Lost workdays	63.8	69.8	74.5	74.8	–	–	–	–	–	-	–	–	–
Chemicals and allied products:													
Total cases	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2	4.4	4.2	4.0
Lost workday cases	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1	2.3	2.2	2.1
Lost workdays	63.4	61.6	62.4	64.2	–	–	–	–	–	-	–	–	–
Petroleum and coal products:													
Total cases	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9	4.1	3.7	2.9
Lost workday cases	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8	1.8	1.9	1.4
Lost workdays	68.1	77.3	68.2	71.2	–	–	–	–	–	-	–	–	–
Rubber and miscellaneous plastics products:													
Total cases	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2	10.1	10.7	8.7
Lost workday cases	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8	5.5	5.8	4.8
Lost workdays	147.2	151.3	150.9	153.3	–	–	–	–	–	-	–	–	–
Leather and leather products:													
Total cases	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8	10.3	9.0	8.7
Lost workday cases	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5	5.0	4.3	4.4
Lost workdays	130.4	152.3	140.8	128.5	–	–	–	–	–	-	–	–	–
Transportation and public utilities													
Total cases	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3	7.3	6.9	6.9
Lost workday cases	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3	4.4	4.3	4.3
Lost workdays	121.5	134.1	140.0	144.0	–	–	–	–	–	-	–	–	–
Wholesale and retail trade													
Total cases	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5	6.1	5.9	6.6
Lost workday cases	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8	2.7	2.7	2.5
Lost workdays	63.5	65.6	72.0	80.1	–	–	–	–	–	-	–	–	–
Wholesale trade:													
Total cases	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5	6.3	5.8	5.3
Lost workday cases	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3	3.3	3.1	2.8
Lost workdays	71.9	71.5	79.2	82.4	–	–	–	–	–	-	–	–	–
Retail trade:													
Total cases	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5	6.1	5.9	5.7
Lost workday cases	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7	2.5	2.5	2.4
Lost workdays	60.0	63.2	69.1	79.2	–	–	–	–	–	-	–	–	–
Finance, insurance, and real estate													
Total cases	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	.7	1.8	1.9	1.8
Lost workday cases	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8	.8	.7
Lost workdays	17.6	27.3	24.1	32.9	–	–	–	–	–	-	–	–	–
Services													
Total cases	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2	4.9	4.9	4.6
Lost workday cases	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4	2.2	2.2	2.2
Lost workdays	51.2	56.4	60.0	68.6	–	–	–	–	–	-	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:

N = number of injuries and illnesses or lost workdays;

EH = total hours worked by all employees during the calendar year; and

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

NOTE: Dash indicates data not available.

51. Fatal occupational injuries by event or exposure, 1997-2002

Event or exposure[1]	Fatalities			
	1997-2001 average	2001[2]	2002	
		Number	Number	Percent
Total..	6,036	5,915	5,524	100
Transportation incidents..	2,593	2,524	2,381	43
Highway incident...	1,421	1,409	1,372	25
Collision between vehicles, mobile equipment........................	697	727	635	11
Moving in same direction...............................	126	142	155	3
Moving in opposite directions, oncoming........................	254	257	202	4
Moving in intersection...............................	148	138	145	3
Vehicle struck stationary object or equipment........................	300	297	326	6
Noncollision incident...................................	369	339	373	7
Jackknifed or overturned—no collision........................	300	273	312	6
Nonhighway (farm, industrial premises) incident........................	368	326	322	6
Overturned...........................	202	158	164	3
Aircraft...	248	247	192	3
Worker struck by a vehicle...............................	382	383	356	6
Water vehicle...............................	99	90	71	1
Rail vehicle...........................	68	62	64	1
Assaults and violent acts...	964	908	840	15
Homicides...	709	643	609	11
Shooting...............................	567	509	469	8
Stabbing...............................	64	58	58	1
Other, including bombing...............................	78	76	82	1
Self-inflicted injuries...............................	221	230	199	4
Contact with objects and equipment..................................	995	962	873	16
Struck by object...............................	562	553	506	9
Struck by falling object...............................	352	343	303	5
Struck by flying object...............................	58	60	38	1
Caught in or compressed by equipment or objects....................	290	266	231	4
Caught in running equipment or machinery........................	156	144	110	2
Caught in or crushed in collapsing materials........................	126	122	116	2
Falls...	737	810	714	13
Fall to lower level...............................	654	700	634	11
Fall from ladder...............................	111	123	126	2
Fall from roof...............................	155	159	143	3
Fall from scaffold, staging...............................	91	91	87	2
Fall on same level...............................	61	84	63	1
Exposure to harmful substances or environments.................	529	499	538	10
Contact with electric current...............................	291	285	289	5
Contact with overhead power lines........................	134	124	122	2
Contact with temperature extremes........................	41	35	60	1
Exposure to caustic, noxious, or allergenic substances...............	106	96	98	2
Inhalation of substances...............................	52	49	49	1
Oxygen deficiency...............................	89	83	90	2
Drowning, submersion...............................	71	59	60	1
Fires and explosions	197	188	165	3
Other events or exposures[3]...	21	24	13	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued Sept. 25, 2002, reported a total of 5,900 fatal work injuries for calendar year 2001. Since then, an additional 15 job-related fatalities were identified, bringing the total job-related fatality count for 2001 to 5,915.

Totals for 2001 exclude fatalities from the September 11 terrorist attacks.

[4] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include sub-categories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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[signed] Richard M. Devens, Executive Editor

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Consumer Price indexes	October 16	September	November 18	October	December 16	November	2; 32–34
Real earnings	October 16	September	November 18	October	December 16	November	14–16, 24
Employment Cost Indexes	October 30	3rd quarter					1–3; 25–28
Productivity and costs			November 6	3rd quarter	December 3	3rd quarter	2; 43–46