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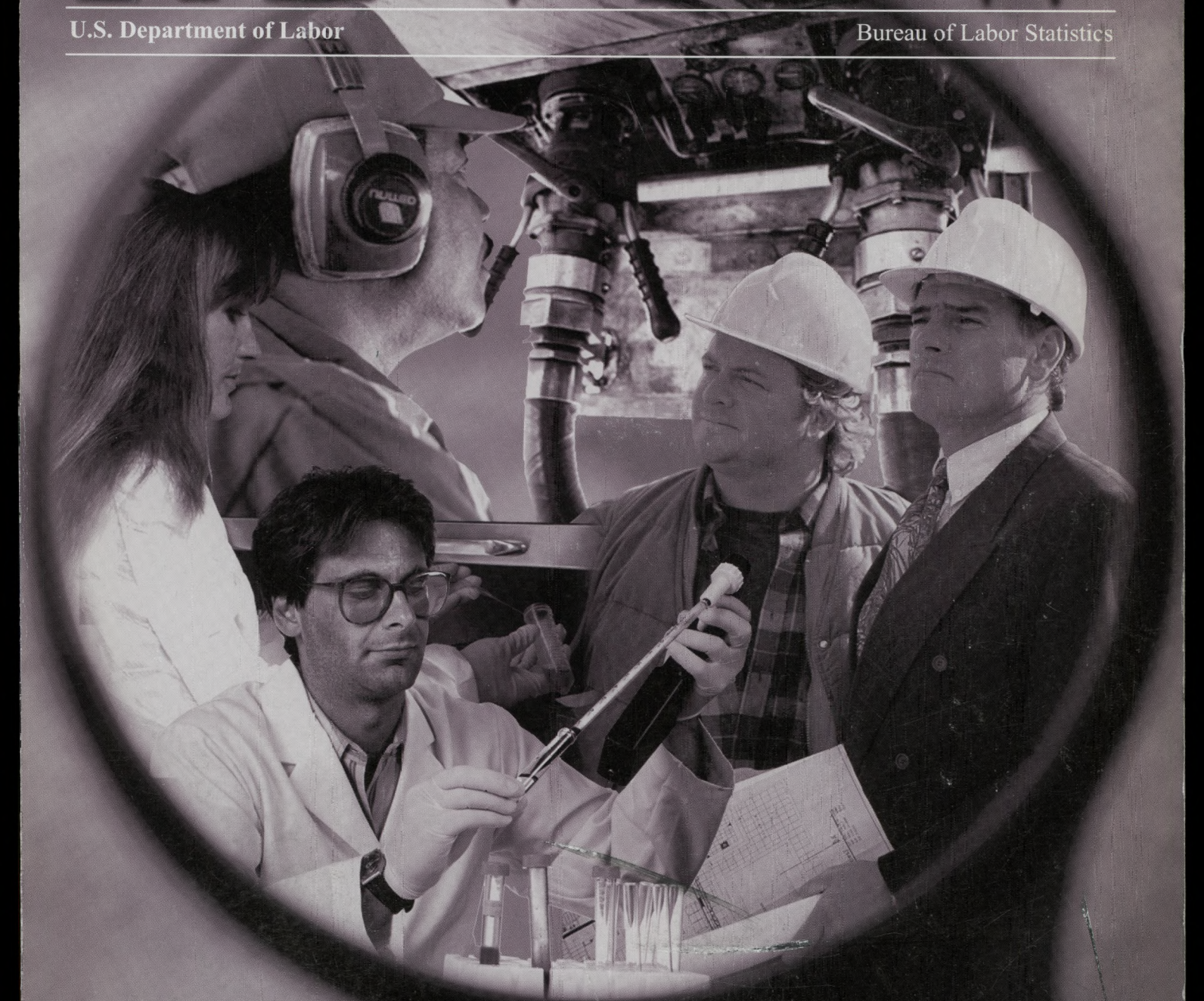

Employment in services

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The services industry division is often alleged to be "recession-proof." Like many other strong generalizations about large groups, this statement is not quite universally true. For one thing, William C. Goodman shows early on in his article that while the division may not lose jobs in NBER-designated periods of recession, the rate of job growth drops significantly. As this would lead one to suspect, there are indeed important segments of the services division that do decline in employment during recession. Perhaps most notable among these are engineering and management services, personal services, and miscellaneous repair services. Only the health care industry bucks the trend by adding significantly more jobs in times of economic decline than it does during expansions.

Retirement, we have heard it said, will be the "health care issue" of the coming decades in that it will be the central concern of senior policymakers and social scientists. Murray Gendell traces the evolution of the average age of retirement in his article. He finds that the average age of retirement began to decline again in the 1990s after pausing in the 1970s and 1980s. According to Gendell's calculations, retirement ages declined by 5 years or more from the early 1950s to the early 1970s, were roughly stable in the late 1970s through the 1980s, and have edged down in the 1990s.

Maury Gittleman and William J. Wiatrowski provide a guide to using and understanding the wage query section of the Bureau's latest data extraction tool. In addition to a brief look at the mechanics of using the one-screen Create Customized Tables tool, Gittleman and Wiatrowski explain the statistical infrastructure of the model-based estimates that are a unique feature of the wage query system.

Productivity comparison

In 2000, the labor productivity growth rate for manufacturing was the highest in the United States among the 10 countries for which comparable data were available. The labor productivity increase in the United States was 7.1 percent, followed by 6.0 percent and 5.8 percent in Germany and France, respectively. The productivity growth rates in Canada and Norway were the lowest among the countries compared, at 1.2 percent and 1.1 percent, respectively. Additional information is available in "International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends, 2000," *news release* USDL *01–280.*

Annual pay trends

The average annual pay of U.S. workers rose by 5.9 percent in 2000, according to preliminary data. This compares with a 4.4-percent rise in 1999. This pay growth in 2000 was the highest in the 1990–2000 period. Moreover, the 2000 increase in average annual pay was the largest since 1982, when pay rose by 6.7 percent.

Massachusetts and California experienced the largest percentage increases in average annual pay from 1999 to 2000 (9.8 and 9.6 percent, respectively). Massachusetts' strong performance reflected above-average pay growth in nearly all the major industries, especially in finance, insurance, and real estate (16.5 percent), services (11.9 percent), and manufacturing (10.7 percent). In California, the largest percentage increases in pay and occurred in manufacturing (16.2 percent), services (12.2 percent), and finance, insurance, and real estate (10.0 percent).

Among industry divisions, the largest over-the-year percentage pay increase in the private sector was registered in the finance, insurance, and real estate division (9.1 percent) in 2000. The next largest were in manufacturing and services (6.8 percent each), followed by mining (6.4 percent). The smallest pay gain in 2000 among the major private industry divisions occurred in the transportation, communications, and public utilities industry (4.4 percent). The annual pay increase for the public sector, which includes Federal, State, and local government, was 4.1 percent.

Find more information on pay in 2000 in "Average Annual Pay By State and Industry, 2000," *news release* USDL *01–295.*

Wages in foreign factories

Average hourly compensation costs in U.S. dollars for production workers in manufacturing in 28 foreign economies declined to 76 percent of the U.S. level in 2000 from 80 percent in 1999. Compensation costs relative to the United States continued to decline in Canada and throughout Europe in 2000, while relative costs rose in Japan, Korea, Mexico, and Taiwan.

The recent decline of relative compensation costs in 17 European economies studied resulted in higher compensation costs in the United States than in Europe for the first time since 1989. In 2000, average costs in the United States were 7 percent higher than for Europe, after being 7 percent lower in 1999. Additional information is available in "International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 2000," *news release* USDL *01–311.* □

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www.bls.gov/bls/newsrels.htm

Employment in services industries affected by recessions and expansions

Although employment in the Services Division has had a recession-resistant image, some industries within Services do lose jobs while others gain more jobs than usual during recessions

William C. Goodman

The services industries' reputation of resisting recessions is well deserved in one sense, as most of the major groups within the Services Division, as well as the division as a whole, generally do not show a net decline in employment from the official start of a recession period to its completion. Employment in the division, however, is affected by recessions. Its growth in jobs slows considerably, and with statistical significance. Furthermore, most of the division's 16 major industry groups decelerate in job growth or lose jobs during recessions. Five major groups in Services, however, are at least slightly countercyclical, gaining jobs faster during recessions than in normal times. One extremely large and important group, healthcare, is countercyclical. Furthermore, healthcare shows countercyclicality with statistical significance. This article identifies and discusses the cyclical and countercyclical industry groups of the Services Division and some of the different causes of cyclical and countercyclical trends.

Methodology

For each employment series examined in this analysis, quarterly averages were computed from seasonally adjusted monthly observations so that each series could be compared in trend with GDP, which is available as a quarterly series. Next, the quarter-to-quarter percent changes of each series were calculated. Within each series, the percent changes were divided into two groups: those during officially declared recessions and those outside of official recessions. The average quarterly percent change during recessions and the average quarterly percent change during other times were calculated. The difference between the two averages determined whether the series is classified in this article as cyclical or countercyclical; when the average percent change during economic expansions is greater than the average change during recessions, the series is called cyclical, and when the average percent change during recessions is greater than that during economic expansions, the series is considered countercyclical.

The period used in this article generally starts at the beginning of the individual series and continues through the third quarter of 2000. (See table 1 for dates.) Later data were not used because the state of the economy (that is, in expansion or in recession) during the recent period has not been determined as of the writing of this article. The employment trends in Services since the third quarter of 2000 are described in the second-to-last section of this article.

A Student's *t* test was applied to the recession and nonrecession changes to see if the difference between the two groups of changes is statistically significant. Statistical significance implies that the series is cyclical or

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Table 1. Cyclical and countercyclical employment series from the Services Division, 1947 to 2000

Industry group	Starting point of data	Number of recessions in series	Difference[1]	Statistical significance[2]	Loses jobs in average recessionary quarter?
Total Services Division	1947[3]	9	0.5	Yes	No
Gross domestic product	1947[3]	9	1.5	Yes	N/A
Cyclical groups					
Engineering, management services	1988	1	1.8	Yes	Yes
Business services	1958	6	1.4	Yes	No
Agricultural services	1976	3	1.1	Yes	No
Automotive services	1972	4	1.1	Yes	No
Miscellaneous repairs	1964	5	1.0	Yes	Yes
Lodging	1972	4	.7	Yes	No
Personal services	1958	6	.7	Yes	Yes
Miscellaneous services	1988	1	.4	No	No
Motion pictures	1988	1	.4	No	No
Museums, gardens, zoos	1988	1	.2	No	No
Membership organizations	1972	4	.1	No	No
Countercyclical groups					
Private education	1958	6	−.5	No	...
Legal services	1972	4	−.4	No	...
Health services	1958	6	−.3	Yes	...
Social services	1972	4	−.2	No	...
Amusements, recreation	1988	1	−.1	No	...

[1] "Difference" is the difference between the average quarter-to-quarter percent change during general economic expansions and the average quarter-to-quarter percent change during recessions.

[2] Statistical significance is based on a Student's *t* test, comparing quarter-to-quarter percent changes during recessions with those of other times. A two-tailed test with a 5-percent probability criterion was used.

[3] Data are available earlier than the date shown, but only data from 1947 to the third quarter of 2000 are used in this article.

countercyclical by its nature rather than by chance and therefore further implies that the series is likely to remain cyclical or countercyclical in the future, unless some aspect of the industry changes in a way that affects the trends of the industry's employment.

The approach used in this article, then, is designed to show differences in job trends between periods of general economic expansions and periods of recession. The results do not reflect another form of cyclicality: the degree of association of an industry's job trends with GDP trends *within* periods of general economic growth (neither within a single period of expansion nor across various expansions). Similarly, the results stated here do not reflect the degree of association of industry-specific employment change with GDP change *within* a recession, nor across various recessions. In another article, correlations between the trend of a specific industry and the trend of GDP capture how the industry does or does not accelerate or decelerate along with GDP over time regardless of whether the economy continues to expand, turns, or continues to decline.[1] By contrast, this article primarily describes differences between a series' trend during recessions and its trend during general economic expansions.

Caveats

The various time-series may have differing cycles of their own, leading, lagging, or behaving independently of the overall business cycle. To compare the cyclicality of the various series, some common basis of comparison had to be used. The official recession periods were chosen.[2] This study, then, may not capture all the cyclicality of employment in some industries, particularly any whose timing of expansion and contraction differs much from the general business cycle. This study does, however, directly reflect the various industries' participation in, or reduction of the general economic cycle.

Certain employment series in services have relatively short histories, starting in 1982 or later. Those series include only one official recession in its entirety: the recession of July 1990 to March 1991. Possibly, the industry behaved differently in the one official recession than in other recessions. In the cases of industries with recorded employment including only the one recession, particular attention should be paid to statistical significance or the lack of it. Deceleration or decline in the one latest recession without statistical significance may be by chance.

The major industry groups

Table 1 identifies which major industry groups of the services division have cyclical or countercyclical histories and which major groups show statistical significance in their cyclicality or countercyclicality. In the table, the major groups are divided into two categories: cyclical and countercyclical. Within each category, industry groups are shown in order of the amount of difference between their behavior in recessions and their behavior in general economic expansions. Specifically, the groups within each category are ordered according to the difference between average quarterly percent change during general economic expansions and average percent change during recessions. Two major industry groups, engineering and management services and business services, have degrees of cyclicality, as indicated by their difference, comparable to that of GDP. Other major groups, including both cyclical and countercyclical ones, have milder differences.

The most cyclical industries

As previously stated, the Services Division as a whole is cyclical. (See chart 1.) Among the division's major components, *engineering and management services* are most cyclical, and furthermore have been one of the few major groups in the division to lose jobs, as opposed to merely decelerating, in the average recessionary quarter. All of the group's four main components (engineering and architectural services, accounting and auditing, research and testing, and management and public-relations services) have been cyclical, and three of them (excluding only the smallest component, research and testing) have lost jobs in the average quarter of a recession.

Engineering and management services are sold mainly to businesses. The engineering and architectural component sells 70 percent of its output to businesses, and more than half of that 70 percent is sold to construction contractors. Nine percent of the portion of output sold to businesses is sold to manufacturers. Contractual engineering and architectural services depend, then, on demand from construction and manufacturing.[3]

Eighty-four percent of the output of management and public-relations services is sold to businesses, most of all to the Services Division. Management consulting is an important industry within management and public relations. Both *engineering and architectural services* and *management and public-relations services* depend heavily on projects, as opposed to ongoing production, for demand. Such projects include construction projects, development of new products, and major changes to internal business processes. Both *engineering and architectural services* and *management and public-relations services* show cyclicality with statistical significance and furthermore actually lose jobs in recessions.

Business services, another cyclical major group (chart 2), include two large components, *help supply* and *computer services*. Both components show cyclicality with statistical significance. Help supply, which is composed of agencies that provide workers to other businesses on a contractual basis, employs massive numbers of workers and actually declines in employment during recessions. Help supply lost 41,000 workers from January 1982 (the earliest point in the time-series, which happened to be during a recession) to the end of the recession in November 1982 and lost 56,000 workers in the recession of the early nineties. The computer services industry, which includes production of software, has a longer time-series (since 1972). During recessions, the industry has slowed but has not lost jobs. Somewhat like engineering and management services, help supply and computer services benefit from projects as well as from ongoing activities. While some employees who are furnished by staffing agencies may work indefinitely or intermittently for clients, others are used for specific temporary activities. Computer services include custom software creation, as in a corporate, military, or nondefense government project; the corporate projects are often designed to improve a business process.

Like engineering and architectural services, *agricultural services*, because of their *landscaping and horticultural* component, are partially dependent on the level of activity in construction. *Agricultural services* also have a cyclical history. Although they sell a majority (60 percent) of their output to businesses, the growth in sales has been mainly in sales to consumers, who may also cut back on professional horticultural services when they become unemployed or become less confident of continued employment.

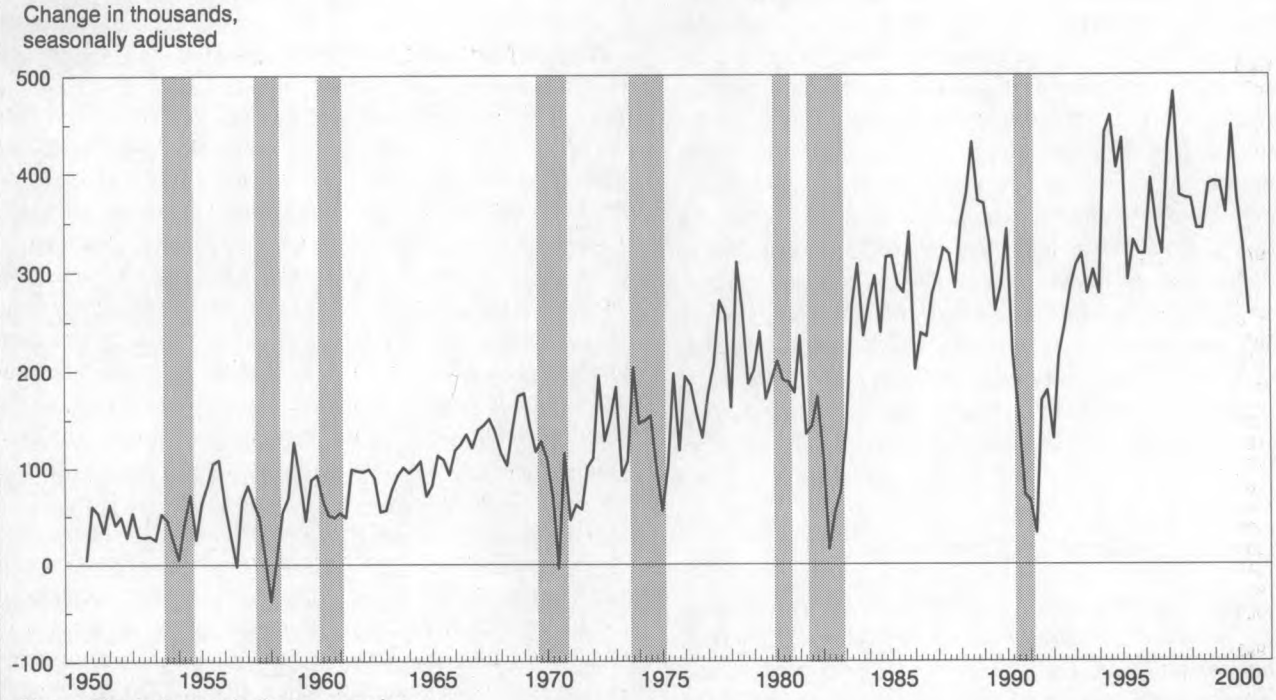
Automotive services also are cyclical. *Passenger-car rental and leasing*, *automotive repair*, and *other automotive services*, such as car washes, are all cyclical with statistical significance. Automotive repair, the largest component, is most responsible for the cyclicality of automotive services as a whole.

The *miscellaneous repair* industry also is cyclical. Surprisingly perhaps, most of its output (71 percent) is sold to businesses. The largest chunk of its sales to businesses (about a third of the portion of output sold to businesses) is purchased by the manufacturing division, suggesting that warranty work accounts for much of the output of the *miscellaneous repair* industry. Reduced sales of appliances and other machinery during recessions would account for a considerable loss of warranty business. The miscellaneous repair business does lose jobs, instead of just decelerating, during the average recessionary quarter.

The *lodging industry* sells about half of its services to consumers and about half to businesses. Lodging is highly cyclical in the context of the division. Although lodging does not lose jobs during the average recessionary quarter, its rate of growth is cut to about one-sixth of its rate during economic expansions.

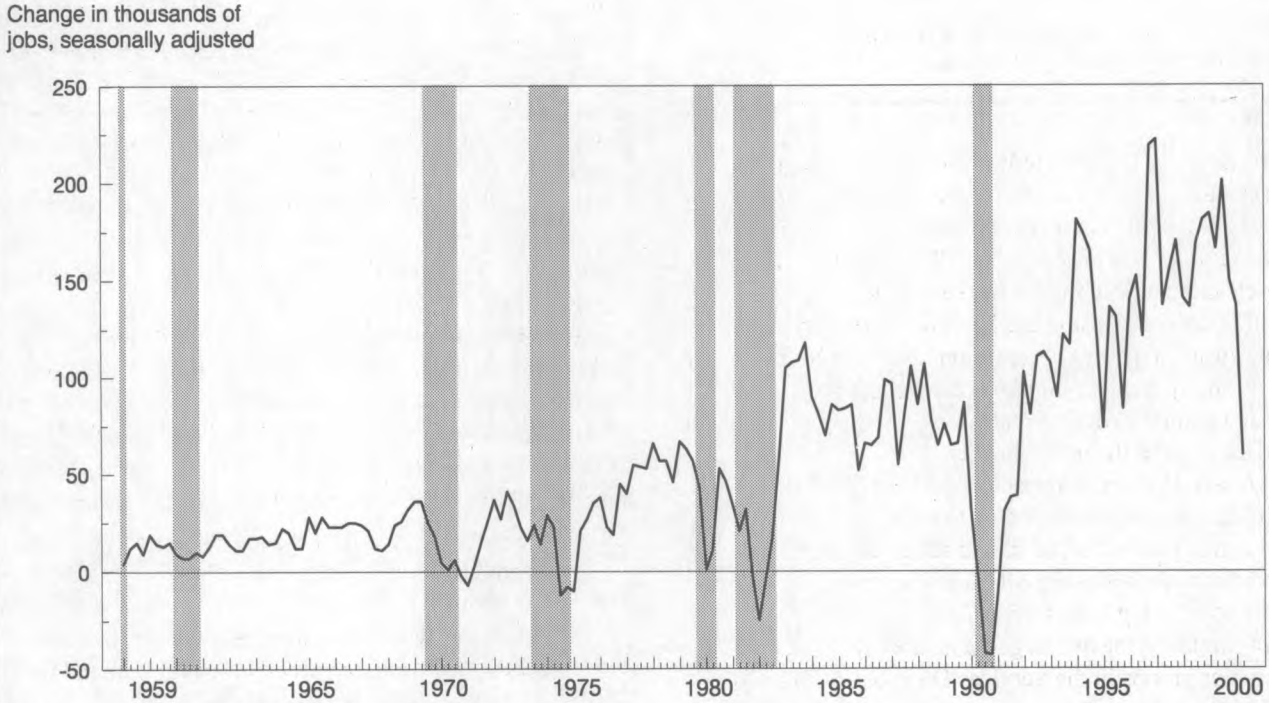
Personal services is one of only three cyclical major groups

Chart 1. Quarter-to-quarter change in jobs in the Services Division through business cycles, 1950 to 2000



NOTE: Shaded areas indicate recessions.

Chart 2. Quarter-to-quarter change in business services through economic cycles, 1958 to 2000



NOTE: Shaded areas indicate recessions.

Table 2. Percent change in enrollment in private higher education, 1965 to 1997

Year	Percent change
1965	7.7
1966	4.6
1967	2.7
1968	−.7
1969	1.2
1970[1]	2.1
1971	−.4
1972	.0
1973	1.8
1974[1]	2.4
1975	5.1
1976	.4
1977	3.4
1978	1.4
1979	2.4
1980	4.2
1981[1]	3.2
1982[1]	.2
1983	1.9
1984	−.6
1985	.1
1986	.8
1987	.1
1988	3.6
1989	2.3
1990[1]	.4
1991	2.5
1992	1.8
1993	.4
1994	.9
1995	.8
1996	1.3
1997	−.3

[1] A recession was in progress during fall of the year.
SOURCE: U.S. Department of Education.

in the Services Division to lose jobs in the average quarter of a recession. The cyclicality of personal services is attributable to two of its components: *laundry, cleaning, and garment services* and *barber shops*. The laundry, cleaning, and dry-cleaning industry gains workers during the average quarter of general expansion and loses far more workers (0.9 percent) during a quarter of recession. *Barber shops* lose workers normally, but lose far more (2.4 percent per quarter or 9.2 percent annually) during recessions. Both industries exhibit statistically significant cyclicality.

Motion pictures, surprisingly perhaps, sells slightly more of its output to businesses than to consumers. One explanation is that production of filmed advertisements is included. Advertising activities are cut back in recessions; employment in the advertising industry itself also is cyclical.

In summary, the two largest and most cyclical of the cyclical major groups in the Services Division (*business services* and *engineering and management services*) sell more of their output to the business community than to consumers. Cutbacks in interindustry purchases, as opposed to consumption, account directly for most of the cyclicality of the Services Division.

Countercyclical industries

As shown in table 1, there are fewer countercyclical main components in the Services Division than there are cyclical ones. Just the same, the major industry group with the greatest employment in the division, health services (with more than 10 million employees), is countercyclical. (See chart 3.) Demand for health care is relatively unaffected by recessions, because to the consumer, healthcare can be a necessity rather than an optional commodity whose purchase can be postponed. Furthermore, Medicare, Medicaid, and private insurance provide funding dedicated solely to healthcare, so that much of the funding is not subject to competition with other types of purchases, and benefits remain available to persons during periods of unemployment.[4]

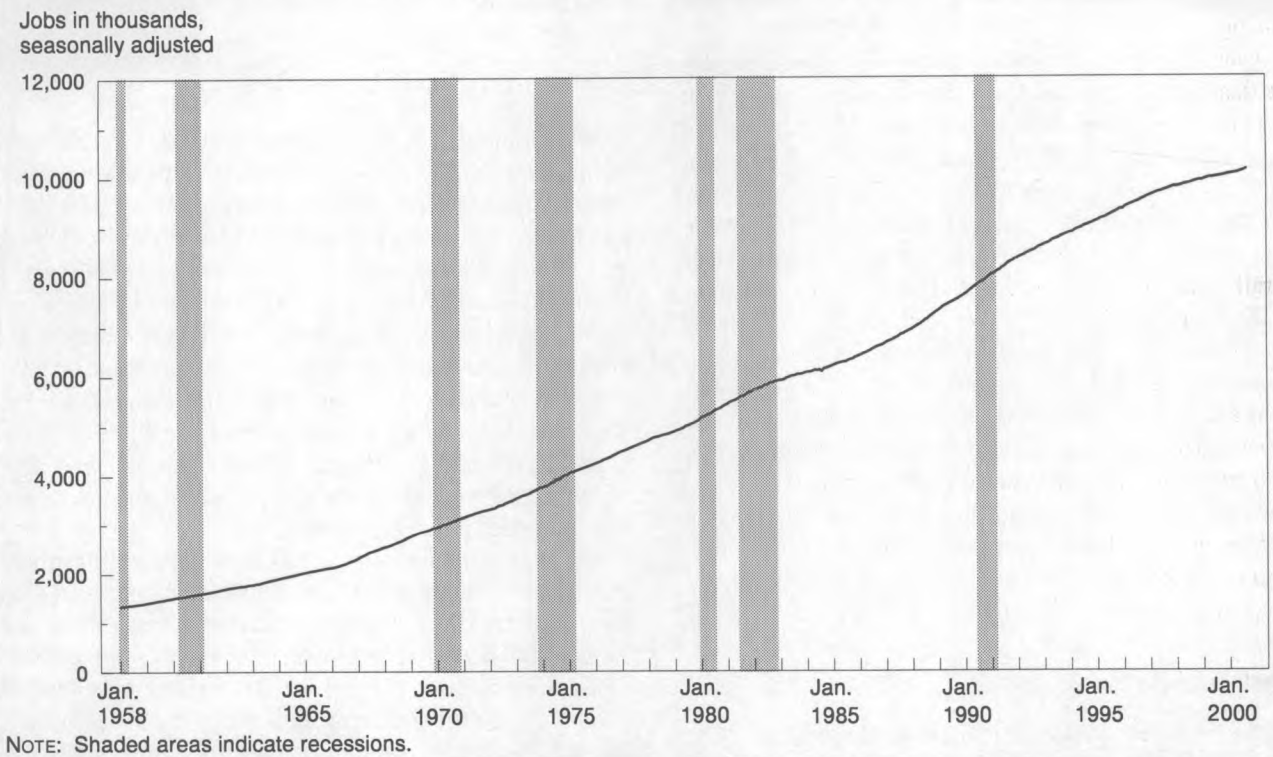
But to be truly countercyclical as defined in this article, the industry must not only resist recessions but also must grow more rapidly during recessions than during expansions. Table 1 indicates that employment in health services is indeed countercyclical. If people need more healthcare services during recessions, countercyclical demand for treatment is implied. But a study by Christopher J. Ruhm provides evidence that health actually improves during recessions. He shows that mortality and eight major causes of death are more frequent in times of economic expansion. He cites empirical support for two explanations. "Tobacco use exhibits a strong procyc[l]ical variation, possibly explaining some of the health improvement that accompanies economic downturns. A one percentage point increase in the state unemployment rate reduces the predicted number of current smokers by 0.3 percentage points." Also, he provides evidence indicating that "physical activity rises and diet improves when the economy weakens."[5] The idea that worsening health conditions during recessions create greater demand, then, is questionable.

While worse health during recessions may not be a reality, another factor is. Considerable evidence shows that healthcare is subject to labor shortages, which intensify in prosperous times and are somewhat relieved in a sluggish or shrinking economy. The countercyclical effects of labor shortages in hospitals are described by John Andrews:

> An economic downturn means the unemployment rate could rise and people will actually need jobs. That would be a great relief to an industry [healthcare] with job vacancies galore, created by forces outlined in Economics 101: high demand for workers that are in short supply. [6]

In addition to the problems of hospitals, low pay in *nurs-*

Chart 3. Employment in health services through business cycles, 1958 to 2000



NOTE: Shaded areas indicate recessions.

ing homes, another part of the healthcare industry, has been identified as a factor contributing to the nursing-home labor shortage.[7]

The introduction of more restrictive rules governing Medicare and Medicaid payments constitutes another factor that has contributed to the countercyclicality of healthcare. Important restrictions were introduced in 1983, 1996, 1997, and 1998, which were all years of economic expansion. The restrictions of Medicare and Medicaid payments slowed the growth of healthcare jobs.[8] The timing of the restrictions, during economic expansions, may be considered a factor that is extraneous to the business cycle. The health services group may not be *intrinsically* as countercyclical as it appears.

The remaining ostensibly countercyclical industries do not show statistical significance in their countercyclicality. Therefore they should not be regarded as having any proven countercyclical nature, at least not in terms of the statistical approach used in this article. Just the same, one may ask why the industries did not clearly participate in business cycles. The following factors may at least prevent the industries from being more cyclical than they are.

Among ostensibly countercyclical major groups of the division, private education reportedly has countercyclical tendencies because more people go to school when they cannot find jobs. Figures representing enrollment in private higher education, however, show no readily apparent distinction between recession periods and other years. (See table 2.)

Instead, we can consider a factor that may explain much of the countercyclicality of various industries. That factor is the availability of more attractive job opportunities in other industries during times of economic expansion. In addition to the health services industry, a shortage of *child day care* workers (in the broader category of *social services*) also has been attributed to better paying opportunities; "demanding work for little pay" typifies the day-care industry.[9] Another of the countercyclical groups, amusements and recreation, also pays much less on average than nonagricultural private employment in general. Private colleges also typically offer many low-paying jobs. Labor shortages in lower paying industries during economic expansions, then, may contribute to their noncyclical or countercyclical behavior.

Alternative comparison

A preceding section noted that an earlier article used a different definition of cyclicality. In that article,[10] Berman and Pfleeger correlated employment of various industries with GDP, and used the correlation coefficients as indications of cyclicality. The present article, instead, uses the difference between series' behavior during recessions and their behavior during economic expansions as an indication of cyclicality. The main question in this article is whether the employment

series behave differently during recessions than they do in other times; a major question in the Berman-Pfleeger article is how closely the employment series follow the trends of GDP as it fluctuates, regardless of whether or not a recession is occurring.

Because this article utilizes somewhat different industry strata than those used by Berman and Pfleeger and because it uses later data, new correlations between the appropriate employment series' quarterly percent change and the percent change of GDP were calculated. Table 3 compares the new correlation coefficients with the "differences" defined in table 1. Not surprisingly, the industries with the higher differences generally have the higher correlation coefficients. To compare the overall results of the two methods, the differences (shown in the second column of table 3) were correlated with the correlation coefficients (in the third column). The resulting correlation coefficient of 0.852 is statistically significant well beyond the 0.2 percent level of probability, meaning that agreement between the two sets of results is almost certainly not by chance. We can conclude that those Services Division industries that decelerate most during recessions are generally those whose trends most resemble the trends of GDP through all sorts of economic times.

Latest trends

From the third quarter of 2000 to the second quarter of 2001, there was a decelerating trend in employment as estimated from the Current Employment Statistics survey. The Services Division participated in the slowdown, exhibiting cyclical and countercyclical behavior in various components.

The Services Division as a whole gained jobs in the three quarters starting with the last quarter of 2000 at a rate closer to its recessionary average than to its average during expansions. In fact, the percent increase per quarter (0.36 percent) in the three recent quarters is actually well below even the average during recessions (0.60 percent).

To identify which Services industries contributed most to the slowdown that began in the last quarter of 2000, the employment change during the first three quarters of 2000 was compared with the change during the subsequent three quarters. In table 4, a negative value in the "Difference" column represents a slowdown or reversal in the more recent period.

Within the division, *business services* contributed most heavily to the slowdown in hiring. Although business services has not lost jobs in the average quarter of official recessions, business services declined by 224,000 jobs in the recent three quarters. *Personnel supply services*, although rapidly expanding until recently, were primarily responsible for the change in trend in *business services*. Personnel supply lost 342,000 jobs during the recent three quarters.

Engineering and management services and *lodging*, two additional definitely cyclical groups, made the second- and third-largest contributions to the slowdown in the division. *Lodging* and *engineering and management* each slowed by about 45,000 jobs. The rate of increase in the last three quarters in *lodging* was almost exactly equal to its average in recessions. *Engineering and management services*, however, have not behaved recently quite as they do in recessions. *Engineering and management services* lose jobs in the average quarter of a recession but gained jobs in the last three quarters, though at a rate reduced from the prior three quarters.

The bulk of the slowdown in the division, then, is due to

Table 3. Comparison of two indications of cyclicality in Services-Division industry groups, seasonally adjusted, 1958 to 2000

Industry group	Difference between average quarterly percent change during general economic expansion and average quarterly percent change during recession	Correlation coefficient from correlation of percent change in industry's employment with percent change in GDP
Engineering and management services	1.8	0.480
Business services	1.4	.515
Agricultural services	1.1	.287
Automotive services	1.1	.550
Miscellaneous repairs	1.0	.354
Lodging	.7	.385
Personal services	.7	.173
Miscellaneous services	.4	−.082
Motion pictures	.4	.045
Museums, gardens, zoos	.2	.046
Membership organizations	.1	.038
Amusements and recreation	−.1	.073
Social services	−.2	.089
Health services	−.3	−.058
Legal services	−.4	.074
Private education	−.5	−.105

Table 4. Contributions of major industry groups in the Services Division to the job-growth slowdown of 2000 to 2001

Industry group	Change in jobs, thousands, seasonally adjusted[1]		
	2000: 1st quarter through 2000: 3rd quarter (A)	2000: 4th quarter through 2001: 2nd quarter (B)	Difference (B minus A)
Services Division	953	437	–516
Cyclical groups			
Engineering and management services	127	80	–47
Business services	348	–224	–572
Agricultural services	19	29	10
Automotive services	36	50	14
Miscellaneous repairs	–3	-3	0
Lodging	55	10	–45
Personal services	19	20	1
Miscellaneous services	0	1	1
Motion pictures	–8	3	11
Museums, gardens, zoos	5	3	–2
Membership organizations	17	23	6
Countercyclical groups			
Amusements and recreation	63	35	–28
Social services	70	139	69
Health services	100	188	88
Legal services	8	14	6
Private education	55	71	16

[1] Major groups do not add to Division because the Services Division also includes nonclassifiable establishments, not shown.

three major groups with definitely cyclical histories. The four other services industries that are cyclical with statistical significance either show no difference in growth between the two 9-month periods (miscellaneous repairs and personal services) or show stronger growth in the three later quarters (agricultural services and automotive services).

Two major groups with at least nominally countercyclical histories accelerated substantially. *Health services* and *social services* gained jobs impressively.

In the latest three quarters, health services accelerated by 88,000 jobs. The acceleration, however, is probably due, at least in part, to recent changes in Medicare and Medicaid payment policies, which might exaggerate a countercyclical pattern.

Social services accelerated by 69,000 jobs. Although social services has not established statistically significant countercyclicality, its acceleration in job growth during the recent general slowdown adds to the evidence suggesting that the group is countercyclical.

Conclusion

The Services Division as a whole and a majority of its main components show cyclicality, at least in the sense that the growth of jobs slows during recessions. Only three of the main components, namely engineering and management services, personal services, and miscellaneous repairs, actually lose jobs in the average quarter of a recession. The components contributing most to the cyclicality of the division, engineering and management services and business services, sell their output primarily to other businesses, so that the cyclicality of the division is driven more by business activity than by consumer purchases.

Five major groups show countercyclicality in the sense that growth during recessions exceeds growth during general economic expansions. Partly because of the countercyclical components, the division as a whole has relatively mild cyclicality; its rate of growth is reduced by about one-half percentage point during the average recessionary quarter, while the quarterly percent change of GDP shows three times the effect, varying by 1.5 percentage points between the average recessionary quarter and the average quarter of economic expansions.

Reasons for the countercyclicality of various components of the division vary. Several at least ostensibly countercyclical components, however, appear to be subject to the effects of labor shortages, which ease during recessions, thus making more people available for less desired, often lower paying jobs.

In recent quarters, business services and engineering and management services, two cyclical and enterprise-related components, contributed most heavily to the slowdown in hiring within the division. □

Notes

[1] Jay Berman and Janet Pfleeger, "Which industries are sensitive to business cycles?" *Monthly Labor Review*, February 1997, pp. 19–25.

[2] Recessions are determined by the National Bureau of Economic Research.

[3] Sales data in this article are from the Office of Occupational Statistics and Employment Projections, Bureau of Labor Statistics.

[4] David R. H. Hiles, "Health services: the real jobs machine," *Monthly Labor Review*, November 1992, p. 13.

[5] Christopher J. Ruhm, "Are Recessions Good for your Health?" *Quarterly Journal of Economics*, May 1, 2000.

[6] John Andrews, "Labor shortages plague hospitals A shrinking labor pool is forcing hospitals to get creative," *Materials Management in Health Care*, Feb. 2001. See also Che Parker, "AHA report shows staffing shortages threaten access to quality health care," *AHA News* (American Hospital Association), June 11, 2001.

[7] Joan Conroy, past president of the Maryland chapter of the National Association of Directors of Nursing in Long Term Care, is quoted in Diana K. Sugg and staff, "Nursing staffs shrink; quality, availability of medical care suffer," *The Baltimore Sun*, Mar. 19, 2000.

[8] Hiles, pp. 3–16, and Cynthia Engel, "Health services industry: still a job machine?" *Monthly Labor Review*, March 1999, pp. 3–14.

[9] See the website of the Children's Defense Fund **http://navigation.helper.realnames.com/framer/1/112/default.asp?realname=Children%27s+Defense+Fund&url=http%3A%2F%2Fwww%2Echildrensdefense%2Eorg&frameid=1&providerid=112&uid=30008170** (visited July 18, 2001) and, as one example of a newspaper account, "Miss. day-care centers face downside of good economy," *Baton Rouge Advocate*, Dec. 29, 1998. Quote is from latter source.

[10] Berman and Pfleeger, *Monthly Labor Review*, pp. 19–25.

Retirement age declines again in 1990s

The average retirement age resumed its long-run decline in the 1990s after having leveled off during the preceding 10 to 15 years; the resumption of the decline is attributed largely to a rise in the labor force participation rate of older men and women between the mid-1980s and 2000

Murray Gendell

Retirement is generally understood to be the time when people stop working and start collecting a pension. A person's age at retirement is important because it is one of the determinants of both the length of one's work life and the duration of retirement. The length of the work life influences how much workers save and how much the government collects in taxes, and the duration of retirement affects expenditures from savings and pension funds (including Social Security). The length of the work life and the duration of retirement also affect the ratio of workers to retirees, which is a key determinant of the viability of pay-as-you-go public pension funds.

Each year, the Social Security Administration calculates the mean age of workers receiving their initial retirement award or disability benefit. The calculation is made from the age data in the Agency's administrative records. Although this time series does not include pensions provided by employers or unions, it covers nearly all workers in the United States and provides valuable information about a major source of earnings: relacement income for elderly men and women who have stopped, or will soon stop, working. Still, the series is limited as an indicator of retirement in that the earliest age of eligibility for the retirement benefit is 62 and many nondisabled workers stop working before that age—some even as young as their early fifties. Also, the disability benefit is provided to qualified workers who are younger than 62 (although the number of beneficiaries is relatively small), and the Social Security retirement benefit does not require workers to leave the labor force, so that many continue to work while collecting the benefit. Therefore, it would be useful to supplement the Social Security series with one that measures the average age of elderly workers at their exit from the labor force.

Such a series has been developed, and it provides estimates, in 5-year increments since the 1950s, of the median age of men and women 50 years or older who have withdrawn from the labor force. The estimates are derived from labor force data obtained in the Current Population Survey (CPS), which affords complete coverage of the workforce in the United States. It has been shown that these two series have followed similar trajectories.[1] However, the Social Security series was previously limited to the retirement benefit. In this article, the mean age of workers 50 years or older at the initial receipt of the disability benefit has been combined with the mean age at the initial receipt of the retirement benefit in order to make the Social Security series more comparable to the labor force series than heretofore. In addition, the two series are brought up to date through the late 1990s, using the latest data available. Also brought up to date is the measure of the average length of retirement after exit from the labor force.[2]

The two series show that the average age at retirement declined in the 1990s, after having leveled off during the 1970s (Social Security series)

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and the 1980s (both series). This finding seems inconsistent with the contention made recently that the long-run decline in the age of retirement has reversed.[3] In what follows, the apparent inconsistency is dispelled, and it is shown that the reversal in the decline in labor force participation rates of men aged 65 or older and women aged 60 or older that has occurred since the middle of the 1980s has actually contributed to the decline in the average age at exit from the labor force during the 1990s. The analysis presented also indicates what statistical changes have to occur in order for a reversal of the decline in the average age at withdrawal from the labor force to take place. Whether such a reversal would be accompanied by a corresponding reversal in the Social Security series is uncertain. The article concludes with a review of the economic, social, and psychological factors that, together, are likely to determine whether the trend will continue or be reversed.

Methodology

The Social Security Administration publishes separate tables showing the annual mean age of women and men initially awarded the retirement benefit and the disability benefit, along with the number of awardees and a frequency distribution of the ages of the awardees.[4] The combined mean age of these two types of beneficiaries was obtained by first calculating the mean age of the disability awardees aged 50 or older and then calculating the weighted average of the two means. This was done for every 5th year from 1950 through 1995. Then the weighted average of the means at the beginning and end of each 5-year interval was calculated to obtain the average for the interval. The average for the late 1990s was calculated from the data for 1995–99, the latest year for which data were available when this article was written.

The method of calculating the median age of exit from the labor force has been described elsewhere,[5] so only a brief account is given here. The basic information used in the calculations is the annual average data on the numbers in the labor force and the labor force participation rates derived from the monthly CPS for every 5th year from 1950 through 2000, arrayed in 5-year age groups from 45 to 49 years through age 75 or older (taken as a proxy for 75 to 79 years).[6] Estimates of the number of net withdrawals from the labor force for reasons other than death during each 5-year interval are given by the equation

$$W = L_1(1 - R_2/R_1)\sqrt{S}, \qquad (1)$$

where L_1 is the number in the labor force at the beginning of the interval, R_1 is the labor force participation rate of the same cohort at the beginning of the interval, R_2 is the labor force participation rate of the same cohort at the end of the interval, and S is the survival rate of the cohort during the interval. The equation applies to each of six cohorts aged 45 to 49 through 70 to 74 at the beginning of the interval and 50 to 54 through 75 to 79 at the end of the interval. An interpolation procedure is needed to convert these estimates for the cohorts (that is, 45–49 becoming 50–54, 50–54 becoming 55–59, and so on) to estimates for age groups (50–54, 55–59, and so forth). The conversion was effected with the use of the Karup-King third-difference formula for osculatory interpolation.[7]

This method of calculating the median age at exit from the labor force is an unusual combination of cohort and period perspectives. The median for a cohort would tell us at what age, on average, the members of the cohort withdrew from the labor force as they passed through their life course from age 45–49 through 75–79. The available data would permit the calculation of such a median for no more than a few cohorts, at this time precluding the development of a substantial time series of median ages of labor force exit for the various cohorts. The method employed in this article, therefore, divides the 30-year life course interval into 5-year periods and, for each of these periods, uses the estimated number of labor force exits in each of six different cohorts to calculate the median age of men and women leaving the labor force in each period. The result is a time series of the median age at exit from the labor force from 1950–55 through 1995–2000, based on estimates of cohort-specific withdrawals.[8]

The CPS was redesigned substantially in 1994, changing the wording of the questionnaire and data collection methodology. Analysts at the Bureau of Labor Statistics have estimated the magnitude and direction of the effect of the revision on various labor force measures and have provided adjustment factors needed to maintain the comparability of the data collected before and after the revision.[9] (The Bureau has not revised the pre-1994 data.) The analysts concluded that "the adjustment factors indicate that the unrevised CPS was less in focus for those on the periphery of the labor market—those involved in more casual, intermittent or marginal work activities, individuals who might have tentatively tested the labor market, and older workers."[10]

The multiplicative adjustment factors the BLS analysts recommend for use in comparisons of labor force participation rates over long periods are as follows:[11]

Age	*Men*	*Women*
25–54	0.996	1.010
55–64	0.996	1.043
65 or older	1.084	1.106

These factors are all significant at the 5-percent level, except the one for men aged 55 to 64. Prerevision data can be adjusted to postrevision levels by multiplying by the appropriate factor. Alternatively, postrevision data can be adjusted to prerevision levels by dividing by the appropriate adjustment

factor. In this article, the postrevision labor force participation rates for 1995 and 2000 were adjusted to prerevision levels, except for the rate for men 55 to 64. Two assumptions were made. First, the adjustment factors applied to the rates for the 5-year age groups within each of the three larger age categories for which the factors were presented were assumed to be the same as the factor for the larger age category. For example, the factor 1.084 for men aged 65 or older was used to adjust the labor force participation rates of men 65 to 69 years, 70 to 74 years, and 75 or older. Second, the adjustment factors were assumed to remain constant over time. Thus, the same procedure was used to adjust the labor force participation rate for 2000.

To estimate the adjusted number of net withdrawals during the interval 1995–2000, the adjusted age-specific numbers in the labor force in 1995 were also needed. An adjustment of the labor force participation rate implies an adjustment of the civilian noninstitutional population or the labor force (or both). It was assumed that the published population data required no adjustment; hence, the adjusted labor force data were obtained by multiplying the published population numbers by the adjusted labor force participation rate.

Results

Both the Social Security and the labor force series show rapid declines in the average retirement age from the early 1950s through the early 1970s. (See table 1 and chart 1.) In both series, the data for the 1950s may be less reliable than subsequent data, chiefly because coverage of Social Security was considerably more limited at that time than afterward and the quality of the labor force data was poorer than it was thereafter.[12] Also, the Social Security data for the 1950s are based only on retirement awards. The inclusion of data on disability awards, if such data were available, would probably have produced substantially lower mean ages than those shown in the table. From the 1960s through the early 1990s, the averages in the two series are quite similar. However, the labor force medians for the late 1990s, adjusted to prerevision levels, are considerably lower than the Social Security means, especially for women.

The major finding is that there were definite declines in both series during the 1990s, after a lull in the declines during the preceding 10 to 15 years. That the decline in the Social Security series is considerably smaller than in the labor force series is understandable in that, given the lower age limit (62) of the large majority of the Social Security awardees (namely, retirees), compared with the lower age limit in the labor force series (50), and given an average retirement age of under 63, the potential for further declines is obviously much more limited in the Social Security series than in the labor force series.

By using national life tables to calculate the average remaining life expectancy at the median age of exit from the labor force, the average duration of retirement (defined here as withdrawal from the labor force of men and women aged 50 years or older) has been estimated. As shown in table 2, there have been large increases in the average duration of retirement since the early 1950s. By the late 1990s, this period in the life course of men had increased 6 years, from a duration of 12 years to one of 18 years, a 50-percent gain. Among women, the increase of 8.4 years (data comparable to prerevision levels), from a duration of 13.6 years to 22.0 years, represented a gain of 62 percent. The increases in the duration of retirement exceed the declines in the median age at exit from the labor force because of increases in longevity since the early 1950s.

Because further gains in longevity are likely, the average length of retirement will continue to increase, unless the decline in the median age at exit from the labor force is reversed and whatever increases occur would exceed the rise in longevity. The expansion of the duration of retirement has helped raise the proportion of the adult population living in retirement. As a consequence, the dependency ratio of the Social Security system (Old Age, Survivors, and Disability Insur-

Table 1. Estimated average age at retirement of men and women, 1950–55 through 1995–2000

Interval	Social Security data[1]		Labor force data[2]	
	Men	Women	Men	Women
1950–55	[3]68.5	[3]67.9	66.9	67.6
1955–60	[3]67.6	[3]66.4	65.7	66.1
1960–65	65.0	65.0	65.1	64.6
1965–70	63.9	64.3	64.2	64.2
1970–75	62.9	62.9	63.4	62.9
1975–80	62.8	62.7	63.0	63.2
1980–85	62.9	62.8	62.8	62.7
1985–90	62.8	62.8	62.6	62.8
1990–95	62.7	62.6	[4]62.4	[4]62.3
1995–2000	62.6	[5]62.5	[4]62.0	[4]61.4

[1]Mean age at initial award of benefit for disability or retirement, calculated as the weighted average of the mean ages of those receiving awards for retirement and disability. The mean for individuals awarded disability benefits is limited to those 50 to 65 years of age.

[2]Median age at exit from the labor force of 5-year cohorts aged 50–54 years through 75 or older for reasons other than death.

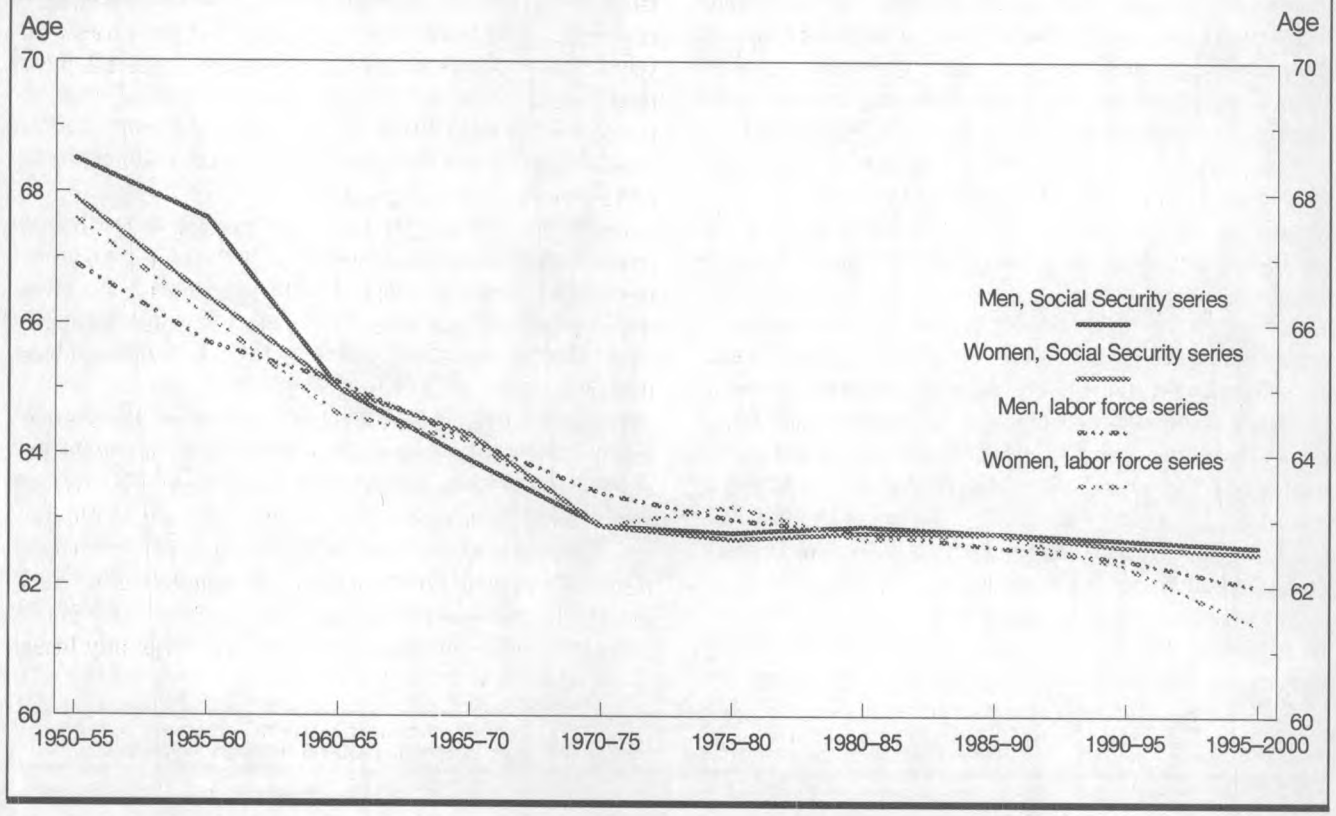
[3]Age data for disability awards are not available. If they were, the means would be lower.

[4]Calculated from data adjusted to levels prior to the 1994 revision of the Current Population Survey. Median ages computed from the published data are as follows: men 1990–95, 62.1; men 1995–2000, 62.0; women 1990–95, 62.6; women 1995–2000, 61.8.

[5]The mean retirement age for 1997 was 65.4, much higher than the means since the 1960s or in 1998 or 1999. It was, therefore, regarded as an anomaly and disregarded. The data for both women and men are limited to the period 1995–99.

SOURCES: *Social Security Bulletin, Annual Statistical Supplement, 1999* (Social Security Administration, 1999); Bureau of Labor Statistics publications and Web site. See Murray Gendell and Jacob S. Siegel, "Trends in retirement age by sex, 1950–2005," *Monthly Labor Review*, July 1992, pp. 22–29, for more information about the labor force data.

Chart 1. Estimated average age at retirement of men and women, 1950–55 through 1995–2000



ance beneficiaries per 100 covered workers) increased from 6/100 in 1950 to 30/100 in 1985. Between 1985 and 2000, there was no change in the ratio, and no further change is expected until the baby boomers start to retire between 2005 and 2010. Thereafter, the ratio is projected to rise fairly quickly, to about 40/100 in 2020 and 47/100 in 2030. As a result, the system is likely to require some combination of an increase in funding, an increase in the rate of return on assets, and a reduction in benefits.

Discussion

Contentions that the decline in the retirement age would soon be reversed have been made for many years. Recently, however, it has been asserted that the reversal has finally occurred. Indeed, it was deemed to be such a well-established fact that *The New York Times* reported it in a front-page story.[13] In addition to citing anecdotal evidence and such presumed influences as the relaxation of the Social Security earnings test, the shift from defined-benefit plans ("traditional pensions") to defined-contribution plans, and reductions in health benefits for retirees, the story presented data showing a rise in the labor force participation rate of people aged 65 or older, a reversal of the long-run decline. The story also quoted the economist Joseph F. Quinn, who said "we have entered a new era." Quinn is well known for his studies of retirement behavior, and he has been tracking the change in the labor force participation rate of the elderly for many years.[14] At a conference in 1999, he contended that "the era of earlier and earlier retirement has come to an end."[15]

In the paper he presented at the conference, Quinn extrapolated the declining trend in the labor force participation rates of men aged 55 to 59, 60 to 64, 65 to 69, and 70 or older and showed that between 1985 and 1998 there were increasing upward deviations from the declining trend lines. There were upward deviations from the mid-1980s on for women also. However, their trend lines are much flatter than those of the older men: slightly up for women aged 55 to 59 and slightly down for women 60 to 64, 65 to 69, and 70 or older. Further analysis revealed that cyclical fluctuations (as indicated by the variation in the unemployment rate) accounted for some, but not much, of the variation in the labor force participation rate of the elderly since 1964. Hence, noncyclical factors, such as those cited in the *Times* story, Quinn argued, were the main reason for the upward deviations from the trend

lines since the mid-1980s.

A significant omission in Quinn's analysis is an adjustment of the data because one effect of the 1994 revision of the CPS was to increase the labor force participation rates of the elderly. The revision had virtually no effect on the rates of men under age 65, as indicated earlier: their rates remained essentially flat during the 1985–2000 period (at a level slightly below that of 1985). This leveling off of the preceding declining trend is what Quinn observed in the increasing divergence between the extrapolated and the published data—certainly a significant change, but not a reversal.

Among men aged 65 or older, there was indeed a reversal, but it was smaller than that indicated by the published data. As shown earlier, the 1994 revision is estimated to have inflated the labor force participation rate of this cohort by 8.4 percent over prerevision levels. After adjustment, the rates of men aged 65 to 69 and 70 to 74 exceeded the 1985 rates by more than 10 percent only in 2000. Among men aged 75 or older, the rates reached this level only in 1994. The largest of these three increases is 14 percent.

The trends are strikingly different for women. At every age from 50 to 54 through 75 or older, there were relatively large increases in their labor force participation rates between 1985 and 2000, even after adjustment to prerevision levels. However, because the 1985 rates for women were very low at ages 70 to 74 (7.6 percent) and 75 or older (2.2 percent), the small gain, in adjusted percentage points, by 2000 (1.4 for those 70 to 74 and 1.0 for those 75 or older) meant percentage increases of 18 percent and 45 percent, respectively. At ages 50 to 54 and 55 to 59, the post-1985 increases are a continuation of the trend since at least the early 1950s. For the older women, however, the gains since the mid-1980s are reversals of preceding declines.

A cross-sectional analysis of the trends in women's labor force participation rates, however, can be misleading. It has long been observed that in the postwar period successive birth cohorts of women, unlike those of men, entered the labor force at higher and higher levels. Yet, at the older ages, the rates within each cohort declined with age, just as they have done among men. (See table 3.) Thus, as older women (as well as men) have aged, they have increasingly withdrawn from the labor force. To date, there is no indication of a change in this pattern.

The question nevertheless arises whether the cross-sectional reversals of the labor force participation rates of men older than 64 and women older than 59 since the mid-1980s are consistent with the finding that the median age at exit from the labor force has resumed falling during the 1990s. To answer this question, it is helpful to look at the change dur-

Table 2. Change in median age at exit from the labor force and expected number of years in retirement, 1950–55 through 1995–2000, in 5-year increments

Period	Men		Women	
	Median age at exit from labor force	Expected years of retirement[1]	Median age at exit from labor force	Expected years of retirement[1]
1950–55	66.9	12.0	67.6	13.6
1985–90	62.6	16.3	62.8	20.3
1990–95	62.4	17.2	62.3	21.3
1995–2000	62.0	18.0	61.4	22.0
1990–95	62.1	17.4	62.6	21.1
1995–2000	62.0	18.0	61.8	21.7
Change from 1950–55				
In years—				
1985–90	–4.3	4.3	–4.8	6.7
1990–95	–4.5	5.2	–5.3	7.7
1995–2000	–4.9	6.0	–6.2	8.4
1990–95	–4.8	5.4	–5.0	7.5
1995–2000	–4.9	6.0	–5.8	8.1
Percent change:				
1985–90	–6.4	35.8	–7.1	49.3
1990–95	–6.7	43.3	–7.8	56.6
1995–2000	–7.3	50.0	–9.2	61.8
1990–95	–7.2	45.0	–7.4	55.1
1995–2000	–7.3	50.0	–8.6	59.6

[1] Average remaining life expectancy at the median age at exit from the labor force.

NOTE: In all instances showing data for 1990–95 and 1995–2000, the first set of data is calculated from data adjusted to levels prior to the 1994 revision of the Current Population Survey, and the second set of data is computed from the Current Population Survey published data.

SOURCES: Median ages at exit from labor force are author's calculations. (See text for method.)

Average remaining life expectancies at median age of exit from labor force are from life expectancy data from the National Center for Health Statistics life tables for 1952, 1987, 1992, and 1997.

Table 3. Labor force participation rates for selected birth cohorts, ages 45–49 through 75–79

Age group	Year of birth							
	1906–10	1911–15	1916–20	1921–25	1926–30	1931–35	1936–40	1941–45
Men								
45–49	97.1	96.6	96.1	95.3	94.1	93.2	93.3	92.3
50–54	94.7	95.0	93.0	90.1	89.2	88.6	88.8	86.7
55–59	90.2	89.5	84.4	81.7	79.6	79.8	77.4	77.1
60–64	75.0	65.5	60.8	55.6	55.5	53.2	54.8	...
65–69	31.7	28.5	24.5	26.0	24.9	27.8	...	...
70–74	17.9	14.9	15.4	15.5	16.5	...	...	...
75–79[1]	7.0	7.1	7.0	7.4	...	...	...	...
Women								
45–49	45.8	50.7	51.7	55.0	55.9	62.1	67.8	74.8
50–54	48.7	50.1	53.8	53.3	57.8	60.8	66.9	70.0
55–59	47.1	49.0	47.9	48.5	50.3	55.3	57.0	58.7
60–64	36.1	33.2	33.2	33.4	35.5	36.4	38.5	
65–69	14.5	15.1	13.5	17.0	15.8	17.5	...	...
70–74	7.5	7.6	8.2	8.4	9.0	...	...	...
75–79[1]	2.2	2.7	2.6	3.2	...	...	...	...
Men and women	Years rates were observed							
45–49	1955	1960	1965	1970	1975	1980	1985	1990
50–54	1960	1965	1970	1975	1980	1985	1990	1995
55–59	1965	1970	1975	1980	1985	1990	1995	2000
60–64	1970	1975	1980	1985	1990	1995	2000	...
65–69	1975	1980	1985	1990	1995	2000	...	...
70–74	1980	1985	1990	1995	2000	...	...	...
75–79[1]	1985	1990	1995	2000	...	...	...	...

[1]Rates for age 75–79 were not available, so those for age 75 or older were used as an approximation.

NOTE: The rates for 1995 and 2000 have been adjusted to make them comparable to the earlier rates because of the 1994 revision of the Current Population Survey.

ing the 15-year period between the early 1980s and the late 1990s in the two main components of the equation used to estimate the age-specific number of withdrawals for reasons other than death, from which the median age is calculated. These two components are (1) the age-specific numbers in the labor force in 1980 and 1995, the beginning points of the two 5-year intervals being compared, and (2) the age-specific cohort net withdrawal rates for reasons other than death, which, in equation (1), are represented by $(1 - R_2/R_1)\sqrt{S}$.

Table 4 shows that from 1980 to 1995, the percentage of those 45 to 54 years increased by 9 to 10 percentage points, with a corresponding decline among older workers. Given that the estimated number of withdrawals is the product of the numbers in the labor force and their net withdrawal rates, the pronounced increase in the relative number of those 45 to 54 obviously tended to increase the relative number of estimated exits in the youngest age categories, thereby lowering the median age.

This "younging" of the elderly labor force, however, had a much smaller effect on the decline in the median age than did the changes in the net withdrawal rates. (See table 5.) Allowing the net withdrawal rates to change between 1980–85 and 1995–2000, while keeping the 1980 age distribution of the labor force constant, reduced the median age of men and women six-tenths of a year, but when only the age distribution was allowed to change, the median was reduced a mere one-tenth of a year. After adjusting the 1995 and 2000 data to prerevision levels, the differential effect of the two factors was narrowed a little, from 0.5 (0.6 – 0.1) to 0.3 (0.5 – 0.2), among men only.

As for the net withdrawal rates, the pattern of change is quite clear: the rates declined more among the three older cohorts than the three younger cohorts. (See table 6.) The pattern was much more pronounced for women, which is why their median age dropped considerably more than that of men. In fact, women's labor force participation rates increased among the three younger cohorts, while decreasing among the three older cohorts. Adjusting the 1995 and 2000 rates to prerevision levels scarcely alters the pattern of differential change between the younger and older cohorts. Thus, there is no inconsistency between (1) the reversal since the mid-1980s of the declining cross-sectional labor force participation rates of men older than 64 years and women older than 59 and (2) the resumption during the 1990s of the postwar decline in the median age at exit from the labor force of those aged 50 or older. This is because the cross-sectional reversal reduced the net withdrawal rates of the older cohorts more than those of the younger cohorts, and that pattern of change was a major reason for the decline in the cohort median age at exit from the labor force.

Table 4. Change in age distribution of the labor force aged 45–74 years, 1980–95

Age group	Percent distribution			Difference, in percentage points	
	1980	1995	Adjusted, 1995	1995 minus 1980	Adjusted, 1995, minus 1980
Men					
Total	[1]100.1	100.0	100.0	...	...
45–54	52.8	61.7	62.2	8.9	9.4
55–64	38.7	29.9	30.0	–8.8	–8.7
65–74	8.6	8.4	7.8	–.2	–.8
Women					
Total	[1]99.9	100.0	100.0	...	...
45–54	54.8	63.7	64.7	8.9	9.9
55–64	37.1	28.9	28.4	–8.2	–8.7
65–74	8.0	7.4	6.9	–.6	–1.1

[1]Differs from 100.0 due to rounding of summands.
SOURCE: Calculated by the author.

Will the reversal of the declines in the labor force participation rates of older men and women and the resumption of the fall in the median age at exit from the labor force continue? There is no unequivocal answer. Nonetheless, it is possible to indicate statistically how at least the latter might or might not happen, as well as to review the economic, social, and psychological forces that, it is argued, are likely to motivate older workers to leave the labor force at an older age than in the past, on the one hand, or to keep them as desirous of early retirement as they have been, on the other.

Without attempting to identify the various changes that could produce either a continuation, a leveling, or a reversal of the decline in the median age at exit from the labor force, we can readily distinguish one pair of alternatives. If the aforesaid pattern of change in the net withdrawal rates between 1980–85 and 1995–2000 were to persist, the median age at exit from the labor force would continue to fall, unless the relative numbers of men and women aged 45 to 54 years (within the age range from 45 to 74 years) in the labor force would decline substantially. By contrast, if the pattern were to reverse, then the median age at exit from the labor force would rise rather than fall. The latter possibility is illustrated by the results obtained for the period 2000–2005, using the data for 2005 given in the 1999 BLS projection of the labor force. (There is no comparison with pre-1994 data in this case; hence, there is no need to adjust the 2005 data because of the 1994 revision of the CPS.) Whereas the net withdrawal rates of the three older cohorts declined more than the rates of the three younger cohorts between 1980–85 and 1995–2000 (see table 6), the net withdrawal rates of the three younger cohorts are projected to fall more than those of the three older cohorts in 2000–05, compared with 1995–2000. (See table 7.) As a result, the median age at exit from the labor force would increase between 1995–2000 and 2000–05 (again, based on unadjusted data), from 62.0 to 62.4 for men and from 61.8 to 62.2 for women.

Note that there also was a further increase in the relative numbers of men and women aged 45–54 between 1995 and 2000. As we saw, between 1980 and 1995, the percentage of men and women of this age increased by 9 to 10 points. Between 1995 and 2000, however, the point gain was merely 0.8 for men and 1.2 for women, a marked deceleration of the rate of increase between 1980 and 1995. This further "younging" of the elderly labor force during the late 1990s tended to lower the median age at exit from the labor force, but the effect was quite small and was easily countered by the projected reversal of the cohort pattern of change in the net withdrawal rates.

Note, too, that the relative number of those aged 45–54 in 2005 is projected to be 2.6 percentage points lower than that in 2000 for men and 2.8 for women. This is a considerably larger change than that just noted between 1995 and 2000. If the projection is borne out, such a change would tend to raise the median age at exit from the labor force more than negligibly. With the further aging of the baby-boom cohorts, the elderly labor force is likely to continue to get older, adding further upward pressure on the median age. Whether the future pattern of changes in net withdrawal rates will oppose or reinforce such pressure and whether this factor will continue to have a considerably stronger effect on the median age at exit from the labor force than the age structure of the elderly labor force remains to be seen.

An important reason for the reversal of the pattern of change in net withdrawal rates between 1995–2000 and 2000–05 compared with the pattern of change between 1980–85 and 1995–2000 is that the labor force participation rates of those aged 65 or older are projected to decline by 2005 from

Table 5. Actual and hypothetical change in the median age of men and women 50 years or older at exit from the labor force between 1980–85 and 1995–2000

Category of change	Men	Women
Actual change		
1980–85	62.8	62.7
1995–2000	62.0 (62.0)	61.8 (61.4)
Change	–.8 (–.8)	–.9 (–1.3)
Hypothetical change		
If the age distribution of the 1980 labor force had remained constant	–.6 (–.5)	–.6 (–.8)
If the 1980–85 cohort net withdrawal rates had remained constant	–.1 (–.2)	–.1 (–.3)

NOTE: The numbers in parentheses show the results of adjusting the 1995 and 2000 data for consistency with those prior to the 1994 revision of the Current Population Survey.
SOURCE: Calculated by the author.

Table 6. Change in 5-year cohort net withdrawal rates for reasons other than death, 1980–85 to 1995–2000[1]

Cohort	1980–85	1995–2000		Ratio, 1995–2000/1980–85	
		Unadjusted[2]	Adjusted[3]	Unadjusted[2]	Adjusted[3]
Men					
45–49 to 50–54	0.0485	0.0424	0.0423	0.87	0.87
50–54 to 55–59	.1046	.1054	.1089	1.01	1.04
55–59 to 60–64	.3059	.2823	.2823	.92	.92
60–64 to 65–69	.5585	.4121	.4537	.74	.81
65–69 to 70–74	.4318	.3111	.3113	.72	.72
70–74 to 75–79[4]	.5248	.4642	.4643	.88	.88
Women					
45–49 to 50–54	.0207	.0399	.0399	1.93	1.93
50–54 to 55–59	.1279	.1327	.1597	1.04	1.25
55–59 to 60–64	.3043	.3195	.3179	1.05	1.04
60–64 to 65—69	.5733	.4744	.5025	.83	.88
65–69 to 70–74	.4714	.4138	.4138	.88	.88
70–74 to 75–79[4]	.6513	.5781	.5787	.89	.89

[1] $(1 - R_2/R_1)\sqrt{S}$. See equation (1) in text.
[2] Calculated from published data.
[3] Calculated from adjusted data. The 1995 and 2000 data were adjusted for consistency with those prior to the 1994 revision of the Current Population Survey.
[4] Data for age 75–79 were not available, so those for age 75 years or older were used as an approximation.
SOURCE: Calculated by the author.

the levels recorded for 2000, in contrast to the substantial increases recorded between 1995 and 2000. Such a decline, though, may not in fact occur, as Quinn would no doubt contend. However, Quinn's view of the prospects for a continued rise in the labor force participation rates of the elderly were opposed at the 1999 conference by the economist Dora Costa, who has written a book on the evolution of retirement in the United States between 1880 and 1990.[16] To help judge the future trend in retirement age, it is useful to present their opposing arguments.

According to Quinn, a number of changes in public policy and in the private sector have made working later in life more feasible or more attractive than it was in the past. With regard to public policy, mandatory retirement is no longer permitted, the amount of money that Social Security beneficiaries can earn without loss of benefit has been repeatedly increased, and the delayed retirement credit for working past age 65 will have risen from 3 percent per year of delay in 1986 to a maximum of 8 percent by 2005. The latter figure "will be close to actuarially fair for the average worker. Instead of penalizing work beyond age 65, which it used to do, Social Security is becoming more age-neutral."[17]

In the private sector, there has been a big shift away from defined-benefit pension plans to defined-contribution plans, to the point where the latter now constitute the majority of plans. "Most [defined-contribution] plans are age neutral by design and do not contain the work disincentives that [defined-benefit] plans often have. As [defined-benefit] plans decline in relative importance, so does their ability to discourage work and to encourage workers to leave a job at a particular age."[18] Moreover, says Quinn, the shift from manufacturing to service work, which is generally less arduous, probably facilitates the continued employment of older workers.

In contrast, Costa contends that it is "premature" to interpret the reversal of the decline in the labor force participation rates of the elderly since the mid-1980s as a reversal of the trend toward early retirement. She points out that in the past the rates of elderly men also have gone up temporarily, counter to the long-term decline. A *permanent* upswing would require a basic change in motivation. Her research on trends in retirement age in the United States and some European countries has led her to conclude that the "specific institutional details of private pension plans and of social security systems are not the primary forces driving the long-run trend."[19] Furthermore, there is evidence that neither improvements in health nor sectoral shifts are significant determinants of the trend: Retirement rates have increased even as the health of the elderly has improved, and the shift from agriculture to manufacturing "had no effect on retirement trends."[20]

What accounts for "much of the long-term increase in retirement rates," said Costa, is the rise in income of the elderly. Other contributing factors are that "retirement has become a social norm" and that retirement has become more attractive. For example, the development of "mass tourism and mass entertainment," the growth of affordable retirement communities in locales with favorable climate (reducing the dependence of an elderly person on his or her kin), a reduction in the "price of transport and communication with family members," and the expansion of social support services all have enhanced the attractiveness of retirement.[21] Costa concludes that "future generations, generations with much higher average levels of education and with much better average health than past generations, may redefine the retirement lifestyle. But, provided that retirement continues to be attractive and that income levels do not fall dramatically (and permanently),

Table 7. Ratios of 5-year cohort net withdrawal rates for reasons other than death, 1995–2000 divided by 1980–85 and 2000–05 divided by 1995–2000

Cohort	1995–2000 divided by 1980–85[1]	2000–05 divided by 1995–2000[2]
Men		
45–49 to 50–54	0.87	0.75
50–54 to 55–59	1.04	.93
55–59 to 60–64	.92	.89
60–64 to 65–69	.81	1.03
65–69 to 70–74	.72	1.28
70–74 to 75–79	.88	1.12
Women		
45–49 to 50–54	1.93	0.85
50–54 to 55–59	1.25	.79
55–59 to 60–64	1.04	.92
60–64 to 65–69	.88	1.11
65–69 to 70–74	.88	1.18
70–74 to 75–79	.89	1.12

[1]Adjusted data. See table 6.
[2]Calculated from published data.
SOURCE: Calculated by the author.

the trend toward early retirement is unlikely to reverse."[22]

In sum, Quinn argues that the aforementioned relatively recent changes in public policy and the private sector have begun to reverse the trend to early retirement. Costa, however, is not convinced that these changes are strong enough to counter the strength of the longer run growth in the income of the elderly and the development of conditions making retirement more attractive. This disagreement can be resolved by measuring the relative impact of these factors on future changes in workers' retirement age. To do that successfully, however, requires that a number of decisions be made as to how to measure the "retirement age." In addition to deciding on the appropriate indicator or indicators of retirement—for example, the end of a career job, exit from the labor force, the receipt of a pension—it is necessary to decide whether a single measure, such as the average age at the onset of retirement, is preferable to tracking a number of indicators, such as the age- or cohort-specific labor force participation rates. Moreover, the issue of either choosing between or finding a way to reconcile cross-sectional and cohort perspectives should not be overlooked. Finally, the specification of the appropriate lower bound of the age range in which it is deemed retirement can occur should not be neglected.

There have been, and probably will continue to be, disagreements about the resolution of these issues, but there can be little dispute about several points. First, retirement is not limited to people aged 65 or older, as the *Times* story implies. Second, the widespread use of averages indicates their great utility, including the opportunity the average age at retirement provides to estimate the average duration of retirement. Third, to ascertain when people decide to leave the labor force or a career job or receive a pension, it is more realistic and accurate to use cohort rather than cross-sectional data, as the changes in women's labor force participation rates illustrate. (See table 3.) The fourth and final point is one that was demonstrated 25 years ago, but that has repeatedly been ignored or overlooked since then. Perhaps calling it "Reimers' rule" would help keep the press and scholars from continuing to make that same mistake. Reimers demonstrated that "there is no necessary connection between the movement over time in age-specific labor force participation rates and in the average age at retirement."[23] Thus, declines in the labor force participation rate do not necessarily indicate declines in the average age at exit from the labor force, and, similarly, increases in the labor force participation rate do not always imply a rise in the average age of withdrawal from the workforce. The finding that the reversal in the decline of the labor force participation rates of men older than 64 and women older than 59 between the mid-1980s and 2000 is not inconsistent with the decline in the median age at exit from the labor force during the 1990s, and in fact was an important determinant of the decline, is a good illustration of Reimers' rule. □

Notes

[1] See Murray Gendell and Jacob S. Siegel, "Trends in retirement age by sex, 1950–2005," *Monthly Labor Review*, July 1992, pp. 22–29; and "Trends in retirement age in the United States, 1955–1993, by sex and race," *Journal of Gerontology: Social Sciences*, May 1996, pp. S132–39.

[2] Earlier results regarding the duration of retirement were presented in Murray Gendell and Jacob S. Siegel, "Retirement quandary: more retirees at younger ages, living longer," *Population Today*, March 1993, pp. 6–7, 9; and Murray Gendell, "Trends in retirement age in four countries, 1965–95," *Monthly Labor Review*, August 1998, pp. 20–30.

[3] Mary Williams Walsh, "Reversing decades-long trend, Americans retiring later in life," *The New York Times*, Feb. 26, 2001, p. 1.

[4] *Social Security Bulletin, Annual Statistical Supplement* (Social Security Administration, published annually).

[5] Gendell and Siegel, "Trends by sex," "Trends by sex and race," and "Retirement quandary"; and Gendell, "Trends in four countries." The second article has the most thorough discussion of the method and its background and limitations.

[6] Gendell and Siegel, "Trends by sex," affords a detailed description of the sources of the data from 1950 through 1985. Subsequent data were obtained from the January issue of *Employment and Earnings* in the year following that in which the data were collected (for example, January 1991 for the 1990 data) or from the BLS website, **www.bls.gov**.

[7] See Henry S. Shryock, Jacob S. Siegel, and associates, in Edward G. Stockwell, *The Methods and Materials of Demography*, condensed edition (New York, Academic Press, 1976), pp. 534–35.

[8] Other studies that have used a cohort method to analyze labor force trends are cited in Gendell and Siegel, "Trends by sex," "Trends by sex and race," and "Retirement quandary"; and Gendell, "Trends in four countries." Another relevant paper is Denis Latulippe, "Effective

retirement age and duration of retirement in industrial countries between 1950 and 1990," *Issues in Social Protection*, Discussion Paper 2 (Geneva, Social Security Department, International Labor Office, 1996). The method used to calculate the average retirement age in that study is similar to the one used in the current article. An important exception is Latulippe's use of cross-sectional, rather than cohort, data. Latulippe's paper is available at the International Labor Organization's website, **www.ilo.org/public/english/protection/socsec/publ/dispp2.htm**.

[9] Anne E. Polivka and Stephen M. Miller, "The CPS after the redesign: refocusing the economic lens," in John Haltiwanger, Marilyn E. Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues* (Chicago, University of Chicago Press, 1998).

[10] *Ibid.*, p. 281.

[11] *Ibid.*, p. 280. (More detailed age classes were not provided.)

[12] See Gendell and Siegel, "Trends by sex," for a description of the limitations of the early labor force data and how the data were adjusted to obtain the requisite estimates.

[13] Walsh, "Americans retiring later."

[14] See, for example, Joseph F. Quinn, "Discussion of Phillip B. Levine and Olivia S. Mitchell, 'Expected changes in the workforce and implications for labor markets,'" in Anna M. Rappaport and Sylvester J. Schieber, eds., *Demography and Retirement: The Twenty-First Century* (Westport, CT, Praeger, 1993); Jill Quadagno and Joseph Quinn, "Does Social Security discourage work?" in Eric R. Kingson and James H. Schulz, eds., *Social Security in the 21st Century* (New York and Oxford, Oxford University Press, 1997); and Joseph F. Quinn, "New paths to retirement" in Olivia S. Mitchell, P. Brett Hammond, and Anna M. Rappaport, eds., *Forecasting Retirement Needs and Retirement Wealth* (Philadelphia, University of Pennsylvania Press, 2000).

[15] Joseph F. Quinn, "Has the early retirement trend reversed?" paper presented at the First Annual Joint Conference for the Retirement Research Consortium, "New Developments in Retirement Research," May 20–21, 1999. The paper is available at the website of the Center for Retirement Research at Boston College, **www.bc.edu/crr**.

[16] Dora Costa, "Has the trend toward early retirement reversed?" paper presented at the First Annual Joint Conference for the Retirement Research Consortium, "New Developments in Retirement Research," May 20–21, 1999. The paper is available at the website of the Center for Retirement Research at Boston College, **www.bc.edu/crr**. (See also Dora L. Costa, *The Evolution of Retirement: An American Economic History, 1880–1990* (Chicago, University of Chicago Press, 1998).)

[17] Quinn, "Early retirement trend," p. 5.

[18] *Ibid.*, p. 6.

[19] Costa, "Trend toward early retirement," p. 4.

[20] *Ibid.*

[21] *Ibid.*, p. 6.

[22] *Ibid.*, p. 7.

[23] Cordelia Reimers, "Is the average age at retirement declining?" *Journal of the American Statistical Association*, September 1976, pp. 552–58; quote from p. 552.

The BLS wage query system: a new tool to access wage data

A new Internet tool available on the BLS website makes it easier than ever to access wage data by area, occupation, and work level

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The search for wage data can be daunting. Data are available for different job characteristics, such as occupation, industry, or geographic area; by demographics of the wage earner, such as race, sex, education, or age; and in a variety of forms, such as hourly wages, annual salaries, total employer payrolls, gross pay, or net pay. Beyond these variations, users of wage data may ask how *wage* is defined in the measure. Is it straight time or does it include overtime? Are other cash payments, such as commissions or year-end bonuses, included? Finally, how reliable are the data? Have they been subjected to the scrutiny of statistical methods? Do they include sufficient observations to support generalizations about wages in the marketplace?

There is no panacea to simplify these complexities or to ensure appropriate application of available data. Users of wage data are advised to learn as much about their data source as possible—in particular, whether the data use the appropriate definition and meet the standard of quality required for their purpose. The Bureau of Labor Statistics publishes a number of different wage measures. To enable data users to find hourly wage data more easily, BLS recently added a new feature to its Internet site—the wage query system. This interactive application allows users to request wage data from the National Compensation Survey (NCS) by certain characteristics. Once they have targeted the specific data, the results are returned almost instantly.

This article provides information on the data behind the new query system, a section on navigating the system, and a discussion on the new regression estimates that recently were added to the query system. Regression estimates help to provide more complete data on area wages by occupation and level of work, an important component of the wage query system. The article concludes with a look at enhancements planned for the future.

Data drive the wage query system

The data behind the new query system come from the National Compensation Survey, which is a BLS survey of wages and benefits throughout the United States. Although the NCS database includes employer costs for wages and benefits, rates of change in those costs, and detailed information on benefit plans, this discussion is limited to the query of hourly wage rates.[1] BLS also publishes other wage measures, each with its own unique characteristics. The feature that sets the NCS wage estimates apart from other wage data currently available is information on "work level." Not only can data users search for the average wage of, for example, accountants in Los Angeles, they also can select by work level to view average wages of entry level or senior accountants in that locality.

The wage query system presents data tabulated in the same manner as all NCS publications. The user is asked to select among

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choices of area, occupation, and work level. To understand the selections the query system offers, it is helpful to review basic features of the NCS survey and its publications.

Area. The NCS is an area-based survey, meaning data are collected only in selected areas of the country, which are designed to represent all areas of the country. The current NCS sample of areas is made up of 154 areas—81 metropolitan areas and 73 nonmetropolitan counties. Wage data are published for about 90 areas annually, including most of the metropolitan areas and a small number of nonmetropolitan counties. The areas are also designed to represent nine broad geographic regions and to represent the United States as a whole. Wage data are published annually for the nine regions and for the United States.

Occupation. Data are collected from a sample of employers within the 154 areas. BLS economists visit these employers and obtain wage and benefit information from a sample of occupations within the establishments. These occupations are classified into one of 480 occupations, based on the duties and responsibilities of the job.[2] Occupations are narrowly defined—there are 13 different categories for engineers, for example, ranging from civil and industrial to petroleum and aerospace engineers. Data are published for as many occupations as possible, given that data exist and that they meet confidentiality and reliability standards.[3] In many large areas, data are published for 150 to 175 occupations; for the United States, data are published for about 450 occupations.

The occupational classification system used to define each job is hierarchical, which means that each detailed occupation is part of larger and larger groupings. The civil engineer occupation, for example, is part of the larger group engineers, architects, and surveyors, which in turn is part of the still larger group professional specialty occupations. That group is part of the composite group professional specialty and technical occupations, which is part of white-collar occupations. Finally, this last category is part of the much larger "all workers" group. If data are not available for a specific detailed occupation, the user may be able to find data for a larger grouping that incorporates that occupation.

Work level. In addition to classifying each occupation on the basis of duties and responsibilities, BLS economists also determine the work level of the occupation. This is intended to differentiate between workers within the same occupation. The level of work is determined by assessing the following nine key job characteristics:

- Knowledge
- Supervisory controls
- Complexity
- Guidelines
- Scope and effect
- Personal contacts
- Purpose of contacts
- Physical demands
- Work environment

For example, there are several possible levels of knowledge, ranging from the knowledge of simple, routine, or repetitive tasks to mastery of a professional field to generate and develop new hypotheses and theories. Points are associated with each level of each job characteristic; the sum of the points for all characteristics determines the overall work level of the occupation. (See exhibit 1 for a complete description of the work level system.)

Presently, wage data are published by occupation and work level, using work levels that correspond to the Federal General Schedule pay system of 15 grades, numbered 1 to 15.[4] Research is underway to determine alternate groupings for publishing data by work level, in an effort to make the distinction between grades more meaningful. For example, several of the lower grades may be combined into an "entry level" category, while upper grades may be combined into a "senior level" category.

Navigating the wage query system

The wage query system is an interface on the BLS Internet website that prompts the user to enter an area, an occupation, and a work level to retrieve an estimate of the average hourly wages derived from NCS data. The query system is located in the NCS section of the BLS website (**www.bls.gov**) at **http://data.bls.gov/labjava/outside.jsp?survey=nc**. On the entry screen, the user first selects an area and an occupation. The query system displays only those areas and occupations for which data are available. The mechanism for entering an area and an occupation are related. If the user chooses an area, the occupation list will show only those occupations for which data are available for that area. Similarly, if the user chooses an occupation, the area list will show only those areas for which data are available for that occupation. These features may be helpful if a user is attempting to find wage data for multiple occupations in the same area or for the same occupation in multiple areas.

Once the user has selected an area and occupation, he or she may select a work level. If wage data by work level are not needed, the automatic default selection is "Overall occupation average (no work level)." At that point, the user can view wage data for the selected area and occupation. If the user needs wage data by work level, he can either designate a specific work level or build a work level by defining each of the nine key job characteristics. In either case, once the work level is determined, the user can view wage data for the selected area, occupation, and work level.

Exhibit 1. Description of work level system

A sample of occupations is selected from each establishment in the National Compensation Survey (NCS). BLS then collects information on the duties and responsibilities involved in these occupations in order to classifiy them into the appropriate detailed occupational categories. In addition, the work level of each selected occupation is determined using the U.S. Office of Personnel Management's Factor Evaluation System, which is the underlying structure for evaluation of Federal General Schedule (GS) employees. The following list includes a brief description of each of the factors:

Knowledge measures the nature and extent of information or facts that the workers must understand to do acceptable work and the nature and extent of the skills needed to apply those knowledges.

Supervision received covers the nature and extent of direct or indirect controls exercised by the supervisor, the employee's responsibility, and the review of completed work.

Guidelines covers the nature of instructions, procedures, and directions and the judgment needed to apply them.

Complexity covers the nature, number, variety, and intricacy of tasks, steps, processes, or methods in the work performed; the difficulty in identifying what needs to be done; and the difficulty and originality involved in performing the work.

Scope and effect covers the relationship between the nature of the work (purpose, breadth, and depth of assignment) and the effect of work products or services both within and outside the organization.

Personal contacts includes face-to-face contacts and telephone dialogue with persons not in the supervisory chain.

Purpose of contacts ranges from factual exchanges of information to situations involving significant or controversial issues and differing viewpoints, goals, or objectives.

Physical demands covers the requirements and physical abilities required by the employee to complete the work assignment.

Work environment considers the risks and discomforts in the employee's physical surroundings or the nature of the work assignment and the safety regulations required.

Within each factor are a number of levels, and each level has an associated written description and point value. The number and range of points differ among the factors. For each NCS occupation, the level and associated point value of each factor is determined on the basis of occupation position descriptions and interviews with survey respondents. The point values are recorded and totaled; the total points determine the overall level (or grade) of the occupation, based on the same 15 levels used for the Federal Government's General Schedule employees. A description of the levels for each factor can be found within the BLS website at the following address: **www.bls.gov/ncs/**.

Using regression techniques, BLS researchers examined the relationship between wages and the nine factors used to determine overall grade level. The analysis showed that several of the factors, most notably knowledge and supervision received, had strong explanatory power for wages. That is, as the levels within a given factor increased, the wages also increased. For additional information see Brooks Pierce, "Using the National Compensation Survey to Predict Wage Rates," *Compensation and Working Conditions*, Winter 1999, pp. 8–16.

Query limitations and complexities

In the NCS, available work levels vary by occupation. For example, clerical workers typically are found in work levels 01 through 08. Alternatively, professional workers typically begin at work level 05 or 07 and can be as high as work level 15. The query system prevents users from requesting data for a work level that is not appropriate for the occupation. In addition, a few occupations—legislators, dancers, artists, athletes, authors, actors, musicians, painters/sculptors, and announcers—are not classified by work level. The Federal Government developed the Factor Evaluation System used in the NCS for the evaluation of white-collar workers. When BLS adopted this system for the NCS, it reviewed the factors to determine their appropriateness for the occupations being surveyed. The nine occupations excluded from the work level process were thought to have other criteria that determined work level and pay. Wage data are available for these occupations, but not by work level.

In some cases, there are insufficient data to publish all work levels for an occupation. For example, of the eight possible work levels for accountants in Miami, in a given year fewer than eight are published. This occurs for two reasons. First, the survey includes only a subset of the occupations in each sampled establishment in a given area, rather than a census of all jobs in every establishment. Second, data for certain work levels may not meet BLS confidentiality and reliability standards. As of June 2001, estimates of average wages for these "missing" work levels within occupations can be obtained using regression models, as described in the section that follows. Wage data by work level displayed in the wage query system are derived either from direct estimation of data or from the regression model. This distinction is clearly marked when users view results of their query.

Model-based estimates

Statisticians use *direct estimation* to produce the series of average wages for area, occupation, and work level that ap-

pear in NCS publications and as part of the wage query system. This method, which refers to the direct computation of an average (or other statistic) using sample data, is the technique used most often in BLS and other statistical agencies. In some cases, however—often because the sample is too small to produce reliable estimates—a different approach is used: *indirect estimation* or *model-based estimation.*[5]

To produce the indirect estimates of hourly wages by area, occupation, and work level that now form part of the wage query system, regression analysis is used. One important aspect of regression methods is that they can be used to produce estimates of *conditional means*, which in this case refer to the average hourly wage for individuals, given the area in which they work, their occupation, and their work level. Clearly, estimates of conditional means are generated by direct methods as well, but there are significant differences between the two techniques.

Before discussing how the regression model works, it may be useful to examine table 1, which displays statistics for hypothetical hourly wage data for three areas (*X*, *Y*, and *Z*), three occupations (*A*, *B*, and *C*) and three work levels (1, 2, and 3). The averages presented have been calculated by the usual method of direct estimation. For the sake of simplicity, employment is distributed evenly across the cells (in the top three panels of the table) that are defined by combinations of these three dimensions. One can see, for example, that the average wages of an individual in area *X*, occupation *A*, and level 1 is $10.00.

The fact that both direct and indirect methods can be used to produce conditional means makes it possible to use this table to give a sense of how the regression model produces its estimates. Before doing so, however, it may be helpful to summarize some key patterns evident in the top three panels of the table. First, for any given occupation and work level, area *Y* tends to have the highest wages and area *X* the lowest wages, while wages for area *Z* are somewhere in the middle. Second, wages by occupation tend to be highest for occupation *C* and lowest for occupation *A*. Third, wages always increase as the level of work increases.

To quantify these trends, one can take an average of the cells by area, occupation, and work level, and then take an average of all cells to obtain a mean for the Nation as a whole. Taking one dimension at a time, one can then calculate differentials with respect to the overall average. For instance, the wages for area *X* are, on average, $1.22 lower than those for the Nation as a whole ($17.56 versus $18.78). Similarly, the wages for occupation *A* are $2.56 lower than the average for all occupations ($16.22 versus $18.78), while those for work level 1 are $5.78 lower ($13.00 versus $18.78).

To provide a simplified example of how the regression model works, let's say one is interested in estimating an average wage for area *X*, occupation *C*, and work level 2. Instead of using the direct estimate in the table, one can construct an estimate in a fashion similar to the way the regression model predicts wages. Using the numbers on the table and making the appropriate subtractions, one sees that average wages in occupation *C* are $2.33 higher than the overall average ($21.11 versus $18.78), and that those in level 2 are $0.11 higher ($18.89 versus $18.78). Remembering that the wages in area *X* are $1.22 lower than the overall average, one can add the differentials to the national average of $18.78, which results in a predicted wage of $20.00 ($18.78 − $1.22 + $2.33 + $0.11 = $20.00).

In this case, the estimate computed indirectly via the model exactly matches the $20.00 that resulted from a direct estimate. Even in this highly artificial example, however, most of the wages predicted by the model would not be exactly right. The reason is that the patterns of wages by occupation and work level are not identical by area. That is, while table 1 was constructed so that the ranking for pay of occupations and work levels is the same for all areas, the exact magnitudes sometimes differ. Thus, the implicit assumption of the model that occupation and work level differentials are identical across areas will, in general, lead to prediction errors.

The regression model used in the wage query system allows wages to differ by area and occupation as in this example. Instead of using work levels as a predictor, however, the model uses scores on the nine factors that are used to calculate the level. Although the example shows that prediction errors come from assuming that differences in wages by occupation and by work level are the same across areas, the regression model used does, in fact, make this assumption.

Table 1. Hypothetical mean hourly earnings by area, occupation, and work level

Items	Area *X*	Area *Y*	Area *Z*	Nation
Occupation *A*				
Level 1	$10.00	$12.00	$11.00	$11.00
Level 2	15.00	18.00	16.00	16.33
Level 3	20.00	23.00	21.00	21.33
Occupation *B*				
Level 1	12.00	14.00	13.00	13.00
Level 2	18.00	20.00	19.00	19.00
Level 3	24.00	26.00	25.00	25.00
Occupation *C*				
Level 1	14.00	16.00	15.00	15.00
Level 2	20.00	22.00	22.00	21.33
Level 3	25.00	28.00	28.00	27.00
Occupation *A*	15.00	17.67	16.00	16.22
Occupation *B*	18.00	20.00	19.00	19.00
Occupation *C*	19.67	22.00	21.67	21.11
Level 1	12.00	14.00	13.00	13.00
Level 2	17.67	20.00	19.00	18.89
Level 3	23.00	25.67	24.67	24.44
Overall	17.56	19.89	18.89	18.78

While the fact that this is not literally true introduces a greater chance of prediction error, not making the assumption means relying on smaller amounts of data to estimate how these areas differ in this regard, which also increases the chances of making inaccurate predictions.[6] It should also be noted that a variety of alternative models were assessed that relaxed the assumption of equality of wage differences by occupation and work level across areas. On average, these models did not have better predictive power than the model that was chosen for incorporation into the wage query system.

Given these errors, one might naturally wonder why it is useful to present estimates generated by the model. First, it is important to keep in mind that even direct estimates contain prediction errors. While they are correct, on average, for the given sample, the average wage is, of course, not the wage that everyone for that job actually receives. In fact, if one could perform a parallel survey, where the respondents are different because the establishments and the occupations within the establishments that are randomly selected are different, the direct estimates also would undoubtedly differ. Second, when using a model, one can combine data from areas with similar labor market patterns to increase the sample size, a process that statisticians refer to as "borrowing strength." While areas can be combined when making direct estimates as well, a model has the advantage of being able to incorporate the ways in which areas differ from each other. Third, a model facilitates the incorporation of auxiliary information to improve the accuracy of its prediction. In this case, using detailed information on factor scores, rather than the work level, which is a kind of summary of the scores, improves the performance of the model.

While it is hoped that this description of where the model-based estimates come from has been of interest (see the appendix for additional technical details), it is not necessary to understand the details of the procedure for generating the estimates in order to make good use of the data. It is important, however, that users know how to view the model-based estimates relative to the directly estimated ones. First, the regression-based estimates should be considered experimental. Though a substantial amount of work has gone into developing, estimating, and validating the model, and such models have a long tradition in the field of labor economics, it has not undergone the scrutiny given to standard BLS products and does not benefit from the years of experience BLS has in direct estimation. Second, the regression-based estimates are being used only in cases where the sample size is too small for direct estimates, indicating greater variability in any estimate, direct or indirect. Work on the model is ongoing, and should, in the future, strengthen users' confidence in the regression-based estimates.

Future enhancements

The BLS wage query system has quickly become a popular Internet tool—nearly 13,000 requests were processed through the system in a recent month. The addition of regression estimates will only enhance the system's usefulness. And BLS is researching additional enhancements as well. Currently, the system is limited to the average wages for all workers in the occupation. Future enhancements will allow users to obtain median and percentile wage estimates, as well as iterations for private sector versus State and local government, and full time versus part time. In addition, some data will be available by union status, industry, and size of establishment. Efforts also are underway to tie the output of the query system to wage escalator calculations from the Employment Cost Index.[7] In this way, detailed occupational wage estimates that may be several months old can be escalated to reflect wage rates in the most recent quarter. □

Notes

[1] The earnings used to calculate the hourly wage rates are defined as regular payments from the employer to the employee as compensation for straight-time hourly work, or for any salaried work performed. Wage data represent gross pay (that is, prior to taxes) and include incentive pay such as commissions and production bonuses, but do not include overtime or bonuses not directly tied to production, such as hiring and year-end bonuses. For additional details, see *National Compensation Survey: Occupational Wages in the United States, 1999*, Bulletin 2539 (Bureau of Labor Statistics, July 2000). This information is available on the Internet at **www.bls.gov/ncs/**.

[2] Occupations in the National Compensation Survey are defined by the Census Occupational Classification System. The NCS is beginning to reclassify occupations using the new Standard Occupational Classification system. BLS expects to publish NCS wage data with occupations defined using this new system by 2005.

[3] More precisely, for data in a given occupation to meet BLS publication standards, there must be sufficient observations to ensure that no one establishment could be identified, perhaps because data from that establishment dominate a particular estimate. In addition, the relative standard error, calculated as the ratio of the standard error to the mean, must be less than 0.50.

[4] The Federal General Schedule (GS) pay system is used for most white-collar employees of the Federal Government.

[5] Examples of indirect estimation that will be familiar to many BLS data users are the estimates produced by the BLS Local Area Unemployment Statistics (LAUS) program. These data and a description of the estimation methodology may be found within the BLS Internet site at **www.bls.gov/lau/**.

[6] The mean squared error, the measure used to gauge the level of predictive accuracy, is composed of a term for prediction bias and one for the variability of predictions. Restricting certain parameters to be the same across regions imposes some bias, but decreases the variability of the estimates.

[7] The Employment Cost Index is a quarterly measure of the change in employer costs for wages, salaries, and employer-provided benefits. More information may be found at **www.bls.gov/ncs/ect/**.

Appendix: Regression model

The model used to predict wages is of the form

$$W_m = \alpha + \sum_{a=1}^{A-1} \beta_a \text{AREA}_{ma} + \sum_{o=1}^{O-1} \chi_o \text{OCCUP}_{mo} +$$

$$\sum_{i=1}^{9} \sum_{j=1}^{S_i-1} \delta_{ij} \text{FACTOR}_{mij} + \varepsilon_m$$

where W_m is the average hourly wage rate of the mth observation, which is for occupation o in an establishment that is in area a and that has a vector f of scores for each of the nine factors. AREA is a vector of dummy variables indicating area, OCCUP is a vector of dummy variables for occupation, and FACTOR is a matrix of dummy variables representing the different possible scores for each of the nine factors. The corresponding coefficients are β, χ, and δ, while α is a constant term, and ε is the error term. Areas are indexed by a and are numbered from one to A, occupations are indexed by o and are numbered from one to O, i is the index for the nine factors, while S_i is the highest score possible for factor i. The coefficients are calculated by using weighted least squares. An initial weight is determined for each observation by taking into account the probability of selection for the establishment and a given occupation in that establishment, and then corrected for nonresponse. This final employment weight is then multiplied by hours worked per week and weeks worked per year to arrive at an hours weight.

Though it is conventional in labor economics to use the log wage rather than the wage itself, taking logs did not improve the performance of the model significantly. Many different specifications were tried, with most of the variations attempting to see if the predictive accuracy of the model could be improved by allowing either the coefficients on occupation, the coefficients for the factor scores, or both, to vary by area. Using the measures *root mean squared error* and *mean absolute error* to gauge predictive accuracy, it was not possible to find a model that allowed occupation or factor score differentials to vary by locality that substantially outperformed the model.

Welfare reform conference

The Personal Responsibility and Work Opportunity Reconciliation Act, the legislative underpinning of welfare reform, became law in 1996. In November 2000, the Federal Reserve Bank of New York held a conference on progress in welfare reform. The papers and proceedings of that conference were published as the most recent issue of the Bank's *Economic Policy Review*.

The first and most central question of most evaluations of welfare reform has been its impact on the employment, income, and other material indicators of well being among the program's constituencies. Pamela Loprest's paper came to conclusions similar to those of the papers published in this *Review* in July: A substantial portion of former welfare recipients are working or are living in a household in which an adult member is employed, however the evidence does not show unequivocal success in transitioning from welfare. In Loprest's National Survey of America's Families data, about one leaver in five returns to the welfare system, and about a quarter live in a family with no earnings at the time of the survey.

The next session of the conference focused on the relative roles of the improving economic climate in the late 1990s versus the implementation of welfare reform. Rebecca M. Blank's identifies the three simultaneous events that characterized the late 1990s and reviewed a wide variety of studies that attempted to disentangle their effects on welfare caseloads. The three factors were welfare reform itself, the decline in unemployment, and the fact that real wages among less skilled workers were rising for the first time in decades. The bulk of the studies suggested that at least 2035 percent of caseload decline was due to improvements in the economic factors in the early 1990s but perhaps a somewhat smaller portion in the later years of the decade.

A second paper in the session was presented by Robert A. Moffitt and David W. Stevens. Moffitt and Stevens found that "welfare reform per se, after one nets out the effect of the economy, has had little effect on the composition of the caseload in its labor market skill distribution.

The third session focused on welfare program administration both in a National perspective and for the city of New York, the major urban area within the Bank's district. (See the items below for additional research on tools for administering and measuring the impact of welfare reforms.) The New York Fed's conference concluded with a session on new policies for using financial incentives in welfare reform.

Statistics for welfare-to-work

With the welfare system changing its focus much more towards employment-based solutions came a need for more effective assessment and referral. Randall W. Eberts reports in the Upjohn Institute's *Employment Research* newsletter that such a system has been pilot tested in Michigan. The project, which was funded by the Department of Labor's Employment and Training Administration, used a statistical screening to provide one of three services to welfare-to-work enrollees in Michigan's Work First program.

The screening is based on the statistical relationship between enrollees' attributes, such as age, education, and prior employment, and their probability of employment and job retention. In the Michigan test, according to Eberts, "The statistical assessment tool was successful in distinguishing among participants with respect to their likelihood of employment and retention," and, "The optimal referral pattern based on the statistical assessment tool yielded retention rates that were 25 percent higher than if participants were randomly assigned to providers."

Welfare and neighborhoods

As with many aspects of public administration, welfare and welfare reform have impacts ranging from the national to the very local. Lois M. Quinn and John Paswasarat's Brookings Institution discussion paper, *Tracking the Progress of Welfare Reform Quickly: A Model for Measuring Neighborhood Health and Change*, outlines the use of indicators at the ZIP Code level to understand the effect of welfare reform in a relatively small neighborhood.

The indicators they tracked for a single ZIP Code (53206) in Milwaukee included public assistance receipt, family income and poverty, childcare usage, housing values, and automobile access. This small 2.72 square mile area had the highest number of AFDC cases in the State of Michigan in 1993. From early 1994 to early 2000, the number of families receiving income support and food stamps fell sharply. Employment and earnings among single parents grew substantially, the number of income tax filers increased, and the number of claims for the earned income tax credit (EITC) rose.

Increasing numbers of families in the neighborhood used subsidized day care, thus relieving one major barrier to employment. A lack of access to automobile transportation among young women, however, may have placed a different constraint on labor market activity. Housing data for the neighborhood showed that ownership rates declined somewhat, but housing values rose enough to slightly outpace inflation. □

We are interested in your feedback on this column. Please let us know what you have found most interesting and what essential reading we may have missed. Write to: Executive Editor, *Monthly Labor Review*, 2 Massachusetts Avenue NE, Washington, DC 20212, or e-mail: mlr@bls.gov

A successful future

The Future of Success. By Robert Reich. New York, Alfred A. Knopf, 2001, 289 pp. *White-Collar Sweatshop: The Deterioration of Work and Its Rewards in Corporate America*. By Jill Andresky Fraser. New York, W.W. Norton & Company, 2001, 278 pp.

Over the past decade, and despite a strong economy, there has been a steady increase in the number of books and articles chronicling an increasingly stressful American workplace. Books by both former Labor Secretary Robert Reich and financial journalist Jill Fraser fall into this category as they attempt to document the problem, analyze the issues, and offer solutions to alieviate these stresses. These authors' premise is that while stock prices may have soared, workers' economic security has eroded over the past decade. And unless definite actions are undertaken, these trends will continue into the future, continuing to cause difficulties for workers and society in general.

Although pursuing a similar theme, the two books take different approaches to their subject. Robert Reich looks at the subject from the macro level, calling this the age of the "terrific deal" where everything seems cheaper and consumers expect more. Reich says that society has changed and so have work rules. For workers, this means less predictable income, which causes workers to work harder during times when work may be less available. He also discusses a growing wage differential between jobs in high demand and those in low demand, causing workers to pay a greater financial price if they choose not to pursue a highly paid but more stressful job. Finally, workplace changes have increased workers' need for self-reliance, adding to employee stress. In addition to working harder, they must continually devote some of their energy to promoting and caring for their own careers.

Reich feels that the results of these trends are strains that are evident in the breakdowns of bonds—between employers and employees, in families, and in communities that suffer as people work more and have less time for social activities. Yet, he contends that workers themselves are not blameless in this new society. People are making active choices that result in the trends outlined above. All workers are both consumers and producers in this economy, and he postulates that those same people who expect greater advantages as consumers are subject to greater stresses on their jobs as they attempt to meet consumer demands. Thus, we become both the beneficiaries and victims of our own economy.

Unlike Robert Reich's book, Jill Fraser approaches her subject by documenting individual worker stories derived from interviews. Focused specifically on white-collar occupations, she devotes much of her book to telling those individual stories as proxies for a more general story about the economy. Almost to the point of repetition, individuals recount their experiences with a variety of corporate jobs, all of which share a common theme on the deterioration of employment conditions in many of the largest corporations over the past decade. These stories add up to a picture of a society where loyalty is a negative value and workloads grow as rewards are slowly eroded.

Just as their approaches to the subject vary, so do the two authors' conclusions, although both are optimistic that these trends are reversable. Robert Reich considers many potential solutions by individuals, including a return to a more simplistic lifestyle and greater self-awareness. In the end, though, he puts most of his faith in changes in public policy. While not advocating any one policy as the sole solution, he sees value in new laws and regulations that will protect the current benefits of the new economy while moderating its costs.

On the other hand, Fraser believes that individuals have it within their own power to reshape the economy through individual and corporate actions outside of government. Among her options, she advocates that corporations take a more worker-friendly approach to their employees, not as a moral choice, but as a competitive advantage over firms that treat their employees in a harsher manner. She also advocates smaller executive compensation, limits on the use of contingent workers, and greater use of investor activism (because many workers are both employees and stockholders). Most importantly, she encourages individual employees to take greater control of their worklives by setting limits to their worktime and seeking out employers who provide support to their workers.

In both of these books, there is an explicit premise that the American workplace has fundamentally changed over the past 30 years. Robert Reich's book is helpful in giving readers an overview of a society that workers may be experiencing individually, while Jill Fraser records the voices of those individual workers to spotlight larger issues. Looking to the future, both books implicitly, but confidently, assume that current workplace trends will continue, unless people actively work for change, either through government or through individual actions. Neither book anticipates that change may occur by outside forces or due to fundamental changes in the world's economy. Recent events, which could not have been forseen at the time these books were published, raises questions about this premise and thus the solutions proposed by the authors. Whether the workplace of the future follows recent trends remains to be seen, but persons interested in understanding the stresses felt by many American workers during the 1990s should add these books to their reading list.

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Labor history

Grand Master Workman: Terence Powderly and the Knights of Labor. By Craig Phelan. Westport, CT, Greenwood Press, 2000, 294 pp. $65.

Here is a delight for labor history buffs with an interest in the 1870s and 1880s. Terence Powderly was recently added to the Labor Hall of Fame at the U.S. Department of Labor. This detailed biography will tell you why. Phelan argues that Powderly was "the first American working-class hero of national stature" and that the Knights of Labor was "the most significant and ambitious labor organization of the Gilded Age."

As leader of the Knights of Labor from 1879 to 1893, Powderly presided over an extraordinary mass movement. The "Order" took in union and nonunion, skilled and unskilled, black and white, male and female, immigrant and native-born. They joined local "assemblies" for a variety of reasons, but chiefly to protest and resist abuses and exploitation by an essentially unregulated capitalism manipulated by powerful industrial bucaneers and railroad "robber barons" like Jay Gould.

You will get insight into the monumental labor-management battles of the 1880s, a sense of then current divisions among workers on the basis of religious, ethnic, race, gender, skill, occupation, and union distinctions, and the problems of reconciling solidarity and democracy in a decentralized labor organization with "local autonomy" and community control."

Powderly transformed the Knights from a secret society into a mass movement. The Knights zoomed from 10,000 members in 1879 to 750,000 members in 1886, reflecting workers' militancy in reaction to employer-imposed wage cuts and longer work hours. Goals ranged from economic strike actions and strike support to political lobbying, political electoral action, cooperatives, and temperance. Powderly's firmly held principles of democracy, and community control for the Knights' local and district "assemblies" and the national (General Assembly) reliance on voluntary contributions led to inevitable weakness of the national organization, Phelan argues. Local and district jurisdictional squabbles often failed to yield to Powderly's charismatic persuasiveness. "The very basis of the Knights' popularity—community control—engendered a lack of trust in any central authority, including one of the members' own making," Phelan notes. "The demise of the Knights thus underscored the inherent tensions between the appeal of democracy and the necessity for discipline and unity of purpose in time of crisis."

Powderly (1849–1924) left school at age 13 to work for a coal-canal-railroad company. At age 17, he started a 3-year apprenticeship to become a machinist. With "boundless, almost manic energy," he rose through the ranks of the Machinists and Blacksmiths International Union. In 1878, he was elected to the first of three terms as mayor of Scranton, Pennsylvania. In 1879, he was elected Grand Master Workman, leader of the Knights of Labor, to succeed Uriah Stephens.

Powderly urged black-white, male-female integration in the Knights locals—but rather than have no local Knights organizations in the South he advocated separate locals for black members. In 1885, after speaking in Richmond, Virginia, to a racially mixed audience on workers' common interests, he organized 24 tobacco workers into the city's first black local and he organized cigarette workers into the city's first all-female local. In 1886, some 10 percent of Knights members were women.

Powderly also led the Knights to an extraordinary 1885 victory over railroad magnate Jay Gould. Gould had put wage cuts into effect all over his railroad empire. A spontaneous mass uprising of striking railroad workers resulted. "One week after the strike became general, a stunned Gould rescinded the wage cuts," Phelan relates. Membership of the Knights shot up, but the subsequent wave of poorly organized, underfinanced, unsuccessful strikes led to membership losses and worker disenchantment with the Knights.

Powderly continued as leader of the Knights until 1894, but the organization dropped in membership and influence in the late 1880s almost as quickly as it had grown in the early 1880s. In part, this was the result of unrestrained localism and factionalism, but Phelan contends the overwhelming cause of the Knights collapse was U.S. employers' "relentless counteroffensive that effectively killed it within three years" after 1886. "By 1888 well-organized, highly disciplined, and soundly financed employer associations, often with the assistance of the State, had crushed a decentralized, undisciplined, impoverished, and fractured movement still struggling to define its goals and strategies through democratic means."

Samuel Gompers and the American Federation of Labor "launched a thoroughly pragmatic alternative to the utopian and backward Knights," says Phelan. "Confidently discarding all the Order's fuzzy reform notions, Gompers declared that the only long-term strategy for labor was the continuous wresting of incremental improvements in the matter of wages, hours, and working conditions." Gompers' Cigar Makers International Union represented "the very craft particularism that the majority of Knights held in contempt," and the Knights General Assembly, contrary to Powderly's wishes, drove the Cigar Makers out of the Knights, "a colossal blunder," according to Phelan.

Powderly and the Knights of Labor are usually consigned to the dustbin of history. This biography brings the man, the organization, and the 1880s to life. Phelan deserves our thanks.

—Markley Roberts

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Career academies

High School Career Academies: A Pathway to Educational Reform in Urban School Districts? By Nan L. Maxwell and Victor Rubin. Kalamazoo, MI, W.E. Upjohn Institute for Employment Research, 2000, 235 pp. $19 paper.

The recent presidential election saw both major party candidates react to Americans' deep discontentment with the educational system. Although individuals will differ as to what they see as its shortcomings, many would argue that our schools do not adequately prepare students for the world of work. One educational reform put forth as a potential method to improve the employment readiness of students is career academies. The career academy model has three defining features. First, although the academy is housed in a high school, students are for the most part taught separately, creating a school within a school. Second, the academic coursework is integrated with the workplace, such as internships. Lastly, employers are involved in the program.

Maxwell and Rubin examine the impact of career academies in a large urban school district. (For confidentiality reasons, the district is not identified.) The district has six high schools with nine different career academies in fields such as Computer Science and Technology, Transportation, Visual Arts, and Business and Finance. The impact of the career academy on various outcomes is estimated through a regression analysis that controls for student and school characteristics. A cohort of 10,000 students was followed from their enrollment as sophomores during the 1990–93 period to 1996.

The authors found that seven of the nine academies had a positive, statistically significant effect on students' grade point average. Although the authors use grade point as one measure of accumulated human capital, it could be argued that it may not in fact reflect knowledge, especially when students are, for the most part, placed in separate classes. The academies did not directly affect the probability of graduating high school, although they did tend to raise high school grade point averages that in turn increased the probability of graduating high school. Controlling for other factors, the academies had a statistically significant positive impact on enrollment at 4-year colleges, but there was no significant effect on enrollment at 2-year colleges. Although the amount of elapsed time was not sufficient to examine this, it would be interesting to see what effect the academies had on college graduation rather than just enrollment, especially if the academy students' higher grade point averages resulted only in admission to college but not subsequent graduation. The academies did not have a significant effect on hours worked or the hourly wage rate, but once again, the effect could show up in later years. Academy students self-reported higher levels of good study habits and other characteristics that would positively affect their capacity for life-long learning.

The authors also examined differences in career academies across the high schools. There were differences across the schools in terms of students' socio-economic status, differences in the way the schools were run, as well as differences in the extent to which career academy students participated in the program (for example, number of academy courses, share of students in academy courses that were academy members, and internships). The academies seemed to increase the level of knowledge, as measured by grade point average, more in schools with lower average socio-economic status students.

Maxwell and Rubin have wrestled with some critical and difficult issues. Given the Nation's current concern about how well our schools prepare students for the working world, there is a need for programs that will improve the job-readiness of students. Further, given the rising gap between the earnings of the more educated and the less educated, there is also a need for programs that will facilitate the attainment of a higher education. As an objective scientist, one might hope for a long period of time to evaluate whether career academies improve employment, earnings, and the chance of obtaining an advanced degree. Unfortunately, such a long-range experiment might leave many in the large control group with inadequate education and training when such skills are ever more important. In short, given the magnitude of the problem, the authors' early conclusions are of great use and make a contribution to our knowledge about possible effective remedies for concerns about the educational system. The book does not serve as a curricular guide to career academies, but should serve policymakers well by providing some preliminary quantitative evidence about the effectiveness of career academies.

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Universities' employment

The Academic Marketplace. By Theodore Caplow and Reece J. McGee. Transaction Publishers, New Brunswick, NJ and London, 2001, 262 pp. $27.95, cloth; $20.95, paper.

This book originally appeared in 1958. Since then it has become a classic. Its reissue with a new introduction is to be welcomed and testifies to the book's lasting value. The authors are sociology professors at the University of Virginia and Purdue University, respectively. The work is based upon a survey of faculty vacancies and replacements in 13 arts and science departments at 9 major or research universities. The interviews consisted of mainly open-ended questions. Unfortunately, the survey questionnaire has not been reproduced, and

there is no bibliography. But the authors' style is lucid, candid, and nearly free of sociological jargon.

Caplow and McGee treat universities as social institutions. They have provided a systematic analysis of how vacancies occur, how faculty are chosen and promoted, and who is involved in the selection process. It is not surprising that the largest percentage of vacancies is caused by resignations, followed by dismissals and retirements. In the decisionmaking process, especially at the senior level, the prestige of a candidate within his or her academic discipline is the decisive factor. One's merit is "determined for the most part by disciplinary prestige." The prestige factor is quite rightly a leitmotif in this book. Faculties are hired "on an estimate of how much research they are likely to do." Prestige is, of course, quite subjective and elusive. There is no objective prestige index. Although publications are generally not read in full—a disturbing phenomenon—they are important in the prestige calculus. One's productivity is thus a "composite of subjective opinion." Faculties are hired "on the basis of how good they will look to others."

American universities and colleges range in quality from some of the best in the world to some of the worst. The smaller and minor institutions place far less emphasis upon publications and far more upon teaching ability. The authors discuss this and its implications at considerable length. The fact remains, however, that the minority of large research institutions set the tone for the whole higher education system.

As might be expected, the selection process is lengthy, cumbersome, and increasingly bureaucratized and competitive. It usually involves senior departmental members, the chairperson, the dean, and sometimes others. There are frequent departmental conflicts and conflicts between the department and the dean. These matters are analyzed at length and provide penetrating explanations of how the selection process really operates. Caplow and McGee have also presented many long and highly revealing quotations by various decisionmakers. There are many excellent recommendations for the resolution of some of these conflicts. Since the book's first appearance, the selection process has become more open and democratic, largely as a result of the Federal Government's affirmative action and civil rights legislation, which the authors acknowledge in their new introduction.

Although the book does not deal specifically with the academic labor market as such, it is set in the 1950s when there was a seller's market and fears of faculty shortages. Since the 1970s, there is a buyer's market in many disciplines with more qualified applicants than available positions, and the consequently large numbers of unemployed and underemployed academics (educational qualifications exceeding employment requirements). Moreover, in an increasing number of disciplines the academic labor market is now global. Also, colleges and universities now have far higher proportions of temporary and part-time positions. It is regrettable that Caplow and McGee have not addressed these developments and their implications in their new introduction.

Despite the noted omissions, this pioneering and classic work remains a significant analysis of the operation of the academic marketplace. It is of special interest to potential and current faculty, higher education administrators, and government and foundation officials supporting higher education.

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Academic shortfalls

The American Academic Profession. Edited by Stephen R. Graubard. New Brunswick, NJ, and London: Transaction Publishers, 2001. 352 pp. $29.95, cloth; $24.95, paper.

This book is a reprint of the fall 1997 issue of *Daedalus*, plus an index. There has been neither an updating of the material nor a correction of the various errors. The authors are professors and senior university and college administrators. The style ranges from quite informal and almost conversational to formal. As frequently happens with edited books or commissioned articles for special journal issues, the quality is uneven, and many of the chapters are of peripheral concern.

Burton R. Clark, one of the contributors, has provided a bleak but realistic overview of the academic profession. There is so much institutional differentiation that core academic values and an ethos are difficult to locate in American academic life. In the community colleges and many of the 4-year colleges, there is now much remedial education. At these institutions, faculty authority is weak and teaching requirements heavy, with little time left for research. Throughout higher education, there is an increasing trend in part-time employment and nontenure track positions. The results of these developments are diminished intrinsic rewards and motivation. The chapter has many unreferenced quotations. Clark's conclusions deserve more indepth analyses.

The meaning of profession in general and academic profession in particular needs to be addressed in detail. Francis Oakley addresses these matters, but insufficiently. In a more substantial chapter, Patricia J. Gumport has related the status of the profession in public universities to the decisionmaking process, which has shifted from departments to university administrators and State governments. As a result, faculty is now treated "as workers who need to be monitored rather than as professionals who are trusted to work according to internalized standards." She raises the important question of whether or not the faculty will internalize "a conception of themselves as employees, competitors, revenue-generators, and redeployable

resources?" If so, "what educational consequences will result?"

In any book or collection of articles on the academic profession, one of the main themes should be the academic labor market and the socialization process. The latter is not covered, and the academic labor market is quite inadequately dealt with by a visiting assistant professor who laments the fact that he was misled by a co-authored book that he read as a graduate student; it predicted significant faculty shortages in the humanities and social sciences. Instead, the surpluses evident since the early 1970s have continued. This should have been evident from the many books and articles on the academic labor market and that for educated people in general, especially Richard B. Freeman's *The Overeducated American* (New York and London, Academic Press, 1976) and the articles by Russell W. Rumberger and this reviewer. Cheryl B. Leggon has sketchily noted that there are too many scientists chasing too few academic positions and research grants. A whole chapter should have been devoted to a detailed analysis of faculty supply and demand data and projections.

In a comparative chapter, Philip G. Altbach has found that the professoriate abroad faces some of the same problems as in the United States. The proportion in tenured and tenure-work positions is declining. Unhappiness with the academic administration is also widespread, as well as increasing bureaucratization and declining funding. Unlike in the other countries of the world, however, American academics are the least likely to go abroad for study or research, pay little attention to the knowledge produced in the rest of the world, and remain uninterested about "internationalizing the curriculum."

All in all, this book falls considerably short of its potential. However, it is of special interest to potential and present faculty and administrators.

—John Dreijmanis
University of Essex

Small business employment

The Job-Generation Controversy: The Economic Myth of Small Business. By David Hirschberg. Armonk, NY, M.E. Sharpe, Inc., 1999, 163 pp.

In *The Job-Generation Controversy*, David Hirschberg provides a methodology for addressing an important economic issue. The question is a simple one: How many jobs are created by small businesses? But while the question is simple, the underlying problem of how to count job gains and losses between small and large businesses over time is not readily apparent.

While it may seem a dry statistical matter, the accurate measure of small business job creation affects the everyday lives of millions of American workers and families. Prominent examples of these real world impacts are the coverage of small firms by minimum wage laws, mandated employer benefits for health insurance, and occupational health and safety laws. The national debate on these issues is vigorous. For example, the small business community such as the National Federation of Independent Businesses contends that increased business costs caused by higher minimum wages, adopting mandated employer health insurance, or lowering the size thresholds for companies subject to health and safety regulations would create more unemployment because small firms cannot afford them, and thus would lay off some workers or even go out of business.

A crucial part of the debate is how many workers would be affected by such job losses. There are two aspects to this. One is the extent to which such cost increases would lead some small business employers to decide they cannot afford them without having to lay off some workers. The other aspect is the universe of workers at all small firms, on which Hirschberg focuses.

The potential job impacts differ considerably if the estimates of jobs created by small businesses are calculated at 91 percent of the total of all new jobs, or if in fact small businesses lost employment as job losses exceeded job gains. Indeed, these are the magnitudes that are at controversy in Hirschberg's book. In particular, he questions the validity of data on small business job generation prepared by the U.S. Small Business Administration (SBA). He concludes that by using a faulty methodology, the SBA vastly overstates the number of jobs created by small businesses. In these analyses, a business is defined as a private nonfarm firm (both for-profit and nonprofit enterprises) that includes all establishments under its ownership operating in various locations around the country.

Hirschberg's contribution is in breaking through a conundrum that has long plagued analyses of the employment impact of small businesses. This is the vexing problem of how to count businesses that shift in size status from small to large and from large to small over time. He summarizes his methodology in the following example that uses a commonly accepted definition of the threshold for small business of 500 employees, with companies of less than 500 employees defined as a small business, and companies of 500 or more employees defined as a large business. Suppose a company starts with 400 employees in year 1, growing to 600 employees in year 2, and falls back to 400 employees in year 3. The net change in employment over the 3-year period is zero, as the gain of 200 workers in year 2 is offset by the loss of 200 workers in year 3.

Hirschberg breaks through the problem by rigorously accounting for firms that cross over the boundary from being a small firm to become a large firm and from being a large firm to become a small firm. For example, consider a threshold of 500 employees, which defines a small business as having less than 500 employees and a large business as having 500 or more employees. From year 1 to year 2, when a small business grows

from 400 to 600 employees, is the entire job gain of 200 employees counted as a growth in jobs for a small or large business? Similarly, if a large business contracts from 600 to 400 employees, is the entire job loss attributed to a large business or a small business? Hirschberg's insight is that it is neither.

Specifically, for the job gain from 400 to 600 employees, Hirschberg counts the increase of 100 workers from 400 to 500 employees as a gain for small business, and the increase of 100 workers from 500 to 600 employees as a gain for large business. And for the job loss from 600 to 400 employees, the decrease of 100 workers from 600 to 500 employees is a loss for large business, and the decrease of 100 workers from 500 to 400 employees is a loss for small business.

This issue is crucial in getting an unbiased reckoning of the growth of small and large businesses, but it had never been systematically addressed before, resulting in gross distortions of the contribution of small and large businesses to job growth. The procedure results in a completely neutral accounting of these boundary crossovers, which favors neither small business nor large business. By contrast, in the above example, the Small Business Administration counts the entire increase of 200 workers from 400 to 600 employees as a gain for small business, and the entire decrease of 200 workers from 600 to 400 employees as a loss for large business. Hirschberg's contribution is vital because in the dynamic U.S. economy, competition among new and existing firms is intense, with an everchanging landscape of some small businesses prospering and becoming large, some large businesses losing out and becoming small, and some small and large firms going out of business.

By contrast, the SBA methodology attributes all of the gain of 200 workers in year 2 to small businesses because that was the firm's initial size status in year 1, and all of the loss of 200 workers in year 3 to large businesses, because that was the initial size status in year 2. But the exact opposite and equally justifiable result would happen if the calculation were made using the size status in the terminal year 3, with large businesses having all of the job gain and small businesses having all of the job loss. In this case, all of the job gain of 200 workers in year 2 would be attributed to large businesses, and all of the job loss in year 3 would be attributed to small businesses. In fact, Milton Friedman, a staunch free-market economist, in questioning claims that the preponderance of job gains is created by small businesses, raised this very issue of not limiting size status to the initial period because equally valid estimates would be obtained by using the terminal period (Hirschberg cites the Friedman critique). This is analogous to the difference between the Laspeyres (initial period) and the Paasche (terminal period) weighting schemes used in index number construction.

Using an example of actual data, Hirschberg highlights the effects of the different methodologies for the 1989–91 period that was characterized by slow economic growth and a recession (the National Bureau of Economic Research dated the recession from August 1990 to March 1991). The SBA estimated that small businesses accounted for 91 percent of the new workers from 1989 to 1991. By contrast, in working through complex data sets, Hirschberg calculated that small businesses lost 192,000 workers while large businesses gained 802,000 workers for the period. The differences between the two estimates are stark. Both the SBA and Hirschberg use the same data base from the U.S. Bureau of the Census in their calculations, so the differences between them are solely due to their methodologies.

The distribution of establishments by employment size has not changed since 1946. In addition, the shares of total employment accounted for by small and large firms has also remained stable over the years. Thus, based on Census Bureau data, small businesses of less than 500 employees accounted for 54 percent of total employment in both 1977 and 1992. These shares hardly diverged in the intervening years, and also showed no upward or downward trend over the period. Hirschberg explains this constancy in the size distribution as the net result of the tremendous volatility in the dynamic American economy. As firms compete for larger market shares by expanding their investments, the successes and failures of these ventures are randomly distributed independent of firm size. The constancy also reflects the great volatility in new firms starting up in business (births) and existing firms going out of business (deaths).

Hirschberg also gives a perspicacious explanation of the real life dynamism of the economy that leads to this stability. The rationale for this is given in the development of a gaming theory model in Chapter 5 ("Explaining the Employment Distribution by Firm Size: The Economic Game"). It is based on the statistical probabilities in which firms move across business size categories over time. The insight provided in this explanatory model is a second signal achievement of the book.

We are indebted to David Hirschberg for providing some light in this murky area and for clarifying how important it is to fix it.

—Norman Frumkin
Formerly with the
Office of Management and Budget

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 past experience. 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, 39, and 43. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2001 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2000 *Review* and reflect the experience through March 2000. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 45 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://stats.bls.gov/cpshome.htm

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

http://stats.bls.gov/ceshome.htm

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://stats.bls.gov/iprhome.htm

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-to-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; 4–20)

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*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method,* by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

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 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual.* 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 manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups 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. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 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 latest adjustment, which incorporated March 1999 benchmarks, was made with the release of May 2000 data, published in the July 2000 issue of the *Review.* Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 1999 forward and seasonally adjusted data from January 1996 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2000 data, all estimates for the wholesale trade division from April 1998 forward were revised to incorporate a new sample design. This represented the first major industry division to convert to a probability-based sample under a 4-year phase-in plan for the establishment survey sample redesign project. For additional information, see the the June 2000 issue of *Employment and Earnings.*

Revisions in State data (table 11) occurred with the publication of January 2000 data.

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 Monthly Industry 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).

Compensation and Wage Data

(Tables 1–3; 21–27)

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/non-metropolitan 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 beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://stats.bls.gov/ecthome.htm

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://stats.bls.gov/ebshome.htm

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 27.

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://stats.bls.gov/cbahome.htm

Price Data

(Tables 2; 28–38)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes 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 29. 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 on consumer prices, contact the Division of Consumer 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 on producer prices, 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 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 (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. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1995.

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 the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

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

Productivity Data

(Tables 2; 39–42)

Business sector 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, non-energy 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 39–42 describe the relation-

ship 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 data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. In addition to labor productivity, the industry data also include annual measures of compensation and unit labor costs for three-digit industries and measures of multifactor productivity for three-digit manufacturing industries and railroad transportation. 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 purchases. 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 43–45)

Labor force and unemployment

Description of the series

Tables 43 and 44 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 45 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 39 and 41 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 46–47)

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 number 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/oshhome.htm

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/oshhome.htm

Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of data on consumer and producer prices, employment and unemployment, occupational compensation, employee benefits, workplace injuries and illnesses, and productivity. The homepage can be accessed using any Web browser:

http://stats.bls.gov

Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov

1. Labor market indicators

Selected indicators	1999	2000	1999			2000				2001	
			II	III	IV	I	II	III	IV	I	II
Employment data											
Employment status of the civilian noninstitutionalized population (household survey):[1]											
Labor force participation rate	67.1	67.2	67.1	67.1	67.1	67.4	67.3	67.0	67.1	67.2	66.9
Employment-population ratio	64.3	64.5	64.2	64.2	64.3	64.6	64.6	64.3	64.4	64.4	63.9
Unemployment rate	4.2	4.0	4.3	4.2	4.1	4.1	4.0	4.0	4.0	4.2	4.5
Men	4.1	3.9	4.2	4.1	4.0	3.9	3.9	3.9	4.0	4.3	4.6
16 to 24 years	10.3	9.7	10.5	10.1	10.3	9.7	9.8	9.8	9.6	10.6	11.2
25 years and over	3.0	2.8	3.0	3.0	2.9	2.8	2.8	2.8	2.9	3.1	3.4
Women	4.3	4.1	4.4	4.3	4.2	4.2	4.1	4.2	4.0	4.2	4.3
16 to 24 years	9.5	8.9	9.2	9.6	9.4	9.5	9.0	8.6	8.6	8.6	9.2
25 years and over	3.3	3.2	3.5	3.3	3.1	3.2	3.2	3.3	3.0	3.3	3.4
Employment, nonfarm (payroll data), in thousands:[1]											
Total	128,916	131,759	128,430	129,073	129,783	130,984	131,854	131,927	132,264	132,559	132,485
Private sector	108,709	111,079	108,319	108,874	109,507	110,456	110,917	111,293	111,669	111,886	111,708
Goods-producing	25,507	25,709	25,454	25,459	25,524	25,704	25,711	25,732	25,704	25,621	25,314
Manufacturing	18,552	18,469	18,543	18,516	18,482	18,504	18,510	18,487	18,378	18,188	17,885
Service-producing	103,409	106,050	102,976	103,614	104,259	105,280	106,143	106,195	106,560	106,938	107,171
Average hours:											
Private sector	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.4	34.3	34.3	34.2
Manufacturing	41.7	41.6	41.7	41.8	41.7	41.8	41.8	41.5	41.1	41.0	40.8
Overtime	4.6	4.6	4.6	4.6	4.7	4.7	4.7	4.5	4.3	4.1	3.9
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)	3.4	4.1	1.0	1.1	.9	1.3	1.0	1.0	.7	1.3	.9
Private industry workers	3.4	4.4	1.1	.9	.9	1.5	1.2	.9	.7	1.4	1.0
Goods-producing[3]	3.4	4.4	.7	.9	1.0	1.6	1.2	.9	.6	1.3	.9
Service-producing[3]	3.4	4.4	1.3	.9	.8	1.4	1.2	1.0	.7	1.4	1.0
State and local government workers	3.4	3.0	.4	1.5	1.0	.6	.3	1.3	.7	.9	.6
Workers by bargaining status (private industry):											
Union	2.7	4.0	.7	.9	.7	1.3	1.0	1.2	.5	.7	1.1
Nonunion	3.6	4.4	1.2	.9	1.0	1.5	1.2	1.0	.7	1.5	1.0

[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-producing industries include all other private sector industries.

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

Selected measures	1999	2000	1999			2000				2001	
			II	III	IV	I	II	III	IV	I	II
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm	3.4	4.1	1.0	1.1	0.9	1.3	1.0	1.0	0.7	1.3	0.9
Private nonfarm	3.4	4.4	1.1	.9	.9	1.5	1.2	.9	.7	1.4	1.0
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.5	3.8	1.0	1.1	.8	1.1	1.0	1.1	.6	1.1	.9
Private nonfarm	3.5	3.9	1.2	.9	.9	1.2	1.0	1.0	.6	1.2	1.0
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	2.7	1.0	.7	1.0	.2	1.7	.7	.8	–.1	1.0	1.0
Producer Price Index:											
Finished goods	2.9	1.0	1.2	1.5	.1	1.4	1.3	.6	1.0	1.0	1.0
Finished consumer goods	3.8	1.0	1.8	2.2	–.2	1.8	1.8	.7	1.0	1.0	1.0
Capital equipment	.3	1.0	–.4	–.4	1.2	.1	.0	.0	l.0	–.1	1.0
Intermediate materials, supplies, and components	3.7	1.0	1.9	1.9	.1	1.9	1.6	1.0	–.1	1.0	1.0
Crude materials	15.3	1.2	9.4	10.2	–3.5	9.1	11.2	.3	1.1	–.1	1.0
Productivity data[3]											
Output per hour of all persons:											
Business sector	2.8	4.3	–1.1	2.9	7.0	–.6	7.3	1.0	3.0	.0	2.8
Nonfarm business sector	2.6	4.3	–1.4	3.0	7.4	–.6	6.3	1.4	2.3	.1	2.5
Nonfinancial corporations[4]	3.5	4.2	.4	2.8	4.5	4.0	7.1	4.0	1.6	.6	2.8

[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					
	2000				2001		2000				2001	
	I	II	III	IV	I	II	I	II	III	IV	I	II
Average hourly compensation:[1]												
All persons, business sector	5.9	8.6	6.5	9.4	5.3	5.2	4.7	5.7	6.1	7.6	7.4	6.6
All persons, nonfarm business sector	6.2	7.6	7.1	8.9	5.1	4.7	5.0	5.8	6.3	7.4	7.2	6.4
Employment Cost Index—compensation:												
Civilian nonfarm[2]	1.3	1.0	1.0	.7	1.3	.9	4.3	4.4	4.3	4.1	4.1	3.9
Private nonfarm	1.5	1.2	.9	.7	1.4	1.0	4.6	4.6	4.6	4.4	4.2	4.0
Union	1.3	1.0	1.2	.5	.7	1.1	3.6	3.9	4.2	4.0	3.4	3.5
Nonunion	1.5	1.2	1.0	.7	1.5	1.0	4.7	4.6	4.7	4.4	4.3	4.2
State and local governments	.6	.3	1.3	.7	.9	.6	3.6	3.5	3.3	3.0	3.3	3.6
Employment Cost Index—wages and salaries:												
Civilian nonfarm[2]	1.1	1.0	1.1	.6	1.1	.9	4.0	4.0	4.0	3.8	3.8	3.7
Private nonfarm	1.2	1.0	1.0	.6	1.2	1.0	4.2	4.1	4.1	3.9	3.8	3.8
Union	.5	.9	1.1	.9	.6	1.1	2.7	2.8	3.2	3.4	3.6	3.8
Nonunion	1.3	1.1	1.0	.6	1.2	.9	4.4	4.3	4.3	4.0	3.9	3.7
State and local governments	.6	.3	1.7	.7	.7	.5	3.8	3.7	3.5	3.3	3.5	3.7

[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		2000					2000							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
TOTAL															
Civilian noninstitutional population[1]	207,753	209,699	209,935	210,161	210,378	210,577	210,743	210,889	211,026	211,171	211,348	211,525	211,725	211,921	212,135
Civilian labor force	139,368	140,863	140,724	140,847	141,000	141,136	141,489	141,955	141,751	141,868	141,757	141,272	141,354	141,774	141,350
Participation rate	67.1	67.2	67.0	67.0	67.0	67.0	67.1	67.3	67.2	67.2	67.1	66.8	66.8	66.9	66.6
Employed	133,488	135,208	134,939	135,310	135,464	135,478	135,836	135,999	135,815	135,780	135,354	135,103	134,932	135,379	134,393
Employment-population ratio[2]	64.3	64.5	64.3	64.4	64.4	64.3	64.5	64.5	64.4	64.3	64.0	63.9	63.7	63.9	63.4
Unemployed	5,880	5,655	5,785	5,537	5,536	5,658	5,653	5,956	5,936	6,088	6,402	6,169	6,422	6,395	6,957
Unemployment rate	4.2	4.0	4.1	3.9	3.9	4.0	4.0	4.2	4.2	4.3	4.5	4.4	4.5	4.5	4.9
Not in the labor force	68,385	68,836	69,211	69,314	69,378	69,441	69,254	68,934	69,275	69,304	69,592	70,254	70,370	70,147	70,785
Men, 20 years and over															
Civilian noninstitutional population[1]	91,555	92,580	92,754	92,863	92,969	93,061	93,117	93,184	93,227	93,285	93,410	93,541	93,616	93,708	93,810
Civilian labor force	79,104	70,930	71,029	71,053	71,155	71,135	71,289	71,492	71,288	71,261	71,575	71,351	71,346	71,555	71,514
Participation rate	76.7	76.6	76.6	76.5	76.5	76.4	76.6	76.7	76.5	76.4	76.6	76.3	76.2	76.4	76.2
Employed	67,761	68,580	68,710	68,728	68,774	68,683	68,848	68,916	68,761	68,534	68,706	68,595	68,466	68,745	68,402
Employment-population ratio[2]	74.0	74.1	74.1	74.0	74.0	73.8	73.9	74.0	73.8	73.5	73.6	73.3	73.1	73.4	72.9
Agriculture	2,028	2,252	2,276	2,350	2,219	2,122	2,232	2,122	2,154	2,150	2,117	2,169	2,035	2,028	2,140
Nonagricultural industries	65,517	66,328	66,434	66,378	66,555	66,561	66,616	66,795	66,607	66,383	66,589	66,426	66,430	66,717	66,262
Unemployed	2,433	2,350	2,319	2,325	2,381	2,452	2,441	2,576	2,527	2,728	2,869	2,756	2,880	2,810	3,112
Unemployment rate	3.5	3.3	3.3	3.3	3.3	3.4	3.4	3.6	3.5	3.8	4.0	3.9	4.0	3.9	4.4
Women, 20 years and over															
Civilian noninstitutional population[1]	100,158	101,078	101,209	101,321	101,448	101,533	101,612	101,643	101,686	101,779	101,870	101,938	102,023	102,067	102,165
Civilian labor force	60,840	61,565	61,265	61,486	61,528	61,625	61,819	62,126	62,220	62,412	62,132	62,119	61,890	62,145	62,172
Participation rate	60.7	60.9	60.5	60.7	60.6	60.7	60.8	61.1	61.2	61.3	61.0	60.9	60.7	60.9	60.9
Employed	58,555	59,352	58,992	59,344	59,425	59,506	59,708	59,894	59,932	60,178	59,741	59,766	59,510	59,752	59,562
Employment-population ratio[2]	58.5	58.7	58.3	58.6	58.6	58.6	58.8	58.9	58.9	59.1	58.6	58.6	58.3	58.5	58.3
Agriculture	803	818	808	764	748	797	822	852	839	819	847	822	752	773	766
Nonagricultural industries	57,752	58,535	58,184	58,580	58,677	58,709	58,886	59,042	59,093	59,359	58,895	58,943	58,759	58,978	58,796
Unemployed	2,285	2,212	2,273	2,142	2,103	2,119	2,111	2,232	2,288	2,233	2,390	2,353	2,380	2,394	2,610
Unemployment rate	3.8	3.6	3.7	3.5	3.4	3.4	3.4	3.6	3.7	3.6	3.8	3.8	3.8	3.9	4.2
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,040	16,042	15,972	15,977	15,960	15,983	16,014	16,063	16,113	16,108	16,068	16,046	16,086	16,145	16,161
Civilian labor force	8,333	8,369	8,430	8,308	8,317	8,376	8,381	8,337	8,243	8,195	8,050	7,802	8,118	8,074	7,664
Participation rate	52.0	52.2	52.8	52.0	52.1	52.4	52.3	51.9	51.2	50.9	50.1	48.6	50.5	50.0	47.4
Employed	7,172	7,216	7,237	7,238	7,265	7,289	7,280	7,188	7,122	7,067	6,907	6,742	6,956	6,883	6,429
Employment-population ratio[2]	44.7	45.4	45.3	45.3	45.5	45.6	45.5	44.7	44.2	43.9	43.0	42.0	43.2	42.6	39.8
Agriculture	234	235	233	242	274	257	220	205	143	191	229	201	209	244	211
Nonagricultural industries	6,938	7,041	7,004	6,996	6,991	7,032	7,060	6,983	6,980	6,876	6,678	6,541	6,748	6,638	6,218
Unemployed	1,162	1,093	1,193	1,070	1,052	1,087	1,101	1,149	1,121	1,127	1,143	1,060	1,162	1,191	1,236
Unemployment rate	13.9	13.1	14.2	12.9	12.6	13.0	13.1	13.8	13.6	13.8	14.2	13.6	14.3	14.8	16.1
White															
Civilian noninstitutional population[1]	173,085	174,428	174,587	174,745	174,899	175,034	175,145	175,246	175,362	175,416	175,533	175,653	175,789	175,924	176,069
Civilian labor force	116,509	117,574	117,554	117,553	117,603	117,640	117,945	118,276	118,287	118,243	118,145	117,688	117,733	117,982	117,726
Participation rate	67.3	67.4	67.3	67.3	67.2	67.2	67.3	67.5	67.5	67.4	67.3	67.0	67.0	67.1	66.9
Employed	112,235	113,475	113,378	113,464	113,584	113,509	113,811	114,015	113,902	113,853	113,434	113,185	113,037	113,237	112,703
Employment-population ratio[2]	64.8	65.1	64.9	64.9	64.9	64.8	65.0	65.1	65.0	64.9	64.6	64.4	64.3	64.4	64.0
Unemployed	4,273	4,099	4,176	4,089	4,019	4,131	4,134	4,261	4,385	4,389	4,711	4,503	4,696	4,745	5,024
Unemployment rate	3.7	3.5	3.6	3.5	3.4	3.5	3.5	3.6	3.7	3.7	4.0	3.8	4.0	4.0	4.3
Black															
Civilian noninstitutional population[1]	24,855	25,218	25,258	25,299	25,339	25,376	25,408	25,382	25,412	25,441	25,472	25,501	25,533	25,565	25,604
Civilian labor force	16,365	16,603	16,540	16,489	16,627	16,732	16,742	16,773	16,691	16,789	16,666	16,639	16,756	16,693	16,712
Participation rate	65.8	65.8	65.5	65.2	65.6	65.9	65.9	66.1	65.7	66.0	65.4	65.2	65.6	65.3	65.3
Employed	15,056	15,334	15,239	15,304	15,401	15,485	15,470	15,372	15,440	15,348	15,299	15,311	15,343	15,374	15,195
Employment-population ratio[2]	60.6	60.8	60.3	60.5	60.8	61.0	60.9	60.6	60.8	60.3	60.1	60.0	60.1	60.1	59.3
Unemployed	1,309	1,269	1,301	1,185	1,226	1,247	1,272	1,401	1,251	1,441	1,367	1,328	1,413	1,320	1,517
Unemployment rate	8.0	7.6	7.9	7.2	7.4	7.5	7.6	8.4	7.5	8.6	8.2	8.0	8.4	7.9	9.1

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		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Hispanic origin															
Civilian noninstitutional population[1]	21,650	22,393	22,488	22,555	22,618	22,687	22,749	22,769	22,830	22,889	22,957	23,021	23,090	23,157	23,157
Civilian labor force	14,665	15,368	15,312	15,513	15,491	15,626	15,671	15,540	15,653	15,770	15,775	15,608	15,570	15,788	15,772
Participation rate	67.7	68.6	68.1	68.8	68.5	68.9	68.9	68.2	68.6	68.9	68.7	67.8	67.4	68.2	67.9
Employed	13,720	14,492	14,439	14,647	14,711	14,686	14,772	14,612	14,673	14,782	14,747	14,634	14,538	14,843	14,778
Employment-population ratio[2]	63.4	64.7	64.2	64.9	65.0	64.7	64.9	64.2	64.3	64.6	64.2	63.6	63.0	64.1	63.6
Unemployed	945	876	873	866	780	940	899	927	980	988	1,028	975	1,032	945	994
Unemployment rate	6.4	5.7	5.7	5.6	5.0	6.0	5.7	6.1	6.3	6.3	6.5	6.2	6.6	6.0	6.3

[1] The population figures are not seasonally adjusted.

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

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals becausedata for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Characteristic															
Employed, 16 years and over	133,488	135,208	134,939	135,310	135,464	135,478	135,836	135,999	135,815	135,780	135,354	135,103	134,932	135,379	134,393
Men	771,446	72,293	72,379	72,398	72,427	72,354	72,534	72,589	72,359	72,201	72,245	71,978	71,926	72,279	71,690
Women	62,042	62,915	62,560	62,912	63,037	63,124	63,302	63,410	63,456	63,578	63,109	63,125	63,006	63,100	62,703
Married men, spouse present	43,254	43,368	43,375	43,321	43,345	43,251	43,293	43,134	43,340	43,385	43,516	43,733	43,428	43,294	43,172
Married women, spouse present	33,450	33,708	33,507	33,491	33,622	33,633	33,635	34,249	34,059	34,080	33,662	33,686	33,380	33,603	33,805
Women who maintain families	8,229	8,387	8,492	8,516	8,449	8,495	8,501	8,426	8,373	8,049	8,160	8,319	8,529	8,567	8,323
Class of worker															
Agriculture:															
Wage and salary workers	1,944	2,034	2,048	2,018	2,041	2,005	2,019	1,983	1,839	1,910	1,902	1,958	1,775	1,786	1,850
Self-employed workers	1,297	1,233	1,241	1,274	1,182	1,180	1,198	1,182	1,291	1,231	1,223	1,201	1,166	1,256	1,239
Unpaid family workers	40	38	36	38	32	25	34	25	29	36	47	38	36	22	29
Nonagricultural industries:															
Wage and salary workers	121,323	123,128	122,931	123,117	123,461	123,632	123,813	124,035	124,069	123,814	123,395	123,416	123,009	123,432	122,686
Government	18,903	19,053	18,644	19,003	19,073	19,146	19,352	18,843	19,103	19,134	18,854	19,067	18,812	18,919	19,219
Private industries	102,420	104,076	104,287	104,114	104,388	104,486	104,461	105,192	104,966	104,680	104,541	104,349	104,197	104,513	103,467
Private households	933	890	781	824	812	827	879	859	823	881	812	789	744	790	827
Other	101,487	103,186	103,506	103,290	103,576	103,659	103,582	104,333	104,143	103,800	103,729	103,559	103,453	103,723	102,640
Self-employed workers	8,790	8,674	8,618	8,786	8,561	8,533	8,600	8,698	8,617	8,784	8,608	8,530	8,741	8,574	8,481
Unpaid family workers	95	101	114	108	136	128	121	110	142	138	93	103	94	88	113
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,357	3,190	3,170	33,188	3,222	3,416	3,234	3,327	3,273	3,164	3,201	3,371	3,637	3,466	3,326
Slack work or business conditions	1,968	1,927	1,980	2,051	1,909	2,183	1,964	2,035	2,043	1,914	2,097	2,215	2,299	2,120	2,086
Could only find part-time work	1,079	944	880	831	947	886	896	954	933	907	873	900	1,025	999	935
Part time for noneconomic reasons	18,758	18,722	18,704	18,595	18,758	18,896	18,993	18,568	19,021	18,647	18,713	18,581	18,472	18,845	19,153
Nonagricultural industries:															
Part time for economic reasons	3,189	3,045	3,038	3,030	3,044	3,285	3,088	3,227	3,143	3,007	3,061	3,197	3,532	3,336	3,196
Slack work or business conditions	1,861	1,835	1,901	1,940	1,808	2,082	1,882	1,971	1,970	1,828	1,985	2,089	2,234	2,059	2,004
Could only find part-time work	1,056	924	861	817	923	871	877	945	910	877	864	876	1,024	985	911
Part time for noneconomic reasons	18,197	18,165	18,142	18,024	18,206	18,323	18,437	18,040	18,509	18,132	18,176	18,061	18,039	18,309	18,580

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

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2000						2001						
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Characteristic															
Total, 16 years and over	4.2	4.0	4.1	3.9	3.9	4.0	4.0	4.2	4.2	4.3	4.5	4.4	4.5	4.5	4.9
Both sexes, 16 to 19 years	13.9	13.1	14.2	12.9	12.6	13.0	13.1	13.8	13.6	13.8	14.2	13.6	14.3	14.8	16.1
Men, 20 years and over	3.5	3.3	3.3	3.3	3.3	3.4	3.4	3.6	3.5	3.8	4.0	3.9	4.0	3.9	4.4
Women, 20 years and over	3.8	3.6	3.7	3.5	3.4	3.4	3.4	3.6	3.7	3.6	3.8	3.8	3.8	3.9	4.2
White, total	3.7	3.5	3.6	3.5	3.4	11.5	3.5	3.6	3.7	3.7	4.0	3.8	4.0	4.0	4.3
Both sexes, 16 to 19 years	12.0	11.4	12.0	11.4	11.2	11.7	11.5	11.7	10.9	11.6	11.8	11.8	12.6	13.3	14.3
Men, 16 to 19 years	12.6	12.3	13.1	12.2	11.8	12.4	12.2	13.3	12.6	11.8	12.8	13.1	14.5	13.7	15.8
Women, 16 to 19 years	11.3	10.4	10.8	10.6	10.5	10.9	10.7	9.8	9.2	11.2	10.8	10.5	10.6	13.0	12.7
Men, 20 years and over	3.0	2.8	2.8	2.9	2.9	3.0	2.9	3.2	3.2	3.3	3.5	3.3	3.6	3.4	3.8
Women, 20 years and over	3.3	3.1	3.3	3.1	3.0	3.0	3.1	3.0	3.3	3.1	3.5	3.4	3.3	3.5	3.6
Black, total	8.0	7.6	7.9	7.2	7.4	7.5	7.6	8.4	7.5	8.6	8.2	8.0	8.4	7.9	9.1
Both sexes, 16 to 19 years	27.9	24.7	26.8	24.1	23.9	21.9	26.7	27.9	28.8	28.9	31.6	25.1	28.2	25.5	30.4
Men, 16 to 19 years	30.9	26.4	31.7	26.7	27.0	22.5	30.1	26.9	31.7	27.7	34.9	30.0	30.7	26.9	32.5
Women, 16 to 19 years	25.1	23.0	22.3	21.7	21.2	21.3	23.4	28.9	25.7	30.2	28.6	20.3	26.0	24.3	28.1
Men, 20 years and over	6.7	7.0	7.2	6.5	7.0	6.9	7.3	6.9	6.6	8.5	8.2	7.6	7.8	7.9	9.0
Women, 20 years and over	6.8	6.3	6.2	5.8	5.8	6.2	5.7	7.3	5.8	6.3	5.5	6.4	6.8	6.0	6.9
Hispanic origin, total	6.4	5.7	5.7	5.6	5.0	6.0	5.7	6.0	6.3	6.3	6.5	6.2	6.6	6.0	6.3
Married men, spouse present	2.2	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.5	2.5	2.6	2.6	2.6	2.7
Married women, spouse present	2.7	2.7	2.8	2.7	2.5	2.5	2.6	2.5	2.6	2.7	2.9	2.9	3.0	2.8	3.0
Women who maintain families	6.4	5.9	6.0	5.4	5.4	5.2	5.1	6.4	6.1	6.2	6.3	6.2	6.3	6.2	6.7
Full-time workers	4.1	3.9	3.9	3.8	3.8	3.9	3.9	4.1	4.0	4.2	4.3	4.3	4.4	4.4	4.8
Part-time workers	5.0	4.8	5.0	4.6	4.5	4.5	4.6	4.9	4.8	4.8	5.5	4.6	5.3	5.1	5.6
Industry															
Nonagricultural wage and salary workers	4.3	4.1	4.1	4.0	4.0	4.0	4.0	4.3	4.5	4.5	4.6	4.5	4.8	4.7	5.1
Mining	5.7	3.9	4.3	5.0	7.1	3.5	3.6	2.2	4.6	3.5	5.1	5.5	6.8	3.7	4.3
Construction	7.0	6.4	6.4	6.4	6.5	6.9	6.5	6.8	7.0	6.2	7.1	6.6	6.7	6.8	7.5
Manufacturing	3.6	3.6	3.5	3.6	4.0	3.6	3.6	4.2	4.5	5.0	4.6	4.8	5.0	5.1	5.7
Durable goods	3.5	3.4	3.1	3.2	3.8	3.5	3.4	4.2	4.2	5.0	4.3	4.9	5.0	4.7	5.8
Nondurable goods	3.9	4.0	4.1	4.3	4.3	3.9	4.0	4.3	5.0	5.0	5.1	4.7	4.9	5.7	5.5
Transportation and public utilities	3.0	3.1	3.1	3.2	2.8	2.6	3.2	2.8	2.9	3.1	4.1	3.8	4.4	3.3	3.5
Wholesale and retail trade	5.2	5.0	5.1	4.8	4.8	4.7	4.8	5.0	5.1	5.3	5.3	5.3	5.3	5.2	5.6
Finance, insurance, and real estate	2.3	2.3	2.4	2.1	2.3	1.9	2.1	2.3	2.5	2.6	2.7	2.3	2.6	3.2	2.7
Services	4.1	3.8	3.8	3.7	3.6	3.7	3.6	4.0	4.2	4.1	4.1	3.9	4.4	4.3	4.9
Government workers	2.2	2.1	2.3	2.1	2.0	2.3	2.2	2.2	1.5	2.1	2.3	2.0	2.0	2.1	2.1
Agricultural wage and salary workers	8.9	7.5	8.0	7.9	8.8	9.4	8.9	9.0	9.2	11.3	9.2	8.2	9.6	10.9	10.2
Educational attainment[1]															
Less than a high school diploma	6.7	6.4	6.3	6.2	6.4	6.6	6.3	6.8	7.7	6.9	6.6	6.5	6.8	6.6	7.3
High school graduates, no college	3.5	3.5	3.7	3.4	3.5	3.5	3.4	3.8	3.8	3.9	3.8	3.9	3.9	4.1	4.4
Some college, less than a bachelor's degree	2.8	2.7	2.7	2.6	2.4	2.7	2.7	3.0	2.7	2.7	3.0	3.0	3.2	3.0	3.2
College graduates	1.8	1.7	1.7	1.9	1.6	1.6	1.6	1.6	1.6	2.0	2.3	2.1	2.2	2.1	2.1

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2000					2001							
	1999	2000	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Less than 5 weeks	2,568	2,543	2,567	2,498	2,510	2,531	2,440	2,613	2,797	2,674	2,958	2,679	2,809	2,612	3,004
5 to 14 weeks	1,832	1,803	1,832	1,750	1,755	1,796	1,852	1,977	1,669	1,992	1,977	2,028	2,084	2,150	2,100
15 weeks and over	1,480	1,309	1,373	1,247	1,311	1,317	1,326	1,371	1,490	1,517	1,499	1,484	1,540	1,587	1,817
15 to 26 weeks	755	665	673	618	702	713	675	731	793	814	759	852	804	935	982
27 weeks and over	725	644	700	629	609	604	651	640	697	703	740	632	737	652	835
Mean duration, in weeks	13.4	12.6	13.0	12.1	12.4	12.4	12.6	12.6	12.9	13.0	12.6	12.2	13.0	12.5	13.3
Median duration, in weeks	6.4	5.9	6.1	5.3	6.1	6.1	6.1	5.9	6.0	6.5	5.8	6.5	6.2	6.7	6.5

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

[Numbers in thousands]

Reason for unemployment	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Job losers[1]	2,622	2,492	2,585	2,502	2,446	2,501	2,514	2,742	2,853	2,963	3,199	3,159	3,291	3,252	3,409
On temporary layoff	848	842	907	837	825	877	937	1,032	945	991	1,053	1,084	940	1,003	1,079
Not on temporary layoff	1,774	1,650	1,678	1,665	1,621	1,624	1,577	1,711	1,908	1,972	2,146	2,075	2,351	2,249	2,330
Job leavers	783	775	780	756	815	768	746	838	820	814	749	820	810	774	894
Reentrants	2,005	1,957	1,930	1,798	1,868	1,936	1,899	1,956	1,927	1,908	2,005	1,801	1,906	1,912	2,166
New entrants	469	431	503	429	398	429	466	446	372	382	462	482	477	436	495
Percent of unemployed															
Job losers[1]	44.6	44.1	44.6	45.6	44.3	44.4	44.7	45.8	47.8	48.8	49.9	50.4	50.8	51.0	49.0
On temporary layoff	14.4	14.9	15.6	15.3	14.9	15.6	16.7	17.2	15.8	16.3	16.4	17.3	14.5	15.7	15.5
Not on temporary layoff	30.2	29.2	28.9	30.4	29.3	28.8	28.0	28.6	32.0	32.5	33.5	33.1	36.3	35.3	33.5
Job leavers	13.3	13.7	13.5	13.8	14.7	13.6	13.3	14.0	13.7	13.4	11.7	13.1	12.5	12.1	12.8
Reentrants	34.1	34.6	33.3	32.8	33.8	34.4	33.8	32.7	32.3	31.4	31.3	28.8	29.4	30.0	31.1
New entrants	8.0	7.6	8.7	7.8	7.2	7.6	8.3	7.4	6.2	6.4	7.2	7.7	7.4	6.8	7.1
Percent of civilian labor force															
Job losers[1]	1.9	1.8	1.8	1.8	1.7	1.8	1.8	1.9	2.0	2.1	2.3	2.2	2.3	2.3	2.4
Job leavers	.6	.6	.6	.5	.6	.5	.5	.6	.6	.6	.5	.6	.6	.5	.6
Reentrants	1.4	1.4	1.4	1.3	1.3	1.4	1.3	1.4	1.4	1.3	1.4	1.3	1.3	1.3	1.5
New entrants	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4

[1] Includes persons who completed temporary jobs.

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

[Civilian workers]

Sex and age	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Total, 16 years and over	4.2	4.0	4.1	3.9	3.9	4.0	4.0	4.2	4.2	4.3	4.5	4.4	4.5	4.5	4.9
16 to 24 years	9.9	9.3	9.4	8.9	8.9	9.1	9.2	9.6	9.5	10.0	10.4	9.9	10.4	10.1	11.5
16 to 19 years	13.9	13.1	14.2	12.9	12.6	13.0	13.1	13.8	13.6	13.8	14.2	13.6	14.3	14.8	16.1
16 to 17 years	16.3	15.4	16.9	15.7	15.2	15.4	15.8	17.4	17.2	16.0	16.7	15.5	16.0	19.3	19.1
18 to 19 years	12.4	11.5	12.6	11.1	11.1	11.4	11.6	11.5	11.0	12.3	12.6	12.2	13.1	11.8	14.7
20 to 24 years	7.5	7.1	6.6	6.6	6.8	6.8	7.0	7.2	7.2	7.8	8.3	7.9	8.2	7.5	9.0
25 years and over	3.1	3.0	3.1	3.0	2.9	3.0	3.0	3.2	3.2	3.2	3.4	3.3	3.5	3.4	3.7
25 to 54 years	3.2	3.1	3.2	3.0	3.0	3.0	3.0	3.2	3.2	3.4	3.5	3.5	3.6	3.6	3.9
55 years and over	2.8	2.6	2.7	2.7	2.8	2.9	2.6	2.7	2.8	2.6	2.8	2.6	2.8	2.8	3.0
Men, 16 years and over	4.1	3.9	4.0	3.9	3.9	4.0	4.0	4.3	4.2	4.4	4.6	4.5	4.7	4.5	5.1
16 to 24 years	10.3	9.7	10.2	9.5	9.4	9.5	9.7	10.3	10.8	10.9	10.9	11.0	11.8	10.4	12.4
16 to 19 years	14.7	14.0	15.8	13.7	13.4	13.6	14.1	15.0	15.5	13.8	15.1	15.3	15.9	15.1	17.9
16 to 17 years	17.0	16.8	17.1	17.5	17.6	17.5	18.4	20.5	18.5	15.6	18.7	17.4	18.0	19.0	22.7
18 to 19 years	13.1	12.2	15.2	11.2	10.7	11.3	11.7	11.8	13.1	12.7	12.8	13.9	14.5	13.0	15.4
20 to 24 years	7.7	7.3	6.9	7.1	7.3	7.3	7.2	7.6	8.2	9.3	8.7	8.7	9.5	7.9	9.5
25 years and over	3.0	2.8	2.8	2.8	2.9	3.0	3.0	3.1	3.0	3.2	3.5	3.3	3.4	3.5	3.7
25 to 54 years	3.0	2.9	2.9	2.9	2.9	2.9	2.9	3.1	3.0	3.3	3.5	3.5	3.5	3.6	3.9
55 years and over	2.8	2.7	2.7	2.6	2.8	2.9	2.8	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.3
Women, 16 years and over	4.3	4.1	4.2	4.0	3.9	4.0	4.0	4.1	4.2	4.2	4.4	4.3	4.4	4.5	4.8
16 to 24 years	9.5	8.9	8.6	8.2	8.4	8.6	8.7	8.8	8.1	8.9	9.8	8.8	8.9	9.7	10.4
16 to 19 years	13.2	12.1	12.4	12.0	11.9	12.3	12.1	12.4	11.6	13.7	13.3	11.8	12.7	14.4	14.2
16 to 17 years	15.5	14.0	16.8	13.8	12.8	13.4	13.2	14.1	15.7	16.4	14.5	13.6	14.0	19.6	15.5
18 to 19 years	11.6	10.8	9.8	11.0	11.6	11.5	11.6	11.3	8.7	11.9	12.4	10.4	11.6	10.6	13.9
20 to 24 years	7.2	7.0	6.3	6.0	6.3	6.3	6.7	6.7	6.1	6.3	7.8	7.1	6.7	7.1	8.4
25 years and over	3.3	3.2	3.4	3.2	3.0	3.1	3.0	3.2	3.4	3.2	3.3	3.4	3.5	3.4	3.7
25 to 54 years	3.4	3.3	3.5	3.2	3.1	3.2	3.1	3.4	3.5	3.5	3.4	3.6	3.8	3.6	3.8
55 years and over	2.8	2.6	2.6	2.8	2.8	2.7	2.4	2.5	2.7	2.2	2.6	2.2	2.5	2.5	2.7

10. Unemployment rates by State, seasonally adjusted

State	July 2000	June 2001[p]	July. 2001[p]	State	July 2000	June 2001[p]	July 2001[p]
Alabama	4.5	4.2	4.5	Missouri	3.4	4.2	4.0
Alaska	6.5	5.8	6.2	Montana	5.0	4.3	4.1
Arizona	3.9	4.3	3.9	Nebraska	3.0	2.9	2.9
Arkansas	4.5	4.9	4.6	Nevada	3.8	4.6	4.7
California	5.0	5.1	5.0	New Hampshire	3.0	2.9	3.4
Colorado	2.8	3.1	3.3	New Jersey	3.7	4.5	4.0
Connecticut	2.2	3.0	3.3	New Mexico	4.7	5.7	5.7
Delaware	4.1	3.2	3.3	New York	4.4	4.4	4.4
District of Columbia	5.7	6.4	6.3	North Carolina	3.6	4.9	5.3
Florida	3.5	4.1	4.2	North Dakota	2.9	2.7	2.6
Georgia	3.7	3.6	3.6	Ohio	4.1	4.3	4.2
Hawaii	4.1	4.2	4.5	Oklahoma	3.1	3.1	3.2
Idaho	4.9	4.8	5.0	Oregon	4.9	5.5	6.1
Illinois	4.3	5.2	5.3	Pennsylvania	4.2	4.8	4.6
Indiana	3.5	3.8	4.0	Rhode Island	4.2	5.0	5.3
Iowa	2.6	3.0	3.1	South Carolina	3.9	4.9	5.0
Kansas	3.9	3.8	3.7	South Dakota	2.2	2.6	2.9
Kentucky	4.1	4.5	5.3	Tennessee	3.8	4.2	4.1
Louisiana	5.5	5.3	5.2	Texas	4.2	4.6	4.8
Maine	3.4	3.5	3.8	Utah	3.2	3.6	3.9
Maryland	4.0	3.5	3.8	Vermont	3.0	3.1	3.2
Massachusetts	2.7	3.4	3.8	Virginia	2.2	2.8	2.8
Michigan	3.6	4.9	4.6	Washington	5.3	6.0	5.8
Minnesota	3.3	3.4	3.5	West Virginia	5.5	5.3	5.0
Mississippi	5.7	4.3	4.6	Wisconsin	3.7	4.4	4.4
				Wyoming	3.9	3.8	3.8

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

State	July 2000	June 2001[p]	July 2001[p]	State	July 2000	June 2001[p]	July 2001[p]
Alabama	1,935.9	1,914.7	1,916.8	Missouri	2,757.9	2,743.8	2,727.1
Alaska	285.1	289.1	289.1	Montana	391.0	394.8	396.3
Arizona	2,258.4	2,270.5	2,267.0	Nebraska	915.4	911.7	915.7
Arkansas	1,162.4	1,164.3	1,164.8	Nevada	1,029.0	1,076.3	1,068.5
California	14,579.0	14,820.7	14,794.5	New Hampshire	622.6	626.2	625.2
Colorado	2,229.2	2,270.1	2,267.1	New Jersey	3,999.7	4,022.5	4,021.0
Connecticut	1,699.4	1,700.4	1,698.5	New Mexico	743.9	757.5	756.5
Delaware	421.0	423.2	423.7	New York	8,654.8	8,722.2	8,717.0
District of Columbia	648.6	654.6	654.4	North Carolina	3,971.2	3,961.1	3,990.6
Florida	7,083.0	7,298.7	7,310.9	North Dakota	326.7	327.6	324.7
Georgia	4,010.2	4,043.3	4,032.6	Ohio	5,649.4	5,646.3	5,657.6
Hawaii	554.7	560.4	557.6	Oklahoma	1,492.0	1,501.3	1,507.2
Idaho	563.3	570.6	570.7	Oregon	1,614.5	1,596.0	1,590.8
Illinois	6,038.7	6,053.8	6,028.5	Pennsylvania	5,718.0	5,729.4	5,727.3
Indiana	3,016.9	2,985.4	2,981.9	Rhode Island	478.1	479.2	479.8
Iowa	1,474.6	1,477.9	1,485.6	South Carolina	1,881.6	1,876.4	1,881.5
Kansas	1,343.8	1,367.5	1,369.2	South Dakota	377.3	380.9	380.2
Kentucky	1,826.5	1,833.5	1,830.4	Tennessee	2,749.0	2,759.9	2,762.1
Louisiana	1,936.0	1,945.2	1,946.4	Texas	9,432.6	9,658.9	9,639.3
Maine	608.4	610.2	614.5	Utah	1,079.8	1,092.9	1,092.2
Maryland	2,439.0	2,474.9	2,459.3	Vermont	298.4	299.9	299.3
Massachusetts	3,331.1	3,368.7	3,364.6	Virginia	3,512.9	3,567.9	3,570.0
Michigan	4,690.3	4,679.5	4,677.5	Washington	2,720.8	2,742.8	2,742.8
Minnesota	2,673.1	2,689.8	2,687.2	West Virginia	735.0	738.5	734.9
Mississippi	1,163.3	1,152.0	1,144.4	Wisconsin	2,841.2	2,838.0	2,840.7
				Wyoming	239.6	244.9	249.0

[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		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
TOTAL	128,916	131,739	131,837	132,046	132,145	132,279	132,367	132,428	132,595	132,654	132,489	132,530	132,431	132,449	132,365
PRIVATE SECTOR	108,709	111,079	111,237	111,463	111,564	111,689	111,753	111,799	111,915	111,943	111,742	111,760	111,603	111,517	111,373
GOODS-PRODUCING	25,507	25,709	25,727	25,696	25,713	25,711	25,688	25,633	25,627	25,602	25,421	25,324	25,186	25,122	24,974
Mining	539	543	543	547	551	548	548	550	555	557	560	564	565	567	569
Metal mining	44	41	40	40	40	40	41	39	39	38	37	37	35	34	35
Oil and gas extraction	297	311	313	316	320	319	320	325	328	331	335	339	340	341	342
Nonmetallic minerals, except fuels	113	114	114	115	115	114	112	111	113	113	113	112	112	113	112
Construction	6,415	6,698	6,699	6,728	6,758	6,781	6,791	6,826	6,880	6,929	6,852	6,881	6,864	6,867	6,863
General building contractors	1,458	1,528	1,525	1,538	1,549	1,548	1,543	1,538	1,555	1,552	1,548	1,556	1,551	1,554	1,556
Heavy construction, except building	874	901	900	900	904	909	913	921	930	938	915	923	925	935	932
Special trades contractors	4,084	4,269	4,274	4,290	4,305	4,324	4,335	4,367	4,395	4,439	4,389	4,402	4,388	4,378	4,375
Manufacturing	18,552	18,469	18,485	18,421	18,404	18,382	18,349	18,257	18,192	18,116	18,009	17,879	17,757	17,688	17,542
Production workers	12,747	12,628	12,631	12,559	12,545	12,511	12,466	12,394	12,323	12,254	12,166	12,066	11,956	11,900	11,789
Durable goods	11,111	11,138	11,172	11,129	11,126	11,120	11,102	11,031	10,997	10,941	10,870	10,778	10,692	10,624	10,525
Production workers	7,596	7,591	7,608	7,568	7,560	7,544	7,517	7,462	7,415	7,358	7,308	7,235	7,157	7,102	7,024
Lumber and wood products	834	832	831	826	821	817	811	806	799	799	800	797	798	797	792
Furniture and fixtures	548	558	559	560	559	557	555	552	549	548	543	540	532	531	521
Stone, clay, and glass products	566	579	580	579	577	577	577	579	578	578	577	574	572	569	568
Primary metal industries	699	698	700	695	695	691	686	681	679	671	667	660	654	648	643
Fabricated metal products	1,521	1,537	1,541	1,540	1,536	1,537	1,536	1,526	1,514	1,509	1,503	1,488	1,478	1,478	1,468
Industrial machinery and equipment	2,136	2,120	2,133	2,121	2,123	2,122	2,119	2,117	2,105	2,084	2,072	2,054	2,031	2,007	1,983
Computer and office equipment	368	361	365	364	365	365	366	369	370	369	367	366	357	353	350
Electronic and other electrical equipment	1,672	1,719	1,740	1,736	1,738	1,737	1,738	1,735	1,726	1,715	1,684	1,656	1,624	1,589	1,565
Electronic components and accessories	641	682	695	698	704	708	710	714	711	702	686	670	650	634	618
Transportation equipment	1,888	1,849	1,836	1,822	1,822	1,822	1,817	1,772	1,786	1,775	1,768	1,757	1,749	1,752	1,747
Motor vehicles and equipment	1,018	1,013	1,015	1,005	994	995	990	952	967	956	950	939	931	936	928
Aircraft and parts	496	465	464	464	463	462	464	462	464	465	464	465	465	466	465
Instruments and related products	855	852	856	858	861	865	867	870	871	871	866	865	865	865	859
Miscellaneous manufacturing industries	391	394	396	392	394	395	396	393	390	391	390	387	389	388	379
Nondurable goods	7,441	7,331	7,313	7,292	7,278	7,262	7,647	7,226	7,195	7,175	7,139	7,101	7,065	7,064	7,017
Production workers	5,150	5,038	5,023	4,991	4,985	4,967	4,949	4,932	4,908	4,896	4,858	4,831	4,799	4,798	4,765
Food and kindred products	1,682	1,684	1,679	1,674	1,678	1,679	1,682	1,684	1,686	1,687	1,687	1,684	1,685	1,680	1,675
Tobacco products	37	34	33	33	32	33	32	32	31	32	32	33	33	33	35
Textile mill products	559	528	528	523	518	514	510	505	496	494	489	480	472	471	464
Apparel and other textile products	690	633	625	620	616	611	604	599	595	590	581	579	567	571	556
Paper and allied products	668	657	655	655	655	654	652	651	645	642	641	639	635	632	628
Printing and publishing	1,552	1,547	1,549	1,547	1,544	1,540	1,539	1,534	1,529	1,524	1,512	1,502	1,495	1,489	1,484
Chemicals and allied products	1,035	1,038	1,036	1,037	1,038	1,038	1,039	1,039	1,039	1,039	1,036	1,033	1,033	1,039	1,035
Petroleum and coal products	132	127	128	127	126	127	127	127	127	126	128	127	128	128	127
Rubber and miscellaneous plastics products	1,006	1,011	1,009	1,006	1,002	997	993	987	979	973	967	959	953	957	951
Leather and leather products	77	71	71	70	69	69	69	68	68	68	66	65	64	64	62
SERVICE-PRODUCING	103,409	106,050	106,110	106,350	106,432	106,568	106,679	106,795	106,968	107,052	107,068	107,206	107,245	107,327	107,391
Transportation and public utilities	6,834	7,019	6,963	7,062	7,076	7,093	7,108	7,106	7,123	7,127	7,119	7,130	7,118	7,108	7,076
Transportation	4,411	4,529	4,548	4,553	4,559	4,573	4,583	4,580	4,591	4,591	4,576	4,584	4,571	4,561	4,535
Railroad transportation	235	236	236	235	234	235	232	229	231	230	230	230	227	226	226
Local and interurban passenger transit	478	476	478	478	477	478	478	479	480	480	477	483	483	485	486
Trucking and warehousing	1,810	1,856	1,860	1,861	1,861	1,864	1,866	1,868	1,870	1,872	1,864	1,867	1,867	1,863	1,844
Water transportation	186	196	198	199	200	200	200	201	200	201	202	203	201	203	199
Transportation by air	1,227	1,281	1,288	1,291	1,298	1,306	1,316	1,312	1,318	1,316	1,313	1,315	1,310	1,304	1,303
Pipelines, except natural gas	13	14	14	14	14	14	14	14	14	13	14	14	14	14	14
Transportation services	463	471	474	475	475	476	477	477	478	479	476	472	469	466	463
Communications and public utilities	2,423	2,490	2,415	2,509	2,517	2,520	2,525	2,526	2,532	2,536	2,543	2,546	2,547	2,547	2,541
Communications	1,560	1,639	1,565	1,660	1,668	1,672	1,678	1,679	1,685	1,690	1,696	1,699	1,700	1,700	1,693
Electric, gas, and sanitary services	863	851	850	849	849	848	847	847	847	846	847	847	847	847	848
Wholesale trade	6,911	7,024	7,037	7,042	7,059	7,070	7,068	7,067	7,064	7,066	7,053	7,038	7,022	7,017	7,011
Retail trade	22,848	23,307	23,348	23,371	23,380	23,395	23,406	23,415	23,472	23,457	23,530	23,546	23,561	23,606	23,574
Building materials and garden supplies	988	1,016	1,015	1,012	1,012	1,011	1,010	1,007	1,007	1,006	999	1,006	1,014	1,008	1,015
General merchandise stores	2,798	2,837	2,830	2,834	2,829	2,835	2,822	2,789	2,807	2,797	2,804	2,821	2,818	2,810	2,799
Department stores	2,459	2,491	2,483	2,487	2,481	2,492	2,480	2,448	2,462	2,451	2,459	2,473	2,471	2,458	2,449

See footnotes at end of table.

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

[In thousands]

Industry	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
Food stores	3,497	3,521	3,526	3,520	3,528	3,527	3,532	3,538	3,548	3,550	3,562	3,553	3,544	3,536	3,528
Automotive dealers and service stations	2,368	2,412	2,418	2,420	2,426	2,426	2,425	2,424	2,424	2,420	2,421	2,428	2,431	2,435	2,441
New and used car dealers	1,080	1,114	1,118	1,120	1,122	1,123	1,123	1,124	1,124	1,124	1,122	1,126	1,128	1,131	1,133
Apparel and accessory stores	1,171	1,193	1,195	1,202	1,202	1,208	1,214	1,221	1,227	1,228	1,226	1,231	1,227	1,219	1,222
Furniture and home furnishings stores	1,087	1,134	1,138	1,138	1,142	1,144	1,148	1,147	1,146	1,147	1,140	1,136	1,136	1,137	1,137
Eating and drinking places	7,961	8,114	8,132	8,138	8,137	8,142	8,149	8,157	8,171	8,158	8,213	8,216	8,241	8,310	8,279
Miscellaneous retail establishments	2,978	3,080	3,094	3,098	3,105	3,103	3,106	3,132	3,142	3,151	3,165	3,155	3,150	3,151	3,153
Finance, insurance, and real estate	7,555	7,560	7,549	7,556	7,569	7,575	7,582	7,594	7,609	7,618	7,626	7,644	7,631	7,618	7,621
Finance	3,688	3,710	3,707	3,718	3,725	3,729	3,735	3,738	3,748	3,755	3,761	3,770	3,767	3,755	3,756
Depository institutions	2,056	2,029	2,024	2,024	2,023	2,023	2,025	2,024	2,025	2,028	2,032	2,037	2,041	2,039	2,037
Commercial banks	1,468	1,430	1,425	1,524	1,421	1,420	1,420	1,418	1,417	1,418	1,421	1,426	1,428	1,426	1,423
Savings institutions	254	253	253	253	253	253	253	253	254	254	255	255	256	255	255
Nondepository institutions	709	681	674	677	678	678	677	678	683	686	691	697	699	703	708
Security and commodity brokers	689	748	756	762	767	770	774	777	781	781	780	776	766	755	753
Holding and other investment offices	234	251	253	255	257	248	259	259	259	260	258	260	261	258	258
Insurance	2,368	2,346	2,341	2,335	2,337	2,340	2,339	2,346	2,351	2,353	2,356	2,358	2,356	2,357	2,357
Insurance carriers	1,610	1,589	1,585	1,580	1,580	1,583	1,582	1,588	1,592	1,593	1,596	1,598	1,598	1,599	1,598
Insurance agents, brokers, and service	758	757	756	755	757	757	757	758	759	760	760	760	758	758	759
Real estate	1,500	1,504	1,501	1,503	1,507	1,506	1,508	1,510	1,510	1,510	1,509	1,516	1,508	1,506	1,508
Services[1]	39,055	40,460	40,613	40,736	40,767	40,845	40,901	40,984	41,020	41,073	40,993	41,078	41,085	41,046	41,117
Agricultural services	766	801	801	804	808	811	813	818	821	828	824	834	833	834	837
Hotels and other lodging places	1,848	1,912	1,923	1,924	1,927	1,939	1,946	1,952	1,957	1,960	1,944	1,935	1,920	1,922	1,911
Personal services	1,226	1,251	1,256	1,257	1,259	1,261	1,265	1,261	1,261	1,265	1,267	1,277	1,279	1,281	1,285
Business services	9,300	9,858	9,921	9,965	9,939	9,933	9,893	9,888	9,851	9,822	9,729	9,702	9,666	9,592	9,584
Services to buildings	983	994	994	995	994	998	1,002	1,007	1,007	1,007	1,009	1,013	1,008	998	997
Personnel supply services	3,616	3,887	3,917	3,947	3,890	3,869	3,816	3,779	3,731	3,694	3,600	3,590	3,556	3,517	3,518
Help supply services	3,248	3,487	3,506	3,547	3,465	3,461	3,404	3,372	3,339	3,293	3,202	3,198	3,161	3,127	3,109
Computer and data processing services	1,875	2,095	2,114	2,124	2,135	2,152	2,164	2,176	2,186	2,195	2,199	2,200	2,205	2,202	2,193
Auto repair services and parking	1,196	1,248	1,254	1,260	1,266	1,270	1,278	1,291	1,291	1,298	1,300	1,309	1,303	1,312	1,308
Miscellaneous repair services	372	366	366	366	366	366	365	365	365	364	364	363	361	360	362
Motion pictures	599	594	596	590	588	593	597	600	600	605	601	587	602	595	587
Amusement and recreation services	1,651	1,728	1,741	1,738	1,747	1,755	1,759	1,769	1,772	1,775	1,764	1,787	1,768	1,772	1,771
Health services	10,036	10,197	10,114	10,131	10,146	10,164	10,184	10,211	10,236	10,259	10,280	10,296	10,329	10,354	10,385
Offices and clinics of medical doctors	1,875	1,924	1,926	1,933	1,938	1,941	1,948	1,953	1,958	1,962	1,967	1,973	1,981	1,983	1,990
Nursing and personal care facilities	1,786	1,795	1,798	1,797	1,799	1,800	1,803	1,806	1,808	1,811	1,816	1,814	1,821	1,823	1,825
Hospitals	3,974	3,990	3,993	4,001	4,005	4,016	4,025	4,035	4,045	4,055	4,062	4,071	4,086	4,098	4,114
Home health care services	636	643	645	645	646	644	642	646	645	648	646	645	648	647	653
Legal services	996	1,009	1,011	1,013	1,014	1,013	1,015	1,017	1,020	1,022	1,021	1,027	1,027	1,026	1,028
Educational services	2,267	2,325	2,352	2,344	2,329	2,338	2,357	2,363	2,375	2,384	2,388	2,431	2,426	2,432	2,450
Social services	2,783	2,903	2,889	2,928	2,950	2,958	2,977	2,985	2,997	3,009	3,023	3,039	3,056	3,048	3,075
Child day care services	680	712	719	719	724	727	729	732	734	739	743	745	756	760	763
Residential care	771	806	809	813	817	820	823	827	829	831	835	842	845	847	850
Museums and botanical and zoological gardens	99	106	107	107	107	108	108	109	110	110	109	110	111	111	111
Membership organizations	2,436	2,475	2,470	2,482	2,482	2,486	2,487	2,487	2,487	2,489	2,489	2,496	2,501	2,493	2,503
Engineering and management services	3,256	3,419	3,440	3,455	3,467	3,478	3,490	3,496	3,504	3,510	3,517	3,512	3,529	3,540	3,545
Engineering and architectural services	957	1,017	1,026	1,030	1,034	1,035	1,040	1,046	1,050	1,052	1,053	1,057	1,059	1,064	1,067
Management and public relations	1,031	1,090	1,098	1,102	1,108	1,113	1,116	1,119	1,123	1,125	1,124	1,121	1,124	1,119	1,124
Government	20,206	20,681	20,600	20,583	20,581	20,590	20,614	20,629	20,680	20,711	20,747	20,770	20,828	20,932	20,992
Federal	2,669	2,777	2,653	2,623	2,622	2,620	2,613	2,613	2,615	2,613	2,615	2,612	2,621	2,626	2,617
Federal, except Postal Service	1,796	1,917	1,790	1,762	1,762	1,761	1,754	1,755	1,756	1,754	1,756	1,754	1,772	1,772	1,770
State	4,709	4,785	4,794	4,813	4,798	4,798	4,809	4,800	4,825	4,836	4,847	4,854	4,881	4,909	4,906
Education	1,983	2,032	2,037	2,051	2,035	2,033	2,037	2,028	2,048	2,055	2,065	2,066	2,089	2,117	2,115
Other State government	2,726	2,753	2,757	2,762	2,763	2,765	2,772	2,772	2,777	2,781	2,782	2,788	2,792	2,792	2,791
Local	12,829	13,119	13,153	13,147	13,161	13,172	13,192	13,216	13,240	13,262	13,285	13,304	13,326	13,397	13,469
Education	7,289	7,440	7,456	7,439	7,445	7,449	7,457	7,468	7,479	7,492	7,495	7,512	7,515	7,575	7,650
Other local government	5,540	5,679	5,697	5,708	5,716	5,723	5,735	5,748	5,761	5,770	5,790	5,792	5,811	5,822	5,819

[1] Includes other industries not shown separately.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

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

Industry	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
PRIVATE SECTOR	34.5	34.5	34.3	34.4	34.4	34.3	34.2	34.4	34.3	34.3	34.2	34.2	34.2	34.2	34.0
GOODS-PRODUCING	41.0	41.0	40.8	40.7	40.8	40.6	40.1	40.5	40.3	40.5	40.6	40.5	40.4	40.5	40.3
MINING	43.2	43.1	43.1	43.0	43.1	43.0	42.5	43.1	43.2	43.8	44.0	43.9	43.3	43.3	43.5
MANUFACTURING	41.7	41.6	41.4	41.4	41.4	41.2	40.6	41.0	40.9	41.0	41.0	40.7	40.7	40.8	40.7
Overtime hours	4.6	4.6	4.5	4.4	4.5	4.3	4.1	4.2	3.9	4.1	3.9	3.9	3.9	4.0	4.0
Durable goods	42.2	42.1	41.9	41.8	41.9	41.6	41.0	41.3	41.1	41.3	41.3	41.0	40.9	41.2	41.0
Overtime hours	4.8	4.7	4.6	4.5	4.6	4.4	4.1	4.1	3.9	4.0	3.9	3.9	3.9	4.0	4.0
Lumber and wood products	41.1	41.0	40.7	40.8	40.9	40.8	40.2	39.8	40.1	40.3	40.1	40.6	40.4	41.1	40.7
Furniture and fixtures	40.3	40.0	39.6	39.7	39.7	39.4	38.8	39.2	39.1	39.1	39.3	38.6	38.4	39.7	39.4
Stone, clay, and glass products	43.4	43.1	43.0	42.9	43.2	43.0	42.3	43.0	42.8	43.7	43.2	43.9	44.0	44.0	43.6
Primary metal industries	44.5	44.9	44.7	44.7	44.4	44.4	43.5	43.8	43.2	43.4	44.3	43.5	43.9	44.1	43.8
Blast furnaces and basic steel products	45.2	46.0	45.9	45.8	45.1	45.2	44.7	44.7	44.4	44.4	45.4	44.6	45.1	44.7	44.9
Fabricated metal products	42.4	42.6	42.3	42.2	42.2	42.1	41.3	41.7	41.7	41.9	42.0	41.4	41.2	41.6	41.5
Industrial machinery and equipment	42.1	42.2	42.1	41.9	42.0	41.7	41.1	41.5	41.0	41.2	41.3	40.7	40.4	40.8	40.1
Electronic and other electrical equipment	41.2	41.1	40.5	40.7	40.7	40.5	40.3	40.3	40.3	40.1	39.8	39.1	39.3	38.9	39.0
Transportation equipment	43.8	43.4	43.2	42.9	43.0	42.5	41.5	42.0	42.0	42.0	42.4	42.4	41.9	42.2	42.7
Motor vehicles and equipment	45.0	44.4	44.3	43.8	43.9	43.2	41.5	42.1	42.0	42.3	43.3	43.6	43.0	43.0	44.5
Instruments and related products	41.3	41.3	40.9	41.1	41.2	41.2	40.7	41.0	41.1	41.0	41.0	41.0	40.8	40.8	40.2
Miscellaneous manufacturing	39.8	39.0	38.7	38.5	38.6	38.4	38.1	38.3	38.2	38.2	38.2	37.9	38.4	38.4	38.2
Nondurable goods	40.9	40.8	40.7	40.7	40.6	40.5	40.1	40.6	40.4	40.5	40.5	40.3	40.4	40.3	40.2
Overtime hours	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4.3	4.0	4.1	3.9	4.0	3.9	4.0	4.1
Food and kindred products	41.8	41.7	41.8	41.6	41.5	41.4	40.9	41.3	41.1	41.2	41.3	41.1	41.2	40.9	41.1
Textile mill products	40.9	41.2	40.8	40.8	40.6	40.5	40.5	40.7	40.4	40.5	40.3	40.3	40.4	39.7	39.9
Apparel and other textile products	37.5	37.8	37.7	37.6	37.5	37.6	37.2	37.6	37.6	37.5	38.0	37.8	37.5	37.7	36.9
Paper and allied products	43.4	42.5	42.5	42.4	42.3	42.2	41.7	41.9	41.7	41.8	42.0	41.6	41.7	41.9	41.3
Printing and publishing	38.1	38.3	38.1	38.2	38.2	38.2	37.O	38.4	38.4	38.6	38.2	38.0	38.0	38.2	38.0
Chemicals and allied products	43.0	42.5	42.3	42.4	42.3	42.1	42.1	42.6	42.3	42.3	42.6	42.4	42.2	42.7	42.2
Rubber and miscellaneous plastics products	41.7	41.4	41.3	41.3	41.2	41.0	40.4	41.0	40.9	41.0	40.8	40.6	40.7	40.6	40.4
Leather and leather products	37.4	37.5	37.4	37.3	37.4	37.3	36.8	36.9	36.4	36.1	36.6	35.9	36.2	35.7	36.4
SERVICE-PRODUCING	32.8	32.8	32.7	32.8	32.8	32.8	32.7	32.9	32.8	32.8	32.7	32.7	32.8	32.6	32.6
TRANSPORTATION AND PUBLIC UTILITIES	38.7	38.6	38.4	38.5	38.6	38.6	38.7	38.7	38.5	38.3	38.1	38.1	38.1	37.8	37.9
WHOLESALE TRADE	38.3	38.5	38.3	38.4	38.4	38.4	38.3	38.3	38.1	38.3	38.2	38.2	38.3	38.2	38.2
RETAIL TRADE	29.0	28.9	28.9	28.8	28.9	28.9	28.7	29.1	28.9	28.8	28.8	28.8	28.7	28.6	28.6

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
PRIVATE SECTOR (in current dollars)	$13.24	$13.75	$13.80	$13.84	$13.90	$13.97	$14.03	$14.03	$14.11	$14.17	$14.21	$14.24	$14.31	$14.34	$14.41
Goods-producing	14.83	15.40	15.45	15.47	15.57	15.63	15.65	15.67	15.74	15.79	15.78	15.86	15.90	15.93	16.02
Mining	17.05	17.24	17.25	17.24	17.30	17.38	17.43	17.49	17.52	17.55	17.53	17.54	17.73	17.74	17.67
Construction	17.19	17.88	17.93	17.97	18.02	18.16	18.17	18.28	18.30	18.33	18.15	18.22	18.28	18.26	18.36
Manufacturing	13.90	14.38	14.43	14.44	14.54	14.57	14.58	14.54	14.63	14.66	14.72	14.78	14.81	14.86	14.93
Excluding overtime	13.17	13.62	13.69	13.73	13.80	13.84	13.88	13.83	13.94	13.96	14.04	14.09	14.13	14.18	14.24
Service-producing	12.73	13.24	13.29	13.34	13.39	13.46	13.53	13.54	13.62	13.68	13.73	13.76	13.84	13.87	13.93
Transportation and public utilities	15.69	16.22	16.27	16.31	16.39	16.42	16.50	16.51	16.64	16.68	16.74	16.76	16.91	16.88	16.93
Wholesale trade	14.59	15.20	15.25	15.33	15.37	15.44	15.55	15.53	15.60	15.68	15.74	15.70	15.86	15.84	15.82
Retail trade	9.09	9.46	9.50	9.54	9.57	9.61	9.65	9.64	9.69	9.72	9.74	9.79	9.83	9.84	9.86
Finance, insurance, and real estate	14.62	15.07	15.13	15.19	15.20	15.28	15.35	15.44	15.55	15.61	15.64	15.74	15.86	15.91	15.99
Services	13.37	13.91	13.97	14.01	14.07	14.16	14.23	14.25	14.35	14.40	14.48	14.49	14.54	14.61	14.70
PRIVATE SECTOR (in constant (1982) dollars)	7.86	7.89	7.90	7.88	7.90	7.92	7.94	7.90	7.92	7.95	7.94	7.93	7.95	8.00	8.04

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

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

Industry	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
PRIVATE SECTOR	$13.24	$13.75	$13.68	$13.89	$13.97	$13.99	$14.04	$14.10	$14.16	$14.19	$14.27	$14.22	$14.22	$14.27	$14.28
MINING	17.05	17.24	17.13	17.16	17.28	17.32	17.54	17.67	17.61	17.57	17.60	17.49	17.59	17.67	$17.51
CONSTRUCTION	17.19	17.88	18.05	18.17	18.22	18.20	18.23	18.17	18.16	18.30	18.07	18.17	18.21	18.32	$18.44
MANUFACTURING	13.90	14.38	14.36	14.51	14.53	14.60	14.67	14.59	14.61	14.65	14.74	14.75	14.79	14.84	$14.89
Durable goods	14.36	14.82	14.81	14.96	14.99	15.05	15.11	14.98	15.03	15.09	15.14	15.19	15.24	15.25	$15.38
Lumber and wood products	11.51	11.93	12.01	12.07	12.09	12.07	12.12	12.13	12.08	12.08	12.13	12.16	12.19	12.32	$12.38
Furniture and fixtures	11.29	11.73	11.83	11.88	11.86	11.90	11.93	11.92	12.03	12.04	12.07	12.09	12.15	12.24	$12.32
Stone, clay, and glass products	13.97	14.53	14.65	14.77	14.75	14.76	14.72	14.65	14.68	14.79	14.96	15.03	15.13	15.12	$15.18
Primary metal industries	15.80	16.42	16.49	16.54	16.48	16.58	16.65	16.66	16.58	16.63	16.90	16.82	16.96	17.11	$17.07
Blast furnaces and basic steel products	18.84	19.82	19.97	19.83	19.84	19.71	19.88	20.16	20.05	20.00	20.37	20.26	20.39	20.48	20.64
Fabricated metal products	13.50	13.87	13.85	13.99	14.01	14.03	14.09	13.99	14.03	14.08	14.11	14.23	14.25	14.27	14.35
Industrial machinery and equipment	15.03	15.55	15.61	15.69	15.66	15.67	15.81	15.73	15.74	15.77	15.74	15.79	15.82	15.90	15.95
Electronic and other electrical equipment	13.43	13.80	13.76	13.91	14.00	14.04	14.17	14.07	14.16	14.26	14.39	14.38	14.51	14.59	14.71
Transportation equipment	17.79	18.45	18.37	18.77	18.88	19.05	19.00	18.57	18.68	18.76	18.77	18.83	18.90	18.80	19.09
Motor vehicles and equipment	18.10	18.79	18.68	19.12	19.26	19.43	19.31	18.77	18.91	19.02	19.13	19.18	19.25	19.04	19.39
Instruments and related products	14.08	14.43	14.44	14.58	14.62	14.64	14.80	14.64	14.60	14.73	14.80	14.75	14.81	14.98	15.01
Miscellaneous manufacturing	11.26	11.63	11.56	11.66	11.75	11.82	11.94	11.98	11.98	12.05	12.04	12.10	12.07	12.12	12.25
Nondurable goods	13.21	13.69	13.68	13.80	13.81	13.89	13.97	12.97	13.97	13.97	14.12	14.07	14.11	14.23	14.17
Food and kindred products	12.11	12.50	12.49	12.59	12.59	12.69	12.71	12.70	12.65	12.68	12.79	12.83	12.86	12.93	12.87
Tobacco products	19.87	21.57	22.60	22.13	22.47	21.85	21.76	21.34	21.49	22.63	22.59	23.01	23.17	23.63	21.94
Textile mill products	10.81	11.16	11.21	11.30	11.23	11.27	11.27	11.32	11.27	11.31	11.30	11.29	11.32	11.37	11.37
Apparel and other textile products	8.92	9.30	9.29	9.36	9.37	9.33	9.37	9.39	9.36	9.46	9.44	9.39	9.45	9.40	9.44
Paper and allied products	15.88	16.25	16.27	16.37	16.43	16.50	16.61	16.53	16.54	16.56	16.74	16.72	16.90	16.99	16.86
Printing and publishing	13.96	14.40	14.39	14.56	14.50	14.56	14.66	14.59	14.64	14.69	14.75	14.75	14.74	14.83	14.88
Chemicals and allied products	17.42	18.15	18.21	18.32	18.27	18.35	18.47	18.34	18.41	18.33	18.64	18.52	18.55	18.69	18.53
Petroleum and coal products	21.43	22.00	21.78	22.06	22.14	22.23	22.31	22.10	22.21	21.83	22.09	21.83	21.78	22.02	22.20
Rubber and miscellaneous plastics products	12.40	12.85	12.87	12.96	12.98	13.10	13.20	13.24	13.31	13.19	13.33	13.30	13.30	13.38	13.43
Leather and leather products	9.71	10.18	10.24	10.31	10.33	10.32	10.37	10.51	10.35	10.46	10.37	10.26	10.30	10.25	10.35
TRANSPORTATION AND PUBLIC UTILITIES	15.69	16.22	16.22	16.31	16.38	16.43	16.53	16.56	16.68	16.65	16.78	16.70	16.83	16.89	16.95
WHOLESALE TRADE	14.59	15.20	15.19	15.33	15.45	15.45	15.58	15.56	15.62	15.58	15.86	15.66	15.77	15.88	15.76
RETAIL TRADE	9.09	9.46	9.41	9.58	9.59	9.61	9.65	9.69	9.72	9.74	9.78	9.78	9.77	9.77	9.78
FINANCE, INSURANCE, AND REAL ESTATE	14.62	15.07	14.99	15.11	15.24	15.25	15.32	15.45	15.63	15.67	15.81	15.74	15.75	15.85	15.84
SERVICES	13.37	13.91	13.74	14.00	14.11	14.20	14.33	14.39	14.47	14.48	14.58	14.46	14.39	14.46	14.45

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

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

Industry	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[P]	Aug.[P]
PRIVATE SECTOR															
Current dollars	$456.78	$474.38	$474.70	$479.21	$484.76	$479.86	$480.17	$477.99	$481.44	$482.46	$486.61	$484.90	$489.17	$493.74	$491.23
Seasonally adjusted	–	–	473.34	476.10	478.16	479.17	479.83	482.63	483.97	486.03	485.98	487.01	489.17	493.74	491.23
Constant (1982) dollars	271.25	272.16	271.72	272.43	275.28	272.03	272.51	269.74	270.62	270.89	271.70	269.39	271.46	275.22	273.82
MINING	736.56	743.04	746.87	751.61	756.86	743.03	747.20	750.98	751.95	757.27	765.60	769.56	768.68	772.18	765.19
CONSTRUCTION	672.13	702.68	725.61	728.62	732.44	704.34	694.56	692.28	682.82	702.52	695.70	728.62	728.40	740.13	741.29
MANUFACTURING															
Current dollars	579.63	598.21	594.50	606.52	604.45	607.36	607.34	596.73	591.71	597.72	588.13	600.33	603.43	598.05	607.51
Constant (1982) dollars	344.20	343.21	340.30	344.81	343.24	344.31	344.69	336.76	332.61	335.61	328.38	333.52	334.87	333.36	338.63
Durable goods Durable goods	605.99	623.92	620.54	632.81	631.08	633.61	630.09	615.68	613.22	620.20	607.11	624.31	626.36	617.63	632.12
Lumber and wood products	473.06	489.13	494.02	496.08	499.32	494.87	486.01	477.92	473.54	483.20	483.99	497.34	498.57	502.66	507.58
Furniture and fixtures	454.99	469.20	473.20	481.14	474.40	474.81	476.01	464.88	461.95	467.15	457.45	462.22	468.99	481.03	489.10
Stone, clay, and glass products	606.30	626.24	641.67	646.93	647.53	637.63	624.13	613.84	610.69	631.53	638.79	665.83	670.26	669.82	672.47
Primary metal industries	703.10	737.26	733.81	742.65	731.71	746.10	735.93	731.37	716.26	718.42	730.08	731.67	744.54	742.57	745.96
Blast furnaces and basic steel products	851.57	911.72	916.62	908.21	890.82	902.72	890.62	901.15	882.20	884.00	920.72	899.54	919.59	919.55	926.74
Fabricated metal products	572.40	590.86	585.86	598.77	596.83	597.68	596.01	581.98	580.84	585.73	567.22	589.12	589.95	582.22	595.53
Industrial machinery and equipment	632.76	656.21	652.50	658.98	656.15	658.14	662.44	655.94	648.49	651.30	628.03	644.23	640.71	640.77	638.00
Electronic and other electrical equipment	553.32	567.18	558.66	573.09	575.00	575.64	585.22	567.02	566.40	568.97	554.02	559.38	570.24	558.80	575.16
Transportation equipment	779.20	800.73	789.91	822.13	819.39	821.06	807.50	772.51	775.22	789.80	765.82	804.04	799.47	765.16	813.23
Motor vehicles and equipment	814.50	834.28	823.79	860.40	857.07	852.98	826.47	778.96	786.66	808.35	791.98	840.08	839.30	780.64	857.04
Instruments and related products	581.50	595.96	587.71	597.78	602.34	607.56	621.72	603.17	605.90	605.40	594.96	602.48	602.77	605.19	603.40
Miscellaneous manufacturing	488.15	453.57	448.53	455.91	457.08	457.43	460.88	454.04	454.04	461.52	450.30	458.59	463.49	458.14	469.18
Nondurable goods	540.29	558.55	556.78	567.18	564.83	569.49	569.98	565.79	560.20	561.59	559.15	564.21	568.63	569.20	571.05
Food and kindred products	506.20	521.25	525.83	535.08	528.78	534.25	528.74	520.70	509.80	513.54	510.32	522.18	528.55	528.84	535.39
Tobacco products	763.01	877.90	942.42	927.25	878.12	895.85	892.16	832.26	831.66	893.89	885.53	906.59	956.92	952.29	888.57
Textile mill products	442.13	459.79	458.49	465.56	457.06	460.94	462.07	459.59	449.67	458.06	444.09	454.99	458.46	444.57	457.07
Apparel and other textile products	334.50	351.54	351.16	352.87	352.31	352.67	353.25	349.31	352.87	355.70	346.45	355.88	357.21	349.68	350.22
Paper and allied products	689.19	690.63	688.22	699.00	699.92	706.20	705.93	697.57	683.10	687.24	688.01	690.54	701.35	708.48	696.32
Printing and publishing	531.88	551.52	549.70	562.02	558.25	564.93	564.41	555.88	557.78	565.57	554.60	556.08	557.17	563.54	568.42
Chemicals and allied products	749.06	771.38	766.64	776.77	772.82	778.04	788.67	781.28	778.74	773.53	790.34	783.40	782.81	790.59	780.11
Petroleum and coal products	908.63	932.80	886.45	930.93	952.02	955.89	952.64	987.87	957.25	936.51	965.33	910.31	934.36	953.47	952.38
Rubber and miscellaneous plastics products	517.08	531.99	528.96	540.43	537.37	539.72	543.84	544.16	543.05	538.15	529.20	539.98	543.97	535.20	542.57
Leather and leather products	363.15	381.75	389.12	390.75	389.44	390.10	382.65	384.67	373.64	375.51	369.17	370.39	378.01	360.80	379.85
TRANSPORTATION AND PUBLIC UTILITIES	607.20	626.09	627.71	631.20	638.82	632.56	638.06	632.59	637.18	362.70	641.00	632.93	642.91	650.27	647.49
WHOLESALE TRADE	558.80	585.20	581.78	588.67	597.92	593.28	596.71	589.72	590.44	592.04	607.44	598.59	603.99	611.38	602.03
RETAIL TRADE	263.61	273.39	277.60	275.90	277.15	274.85	278.89	273.26	276.05	276.62	281.66	280.69	283.33	288.22	286.55
FINANCE, INSURANCE, AND REAL ESTATE	529.24	547.04	539.64	545.47	557.78	549.00	553.05	556.20	567.37	564.12	580.23	565.78	570.15	581.70	571.82
SERVICES	435.86	454.86	452.05	455.00	464.22	462.92	467.16	464.80	471.72	472.05	476.77	469.95	471.99	478.63	473.96

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available

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, 356 industries											
Over 1-month span:												
1998	63.2	56.2	59.3	60.2	58.9	57.1	55.4	58.4	54.8	55.0	58.2	56.4
1999	55.1	59.6	52.8	57.2	58.2	54.2	57.1	54.4	55.2	57.9	59.9	56.8
2000	55.7	59.3	61.0	54.2	47.7	60.5	57.8	55.1	52.0	54.8	55.1	54.2
2001	53.7	50.4	55.8	45.0	46.6	44.3	45.3	43.6	–	–	–	–
Over 3-month span:												
1998	65.3	66.1	64.6	65.7	62.2	57.9	57.5	58.4	59.1	59.2	59.3	59.2
1999	60.8	57.8	58.5	55.8	58.1	57.9	57.2	59.2	59.8	59.1	61.0	60.6
2000	61.6	63.3	61.9	56.2	55.1	57.9	61.5	56.4	54.1	53.3	55.7	53.3
2001	51.7	54.1	48.6	49.2	42.5	42.2	39.7	–	–	–	–	–
Over 6-month span:												
1998	70.4	67.4	65.0	62.5	63.6	60.5	59.2	58.6	57.9	59.6	60.6	59.9
1999	59.8	59.8	58.2	60.3	56.7	59.2	61.8	60.8	62.2	61.2	62.3	64.9
2000	63.5	60.6	62.6	63.7	61.5	55.5	56.1	58.6	54.2	54.8	51.8	54.2
2001	52.0	50.6	48.6	45.2	43.2	–	–	–	–	–	–	–
Over 12-month span:												
1998	69.7	67.6	67.4	66.0	64.0	62.7	61.9	62.0	60.9	59.3	60.8	58.8
1999	61.2	60.2	58.2	60.8	60.8	61.6	62.2	61.3	63.9	63.0	61.3	60.9
2000	62.5	63.0	61.8	59.5	58.4	56.8	55.7	56.5	54.2	53.4	53.0	51.8
2001	49.9	47.5	–	–	–	–	–	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1998	57.4	51.5	53.7	53.3	43.8	48.2	38.2	51.5	41.9	41.5	41.2	43.4
1999	46.9	44.5	43.0	42.3	50.4	39.3	51.5	39.3	45.2	46.3	53.3	46.7
2000	44.9	56.6	55.5	46.7	41.2	54.8	53.7	38.6	34.6	41.5	43.8	44.1
2001	37.9	32.4	41.5	31.3	29.4	33.1	38.6	27.2	–	–	–	–
Over 3-month span:												
1998	59.6	59.6	55.9	50.4	46.7	37.9	41.5	41.5	41.9	38.2	36.8	40.8
1999	41.2	39.0	38.2	41.8	40.8	45.2	39.0	45.2	40.8	44.9	46.3	46.0
2000	50.0	54.0	52.9	42.3	43.0	48.5	48.2	33.6	28.7	30.5	39.0	35.7
2001	28.3	29.4	24.6	26.5	22.4	25.7	19.1	–	–	–	–	–
Over 6-month span:												
1998	63.2	54.4	50.4	40.4	44.5	40.1	37.5	36.4	34.9	40.1	37.1	34.2
1999	36.0	38.2	37.5	41.2	36.8	39.7	43.0	41.5	46.0	40.4	46.3	51.5
2000	51.5	44.5	48.5	55.1	43.8	34.9	33.5	34.6	30.1	29.4	25.0	27.9
2001	26.8	25.4	19.9	21.0	19.9	–	–	–	–	–	–	–
Over 12-month span:												
1998	54.8	52.2	51.8	46.7	40.4	40.1	38.2	37.5	36.4	34.6	35.7	34.2
1999	38.6	34.6	32.4	36.0	37.9	39.0	40.1	40.4	44.5	46.0	44.9	44.5
2000	46.3	45.2	41.2	37.9	33.8	31.3	31.3	31.3	27.6	25.4	24.3	21.3
2001	20.6	17.3	–	–	–	–	–	–	–	–	–	–

Dash indicates data not available.

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 inceasing and decreasing employment.

Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1992	1993	1994	1995	1996	1997	1998	1999	2000
Civilian noninstitutional population	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753	209,699
Civilian labor force	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863
Labor force participation rate	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2
Employed	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208
Employment-population ratio	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5
Agriculture	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281	3,305
Nonagricultural industries	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207	131,903
Unemployed	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655
Unemployment rate	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
Not in the labor force	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385	68,836

19. Annual data: Employment levels by industry

[In thousands]

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total employment	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,916	131,759
Private sector	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,709	111,079
Goods-producing	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,507	25,709
Mining	635	610	601	581	580	596	590	539	543
Construction	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,415	6,698
Manufacturing	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,552	18,469
Service-producing	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,409	106,050
Transportation and public utilities	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,834	7,019
Wholesale trade	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,911	7,024
Retail trade	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,848	23,307
Finance, insurance, and real estate	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,555	7,560
Services	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,055	40,460
Government	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,206	20,681
Federal	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669	2,777
State	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,709	4,785
Local	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,829	13,119

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

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

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000
Private sector:									
Average weekly hours	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5	34.5
Average hourly earnings (in dollars)	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24	13.75
Average weekly earnings (in dollars)	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78	474.38
Mining:									
Average weekly hours	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.2	43.1
Average hourly earnings (in dollars)	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.05	17.24
Average weekly earnings (in dollars)	638.31	646.78	666.62	683.91	707.59	733.21	742.35	736.56	743.04
Construction:									
Average weekly hours	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1	39.3
Average hourly earnings (in dollars)	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.19	17.88
Average weekly earnings (in dollars)	537.70	553.63	573.00	587.00	603.33	625.56	646.13	672.13	702.68
Manufacturing:									
Average weekly hours	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7	41.6
Average hourly earnings (in dollars)	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.90	14.38
Average weekly earnings (in dollars)	469.86	486.04	506.94	514.59	531.23	553.14	562.53	579.63	598.21
Transportation and public utilities:									
Average weekly hours	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7	38.6
Average hourly earnings (in dollars)	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69	16.22
Average weekly earnings (in dollars)	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20	626.09
Wholesale trade:									
Average weekly hours	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3	38.5
Average hourly earnings (in dollars)	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58	15.20
Average weekly earnings (in dollars)	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.80	585.20
Retail trade:									
Average weekly hours	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0	28.9
Average hourly earnings (in dollars)	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.09	9.46
Average weekly earnings (in dollars)	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.61	273.39
Finance, insurance, and real estate:									
Average weekly hours	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2	36.3
Average hourly earnings (in dollars)	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62	15.07
Average weekly earnings (in dollars)	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24	547.04
Services:									
Average weekly hours	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6	32.7
Average hourly earnings (in dollars)	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.37	13.91
Average weekly earnings (in dollars)	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.86	454.86

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

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
Civilian workers[2]	141.8	143.3	144.6	146.5	148.0	149.5	150.6	152.5	153.8	0.9	3.9
Workers, by occupational group:											
White-collar workers	143.3	145.0	146.3	148.4	149.9	151.5	152.5	154.4	156.0	1.0	4,1
Professional specialty and technical	142.2	143.9	145.3	146.7	148.3	150.0	151.3	153.2	154.3	.7	4.0
Executive, administrative, and managerial	145.4	147.3	148.6	150.5	151.9	153.7	154.6	156.6	158.6	1.3	4.4
Administrative support, including clerical	143.4	144.7	146.1	148.6	150.1	151.8	152.8	155.3	156.8	1.0	4.5
Blue-collar workers	138.3	139.5	140.6	142.7	144.1	145.6	146.5	148.2	149.3	.7	3.6
Service occupations	142.4	143.1	144.8	146.0	147.1	148.5	150.0	152.0	153.3	.9	4.2
Workers, by industry division:											
Goods-producing	140.0	141.2	142.5	144.9	146.6	148.0	148.8	150.7	152.2	1.0	3.8
Manufacturing	140.9	142.1	143.6	146.0	147.5	148.7	149.3	151.3	2.6154.4	.9	3.5
Service-producing	142.4	144.0	145.3	147.1	148.4	150.1	151.1	153.0	155.4	.9	4.0
Services	143.2	145.1	146.5	148.0	149.3	151.2	152.4	154.3	154.6	.7	4.1
Health services	141.4	142.7	144.3	145.9	147.5	149.0	150.7	152.5	155.6	1.4	4.8
Hospitals	142.2	143.4	145.0	146.3	147.7	149.5	151.3	153.2	152.2	1.6	5.3
Educational services	141.7	144.6	145.8	146.5	146.8	149.7	150.6	151.7	151.9	.3	3.7
Public administration[3]	141.5	142.4	144.4	145.7	146.1	146.9	148.3	150.6	154.0	.9	4.0
Nonmanufacturing	141.9	143.4	144.7	146.6	148.0	149.6	150.7	152.6	154.0	.9	4.1
Private industry workers	142.0	143.3	144.6	146.8	148.5	149.9	150.9	153.0	154.5	1.0	4.0
Excluding sales occupations	141.9	143.2	144.5	146.5	148.2	149.8	150.9	153.0	154.4	.9	4.2
Workers, by occupational group:											
White-collar workers	144.1	145.6	146.9	149.3	151.1	152.6	153.6	155.7	157.4	1.1	4.2
Excluding sales occupations	144.5	146.0	147.3	149.4	151.3	152.9	154.1	156.5	158.1	1.0	4.5
Professional specialty and technical occupations	144.1	145.2	146.7	148.4	150.7	152.2	153.7	156.3	157.5	.8	4.5
Executive, administrative, and managerial occupations	145.8	147.7	149.1	151.1	152.7	154.4	155.3	157.3	159.4	1.3	4.4
Sales occupations	142.6	144.1	145.3	148.9	150.3	151.2	151.4	152.3	154.5	1.4	2.8
Administrative support occupations, including clerical	143.7	145.0	146.2	149.0	150.6	152.3	153.4	156.1	157.7	1.0	4.7
Blue-collar workers	138.2	139.4	140.5	142.6	144.1	145.5	146.4	148.2	149.3	.7	3.6
Precision production, craft, and repair occupations	138.4	139.6	140.6	142.3	144.1	145.8	146.7	148.7	149.7	.7	3.9
Machine operators, assemblers, and inspectors	138.4	139.9	141.4	144.0	145.0	146.0	146.8	148.3	149.1	.5	2.8
Transportation and material moving occupations	133.6	134.4	135.2	137.5	138.6	139.9	141.1	142.6	143.9	.9	3.8
Handlers, equipment cleaners, helpers, and laborers	142.3	143.2	144.4	146.4	148.1	149.4	150.4	152.2	153.4	.8	3.6
Service occupations	140.6	141.0	142.6	143.9	145.4	146.6	148.1	150.0	151.3	.9	4.1
Production and nonsupervisory occupations[4]	140.8	141.9	143.1	145.3	146.9	148.4	149.5	151.4	152.7	.9	3.9
Workers, by industry division:											
Goods-producing	139.9	141.1	142.5	144.8	146.6	147.9	148.8	150.7	152.1	.9	3.8
Excluding sales occupations	139.3	140.5	141.8	144.2	145.9	147.2	148.2	150.1	151.5	.9	3.8
White-collar occupations	142.7	143.9	145.5	148.1	150.1	151.3	151.9	154.5	156.5	1.3	4.3
Excluding sales occupations	141.3	142.5	143.9	146.5	148.4	149.6	150.5	153.0	155.0	1.3	4.4
Blue-collar occupations	138.3	139.4	140.7	142.8	144.4	145.8	146.8	148.2	149.2	.7	3.4
Construction	136.9	137.9	138.7	140.8	143.2	145.1	146.7	148.2	150.3	1.4	5.0
Manufacturing	140.9	142.1	143.6	146.0	147.5	148.7	149.3	151.3	152.6	.9	3.5
White-collar occupations	143.0	144.3	145.8	148.2	150.2	151.4	151.5	154.2	156.0	1.2	3.9
Excluding sales occupations	141.3	142.5	143.8	146.2	148.2	149.3	149.7	152.2	154.0	1.2	3.9
Blue-collar occupations	139.4	140.5	142.1	144.4	145.6	146.7	147.8	149.1	150.0	.6	3.0
Durables	141.0	142.3	144.0	146.5	148.3	149.4	150.1	151.8	153.1	.9	3.2
Nondurables	140.4	141.5	142.8	144.9	146.0	147.5	147.7	150.4	151.6	.8	3.8
Service-producing	142.8	144.1	145.3	147.4	149.1	150.6	151.7	153.8	155.3	1.0	4.2
Excluding sales occupations	143.3	144.6	145.9	147.7	149.4	151.1	152.2	154.6	156.0	.9	4.4
White-collar occupations	144.3	145.8	147.0	149.3	151.0	152.6	153.7	155.8	157.4	1.0	4.2
Excluding sales occupations	145.5	147.0	148.3	150.3	152.1	153.9	155.1	157.5	159.1	1.0	4.6
Blue-collar occupations	137.8	139.1	139.8	141.8	143.1	144.5	145.3	147.7	148.7	.7	3.9
Service occupations	140.5	140.8	142.4	143.6	145.1	146.3	147.9	149.6	150.8	.8	3.9
Transportation and public utilities	140.9	141.8	142.3	143.9	145.7	147.4	148.3	150.5	152.4	1.3	4.6
Transportation	138.1	138.7	139.5	140.4	141.8	142.8	143.9	145.4	146.9	1.0	3.6
Public utilities	144.6	145.7	146.1	148.6	150.9	153.5	154.1	157.3	159.8	1.6	5.9
Communications	144.9	146.1	146.0	148.4	150.9	153.9	154.7	158.3	161.1	1.8	6.8
Electric, gas, and sanitary services	144.2	145.1	146.1	148.9	151.0	152.9	153.4	156.0	158.1	.3	4.7
Wholesale and retail trade	141.1	142.2	143.5	145.6	147.3	148.3	149.4	151.0	152.6	1.1	3.6
Excluding sales occupations	141.9	142.8	144.3	146.4	148.1	149.6	150.6	152.6	153.9	.9	3.9
Wholesale trade	144.6	146.3	148.5	150.0	151.8	152.1	154.4	155.1	157.8	1.7	4.0
Excluding sales occupations	144.0	145.8	147.4	149.6	151.1	152.7	154.9	156.9	158.5	1.0	4.9
Retail trade	139.1	140.0	140.7	143.2	144.8	146.2	146.6	148.7	149.7	.7	3.4
General merchandise stores	135.6	137.2	138.3	139.7	141.0	142.2	144.4	147.3	149.4	1.4	6.0
Food stores	135.7	137.0	138.1	140.1	142.5	143.4	144.5	146.1	148.2	1.4	4.0

See footnotes at end of table.

21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
Finance, insurance, and real estate	145.8	147.6	148.3	152.0	153.1	155.2	155.7	157.9	159.5	1.0	4.2
Excluding sales occupations	148.8	151.0	151.6	154.2	155.5	157.4	158.4	161.2	163.1	1.2	4.9
Banking, savings and loan, and other credit agencies	155.4	159.3	159.8	162.7	164.2	165.8	166.5	170.8	172.7	1.1	5.2
Insurance	144.0	144.5	145.8	149.9	151.3	154.8	155.2	157.6	159.3	1.1	5.3
Services	144.6	146.1	147.6	149.4	151.2	152.9	154.1	156.5	157.8	.8	4.4
Business services	148.7	150.7	151.9	154.2	156.3	157.5	158.4	160.5	163.0	1.6	4.3
Health services	141.4	142.6	144.2	145.8	147.5	149.0	150.6	152.7	154.7	1.3	4.9
Hospitals	142.1	143.0	144.6	145.8	147.5	149.2	151.1	153.5	155.9	1.6	5.7
Educational services	148.7	152.2	153.0	154.0	154.9	158.8	159.9	162.3	162.6	.2	5.0
Colleges and universities	149.6	152.6	153.3	154.6	155.5	158.6	159.2	162.2	162.6	.2	4.6
Nonmanufacturing	142.0	143.4	144.5	146.7	148.4	150.0	151.1	153.1	154.7	1.0	4.2
White-collar workers	144.1	145.6	146.9	149.2	151.0	152.6	153.7	155.8	157.5	1.1	4.3
Excluding sales occupations	145.3	146.8	148.1	150.2	152.0	153.8	155.1	157.5	159.1	1.0	4.7
Blue-collar occupations	136.8	138.0	138.7	140.6	142.3	143.9	144.8	146.9	148.1	.8	4.1
Service occupations	140.4	140.7	142.3	143.5	145.1	146.3	147.8	149.5	150.7	.8	3.9
State and local government workers	141.0	143.1	144.6	145.5	145.9	147.8	148.9	150.3	151.2	.6	3.6
Workers, by occupational group:											
White-collar workers	140.2	142.6	144.0	144.9	145.3	147.3	148.3	149.5	150.4	.6	3.5
Professional specialty and technical	139.3	142.0	143.2	144.1	144.5	146.6	147.4	148.4	149.2	.5	3.3
Executive, administrative, and managerial	142.8	144.5	146.1	147.0	147.2	149.2	150.7	152.4	153.7	.9	4.4
Administrative support, including clerical	141.3	143.0	145.0	145.9	146.5	148.3	149.4	150.7	151.6	.6	3.5
Blue-collar workers	139.5	140.9	142.5	143.7	144.2	145.9	147.2	148.6	149.0	.3	3.3
Workers, by industry division:											
Services	140.5	143.2	144.5	145.2	145.5	148.0	148.9	149.9	150.6	.5	3.5
Services excluding schools[5]	140.3	142.6	143.8	145.2	145.8	147.6	148.8	150.1	151.9	1.2	4.2
Health services	142.0	144.2	145.8	147.3	147.9	150.0	151.6	152.1	154.4	1.5	4.4
Hospitals	142.7	144.8	146.3	147.9	148.4	150.7	152.0	152.2	154.7	1.6	4.2
Educational services	140.3	143.1	144.4	145.0	145.2	147.9	148.7	149.6	150.1	.3	3.4
Schools	140.6	143.5	144.7	145.3	145.5	148.2	149.0	149.9	150.5	.4	3.4
Elementary and secondary	140.0	142.9	144.1	144.5	144.7	147.3	148.1	148.5	149.0	.3	3.0
Colleges and universities	142.1	144.8	146.5	147.4	147.6	150.5	151.7	153.7	154.3	.4	4.5
Public administration[3]	141.5	142.4	144.4	145.7	146.1	146.9	148.3	150.6	151.9	.9	4.0

[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.

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

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
Civilian workers[1]	139.8	141.3	142.5	144.0	145.4	147.0	147.9	149.5	150.8	0.9	3.7
Workers, by occupational group:											
White-collar workers	141.6	143.3	144.6	146.2	147.6	149.2	150.2	151.7	153.1	.9	3.7
Professional specialty and technical	141.0	142.6	144.0	144.9	146.4	148.3	149.6	151.1	152.-	.6	3.8
Executive, adminitrative, and managerial	143.8	145.9	147.2	148.6	149.9	151.6	152.4	154.0	155.8	1.2	3.9
Administrative support, including clerical	140.9	142.3	143.5	145.5	146.9	148.5	149.6	151.6	152,7	.8	4.0
Blue-collar workers	135.8	137.0	137.9	139.2	140.6	142.0	142.9	144.7	146.0	.9	3.8
Service occupations	139.4	140.1	141.7	143.0	144.0	145.7	147.1	148.6	149.7	.7	4.0
Workers, by industry division:											
Goods-producing	137.4	138.6	139.7	141.3	143.0	144.3	145.3	147.0	147,6	1.1	3.9
Manufacturing	139.0	140.2	141.5	142.9	144.4	145.7	146.5	148.5	150.0	1.0	3.9
Service-producing	140.7	142.3	143.5	145.0	146.3	148.0	148.9	150.5	151.7	.8	3.7
Services	142.3	144.1	145.5	146.6	147.9	149.9	151.0	152.6	153.6	.7	3.9
Health services	139.7	140.9	142.5	143.8	145.3	146.7	148.3	149.8	151.8	1.3	4.5
Hospitals	138.8	140.1	141.6	142.6	143.8	145.6	147.3	148.8	151.2	1.6	5.1
Educational services	140.6	143.7	144.7	145.3	145.6	148.9	149.6	150.5	151.0	.3	3.7
Public administration[2]	137.8	139.5	141.5	142.5	142.9	144.6	146.1	147.6	148.7	.7	4.1
Nonmanufacturing	139.9	141.5	142.6	144.2	145.5	147.2	148.1	149.7	149.7	.8	3.7
Private industry workers	139.7	141.0	142.2	143.9	145.4	146.8	147.7	149.4	150.9	1.0.9	3.8
Excluding sales occupations	139.6	140.8	142.0	143.5	145.1	146.5	147.6	149.5	150.8	1.3	3.9
Workers, by occupational group:											
White-collar workers	142.1	143.5	144.8	146.6	148.3	149.7	150.6	152.3	153.8	1.0	3.7
Excluding sales occupations	142.5	143.9	145.2	146.7	148.5	149.9	151.1	153.0	154.4	.8	4.0
Professional specialty and technical occupations	141.8	142.6	144.1	145.1	147.3	148.6	150.2	152.1	153.2	.7	4.0
Executive, adminitrative, and managerial occupations	144.3	146.4	147.6	149.2	150.7	152.3	153.0	154.7	156.5	1.2	3.8
Sales occupations	140.5	142.1	143.3	146.7	147.9	149.0	148.7	149.2	151.5	1.5	2.4
Administrative support occupations, including clerical	141.4	142.7	143.8	146.0	147.5	149.1	150.1	152.3	153.6	.9	4.1
Blue-collar workers	135.6	136.8	137.7	139.1	140.5	141.9	142.8	144.6	145.9	.9	3.8
Precision production, craft, and repair occupations	135.6	136.7	137.5	138.9	140.6	142.0	142.8	144.6	145.7	.8	3.6
Machine operators, assemblers, and inspectors	136.7	138.3	139.5	140.7	141.6	142.9	143.7	145.6	146.9	.9	3.7
Transportation and material moving occupations	131.0	131.9	132.7	134.1	135.2	136.5	137.6	139.5	140.7	.9	4.1
Handlers, equipment cleaners, helpers, and laborers	138.3	139.4	140.4	141.8	143.6	145.0	146.2	148.0	149.8	1.2	4.3
Service occupations	137.8	138.0	139.6	141.0	142.5	143.5	144.9	146.4	147.5	.8	3.5
Production and nonsupervisory occupations[3]	138.2	139.3	140.4	142.1	143.7	145.0	146.0	147.7	149.0	.9	3.7
Workers, by industry division:											
Goods-producing	137.3	138.5	139.7	141.3	143.0	144.3	145.2	147.0	148.6	1.1	3.9
Excluding sales occupations	136.6	137.8	138.9	140.5	142.1	143.4	144.6	146.3	147.8	1.0	4.0
White-collar occupations	140.5	141.7	143.0	145.0	146.8	147.9	148.7	150.5	152.3	1.2	3.7
Excluding sales occupations	138.8	140.1	141.3	143.2	144.9	146.0	147.2	148.9	150.5	1.1	3.9
Blue-collar occupations	135.4	136.6	137.6	139.0	140.5	142.0	143.1	144.7	146.1	1.0	4.0
Construction	131.9	133.0	133.6	136.0	138.0	139.4	140.7	142.1	143.9	1.3	4.3
Manufacturing	139.0	140.2	141.5	142.9	144.4	145.7	146.5	148.5	150.0	1.0	3.9
White-collar occupations	141.4	142.7	144.0	145.8	147.7	148.7	149.2	151.1	152.7	1.1	3.4
Excluding sales occupations	139.6	140.8	142.0	143.7	145.6	146.6	147.5	149.9	150.5	.9	3.4
Blue-collar occupations	137.2	138.4	139.7	140.8	142.0	143.4	144.6	146.4	147.8	1.0	4.1
Durables	139.1	140.4	141.8	143.0	144.7	146.1	147.3	149.0	150.5	1.0	4.0
Nondurables	138.7	139.7	140.9	142.7	143.9	145.0	145.4	147.5	149.0	1.0	3.5
Service-producing	140.8	142.1	143.3	145.0	146.5	147.9	148.9	150.5	151.9	.9	3.7
Excluding sales occupations	141.4	142.6	143.8	145.3	146.9	148.3	149.4	151.3	152.6	.9	3.9
White-collar occupations	142.3	143.8	145.0	146.9	148.5	150.0	150.9	152.5	154.0	1.0	3.7
Excluding sales occupations	143.7	145.1	146.4	147.8	149.6	151.2	152.3	154.3	155.6	.8	4.0
Blue-collar occupations	135.9	137.0	137.8	139.1	140.3	141.6	142.2	144.3	145.3	.7	3.6
Service occupations	137.8	138.0	139.6	141.1	142.5	143.5	144.8	146.1	147.2	.8	3.3
Transportation and public utilities	136.8	137.5	137.9	138.5	140.0	141.3	142.3	143.7	145.7	1.4	4.1
Transportation	133.7	134.4	134.9	134.9	136.2	137.4	138.6	139.8	141.6	1.3	4.0
Public utilities	140.6	141.5	141.8	143.2	144.9	146.4	147.1	148.7	151.0	1.5	4.2
Communications	141.1	141.9	142.2	143.4	145.0	146.7	147.4	149.2	151.8	1.7	4.7
Electric, gas, and sanitary services	140.0	140.9	141.3	143.0	144.7	145.9	146.6	148.1	149.9	1.2	3.6
Wholesale and retail trade	139.6	140.7	142.0	143.8	145.5	146.4	147.4	148.4	150.1	1.1	3.2
Excluding sales occupations	141.1	141.8	143.3	145.2	146.8	148.2	149.0	150.7	151.9	.8	3.5
Wholesale trade	142.3	144.3	146.5	147.4	149.4	149.6	151.6	151.6	154.5	1.9	3.4
Excluding sales occupations	143.0	144.8	146.4	147.9	149.7	151.3	153.2	154.9	156.5	1.0	4.5
Retail trade	138.3	138.9	139.6	142.1	143.5	144.8	145.2	146.9	147.8	.6	3.0
General merchandise stores	134.3	135.6	136.7	137.8	138.5	139.7	142.2	143.8	145.5	1.2	5.1
Food stores	132.8	133.9	134.9	136.7	139.5	140.2	141.6	143.3	144.5	.8	3.6

See footnotes at end of table.

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

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
Finance, insurance, and real estate	142.4	144.5	145.2	148.7	149.5	151.7	151.7	153.9	154.6	0.5	3.4
Excluding sales occupations	144.8	147.5	148.0	150.2	151.5	153.3	154.1	156.6	157.6	.6	4.0
Banking, savings and loan, and other credit agencies	154.5	159.2	159.6	162.0	163.3	165.0	165.7	169.4	170.8	.8	4.6
Insurance	139.8	140.2	141.5	145.5	146.6	150.7	150.8	152.4	153.3	.6	4.6
Services	143.2	144.5	146.0	147.4	149.1	150.6	151.8	153.8	155.0	.8	4.0
Business services	146.3	148.5	149.8	152.0	154.1	155.3	156.0	158.2	160.8	1.6	4.3
Health services	139.6	140.6	142.2	143.5	145.3	146.6	148.1	149.8	151.8	1.3	4.5
Hospitals	138.3	139.3	140.9	141.8	143.3	144.9	146.8	148.5	151.0	1.7	5.4
Educational services	144.2	147.5	148.2	148.9	149.6	153.4	154.3	155.4	156.1	.5	4.3
Colleges and universities	144.4	147.2	147.9	148.9	149.4	152.5	152.9	154.1	155.0	.6	3.7
Nonmanufacturing	139.7	141.0	142.1	143.9	145.5	146.9	147.9	149.5	150.9	.9	3.7
White-collar workers	142.0	143.5	144.7	146.5	148.2	149.6	150.6	152.3	153.8	1.0	3.8
Excluding sales occupations	143.2	144.6	145.9	147.4	149.1	150.7	151.9	153.9	155.3	.9	4.2
Blue-collar occupations	134.0	135.1	135.8	137.4	138.9	140.3	140.9	142.8	143.9	.8	3.6
Service occupations	137.7	137.9	139.5	140.9	142.4	143.4	144.7	146.0	147.1	.8	3.3
State and local government workers	139.6	142.2	143.5	144.3	144.7	147.2	148.3	150.2	151.2	.5	3.7
Workers, by occupational group:											
White-collar workers	139.3	142.1	143.4	144.1	144.5	147.1	148.0	149.0	149.8	.5	3.4
Professional specialty and technical	139.4	142.5	143.6	144.3	144.7	147.4	148.2	149.1	149.8	.5	3.5
Executive, administrative, and managerial	140.5	142.7	144.3	144.9	145.1	147.3	148.8	150.1	151.5	.9	4.4
Administrative support, including clerical	137.5	139.6	141.7	142.4	143.0	145.0	146.2	147.0	147.6	.4	3.2
Blue-collar workers	137.6	139.4	140.7	141.5	142.1	143.9	145.1	146.0	146.5	.3	3.1
Workers, by industry division:											
Services	139.9	142.9	144.0	144.6	144.9	147.9	148.7	149.5	150.2	.5	3.7
Services excluding schools[4]	139.6	142.1	143.2	144.3	144.8	146.7	147.9	149.1	150.7	1.1	4.1
Health services	140.4	142.8	144.2	145.3	145.7	147.7	149.3	149.9	151.9	1.3	4.3
Hospitals	140.6	142.8	144.1	145.3	145.6	147.7	149.2	149.5	151.8	1.5	4.3
Educational services	139.8	142.9	144.0	144.5	144.8	148.0	148.7	149.5	150.0	.3	3.6
Schools	140.0	143.1	144.2	144.7	144.9	148.1	148.9	149.7	150.2	.3	3.7
Elementary and secondary	139.9	143.1	144.1	144.5	144.6	147.9	148.5	149.0	149.5	.3	3.4
Colleges and universities	139.8	142.6	144.4	144.9	145.6	148.3	149.5	151.4	151.8	.3	4.3
Public administration[2]	137.8	139.5	141.5	142.5	142.9	144.6	146.1	147.6	148.7	.7	4.1

[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.

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

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
Private industry workers	147.3	148.6	150.2	153.8	155.7	157.5	158.6	161.5	163.2	1.1	4.8
Workers, by occupational group:											
White-collar workers	149.4	151.0	152.5	156.3	158.5	160.4	161.5	165.2	167.4	1.3	5.6
Blue-collar workers	143.6	144.8	146.2	150.0	151.6	153.1	154.1	155.7	156.7	.3	3.0
Workers, by industry division:											
Goods-producing	145.2	146.3	148.2	152.3	154.2	155.7	156.2	158.5	159.6	.7	3.5
Service-producing	147.9	149.4	150.7	154.0	156.0	157.9	159.4	162.6	164.6	1.2	5.5
Manufacturing	144.5	145.7	147.8	152.3	153.9	154.9	154.8	157.1	157.9	.5	2.6
Nonmanufacturing	148.0	149.4	150.7	154.0	156.1	158.1	159.7	162.9	164.9	1.2	5.6

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

[June 1989 = 100]

Series	1999			2000				2001		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2001	
COMPENSATION											
Workers, by bargaining status[1]											
Union	139.0	140.2	141.2	143.0	144.4	146.1	146.9	147.9	149.5	1.1	0.6
Goods-producing	138.2	139.2	140.8	143.3	144.8	146.8	147.3	147.9	149.3	.9	3.1
Service-producing	139.7	141.0	141.4	142.5	143.9	145.2	146.4	147.6	149.5	1.3	3.9
Manufacturing	138.1	139.1	141.0	144.5	145.4	147.1	147.4	147.9	148.8	.6	2.3
Nonmanufacturing	139.2	140.3	140.8	141.7	143.4	145.0	146.2	147.3	149.4	1.4	4.2
Nonunion	142.5	143.8	145.2	147.4	149.1	150.6	151.6	153.8	155.3	1.0	4.2
Goods-producing	140.5	141.8	143.1	145.4	147.2	148.4	149.3	151.6	153.1	1.0	4.0
Service-producing	143.0	144.4	145.7	148.0	149.6	151.2	152.3	154.4	155.9	1.0	4.2
Manufacturing	141.7	143.0	144.4	146.5	148.2	149.2	149.9	152.4	153.7	.9	3.7
Nonmanufacturing	142.4	143.8	145.1	147.4	149.1	150.7	151.8	153.9	155.4	1.0	4.2
Workers, by region[1]											
Northeast	141.5	143.2	144.3	146.3	147.6	149.3	150.3	151.6	153.7	1.4	4.1
South	140.7	141.8	143.0	145.0	146.7	147.6	148.6	151.1	152.3	.8	3.8
Midwest (formerly North Central)	143.6	145.0	146.3	148.9	150.7	152.2	153.3	154.8	156.0	.8	3.5
West	142.1	143.3	144.7	147.0	148.8	150.8	151.8	154.3	156.0	1.1	4.8
Workers, by area size[1]											
Metropolitan areas	142.0	143.3	144.7	146.9	148.6	150.1	151.0	153.1	154.6	1.0	4.0
Other areas	141.8	143.1	143.6	146.0	147.7	148.8	150.3	152.1	153.7	1.1	4.1
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	134.7	135.7	136.5	137.2	138.5	140.0	141.2	142.1	143.7	1.1	3.8
Goods-producing	133.8	134.9	136.1	137.2	138.4	140.2	141.3	142.4	144.2	1.3	4.2
Service-producing	135.8	136.8	137.2	137.6	138.9	140.1	141.5	142.2	143.7	1.1	3.5
Manufacturing	134.7	135.8	137.5	138.8	139.7	141.4	142.6	143.9	145.5	1.1	4.2
Nonmanufacturing	134.6	135.6	135.9	136.4	137.8	139.2	140.4	141.1	142.7	1.1	3.6
Nonunion	140.7	142.0	143.3	145.1	146.7	148.1	149.0	150.8	152.2	.9	3.7
Goods-producing	138.8	140.0	141.1	142.9	144.7	145.8	146.8	148.8	150.3	1.0	3.9
Service-producing	141.3	142.6	143.9	145.8	147.3	148.7	149.6	151.4	152.7	.9	3.7
Manufacturing	140.5	141.7	142.9	144.4	146.1	147.2	148.0	150.1	151.6	1.0	3.8
Nonmanufacturing	140.5	141.8	143.0	145.0	146.6	148.0	148.9	150.7	152.0	.9	3.7
Workers, by region[1]											
Northeast	138.2	139.9	140.9	142.3	143.7	145.3	146.0	147.3	149.2	1.3	3.8
South	139.4	140.2	141.5	143.0	144.6	145.3	146.3	148.3	149.3	.7	3.3
Midwest (formerly North Central)	141.0	142.4	143.6	145.3	147.1	148.6	149.6	150.9	152.3	.9	3.5
West	140.2	141.3	142.6	144.7	146.3	148.2	149.2	151.3	152.9	1.1	4.5
Workers, by area size[1]											
Metropolitan areas	139.9	141.2	142.5	144.1	145.7	147.1	148.0	149.8	151.2	.9	3.8
Other areas	138.4	139.8	140.2	142.2	143.7	144.7	146.0	147.4	148.8	.9	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.

25. 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 benefits 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.

26. 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.

27. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1999	2000											
	1999	2000	Dec.	Jan.[p]	Feb.[p]	Mar.[p]	Apr.[p]	May[p]	June[p]	July[p]	Aug.[p]	Sept.[p]	Oct.[p]	Nov.[p]	Dec.[p]
Number of stoppages:															
Beginning in period	17	39	0	0	1	2	6	2	5	3	6	5	7	0	2
In effect during period	21	40	1	1	2	4	7	4	8	6	8	10	12	3	3
Workers involved:															
Beginning in period (in thousands)	73	394	.0	.0	17.0	5.7	26.7	136.9	11.4	7.2	99.2	17.8	60.3	.0	8.7
In effect during period (in thousands)	80	397	3.0	3.0	20.0	25.7	29.7	141.3	150.8	146.9	237.2	167.8	211.6	4.5	10.3
Days idle:															
Number (in thousands)	1,995	20,419	63.0	60.0	298.0	327.6	272.2	3,095.3	3,134.0	2,804.4	4,186.6	3,029.3	3,088.6	64.5	58.9
Percent of estimated working time[1]	.01	.06	([2])	([2])	.01	.01	.01	.10	.10	.10	.13	.11	.11	([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.

28. 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		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	166.6	172.2	172.8	173.7	174.0	174.1	174.0	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5
All items (1967 = 100)	499.0	515.8	517.6	520.3	521.2	521.5	521.1	524.5	526.7	528.0	529.9	532.2	533.3	531.6	531.8
Food and beverages	164.6	168.4	169.2	169.4	169.6	169.5	170.5	171.4	171.8	172.2	172.4	172.9	173.4	174.0	174.4
Food	164.1	167.8	168.7	168.9	169.1	168.9	170.0	170.9	171.3	171.7	171.9	172.5	173.0	173.5	173.9
Food at home	164.2	167.9	168.9	169.0	169.1	168.8	170.2	171.3	171.8	172.0	172.2	172.8	173.3	173.9	174.2
Cereals and bakery products	185.0	188.3	189.9	188.6	190.1	189.0	190.7	191.1	191.9	191.9	192.5	193.2	194.2	194.9	195.9
Meats, poultry, fish, and eggs	147.9	154.5	156.8	156.9	156.8	155.5	156.6	158.0	159.5	160.1	160.7	160.8	161.7	162.3	162.4
Dairy and related products[1]	159.6	160.7	161.0	161.6	161.9	161.4	161.5	163.6	163.6	163.2	163.4	164.7	166.9	168.3	168.9
Fruits and vegetables	203.1	204.6	202.5	204.6	206.2	207.3	215.1	212.6	211.5	211.5	213.3	213.1	211.8	210.7	208.8
Nonalcoholic beverages and beverage materials	134.3	137.8	138.2	138.0	137.4	137.9	136.7	139.4	139.9	139.5	138.9	138.1	138.6	138.9	140.0
Other foods at home	153.5	155.6	156.9	156.7	155.8	156.0	156.3	157.8	157.9	158.6	157.6	159.6	159.5	160.4	161.0
Sugar and sweets	152.3	154.0	154.6	154.6	153.9	153.0	153.5	155.7	155.8	155.7	154.0	155.8	155.7	156.1	156.1
Fats and oils	148.3	147.4	148.9	148.7	149.7	146.5	150.2	153.0	152.6	153.1	151.5	154.7	156.7	157.8	158.5
Other foods	168.9	172.2	173.7	173.4	172.0	173.3	172.7	173.8	174.0	175.1	174.4	176.4	175.7	176.8	177.6
Other miscellaneous foods[1,2]	104.9	107.5	109.5	107.7	106.8	110.0	108.9	109.0	108.7	108.4	108.5	108.8	107.7	109.6	109.5
Food away from home[1]	165.1	169.0	169.5	170.0	170.3	170.4	170.8	171.4	171.8	172.3	172.7	173.1	173.6	174.1	174.7
Other food away from home[1,2]	105.2	109.0	109.3	110.0	110.5	111.0	111.1	111.3	111.4	111.6	111.8	112.4	112.6	113.8	114.3
Alcoholic beverages	169.7	174.7	175.6	175.5	175.9	176.4	176.5	177.2	177.7	177.8	178.1	178.5	179.1	179.7	180.0
Housing	163.9	169.6	170.9	171.4	171.7	171.6	171.9	174.1	174.7	175.4	175.4	175.9	177.3	177.6	178.0
Shelter	187.3	193.4	194.7	194.6	195.2	195.2	195.1	196.4	197.6	198.9	199.2	199.6	200.7	201.4	202.4
Rent of primary residence	177.5	183.9	184.6	185.3	186.1	186.8	187.6	188.2	188.9	189.6	190.2	191.0	191.6	192.3	193.1
Lodging away from home	112.3	117.5	123.0	118.1	118.5	113.9	108.8	114.1	119.1	124.2	121.8	120.0	123.7	124.0	125.2
Owners' equivalent rent of primary residence[3]	192.9	198.7	199.2	199.9	200.5	201.2	201.8	202.4	105.4	203.6	204.2	204.9	205.7	206.3	207.3
Tenants' and household insurance[1,2]	101.3	103.7	104.0	104.2	104.2	104.5	104.7	105.0	105.1	105.4	105.5	106.8	107.0	106.6	106.6
Fuels and utilities	128.8	137.9	140.9	143.8	143.1	142.7	145.3	153.8	152.3	150.8	149.7	151.3	155.7	154.8	152.7
Fuels	113.5	122.8	125.9	129.1	128.3	127.7	130.6	139.8	138.0	136.3	135.1	136.8	141.6	140.5	138.0
Fuel oil and other fuels	91.4	129.7	120.8	133.7	137.6	140.3	144.9	149.1	144.6	138.1	134.4	131.9	129.6	123.8	122.1
Gas (piped) and electricity	120.9	128.0	132.4	134.8	133.6	132.7	135.6	145.7	144.0	142.6	141.6	143.8	149.4	148.6	146.0
Household furnishings and operations	126.7	128.2	128.6	129.0	128.7	128.9	128.6	128.8	129.1	129.1	129.1	128.9	129.2	129.2	129.1
Apparel	131.3	129.6	125.3	130.4	132.8	131.8	127.8	125.4	128.4	132.2	131.9	129.8	126.3	122.6	122.6
Men's and boys' apparel	131.1	129.7	126.8	129.1	130.4	131.3	128.0	125.5	126.6	127.5	128.2	129.1	125.8	122.5	121.4
Women's and girls' apparel	123.3	121.5	115.6	124.2	127.9	124.8	119.7	115.5	121.0	127.8	127.0	122.3	117.5	111.6	112.1
Infants' and toddlers' apparel[1]	129.0	130.6	126.7	127.4	130.8	130.7	128.2	127.4	129.3	1316.0	131.4	130.6	127.3	124.5	126.3
Footwear	125.7	123.8	120.7	124.9	125.3	125.4	123.8	121.4	122.6	125.2	124.9	124.4	122.1	121.3	121.9
Transportation	144.4	153.3	153.2	154.7	154.4	155.2	154.4	154.4	154.9	153.9	156.1	159.2	158.3	154.4	153.3
Private transportation	140.5	149.1	148.6	150.4	150.4	151.1	150.3	150.3	150.7	149.7	152.1	155.3	154.0	149.9	148.8
New and used motor vehicles[2]	100.1	100.8	100.4	100.4	100.8	101.5	102.1	102.3	102.2	101.9	101.8	101.4	101.1	100.8	100.5
New vehicles	142.9	142.8	141.9	141.4	141.6	142.7	143.6	143.7	143.3	142.8	142.7	142.3	141.7	141.2	140.3
Used cars and trucks[1]	152.0	155.8	155.2	156.2	157.9	159.3	160.2	160.4	160.4	159.9	159.7	159.1	158.9	158.3	158.0
Motor fuel	100.7	129.3	128.4	135.2	133.1	133.0	127.8	126.6	127.5	124.1	133.6	146.8	142.0	125.6	121.9
Gasoline (all types)	100.1	128.6	127.7	134.3	132.3	132.2	127.0	125.8	126.8	123.3	132.8	146.0	141.3	124.9	121.2
Motor vehicle parts and equipment	100.5	101.5	101.5	101.7	101.7	102.5	103.1	103.6	104.0	104.7	104.2	104.4	104.4	105.1	104.9
Motor vehicle maintenance and repair	171.9	177.3	178.2	178.7	179.4	179.9	179.9	180.6	181.5	181.7	181.9	182.5	182.7	183.4	184.0
Public transportation	197.7	209.6	215.7	213.0	208.0	209.1	209.5	210.2	212.1	210.0	208.3	209.3	216.3	216.1	213.7
Medical care	250.6	260.8	262.6	263.1	263.7	264.1	264.8	267.1	268.9	270.0	270.8	271.4	272.5	273.1	274.4
Medical care commodities	230.7	238.1	239.2	239.4	239.6	240.0	241.1	242.3	243.8	244.9	245.7	246.6	248.1	248.5	249.1
Medical care services	255.1	266.0	268.0	268.7	269.4	269.8	270.4	273.0	274.9	275.9	276.8	277.3	278.3	278.9	280.5
Professional services	229.2	137.7	238.9	239.3	239.7	239.8	240.3	242.6	244.1	244.8	245.6	245.8	246.5	246.8	247.7
Hospital and related services	299.5	317.3	321.3	322.5	323.6	324.7	325.3	328.5	331.0	332.8	333.6	335.1	336.6	337.9	341.2
Recreation[2]	102.1	103.3	103.9	103.8	103.8	103.7	103.7	104.1	104.3	104.3	105.0	105.0	104.8	105.0	105.1
Video and audio[1,2]	100.7	101.0	101.6	101.5	101.0	100.9	100.7	101.2	101.6	101.6	101.7	101.6	101.3	101.7	101.7
Education and communication[2]	101.2	102.5	102.8	102.9	103.6	103.2	103.6	103.9	104.0	104.3	104.1	104.0	104.4	104.8	105.8
Education[2]	107.0	112.5	113.0	114.9	115.3	115.4	115.5	115.8	116.0	116.1	116.1	116.4	116.9	117.2	119.5
Educational books and supplies	261.7	279.9	280.2	284.8	285.2	284.8	285.4	289.2	290.4	290.8	290.8	290.7	293.9	295.1	298.0
Tuition, other school fees, and child care	308.4	324.0	325.4	330.8	332.1	332.5	332.7	333.3	333.7	334.0	334.1	335.0	336.2	337.2	343.9
Communication[1,2]	96.0	93.6	93.7	92.1	93.1	92.3	93.0	93.3	93.2	93.7	93.3	92.9	93.1	93.6	93.5
Information and information processing[1,2]	95.5	92.8	93.0	91.3	92.3	91.5	92.2	92.4	92.2	92.7	92.3	91.8	92.1	92.5	92.4
Telephone services[1,2]	100.1	98.5	98.9	97.0	98.3	97.5	98.4	98.8	98.7	99.4	99.0	98.7	99.0	99.6	99.6
Information and information processing other than telephone services[1,4]	30.5	25.9	25.2	25.0	24.7	24.2	23.8	23.2	22.9	22.5	22.1	21.7	21.4	21.3	20.7
Personal computers and peripheral equipment[1,2]	53.5	41.1	39.5	38.9	38.3	37.3	36.5	35.0	33.9	32.4	31.7	30.4	29.8	29.3	27.8
Other goods and services	258.3	271.1	271.6	274.7	273.0	276.2	274.0	275.9	277.2	277.7	277.7	281.3	281.2	285.8	283.3
Tobacco and smoking products	355.8	394.9	394.1	408.0	396.7	411.0	396.6	404.3	408.5	407.7	424.2	418.7	421.0	441.2	424.6
Personal care[1]	161.1	165.6	166.2	166.6	167.0	167.4	167.8	168.2	168.6	169.1	169.6	169.5	170.0	170.7	171.2
Personal care products[1]	151.8	153.7	154.3	154.3	153.4	153.9	155.5	155.3	155.3	155.7	155.8	153.2	154.6	155.1	154.7
Personal care services[1]	171.4	178.1	179.3	179.9	180.3	180.6	181.3	181.6	181.9	182.2	183.4	184.1	184.1	184.8	185.2

See footnotes at end of table.

28. 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		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Miscellaneous personal services	243.0	252.3	253.6	254.0	255.1	255.7	255.7	257.3	258.6	259.5	260.2	261.0	261.8	263.2	265.5
Commodity and service group:															
Commodities	144.4	149.2	148.6	150.3	150.4	150.6	150.0	150.0	150.6	150.7	151.9	152.9	152.1	150.4	149.8
Food and beverages	164.6	168.4	169.2	169.4	169.6	169.5	170.5	171.4	171.8	172.2	172.4	172.9	173.4	174.0	174.4
Commodities less food and beverages	132.5	137.7	136.4	138.8	138.9	139.3	137.8	137.4	138.1	138.0	139.7	140.8	139.4	136.5	135.4
Nondurables less food and beverages	137.5	147.4	145.6	149.9	149.9	150.2	147.2	146.4	147.7	147.9	151.0	153.5	151.3	146.3	144.8
Apparel	131.3	129.6	125.3	130.4	132.8	131.8	127.8	125.4	128.4	132.2	131.9	129.8	126.3	122.6	122.6
Nondurables less food, beverages, and apparel	146.0	162.5	162.0	165.9	164.7	165.7	163.1	163.2	163.7	161.9	167.0	172.0	170.4	164.5	162.1
Durables	126.0	125.4	124.7	124.8	125.0	125.5	125.9	125.9	125.9	125.5	125.4	124.9	124.5	124.2	123.6
Services	188.8	195.3	197.0	197.2	197.6	197.6	198.0	200.2	201.0	201.8	201.9	202.5	204.0	204.5	205.2
Rent of shelter[3]	195.0	201.3	202.7	202.6	203.3	203.2	203.1	204.5	205.7	207.2	207.4	207.8	209.0	209.7	210.8
Transporatation services	190.7	196.1	197.4	197.2	197.0	198.0	198.3	199.1	200.3	200.2	200.1	200.4	202.0	202.6	202.7
Other services	223.1	229.9	231.3	231.5	232.6	232.4	233.0	234.1	234.8	235.4	236.2	236.4	236.7	237.7	239.4
Special indexes:															
All items less food	167.0	173.0	173.5	174.6	174.9	175.0	174.7	175.9	176.6	177.1	177.8	178.6	179.0	178.2	178.2
All items less shelter	160.2	165.7	166.0	167.4	167.5	167.7	167.5	168.6	169.1	169.2	170.1	170.9	171.0	170.0	169.7
All items less medical care	162.0	167.3	167.9	168.8	169.1	169.2	169.0	170.1	170.8	171.2	171.8	172.6	172.9	172.3	172.3
Commodities less food	134.0	139.2	138.0	140.3	140.4	140.8	139.3	139.0	139.7	139.6	141.2	142.4	141.0	138.2	137.2
Nondurables less food	139.4	149.1	147.5	151.5	151.6	151.8	149.0	148.3	149.6	149.8	152.8	155.1	153.1	148.3	146.9
Nondurables less food and apparel	147.5	162.9	162.6	166.2	165.1	166.0	163.6	163.9	164.3	162.7	167.4	172.0	170.6	165.2	163.0
Nondurables	151.2	158.2	157.6	160.0	160.1	160.2	159.1	159.1	160..0	160.3	162.0	163.6	162.7	160.3	159.7
Services less rent of shelter[3]	195.8	202.9	205.0	205.7	205.8	205.9	206.9	210.0	210.5	210.6	210.6	211.4	213.3	213.7	214.0
Services less medical care services	182.7	188.9	190.5	190.7	191.1	191.1	191.5	193.6	194.3	195.1	195.2	195.7	197.2	197.8	198.4
Energy	106.6	124.6	125.9	130.6	129.3	129.0	128.1	132.5	132.0	129.5	133.1	140.1	140.5	132.4	129.4
All items less energy	174.4	178.6	179.1	179.6	180.1	180.3	180.2	181.0	181.8	182.6	182.9	182.9	183.3	183.6	184.1
All items less food and energy	177.0	181.3	181.7	182.3	182.8	183.0	182.8	183.5	184.4	185.3	185.6	185.5	185.9	186.2	186.6
Commodities less food and energy	144.1	144.9	143.7	145.1	145.6	146.0	145.1	144.8	145.9	146.2	146.6	145.7	144.9	144.4	143.8
Energy commodities	100.0	129.5	127.9	135.2	133.6	133.8	129.3	128.6	129.1	125.4	133.8	145.6	141.1	125.6	122.0
Services less energy	195.7	202.1	203.5	203.5	204.1	204.2	204.4	205.7	206.8	207.7	208.0	208.4	209.4	210.1	211.2
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	163.2	168.9	169.3	170.4	170.6	170.9	170.7	171.7	172.4	172.6	173.5	174.4	174.6	173.8	173.8
All items (1967 = 100)	486.2	503.1	504.2	507.6	508.2	509.0	508.5	511.6	513.4	514.2	516.7	519.4	520.0	517.8	517.6
Food and beverages	163.8	167.7	168.6	168.8	169.0	168.8	169.8	170.8	171.2	171.6	171.9	172.3	172.8	173.4	173.8
Food	163.4	167.2	189.9	168.3	168.5	168.3	169.3	170.3	170.8	171.1	171.4	171.9	172.4	173.0	173.4
Food at home	163.0	166.8	156.8	168.1	168.1	167.8	169.1	170.3	170.8	171.1	171.3	171.8	172.4	173.0	173.3
Cereals and bakery products	184.7	188.0	161.0	188.4	189.9	188.6	190.4	190.9	191.7	191.7	192.2	192.9	193.9	194.5	195.6
Meats, poultry, fish, and eggs	147.6	154.1	202.5	156.6	156.4	155.3	156.3	157.9	159.2	160.0	160.7	160.6	161.4	162.1	162.0
Dairy and related products[1]	159.4	160.5	138.2	161.6	161.9	161.4	161.5	163.8	163.5	163.1	163.5	164.7	166.9	168.3	168.9
Fruits and vegetables	201.8	203.4	201.5	203.6	204.7	205.8	213.3	210.9	210.1	209.8	211.7	211.5	210.5	209.5	208.0
Nonalcoholic beverages and beverage materials	133.2	136.9	137.4	137.1	136.6	137.1	135.8	138.7	139.3	138.8	138.2	137.2	137.8	138.0	139.3
Other foods at home	152.8	155.1	156.2	156.1	155.3	155.4	155.8	157.3	157.3	158.2	157.1	159.1	159.1	160.0	160.5
Sugar and sweets	152.2	153.9	154.4	154.4	153.8	152.7	153.3	155.4	155.6	155.6	153.7	155.8	155.5	156.0	156.1
Fats and oils	147.9	147.2	148.6	148.5	149.4	146.3	149.9	152.8	152.4	153.0	151.4	154.3	156.4	157.4	158.0
Other foods	168.8	172.3	173.6	173.5	172.0	173.4	173.0	174.0	174.1	175.4	174.6	176.5	176.0	177.2	177.9
Other miscellaneous foods[1,2]	104.6	107.1	109.0	107.5	106.3	109.6	108.6	108.5	108.5	108.5	108.4	108.7	108.0	109.9	109.7
Food away from home[1]	165.0	169.0	169.5	170.0	170.3	170.5	170.8	171.4	171.8	172.3	172.7	173.1	173.5	174.0	174.7
Other food away from home[1,2]	105.1	109.2	109.6	110.4	110.9	111.2	111.4	111.5	111.6	111.8	112.0	112.5	112.8	114.0	114.4
Alcoholic beverages	168.8	173.8	174.7	174.4	174.8	175.6	175.8	176.5	177.0	177.2	177.6	178.0	178.4	179.2	179.7
Housing	160.0	165.4	166.6	167.3	167.5	167.6	168.1	170.2	170.5	171.0	171.0	171.7	173.0	173.3	173.5
Shelter	181.6	187.4	188.4	188.7	189.3	189.5	189.6	190.6	191.5	192.6	192.9	193.5	194.4	195.0	195.9
Rent of primary residence	177.1	183.4	184.1	184.8	185.6	186.2	187.0	187.7	188.3	189.0	189.6	190.4	191.0	191.7	192.4
Lodging away from home[2]	122.2	117.3	122.5	118.3	118.6	113.9	108.7	113.8	118.5	123.8	121.2	119.9	123.2	123.7	124.4
Owners' equivalent rent of primary residence[3]	175.7	180.8	181.3	181.9	182.4	183.0	183.5	184.1	184.5	185.2	185.7	186.3	187.0	187.5	188.5
Tenants' and household insurance[1,2]	101.6	103.9	104.2	104.4	104.4	104.7	104.9	105.2	105.3	105.6	105.8	106.9	107.2	106.7	106.8
Fuels and utilities	128.7	137.4	140.4	143.4	142.5	142.0	144.6	153.2	151.5	149.9	148.8	150.8	155.2	154.4	152.2
Fuels	113.0	121.8	125.0	128.2	127.2	126.5	129.3	138.6	136.6	134.8	133.6	135.7	140.5	139.5	137.0
Fuel oil and other fuels	91.7	128.8	120.1	133.1	136.7	139.3	144.1	150.1	145.0	138.0	133.9	131.5	129.2	123.1	121.5
Gas (piped) and electricity	120.4	127.5	131.8	134.4	133.0	132.1	134.8	144.8	143/0	141.5	140.4	142.9	148.5	147.8	145.2
Household furnishings and operations	124.7	125.5	125.7	126.1	125.8	126.0	125.6	125.7	125.9	125.9	126.0	125.7	125.9	125.8	125.7
Apparel	130.1	128.3	124.0	128.7	131.3	130.5	126.6	124.1	127.0	130.6	130.5	128.5	125.2	121.9	121.6
Men's and boys' apparel	131.2	129.7	126.8	128.8	130.3	131.3	128.0	125.8	126.9	127.6	128.3	129.2	126.3	122.9	121.6
Women's and girls' apparel	121.3	119.3	113.2	121.5	125.5	122.6	117.5	113.2	118.4	125.2	124.7	120.2	115.6	110.2	110.1
Infants' and toddlers' apparel[1]	130.3	132.3	128.4	129.0	132.6	132.7	130.0	129.0	131.0	133.3	133.2	132.0	128.6	126.2	128.3
Footwear	126.2	124.2	121.5	124.8	125.5	125.7	124.0	121.5	122.4	125.2	125.2	124.5	122.1	121.4	122.0
Transportation	143.4	152.8	152.3	154.2	154.0	154.9	153.9	154.0	154.5	153.3	155.8	159.2	157.9	153.4	152.5
Private transportation	140.7	150.1	149.3	151.4	151.3	152.2	151.2	151.2	151.7	150.5	153.2	156.6	155.1	150.4	149.5
New and used motor vehicles[2]	100.4	101.4	100.9	101.0	101.4	102.2	102.8	102.9	102.8	102.5	102.4	102.0	101.7	101.4	101.0

See footnotes at end of table.

28. 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		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
New vehicles	144.0	143.9	143.1	142.5	142.7	143.7	144.6	144.8	144.5	143.8	143.8	143.4	142.7	142.3	141.4
Used cars and trucks[1]	153.3	157.1	156.5	157.5	159.3	160.7	161.6	161.7	161.7	161.1	160.9	160.2	160.0	159.3	159.0
Motor fuel	100.8	129.5	128.0	135.3	133.1	133.2	127.7	126.9	127.8	124.1	134.0	147.4	142.1	124.9	122.0
Gasoline (all types)	100.2	128.8	127.3	134.6	132.3	132.4	126.9	126.2	127.1	123.4	133.3	146.7	141.1	124.2	121.3
Motor vehicle parts and equipment	100.0	100.9	100.7	100.9	101.0	101.8	102.3	103.0	103.4	104.0	103.5	103.6	103.6	104.3	104.1
Motor vehicle maintenance and repair	173.3	178.8	179.6	180.2	180.9	181.4	181.5	182.1	183.1	183.3	183.4	184.1	184.4	185.0	185.6
Public transportation	193.1	203.4	208.7	206.4	202.4	203.2	203.7	204.3	205.8	204.2	202.7	203.5	209.5	209.5	207.7
Medical care	249.7	259.9	261.7	262.2	262.8	263.1	263.8	266.3	268.1	269.1	269.9	270.4	271.5	272.0	273.4
Medical care commodities	226.8	233.6	234.6	235.0	235.2	235.5	236.5	237.8	239.1	240.2	241.0	241.7	243.2	243.6	244.1
Medical care services	254.9	265.9	267.9	268.5	269.2	269.4	270.1	272.8	274.7	275.7	276.5	277.0	278.0	278.5	280.2
Professional services	230.8	239.6	240.9	241.3	241.8	241.7	242.3	244.9	246.4	247.0	247.8	248.0	248.7	249.0	249.9
Hospital and related services	295.5	313.2	317.1	318.2	319.2	320.3	320.9	323.9	326.6	328.3	329.1	330.6	332.0	333.5	337.0
Recreation[2]	101.3	102.4	102.9	102.8	102.8	102.7	102.6	103.0	103.1	103.0	103.7	103.7	103.5	103.7	103.9
Video and audio[1,2]	100.5	100.7	101.3	101.1	100.7	100.6	100.3	100.8	101.2	101.0	101.2	101.1	100.7	101.1	101.0
Education and communication[2]	101.5	102.7	103.0	102.9	103.7	103.2	103.7	104.0	104.1	104.4	104.2	104.1	104.5	104.9	105.8
Education[2]	107.2	112.8	113.2	115.1	115.4	115.6	115.7	116.0	116.2	116.3	116.4	116.7	117.2	117.6	119.6
Educational books and supplies	264.1	283.3	283.6	288.6	289.0	288.6	289.2	292.9	294.1	294.7	294.7	294.5	298.2	299.3	302.2
Tuition, other school fees, and child care	302.8	318.2	319.2	324.7	325.7	326.3	326.5	327.0	327.4	327.9	328.2	329.1	330.3	331.3	337.3
Communication[1,2]	96.9	94.6	94.8	93.1	94.2	93.3	94.1	94.4	94.4	94.8	94.4	94.0	94.3	94.8	94.7
Information and information processing[1,2]	96.5	94.1	94.4	92.6	93.8	92.8	93.6	93.8	93.7	94.1	93.8	93.4	93.6	94.0	94.0
Telephone services[1,2]	100.2	98.7	99.1	97.1	98.6	97.6	98.6	99.0	98.9	99.5	99.2	98.8	99.2	99.7	99.8
Information and information processing other than telephone services[1,4]	31.6	26.8	26.1	25.9	25.5	25.1	24.6	24.0	23.8	23.3	22.8	22.4	22.2	22.0	21.5
Personal computers and peripheral equipment[1,2]	53.1	40.5	39.1	38.5	37.8	36.7	35.9	34.3	33.4	31.8	31.1	29.9	29.4	28.7	27.4
Other goods and services	261.9	276.5	276.8	280.9	278.2	282.3	279.2	281.5	283.2	283.5	288.2	286.8	287.9	293.8	290.0
Tobacco and smoking products	356.2	395.2	394.2	408.2	397.0	411.3	396.9	404.6	409.2	408.5	424.8	419.8	421.6	441.9	425.6
Personal care[1]	161.3	165.5	166.1	166.5	166.8	167.1	167.7	168.1	168.5	169.0	169.4	169.3	169.9	170.6	170.9
Personal care products[1]	152.5	154.2	155.0	155.1	153.9	154.2	155.8	155.7	155.7	155.9	156.0	153.8	155.4	155.9	155.5
Personal care services[1]	171.7	178.6	179.7	180.3	180.8	181.1	181.7	182.1	182.4	182.8	183.9	184.7	184.8	185.4	185.9
Miscellaneous personal services	243.1	251.9	253.0	253.4	254.5	255.1	255.3	257.0	258.4	258.3	260.0	260.7	261.6	263.2	264.9
Commodity and service group:															
Commodities	144.7	149.8	149.3	151.0	151.0	151.4	150.6	150.8	151.4	151.4	152.8	153.9	153.0	151.2	150.5
Food and beverages	163.8	167.7	168.6	168.8	169.0	168.8	169.8	170.8	171.2	171.6	171.9	172.3	172.8	173.4	173.8
Commodities less food and beverages	133.2	139.0	137.7	140.2	140.2	140.8	139.1	138.8	139.5	139.3	141.2	142.6	141.1	138.0	136.9
Nondurables less food and beverages	138.1	149.1	147.2	151.8	151.6	152.1	148.6	148.1	149.4	149.3	153.1	156.2	153.6	148.2	146.5
Apparel	130.1	128.3	124.0	128.7	131.3	130.5	126.6	124.1	127.0	130.6	130.5	128.5	125.2	121.9	121.6
Nondurables less food, beverages, and apparel	147.2	165.3	164.6	169.3	167.6	168.8	165.5	166.0	166.5	164.4	170.5	176.3	174.1	167.3	164.8
Durables	126.0	125.8	125.2	125.3	125.6	126.2	126.6	126.6	126.6	126.2	126.0	125.5	125.2	124.8	124.3
Services	185.3	191.6	193.0	193.4	193.9	194.0	194.5	196.6	197.2	197.8	198.0	198.7	200.1	200.6	201.2
Rent of shelter[3]	174.9	180.5	181.5	181.7	182.3	182.5	182.6	183.6	184.4	185.5	185.8	186.3	187.2	187.8	188.7
Transporatation services	187.9	192.9	193.8	193.7	193.9	195.0	195.2	196.0	197.2	197.2	197.2	197.6	198.9	199.5	199.8
Other services	219.6	225.9	227.3	227.3	228.4	228.1	228.9	229.9	230.6	231.2	231.9	232.2	232.6	233.6	235.1
Special indexes:															
All items less food	163.1	169.1	169.4	170.7	170.9	171.3	170.9	171.9	172.5	172.8	173.8	174.7	174.9	173.9	173.7
All items less shelter	158.1	163.8	163.9	165.4	165.5	165.7	165.5	166.5	167.0	167.0	168.0	169.1	169.0	167.8	167.5
All items less medical care	159.2	164.7	165.0	166.2	166.4	166.6	166.4	167.4	168.0	168.2	169.1	170.0	170.2	169.4	169.3
Commodities less food	134.6	140.4	139.1	141.6	141.6	142.2	140.6	140.3	141.0	140.8	142.7	144.1	142.6	139.6	138.5
Nondurables less food	140.0	150.7	148.9	153.3	153.1	153.6	150.3	149.9	151.1	151.1	154.7	157.6	155.3	150.1	148.5
Nondurables less food and apparel	148.4	165.4	164.9	169.2	167.7	168.8	165.8	166.3	166.8	164.9	170.5	175.9	173.9	167.7	165.4
Nondurables	151.3	158.9	158.3	160.8	160.8	161.0	159.7	159.9	160.8	160.9	163.0	164.8	163.8	161.2	160.5
Services less rent of shelter[3]	174.1	180.1	181.9	182.5	182.7	182.8	183.7	186.6	186.9	187.0	187.0	187.8	189.6	189.9	190.1
Services less medical care services	179.5	185.4	186.6	187.2	187.6	187.7	188.3	190.3	190.8	191.4	191.6	192.3	193.6	194.2	194.7
Energy	106.1	124.8	125.7	130.9	129.3	129.0	127.6	131.8	131.3	128.6	132.9	140.6	140.3	131.3	128.6
All items less energy	171.1	175.1	175.3	176.0	176.5	176.8	176.8	177.4	178.2	178.8	179.2	179.2	179.5	179.8	180.1
All items less food and energy	173.1	177.1	177.2	178.0	178.6	179.0	178.7	179.3	180.1	180.9	181.3	181.2	181.4	181.7	181.9
Commodities less food and energy	144.3	145.4	144.2	145.7	146.1	146.7	145.8	145.5	146.2	146.8	147.3	146.4	145.6	145.4	144.6
Energy commodities	100.3	129.7	127.7	135.4	133.5	133.8	128.9	128.5	129.1	125.1	134.2	146.6	141.5	125.0	122.1
Services less energy	192.6	198.7	199.5	200.0	200.6	200.8	201.1	202.2	203.1	204.0	204.4	204.8	205.7	206.3	207.3

[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.

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

[1982–84 = 100, unless otherwise indicated]

Area	Pricing schedule[1]	All Urban Consumers							Urban Wage Earners						
		2000		2001					2000		2001				
		July	Aug.	Apr.	Feb.	Mar.	Apr.	May	July	Aug.	Apr.	May	June	July	Aug.
U.S. city average	M	172.8	172.8	176.9	166.5	167.9	168.0	168.2	169.4	169.3	173.5	174.4	174.6	173.8	173.8
Region and area size[2]															
Northeast urban	M	179.8	179.9	184.2	174.4	175.2	175.4	175.4	176.7	176.6	180.9	181.6	182.1	181.8	181.7
Size A—More than 1,500,000	M	180.5	180.8	185.0	174.2	175.0	175.1	175.1	176.5	176.7	180.7	181.6	182.3	182.1	182.2
Size B/C—50,000 to 1,500,000[3]	M	108.2	108.0	110.7	106.3	107.0	107.1	107.0	107.7	107.4	110.2	110.4	110.5	110.1	109.8
Midwest urban[4]	M	168.8	168.2	172.8	162.3	163.5	163.3	163.9	165.1	164.3	169.0	170.7	170.1	168.4	168.9
Size A—More than 1,500,000	M	170.5	170.0	174.4	162.8	164.0	163.7	164.6	165.9	165.3	169.6	171.0	170.5	169.3	169.8
Size B/C—50,000 to 1,500,000[3]	M	107.7	107.1	110.4	106.2	107.0	106.9	107.0	107.7	106.9	110.6	112.0	111.4	109.8	110.1
Size D—Nonmetropolitan (less than 50,000)	M	163.2	162.5	166.7	158.4	160.1	159.9	160.0	161.7	160.9	165.1	166.4	165.8	164.2	164.9
South urban	M	168.0	168.0	171.4	163.1	164.7	165.0	165.0	166.3	166.1	169.6	170.0	170.3	169.7	169.4
Size A—More than 1,500,000	M	167.9	167.9	171.6	161.8	163.5	163.8	163.8	165.7	165.5	169.3	169.7	170.5	170.3	169.8
Size B/C—50,000 to 1,500,000[3]	M	107.8	107.8	109.9	105.8	106.8	107.0	107.0	107.6	107.5	109.7	109.9	110.0	109.5	109.3
Size D—Nonmetropolitan (less than 50,000)	M	167.7	167.8	170.6	165.9	167.7	167.7	168.0	168.6	168.7	171.8	172.0	172.3	170.8	170.7
West urban	M	175.2	175.9	180.4	167.5	169.1	169.4	169.6	170.8	171.2	175.8	176.7	177.3	177.2	176.9
Size A—More than 1,500,000	M	176.8	177.6	182.5	167.1	168.8	169.0	169.4	170.6	171.2	176.0	177.0	177.9	177.8	177.4
Size B/C—50,000 to 1,500,000[3]	M	108.1	108.3	110.6	105.9	106.9	107.1	107.1	107.9	108.0	110.4	110.9	110.9	111.0	110.8
Size classes:															
A[5]	M	156.8	157.0	160.9	152.5	153.7	153.8	154.1	155.4	155.4	159.3	160.2	160.6	160.2	160.1
B/C[3]	M	107.9	107.8	110.2	106.0	106.9	107.0	107.0	107.7	107.4	110.1	110.7	110.6	109.9	109.8
D	M	167.8	167.6	171.2	164.2	166.0	166.1	166.2	167.0	166.8	170.5	171.1	171.2	169.8	170.0
Selected local areas[6]															
Chicago–Gary–Kenosha, IL–IN–WI	M	174.6	173.7	178.4	165.8	166.5	166.3	168.1	168.9	168.0	172.6	174.0	173.4	171.7	172.0
Los Angeles–Riverside–Orange County, CA	M	171.7	172.2	176.6	162.4	163.9	164.0	164.4	165.0	165.3	169.6	170.5	171.9	171.3	171.1
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	182.8	183.1	186.6	176.0	176.7	176.8	177.0	178.4	178.5	181.9	183.0	183.8	183.5	183.5
Boston–Brockton–Nashua, MA–NH–ME–CT	1	183.2	–	–	–	181.1	–	180.6	182.3	–	–	190.1	–	191.3	–
Cleveland–Akron, OH	1	168.3	–	–	–	159.3	–	159.0	160.5	–	–	165.6	–	164.9	–
Dallas–Ft Worth, TX	1	166.2	–	–	–	162.9	–	163.1	166.2	–	–	169.1	–	171.6	–
Washington–Baltimore, DC–MD–VA–WV[7]	1	108.4	–	–	–	106.9	–	106.7	108.2	–	–	109.9	–	110.6	–
Atlanta, GA	2	–	172.1	176.6	165.0	–	167.3	–	–	169.6	173.8	–	175.4	–	174.2
Detroit–Ann Arbor–Flint, MI	2	–	170.1	174.5	162.1	–	163.0	–	–	164.6	169.1	–	170.4	–	169.4
Houston–Galveston–Brazoria, TX	2	–	154.4	159.5	150.5	–	151.4	–	–	153.1	157.8	–	158.4	–	157.0
Miami–Ft. Lauderdale, FL	2	–	168.4	172.8	163.5	–	164.6	–	–	165.8	170.4	–	171.2	–	170.9
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	–	177.5	181.2	174.6	–	175.8	–	–	177.1	180.7	–	182.0	–	182.2
San Francisco–Oakland–San Jose, CA	2	–	181.7	189.1	172.6	–	174.9	–	–	177.8	184.9	–	186.9	–	186.7
Seattle–Tacoma–Bremerton, WA	2	–	180.3	184.2	171.6	–	173.3	–	–	175.4	179.4	–	181.3	–	181.5

[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–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Portland–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

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

Dash indicates data not available.

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

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

[1982–84 = 100]

Series	1992	1993	1994	1995	1996	1997	1998	1999	2000
Consumer Price Index for All Urban Consumers:									
All items:									
Index	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.2
Percent change	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4
Food and beverages:									
Index	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6	168.4
Percent change	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2	2.3
Housing:									
Index	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9	169.6
Percent change	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2	3.5
Apparel:									
Index	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3	129.6
Percent change	2.5	1.4	–.2	–1.0	–.2	.9	.1	–1.3	–1.3
Transportation:									
Index	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4	153.3
Percent change	2.2	3.1	3.0	3.6	2.8	0.9	–1.9	2.0	6.2
Medical care:									
Index	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6	260.8
Percent change	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1
Other goods and services:									
Index	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3	271.1
Percent change	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7	5.0
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2	168.9
Percent change	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2	3.5

31. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2000					2001							
	1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Finished goods	133.0	138.0	138.2	139.4	140.1	140.0	139.7	141.2	141.5	141.0	141.7	142.5	142.1	140.7	141.1
Finished consumer goods	132.0	138.2	138.6	140.1	140.7	140.5	140.1	141.9	142.5	141.9	142.7	143.8	143.3	141.5	142.0
Finished consumer foods	135.1	137.2	137.2	137.4	138.0	138.2	137.9	138.4	139.5	140.9	141.6	141.8	141.9	141.2	142.6
Finshed consumer goods excluding foods	130.5	138.4	139.0	141.1	141.6	141.3	140.8	143.3	143.6	142.1	142.9	144.5	143.7	141.4	141.6
Nondurable goods less food	127.9	138.7	140.0	143.0	142.6	142.1	141.5	144.9	145.9	143.8	144.9	147.3	146.5	143.1	143.5
Durable goods	133.0	133.9	132.7	132.5	135.3	135.4	135.3	135.2	134.2	134.1	134.2	133.8	133.2	133.2	133.0
Capital equipment	137.6	138.8	138.5	138.6	139.8	139.9	139.9	140.2	139.7	139.7	140.0	139.7	139.6	139.8	139.5
Intermediate materials, supplies, and components	123.2	129.2	129.9	131.1	130.8	130.5	130.6	131.5	131.3	130.8	130.6	131.2	131.4	130.3	129.8
Materials and components for manufacturing	124.6	128.1	128.6	128.5	128.4	128.0	128.1	128.6	128.8	128.9	128.7	128.6	128.3	127.5	126.9
Materials for food manufacturing	120.8	119.2	119.4	119.0	119.1	118.9	119.8	120.4	120.3	122.3	122.3	124.6	125.7	126.1	128.1
Materials for nondurable manufacturing	124.9	132.6	133.9	133.6	133.7	133.3	133.5	135.0	136.1	135.8	135.2	134.2	133.4	131.9	130.1
Materials for durable manufacturing	125.1	129.0	129.0	129.3	128.8	127.5	128.0	127.2	127.0	126.7	126.0	126.9	126.5	125.3	124.6
Components for manufacturing	125.7	126.2	126.3	126.4	126.4	126.5	126.1	126.4	126.2	126.4	126.6	126.4	126.4	126.2	126.2
Materials and components for construction	148.9	150.7	150.4	150.3	150.2	150.1	149.9	149.6	150.0	150.2	150.4	151.6	151.7	151.0	151.0
Processed fuels and lubricants	84.6	102.0	104.5	110.5	109.2	108.8	108.3	111.4	109.9	106.9	105.9	108.1	110.2	106.8	106.0
Containers	142.5	151.6	153.0	153.3	153.4	153.0	153.0	153.0	153.0	152.8	153.2	153.9	154.1	153.6	153.2
Supplies	134.2	136.9	137.0	137.4	137.7	138.0	138.1	138.9	138.5	138.7	139.0	139.0	138.8	138.8	138.7
Crude materials for further processing	98.2	120.6	118.3	126.0	130.3	128.4	136.2	155.0	133.2	131.5	132.9	130.9	122.8	116.1	113.4
Foodstuffs and feedstuffs	98.7	100.2	95.5	97.6	99.5	100.4	103.9	105.3	104.5	108.9	109.1	110.3	109.7	109.6	108.9
Crude nonfood materials	94.3	130.4	129.7	141.0	146.7	143.0	153.5	183.5	148.2	142.2	144.5	140.4	127.4	116.3	112.4
Special groupings:															
Finished goods, excluding foods	132.3	138.1	138.4	139.9	140.6	140.4	140.1	141.9	142.0	140.9	141.6	142.6	142.0	140.5	140.5
Finished energy goods	78.8	94.1	95.9	100.6	99.6	98.9	97.9	101.9	103.6	99.7	101.2	104.1	102.7	97.0	97.8
Finished goods less energy	143.0	144.9	144.7	144.8	146.0	146.1	145.9	146.7	146.6	147.1	147.5	147.7	147.6	147.5	147.7
Finished consumer goods less energy	145.2	147.4	147.3	147.5	148.6	148.7	148.5	149.4	149.5	150.2	150.6	151.6	150.9	150.7	151.1
Finished goods less food and energy	146.1	148.0	147.7	147.8	149.2	149.2	149.1	150.0	149.4	149.5	149.8	150.0	149.9	149.9	149.7
Finished consumer goods less food and energy	151.7	154.0	153.8	154.0	155.5	155.4	155.3	156.5	155.9	156.1	156.4	156.9	156.7	156.8	156.6
Consumer nondurable goods less food and energy	166.3	169.8	170.4	170.9	171.3	171.2	171.0	173.2	173.2	173.5	174.0	175.4	175.5	175.5	175.3
Intermediate materials less foods and feeds	123.9	130.1	131.0	132.2	131.9	131.5	131.5	132.4	132.3	131.7	131.6	132.1	132.3	131.0	130.4
Intermediate foods and feeds	111.1	111.7	110.6	111.1	111.5	111.7	113.5	115.1	113.6	114.1	114.0	114.9	116.3	117.1	119.4
Intermediate energy goods	84.3	101.7	104.2	110.1	108.8	107.6	107.9	110.9	109.5	106.4	105.5	107.6	109.7	106.3	105.6
Intermediate goods less energy	131.7	135.0	135.3	135.4	135.4	135.2	135.3	135.8	135.8	136.0	136.0	136.1	135.9	135.3	134.9
Intermediate materials less foods and energy	133.1	136.6	137.0	137.0	137.0	136.8	136.8	137.1	137.3	137.4	137.4	137.5	137.2	136.5	136.0
Crude energy materials	78.5	122.1	122.4	136.7	144.8	140.9	154.7	193.4	148.3	141.0	145.2	139.8	123.1	109.0	104.2
Crude materials less energy	107.9	111.7	107.4	109.2	110.1	109.9	112.4	113.7	112.4	115.2	114.3	115.3	114.8	114.3	113.6
Crude nonfood materials less energy	135.2	145.2	141.9	142.9	141.0	137.8	137.5	138.7	136.1	134.6	130.8	130.9	130.6	129.4	128.4

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

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		2000					2001							
		1999	2000	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
–	**Total mining industries**	78.0	113.5	113.8	124.7	131.8	128.9	139.6	170.8	138.2	130.7	132.2	127.5	115.5	103.4	100.4
10	Metal mining	70.3	73.8	73.4	75.2	75.1	73.3	73.5	73.5	72.4	73.1	70.0	71.4	71.0	70.4	69.6
12	Coal mining (12/85 = 100)	87.3	84.8	83.3	83.5	83.6	84.1	84.8	83.6	90.8	90.3	90.6	92.2	87.7	90.9	89.9
13	Oil and gas extraction (12/85 = 100)	78.5	126.8	127.4	141.9	151.5	147.7	162.0	204.4	159.4	149.3	151.5	144.9	129.6	112.9	109.4
14	Mining and quarrying of nonmetallic minerals, except fuels	134.0	137.0	137.8	138.0	138.0	138.0	138.2	139.3	140.1	140.8	140.8	140.7	141.8	141.6	141.2
–	**Total manufacturing industries**	128.3	133.5	133.5	134.7	134.9	134.9	134.4	134.7	134.7	134.6	135.4	136.3	136.0	134.6	134.8
20	Food and kindred products	126.3	128.5	128.7	128.5	128.7	128.8	129.6	130.1	130.4	131.7	132.5	133.2	133.8	133.9	134.7
21	Tobacco manufactures	325.7	345.8	350.4	351.1	351.6	351.6	351.8	372.4	372.4	372.3	372.1	391.2	391.7	391.1	391.0
22	Textile mill products	116.3	116.7	116.9	116.6	116.8	117.0	117.5	117.4	117.9	117.0	117.0	117.1	117.2	116.9	116.6
23	Apparel and other finished products made from fabrics and similar materials	125.3	125.7	125.9	125.9	126.0	125.7	125.9	125.7	125.7	125.7	125.9	125.8	125.7	125.9	126.1
24	Lumber and wood products, except furniture	161.8	158.1	155.7	155.3	155.0	154.5	154.2	153.2	153.8	154.5	154.7	160.5	161.3	158.2	157.5
25	Furniture and fixtures	141.3	143.3	143.6	143.5	143.7	143.8	143.8	144.2	144.3	144.8	144.7	144.9	145.2	145.3	145.2
26	Paper and allied products	136.4	145.8	147.3	147.7	147.6	147.5	147.0	147.4	147.0	147.0	147.0	146.9	146.8	146.4	145.4
27	Printing, publishing, and allied industries	177.6	182.9	183.6	183.6	184.9	185.0	185.1	186.8	187.2	187.6	188.4	188.8	188.4	188.6	188.9
28	Chemicals and allied products	149.7	156.7	157.5	158.3	158.6	158.3	159.0	160.4	161.6	161.9	161.4	160.4	160.0	158.8	156.3
29	Petroleum refining and related products	76.8	112.8	112.6	125.1	121.8	121.9	114.4	112.5	112.0	107.3	114.1	120.9	116.9	103.8	106.8
30	Rubber and miscellaneous plastics products	122.2	124.6	124.7	125.4	125.3	126.5	124.8	126.0	126.1	126.8	127.4	126.6	126.4	126.5	126.0
31	Leather and leather products	136.5	137.9	137.8	138.4	138.4	138.8	138.9	139.1	140.6	140.9	142.8	142.9	142.6	141.9	142.1
32	Stone, clay, glass, and concrete products	132.6	134.6	134.5	134.8	134.5	134.3	134.1	134.4	135.0	135.4	135.6	136.0	135.7	135.9	135.9
33	Primary metal industries	115.8	119.8	120.4	120.5	120.2	119.0	119.2	118.5	118.0	117.4	116.8	116.9	116.5	116.1	115.8
34	Fabricated metal products, except machinery and transportation equipment	129.1	130.3	130.4	130.5	130.6	130.5	130.5	130.6	130.7	130.8	131.2	131.1	131.1	131.1	131.1
35	Machinery, except electrical	117.3	117.5	117.6	117.6	117.6	117.7	117.7	117.7	117.8	117.8	118.0	118.0	118.1	118.1	118.0
36	Electrical and electronic machinery, equipment, and supplies	109.5	108.3	108.1	108.1	108.0	107.9	107.7	107.7	107.6	107.5	107.5	107.4	107.3	106.9	106.4
37	Transportation	134.5	136.8	135.7	135.7	138.4	138.6	138.4	138.7	137.6	137.9	138.1	137.4	137.1	137.3	137.2
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	125.7	126.2	126.2	126.3	126.4	121.8	126.4	126.9	127.1	126.9	126.9	127.3	127.4	127.2	127.4
39	Miscellaneous manufacturing industries (12/85 = 100)	130.3	130.9	131.0	131.0	131.0	131.2	131.3	131.7	131.9	132.3	132.2	132.5	132.5	132.7	132.3
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)	114.8	119.4	120.1	121.2	121.4	121.8	121.5	121.9	122.5	122.6	122.7	123.0	123.2	123.3	123.4
43	U.S. Postal Service (06/89 = 100)	135.3	135.2	135.2	135.2	135.2	135.2	135.2	141.3	141.3	141.3	141.3	141.3	141.3	145.4	145.4
44	Water transportation (12/92 = 100)	113.0	122.6	126.1	127.0	126.5	124.2	126.1	125.8	127.8	126.8	125.9	125.6	130.3	131.8	132.0
45	Transportation by air (12/92 = 100)	130.8	147.7	147.9	151.5	152.5	152.7	154.2	154.7	154.0	155.4	155.4	156.4	156.6	157.6	159.1
46	Pipelines, except natural gas (12/92 = 100)	98.3	102.3	102.5	102.4	102.7	102.7	102.7	109.1	109.1	108.9	108.9	109.0	109.0	110.9	111.2

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

[1982 = 100]

Index	1992	1993	1994	1995	1996	1997	1998	1999	2000
Finished goods									
Total	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0	138.0
Foods	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1	137.2
Energy	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8	94.1
Other	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1	148.0
Intermediate materials, supplies, and components									
Total	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2	129.2
Foods	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8	119.2
Energy	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3	101.7
Other	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1	136.6
Crude materials for further processing									
Total	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2	120.6
Foods	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7	100.2
Energy	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5	122.1
Other	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1	118.0

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

[1995 = 100]

SITC Rev. 3	Industry	2000					2001							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
0	**Food and live animals**	83.6	85.9	87.1	88.5	88.7	89.8	88.6	89.1	88.6	87.9	87.8	88.5	89.2
01	Meat and meat preparations	103.7	105.2	107.4	107.6	105.9	105.4	107.1	107.1	109.8	110.8	110.7	110.4	111.0
04	Cereals and cereal preparations	64.0	67.8	70.8	74.0	75.8	78.8	76.4	77.2	74.7	74.7	73.5	73.2	74.8
05	Vegetables, fruit, and nuts, prepared fresh or dry	88.6	91.9	88.7	89.8	88.9	86.9	86.2	87.8	89.5	87.4	88.4	91.2	91.8
2	**Crude materials, inedible, except fuels**	82.9	83.7	83.5	82.2	82.6	82.0	80.9	79.7	78.4	77.5	77.0	76.8	75.7
21	Hides, skins, and furskins, raw	95.4	100.5	104.7	102.1	103.3	105.6	106.5	107.5	119.2	123.2	111.0	104.2	90.2
22	Oilseeds and oleaginous fruits	78.0	83.8	81.3	79.3	85.0	83.9	78.1	79.0	75.0	76.0	79.9	85.7	87.2
24	Cork and wood	88.4	86.9	87.2	86.5	85.9	85.2	84.3	83.5	81.6	80.9	80.6	81.1	80.7
25	Pulp and waste paper	91.7	90.7	89.8	88.6	85.9	85.8	83.6	82.3	80.6	75.2	73.6	71.4	69.9
26	Textile fibers and their waste	70.7	72.2	72.0	72.2	73.2	70.4	70.6	67.6	64.8	64.1	63.0	62.6	61.8
27	Crude fertilizers and crude minerals	93.1	91.5	90.7	90.6	90.6	90.9	90.9	89.9	89.4	89.2	89.4	90.4	90.5
28	Metalliferous ores and metal scrap	78.7	78.7	79.5	76.2	74.7	74.1	74.7	72.5	73.0	72.2	71.7	69.2	68.0
3	**Mineral fuels, lubricants, and related products**	147.6	166.3	157.2	162.1	157.4	157.5	159.5	152.4	156.0	159.0	153.6	144.0	145.1
32	Coal, coke, and briquettes	93.1	93.1	93.3	93.1	93.0	93.1	93.1	93.6	100.2	100.4	100.7	100.7	101.7
33	Petroleum, petroleum products, and related materials	172.3	203.3	189.0	193.4	183.6	181.1	185.2	172.4	178.4	184.4	177.0	162.8	165.4
4	**Animal and vegetable oils, fats, and waxes**	63.2	61.7	60.0	59.0	58.7	61.0	60.8	60.6	61.6	65.0	67.1	69.1	80.2
5	**Chemicals and related products, n.e.s.**	94.9	94.4	94.9	94.0	93.0	93.1	92.9	93.4	92.8	91.6	91.0	89.7	88.9
54	Medicinal and pharmaceutical products	100.3	100.2	100.4	100.2	100.1	99.7	99.6	99.4	99.7	99.6	99.7	99.5	100.2
55	Essential oils; polishing and cleaning preparations	103.3	103.4	103.4	103.3	103.2	103.4	103.2	103.4	103.0	102.9	102.9	102.2	102.1
57	Plastics in primary forms	95.4	92.8	92.3	91.2	90.0	90.5	91.5	92.7	91.2	89.9	89.1	86.5	85.3
58	Plastics in nonprimary forms	99.4	99.3	98.9	98.3	98.3	96.6	96.5	96.7	96.8	96.1	96.5	97.1	96.0
59	Chemical materials and products, n.e.s.	99.2	99.2	99.2	99.1	99.9	98.4	98.5	98.5	98.6	98.3	98.5	98.0	98.0
6	**Manufactured goods classified chiefly by materials**	100.9	101.1	100.8	100.5	100.4	101.0	100.6	100.4	100.1	99.9	99.7	98.8	98.0
62	Rubber manufactures, n.e.s.	104.7	104.7	104.6	104.1	103.8	104.4	104.3	104.7	104.0	104.0	104.1	104.8	105.3
64	Paper, paperboard, and articles of paper, pulp, and paperboard	90.3	90.0	89.9	89.6	89.1	88.6	88.4	87.8	87.7	87.6	87.0	85.0	85.0
66	Nonmetallic mineral manufactures, n.e.s.	106.3	106.1	105.8	105.9	105.6	106.2	106.2	106.0	106.5	106.6	107.0	107.0	107.2
68	Nonferrous metals	105.1	105.0	104.9	103.4	104.9	109.1	108.1	106.5	103.1	101.6	99.5	95.5	91.0
7	**Machinery and transport equipment**	97.3	97.4	97.3	97.4	97.4	97.5	97.6	97.9	97.8	97.8	97.6	97.5	97.4
71	Power generating machinery and equipment	112.3	112.4	112.4	113.7	113.7	115.2	115.2	14.7	115.0	115.0	115.0	115.1	115.1
72	Machinery specialized for particular industries	106.5	106.3	106.3	106.5	106.6	106.8	107.1	106.8	106.7	106.7	106.7	105.9	105.6
74	General industrial machines and parts, n.e.s., and machine parts	108.1	108.2	108.3	108.4	108.5	108.6	108.8	109.2	109.5	109.5	109.6	110.1	110.1
75	Computer equipment and office machines	67.8	67.8	67.7	67.8	67.6	67.1	67.1	66.8	66.7	66.2	65.5	65.3	64.8
76	Telecommunications and sound recording and reproducing apparatus and equipment	96.8	96.8	96.6	96.5	96.3	96.5	96.4	96.4	96.5	96.5	96.5	96.5	96.2
77	Electrical machinery and equipment	85.8	85.8	85.4	85.3	85.4	85.2	85.2	85.2	84.8	84.8	84.5	84.0	83.9
78	Road vehicles	103.9	104.1	104.0	103.9	104.0	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1
87	**Professional, scientific, and controlling instruments and apparatus**	106.4	106.5	106.9	106.9	106.6	107.0	107.0	107.0	106.8	106.9	107.1	106.9	106.9

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

[1995 = 100]

SITC Rev. 3	Industry	2000					2001							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
0	**Food and live animals**	91.7	91.2	91.5	90.2	92.4	92.8	91.3	93.0	90.8	89.8	88.5	87.7	87.5
01	Meat and meat preparations	98.9	99.0	95.5	95.7	97.3	95.5	96.1	100.4	102.6	104.4	104.3	107.4	107.0
03	Fish and crustaceans, mollusks, and other aquatic invertebrates	113.5	112.6	110.7	109.3	109.1	107.4	105.6	102.2	100.1	99.7	98.8	95.6	95.3
05	Vegetables, fruit, and nuts, prepared fresh or dry	97.6	97.8	100.9	96.8	104.5	106.1	101.7	109.5	102.3	100.5	97.1	97.8	97.6
07	Coffee, tea, cocoa, spices, and manufactures thereof	55.8	54.5	54.1	51.9	50.8	50.5	51.1	51.1	52.1	50.8	49.8	47.2	45.8
1	**Beverages and tobacco**	112.9	113.6	113.5	113.3	113.2	113.2	113.3	113.0	113.2	114.8	114.4	114.4	114.9
11	Beverages	109.9	110.7	110.6	110.7	110.6	110.5	110.8	110.4	110.7	112.5	112.2	112.2	112.2
2	**Crude materials, inedible, except fuels**	89.6	88.9	89.8	87.7	88.5	87.5	88.9	86.1	86.6	89.5	93.7	87.9	87.4
24	Cork and wood	102.2	99.7	101.6	97.7	101.7	95.6	97.6	97.5	102.9	114.1	132.7	117.6	119.0
25	Pulp and waste paper	81.4	82.0	83.4	83.4	83.4	84.3	82.9	80.4	76.8	72.5	68.3	65.5	62.2
28	Metalliferous ores and metal scrap	102.1	101.6	102.3	100.1	98.8	100.8	100.9	98.1	98.1	97.0	95.4	95.9	94.6
29	Crude animal and vegetable materials, n.e.s.	101.3	103.0	104.3	99.1	97.1	102.0	115.3	97.7	91.8	100.7	98.6	85.7	86.0
3	**Mineral fuels, lubricants, and related products**	172.1	189.0	186.3	188.4	180.2	177.1	169.9	154.1	153.1	158.2	153.5	143.1	144.7
33	Petroleum, petroleum products, and related materials	169.9	187.6	181.8	183.3	163.9	152.0	153.9	144.7	143.5	150.6	149.4	141.3	143.9
34	Gas, natural and manufactured	205.4	218.1	242.6	249.3	331.8	401.0	316.9	244.5	244.4	233.5	200.0	168.4	162.3
5	**Chemicals and related products, n.e.s.**	95.9	95.4	95.1	94.7	95.0	95.8	96.3	96.6	96.3	95.7	94.7	93.7	92.8
52	Inorganic chemicals	92.6	92.5	93.1	93.7	94.2	98.5	98.9	97.9	95.0	92.4	91.5	90.8	89.5
53	Dying, tanning, and coloring materials	88.6	87.9	87.0	86.9	86.9	88.8	89.6	89.1	88.4	87.9	86.1	86.5	86.6
54	Medicinal and pharmaceutical products	97.3	96.7	96.0	95.7	95.7	95.1	94.9	94.6	94.0	93.8	93.8	96.0	94.3
55	Essential oils; polishing and cleaning preparations	89.4	88.8	87.6	87.2	86.9	87.1	88.2	88.6	88.1	87.7	87.4	87.1	87.1
57	Plastics in primary forms	95.4	95.3	96.0	95.9	95.8	95.5	95.5	95.8	95.8	95.7	96.8	96.8	95.2
58	Plastics in nonprimary forms	80.9	80.8	80.0	79.5	78.6	80.3	84.5	84.4	83.2	83.1	82.1	80.7	80.7
59	Chemical materials and products, n.e.s.	100.0	101.1	100.4	100.4	100.6	101.8	101.6	101.9	101.4	100.5	100.3	99.6	99.5
6	**Manufactured goods classified chiefly by materials**	98.8	97.9	97.6	97.2	97.3	98.2	98.7	97.3	96.3	95.5	95.3	94.1	92.5
62	Rubber manufactures, n.e.s.	91.9	91.7	91.6	91.5	91.8	91.8	91.9	91.8	91.6	91.5	91.2	91.0	90.9
64	Paper, paperboard, and articles of paper, pulp, and paperboard	89.4	91.4	91.6	91.9	92.2	92.1	92.6	92.8	93.7	92.8	91.9	91.0	89.9
66	Nonmetallic mineral manufactures, n.e.s.	100.9	100.8	100.2	100.2	100.2	100.7	100.5	100.5	100.3	100.3	100.0	100.0	99.8
68	Nonferrous metals	118.7	114.4	115.7	114.3	114.4	121.0	124.0	116.4	110.9	107.0	106.1	101.7	92.9
69	Manufactures of metals, n.e.s.	95.4	95.4	95.2	94.9	95.0	95.3	95.0	94.9	95.7	95.7	95.6	94.9	95.0
7	**Machinery and transport equipment**	89.5	89.3	89.2	89.1	89.0	88.9	88.8	88.8	88.4	88.2	88.1	87.9	87.8
72	Machinery specialized for particular industries	96.5	95.9	95.7	95.4	95.3	95.9	96.6	96.3	96.0	95.8	95.7	95.1	95.2
74	General industrial machines and parts, n.e.s., and machine parts	96.4	96.1	95.5	95.3	95.4	95.9	95.9	95.6	95.1	94.7	94.6	94.6	94.4
75	Computer equipment and office machines	59.9	59.8	58.8	58.8	58.7	58.3	57.8	57.5	56.5	56.4	56.2	55.3	55.1
76	Telecommunications and sound recording and reproducing apparatus and equipment	84.2	84.1	83.9	83.7	83.6	83.0	82.8	82.8	82.1	82.0	82.0	82.1	82.0
77	Electrical machinery and equipment	82.7	82.6	82.7	82.5	82.2	82.1	81.8	82.5	82.1	82.0	81.7	81.8	81.7
78	Road vehicles	102.7	102.6	102.9	102.9	102.9	102.9	102.8	102.8	102.6	102.4	102.6	102.4	102.4
85	Footwear	101.0	100.9	100.8	100.7	100.6	101.0	101.2	101.5	101.1	101.0	100.8	100.9	101.2
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	92.1	91.4	91.4	91.0	90.7	91.2	91.3	91.4	90.6	90.6	90.3	89.7	89.7

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

[1995 = 100]

Category	2000					2001							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
ALL COMMODITIES	96.0	96.6	96.5	96.5	96.3	96.5	96.5	96.2	96.1	95.9	95.6	95.3	95.1
Foods, feeds, and beverages	82.8	85.3	85.8	86.7	87.4	88.2	86.6	87.3	86.6	86.2	86.8	87.9	88.9
Agricultural foods, feeds, and beverages	81.3	84.3	84.6	85.7	86.7	87.3	85.7	86.4	85.9	85.9	86.5	87.5	89.1
Nonagricultural (fish, beverages) food products	99.7	97.9	99.5	98.2	96.3	98.6	97.0	97.6	95.3	91.0	90.9	93.1	88.5
Industrial supplies and materials	95.4	96.6	96.2	95.8	95.0	95.0	94.9	93.9	93.8	93.1	92.3	90.6	89.9
Agricultural industrial supplies and materials	80.3	81.9	82.3	82.0	82.9	82.4	82.6	80.7	80.7	81.0	78.8	78.1	77.1
Fuels and lubricants	137.9	155.0	146.9	150.7	146.2	145.2	147.1	139.8	144.8	147.7	143.2	135.0	136.1
Nonagricultural supplies and materials, excluding fuel and building materials	91.7	91.4	91.6	90.7	90.1	90.4	90.1	89.8	89.2	88.0	87.6	86.4	85.5
Selected building materials	90.5	89.4	89.8	89.0	89.0	88.8	88.2	87.4	86.8	86.3	87.0	87.2	86.8
Capital goods	96.1	96.2	96.1	96.2	96.3	96.4	96.5	96.7	96.6	96.6	96.4	96.3	96.1
Electric and electrical generating equipment	99.7	99.9	99.5	99.6	99.7	100.0	100.5	100.1	100.5	100.9	100.9	100.9	100.5
Nonelectrical machinery	91.6	91.5	91.5	91.5	91.5	91.5	91.5	915.0	91.3	91.1	90.9	90.7	90.5
Automotive vehicles, parts, and engines	104.4	104.5	104.5	104.4	104.4	104.6	104.5	104.6	104.7	104.7	104.7	104.7	104.7
Consumer goods, excluding automotive	102.4	102.2	102.3	102.2	102.0	102.1	102.0	101.9	101.8	101.7	101.7	101.7	101.7
Nondurables, manufactured	102.4	102.2	102.4	102.2	102.0	102.0	101.5	101.3	101.2	101.2	101.3	101.0	101.0
Durables, manufactured	101.4	101.3	101.2	101.2	101.1	101.3	101.5	101.5	101.3	101.2	101.2	101.4	101.5
Agricultural commodities	80.9	83.5	83.9	84.7	85.7	86.1	84.9	85.1	84.7	84.7	84.8	85.5	86.6
Nonagricultural commodities	97.7	98.0	97.9	97.8	97.5	97.7	97.7	97.5	97.4	97.1	96.9	96.4	96.0

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

[1995 = 100]

Category	2000					2001							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
ALL COMMODITIES	99.9	101.0	100.6	100.6	100.0	100.0	99.3	97.8	97.2	97.5	97.1	95.6	95.4
Foods, feeds, and beverages	91.3	90.7	90.7	89.4	91.0	90.8	89.8	90.6	88.9	88.7	87.6	86.5	86.6
Agricultural foods, feeds, and beverages	83.2	82.5	83.0	81.9	84.2	84.3	83.4	85.6	83.8	83.5	82.2	81.9	82.0
Nonagricultural (fish, beverages) food products	112.9	112.5	111.2	109.5	109.1	107.9	106.7	103.9	102.4	102.1	101.4	98.6	98.4
Industrial supplies and materials	122.8	127.6	126.6	126.9	124.5	124.4	122.3	116.1	115.4	116.7	115.6	110.5	110.0
Fuels and lubricants	170.9	187.4	184.5	186.8	178.7	176.7	169.3	153.3	152.3	157.4	153.1	142.6	144.3
Petroleum and petroleum products	169.5	187.1	181.9	183.6	165.6	155.7	156.1	145.9	144.2	151.0	149.5	141.4	143.8
Paper and paper base stocks	87.6	89.8	90.4	90.6	91.0	91.0	91.2	90.8	91.1	89.0	87.1	85.3	83.2
Materials associated with nondurable supplies and materials	93.4	92.8	92.8	92.6	93.3	94.1	94.3	94.4	93.9	93.1	92.1	90.7	90.1
Selected building materials	100.2	98.7	99.3	97.2	99.1	95.3	96.0	96.2	98.3	104.8	116.3	107.9	107.7
Unfinished metals associated with durable goods	109.5	105.9	105.6	104.1	103.7	107.2	108.7	103.8	101.1	98.2	97.6	95.5	91.1
Nonmetals associated with durable goods	87.6	87.2	87.3	87.1	87.2	87.8	88.7	88.8	88.5	88.2	88.0	87.5	87.7
Capital goods	80.7	80.6	80.2	80.1	80.0	79.9	79.7	68,7	79.2	68,1	79.0	78.7	78.6
Electric and electrical generating equipment	93.7	93.5	93.4	93.1	93.1	93.1	92.9	95.2	94.7	94.9	94.9	94.7	94.4
Nonelectrical machinery	77.0	76.8	76.4	76.3	76.1	76.0	75.8	75.6	75.0	74.8	74.7	74.3	74.2
Automotive vehicles, parts, and engines	102.7	102.5	102.6	102.7	102.7	102.7	102.6	102.6	102.5	102.3	102.3	102.2	102.1
Consumer goods, excluding automotive	96.8	96.6	96.6	96.5	96.4	96.6	96.6	96.6	96.4	96.4	96.2	96.1	96.1
Nondurables, manufactured	100.0	99.8	99.8	99.8	99.6	92.9	99.8	100.1	100.0	100.0	99.8	99.9	100.0
Durables, manufactured	93.2	93.0	92.8	92.8	92.8	92.9	92.8	92.8	92.5	92.3	92.1	91.9	92.0
Nonmanufactured consumer goods	99.2	99.6	99.8	99.1	98.8	99.5	101.5	99.1	98.0	99.4	99.0	97.4	97.2

38. U.S. international price indexes for selected categories of services

[1995 = 100]

Category	1999			2000				2001	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June
Air freight (inbound)	86.2	87.9	90.7	88.9	88.4	88.5	87.4	86.5	84.0
Air freight (outbound)	92.8	92.7	91.7	91.7	92.8	92.6	92.6	92.6	90.5
Air passenger fares (U.S. carriers)	112.3	114.2	106.8	107.3	113.3	115.5	111.9	114.2	119.2
Air passenger fares (foreign carriers)	106.3	108.6	102.2	102.6	107.9	109.1	103.2	106.4	109.7
Ocean liner freight (inbound)	133.7	148.0	139.4	136.3	143.0	142.8	142.8	145.1	142.3

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

[1992 = 100]

Item	Quarterly indexes												
	1998			1999				2000				2001	
	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Business													
Output per hour of all persons	110.3	110.8	111.8	112.5	112.7	114.0	116.1	115.0	117.1	117.4	118.2	118.2	119.0
Compensation per hour	118.9	120.3	121.6	123.0	124.3	125.9	127.1	129.0	131.7	133.8	136.8	138.2	140.4
Real compensation per hour	104.1	105.0	105.7	106.4	106.8	107.4	107.6	108.1	109.6	110.3	112.0	112.3	112.9
Unit labor costs	107.8	108.6	108.8	109.3	110.4	110.5	109.5	112.1	112.5	114.0	115.7	117.2	117.9
Unit nonlabor payments	115.1	114.5	114.6	115.1	114.2	114.4	116.9	114.2	115.2	113.9	112.1	111.8	112.1
Implicit price deflator	110.5	110.7	110.9	111.4	111.8	111.9	112.2	112.9	113.5	113.9	114.4	115.2	115.8
Nonfarm business													
Output per hour of all persons	110.1	110.5	111.4	111.9	112.0	113.4	115.6	114.5	116.3	116.7	117.4	117.4	118.1
Compensation per hour	118.3	119.8	120.9	122.1	123.4	125.0	126.3	128.4	130.7	133.0	135.9	137.6	139.1
Real compensation per hour	103.6	104.5	105.1	105.6	106.0	106.6	107.0	107.6	108.8	109.7	111.3	111.5	111.9
Unit labor costs	107.5	108.4	108.6	109.0	110.2	110.2	109.3	112.1	112.4	114.0	115.8	117.2	117.8
Unit nonlabor payments	116.2	115.7	115.8	116.7	115.8	116.1	118.6	116.0	116.7	115.4	113.5	113.1	113.4
Implicit price deflator	110.7	111.0	111.2	111.8	112.2	112.4	112.7	113.5	114.0	114.5	114.9	115.7	116.2
Nonfinancial corporations													
Output per hour of all employees	111.7	113.1	113.7	114.6	115.3	116.6	118.3	117.7	119.7	120.9	121.4	121.5	122.4
Compensation per hour	115.2	116.7	117.8	119.0	120.3	121.8	123.0	124.7	127.2	129.3	132.3	134.1	136.1
Real compensation per hour	100.9	101.8	102.4	103.0	103.3	103.9	104.2	104.5	105.8	106.6	108.3	108.7	109.5
Total unit costs	102.6	102.5	103.2	103.2	103.7	104.0	103.9	105.9	106.0	106.6	108.2	109.6	110.7
Unit labor costs	103.1	103.2	103.6	103.9	104.3	104.5	104.0	106.0	106.2	106.9	109.0	110.3	111.2
Unit nonlabor costs	101.2	100.7	102.1	101.3	102.2	102.9	103.4	105.5	105.3	105.6	106.0	107.5	109.2
Unit profits	147.7	152.0	145.3	150.6	148.6	144.4	147.0	134.3	137.8	133.8	118.5	109.2	104.2
Unit nonlabor payments	113.0	113.8	113.1	113.9	114.0	113.5	114.5	112.9	113.6	112.8	109.2	107.9	107.9
Implicit price deflator	106.4	106.7	106.8	107.2	107.5	107.5	107.5	108.3	108.7	108.9	109.0	109.5	110.1
Manufacturing													
Output per hour of all persons	123.2	125.7	126.8	128.9	130.2	131.9	135.0	135.2	137.3	139.4	141.3	140.0	139.9
Compensation per hour	116.8	118.0	119.0	119.9	121.2	122.8	124.1	125.9	128.1	131.2	135.2	137.2	139.3
Real compensation per hour	102.2	103.0	103.4	103.7	104.1	104.7	105.2	105.5	106.6	108.3	110.7	111.3	112.1
Unit labor costs	94.8	93.9	93.9	93.0	93.1	93.1	91.9	93.2	93.3	94.1	95.7	98.0	99.6

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

[1996 = 100, unless otherwise indicated]

Item	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
Private business												
Productivity:												
Output per hour of all persons	45.6	63.0	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	104.8
Output per unit of capital services	110.4	111.1	101.5	99.3	96.1	97.7	98.5	100.3	99.7	100.0	100.5	100.1
Multifactor productivity	65.2	80.0	88.3	95.3	94.4	96.6	97.1	98.1	98.4	100.0	101.1	102.6
Output	27.5	42.0	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.6
Inputs:												
Labor input	54.0	61.0	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.7	106.4
Capital services	24.9	37.8	58.6	84.2	86.0	87.7	89.8	92.6	96.0	100.0	104.7	110.4
Combined units of labor and capital input	42.3	52.4	67.3	87.7	87.5	88.8	91.1	94.6	97.3	100.0	104.0	107.7
Capital per hour of all persons	41.3	56.7	74.7	90.8	95.0	97.0	96.8	96.3	97.6	100.0	101.5	104.7
Private nonfarm business												
Productivity:												
Output per hour of all persons	48.7	64.9	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	101.7	104.5
Output per unit of capital services	120.1	118.3	105.7	100.0	96.6	97.9	98.8	100.3	99.9	100.0	100.2	99.8
Multifactor productivity	69.1	82.6	90.5	95.6	94.7	96.6	97.1	98.1	98.6	100.0	100.9	102.4
Output	27.2	41.9	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.6
Inputs:												
Labor input	50.1	59.3	70.7	89.2	88.0	89.0	91.8	95.4	97.8	100.0	103.8	106.6
Capital services	22.6	35.5	56.4	83.5	85.4	87.3	89.5	92.3	95.9	100.0	104.9	110.8
Combined units of labor and capital input	39.3	50.7	65.9	87.3	87.1	88.4	91.0	94.4	97.2	100.0	104.2	108.0
Capital per hour of all persons	40.5	54.8	73.1	90.3	94.7	96.8	96.5	96.3	97.6	100.0	101.5	104.7
Manufacturing (1992 = 100)												
Productivity:												
Output per hour of all persons	41.8	54.2	70.1	92.8	95.0	100.0	101.9	105.0	109.0	112.8	117.1	124.3
Output per unit of capital services	124.3	116.5	100.9	101.6	97.5	100.0	101.1	104.0	105.0	104.5	105.6	106.5
Multifactor productivity	72.7	84.4	86.6	99.3	98.3	100.0	100.4	102.6	105.0	106.1	109.8	113.2
Output	38.5	56.5	75.3	97.3	95.4	100.0	103.3	108.7	113.4	116.9	123.5	130.7
Inputs:												
Hours of all persons	92.0	104.2	107.5	104.8	100.4	100.0	101.4	103.6	104.0	103.7	105.5	105.2
Capital services	30.9	48.5	74.7	95.8	97.9	100.0	102.2	104.5	108.0	111.9	116.9	122.8
Energy	51.3	85.4	92.5	99.9	100.1	100.0	103.7	107.3	109.5	107.0	103.9	109.2
Nonenergy materials	38.2	44.8	75.0	92.5	93.6	100.0	105.7	111.3	112.8	120.4	120.4	127.2
Purchased business services	28.2	48.8	73.7	92.5	92.1	100.0	103.0	105.1	110.0	108.9	114.2	116.8
Combined units of all factor inputs	52.9	67.0	87.0	98.0	97.0	100.0	102.9	106.0	107.9	110.2	112.5	115.5

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

[1992 = 100]

Item	1960	1970	1980	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000
Business													
Output per hour of all persons	48.8	67.0	80.4	95.2	96.3	100.5	101.9	102.6	105.4	107.8	110.8	113.8	116.9
Compensation per hour	13.7	23.5	54.2	90.7	95.0	102.5	104.5	106.7	110.1	113.5	119.6	125.1	132.8
Real compensation per hour	60.0	78.9	89.4	96.5	97.5	99.9	99.7	99.3	99.7	100.6	104.6	107.1	110.1
Unit labor costs	28.0	35.1	67.4	95.3	98.7	101.9	102.6	104.1	104.5	105.3	108.0	109.9	113.6
Unit nonlabor payments	25.2	31.6	61.5	93.9	97.0	102.5	106.4	109.4	113.3	117.1	115.1	115.1	113.9
Implicit price deflator	27.0	33.9	65.2	94.8	98.1	102.2	104.0	106.0	107.7	109.7	110.6	111.8	113.7
Nonfarm business													
Output per hour of all persons	51.9	68.9	82.0	95.3	96.4	100.5	101.8	102.8	105.4	107.5	110.4	113.2	116.2
Compensation per hour	14.3	23.7	54.6	90.5	95.0	102.2	104.3	106.6	109.8	113.1	119.0	124.2	132.0
Real compensation per hour	62.8	79.5	90.0	96.3	97.5	99.6	99.5	99.2	99.4	100.2	104.0	106.4	109.4
Unit labor costs	27.5	34.4	66.5	95.0	98.5	101.7	102.5	103.7	104.2	105.2	107.7	109.7	113.6
Unit nonlabor payments	24.6	31.3	60.5	93.6	97.1	103.0	106.9	110.4	113.5	118.0	116.3	116.8	115.4
Implicit price deflator	26.5	33.3	64.3	94.5	98.0	102.2	104.1	106.1	107.6	109.8	110.8	112.3	114.2
Nonfinancial corporations													
Output per hour of all employees	55.4	70.4	81.1	95.4	97.7	100.7	103.1	104.2	107.5	108.4	112.3	116.2	119.9
Compensation per hour	15.6	25.3	56.4	90.8	95.3	102.0	104.2	106.2	109.0	110.3	115.9	121.1	128.3
Real compensation per hour	68.3	84.7	93.1	96.7	97.8	99.5	99.4	98.8	98.7	97.8	101.3	103.7	106.4
Total unit costs	26.8	34.8	68.4	95.9	98.8	101.0	101.1	102.0	101.2	101.5	102.6	103.7	106.7
Unit labor costs	28.1	35.9	69.6	95.2	97.5	101.3	101.0	101.9	101.4	101.8	103.2	104.2	107.0
Unit nonlabor costs	23.3	31.9	65.1	98.0	102.1	100.2	101.3	102.2	100.6	100.9	101.2	102.5	105.6
Unit profits	50.2	44.4	68.8	94.3	93.0	113.2	131.7	139.0	152.2	156.9	148.9	147.6	131.0
Unit nonlabor payments	30.2	35.1	66.0	97.1	99.7	103.5	109.0	111.6	113.8	115.2	113.4	114.0	112.1
Implicit price deflator	28.8	35.6	68.4	95.8	98.3	102.1	103.7	105.1	105.5	106.2	106.6	107.4	108.7
Manufacturing													
Output per hour of all persons	41.8	54.2	70.1	92.8	95.0	101.9	105.0	109.0	112.8	117.1	124.3	129.6	46.3
Compensation per hour	14.9	23.7	55.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	122.0	130.1
Real compensation per hour	65.2	79.5	91.7	96.6	98.1	100.2	100.8	100.4	99.0	98.8	102.6	104.5	107.8
Unit labor costs	35.6	43.8	79.3	97.8	100.6	100.8	100.7	99.0	96.9	95.1	94.4	94.1	94.1
Unit nonlabor payments	26.8	29.3	80.2	99.7	99.0	100.9	102.8	106.9	109.9	109.6	104.4	105.5	–
Implicit price deflator	30.2	34.9	79.8	99.0	99.6	100.9	102.0	103.9	104.9	104.0	100.5	101.1	–

Dash indicates data not available.

42. Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Mining											
Copper ores	102	102.7	100.5	115.2	118.1	126.0	117.2	116.5	118.9	118.3	105.5
Gold and silver ores	104	122.3	127.4	141.6	159.8	160.8	144.2	138.3	158.5	187.6	200.0
Bituminous coal and lignite mining	122	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	188.0	192.2
Crude petroleum and natural gas	131	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	127.4	132.3
Crushed and broken stone	142	102.2	99.8	105.0	103.6	108.7	105.4	107.2	112.6	110.2	104.8
Manufacturing											
Meat products	201	97.1	99.6	104.6	104.3	101.2	102.3	97.4	102.5	102.3	102.2
Dairy products	202	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.3	119.3	114.1
Preserved fruits and vegetables	203	95.6	99.2	100.5	106.8	107.6	109.1	109.2	110.7	117.8	120.0
Grain mill products	204	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.2	126.2	130.4
Bakery products	205	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.1	100.8	107.5
Sugar and confectionery products	206	103.2	102.0	99.8	104.5	106.2	108.3	113.8	116.7	123.0	130.0
Fats and oils	207	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.2	137.3	156.1
Beverages	208	117.0	120.0	127.1	126.4	130.1	133.5	135.0	135.5	136.4	132.4
Miscellaneous food and kindred products	209	99.2	101.7	101.5	105.2	100.9	102.9	109.1	104.1	112.7	116.3
Cigarettes	211	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	152.2	135.8
Broadwoven fabric mills, cotton	221	103.1	111.2	110.3	117.8	122.1	134.0	137.3	131.2	136.2	138.7
Broadwoven fabric mills, manmade	222	111.3	116.2	126.2	131.7	142.5	145.3	147.6	162.2	168.6	171.9
Narrow fabric mills	224	96.5	99.6	112.9	111.4	120.1	118.9	126.3	110.8	117.7	122.4
Knitting mills	225	107.5	114.0	119.3	127.9	134.1	138.3	150.3	138.0	135.9	144.8
Textile finishing, except wool	226	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.3	99.1	101.0
Carpets and rugs	227	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	102.3	97.8
Yarn and thread mills	228	110.2	111.4	119.6	126.6	130.7	137.4	147.4	150.4	153.0	169.5
Miscellaneous textile goods	229	109.2	104.6	106.5	110.4	118.5	123.7	123.1	118.7	120.1	127.0
Men's and boys' furnishings	232	102.1	108.4	109.1	108.4	111.7	123.4	134.7	162.1	174.7	187.0
Women's and misses' outerwear	233	104.1	104.3	109.4	121.8	127.4	135.5	141.6	149.9	151.9	174.5
Women's and children's undergarments	234	102.1	113.7	117.4	124.5	138.0	161.3	174.5	208.9	216.4	293.0
Hats, caps, and millinery	235	89.2	91.1	93.6	87.2	77.7	84.3	82.2	87.1	99.5	108.7
Miscellaneous apparel and accessories	238	90.6	91.8	91.3	94.0	105.5	116.8	120.1	101.4	107.7	105.8
Miscellaneous fabricated textile products	239	99.9	100.7	107.5	108.5	107.8	109.2	105.6	119.2	117.2	129.2
Sawmills and planing mills	242	99.8	102.6	108.1	101.9	103.3	110.2	115.6	116.9	118.7	125.4
Millwork, plywood, and structural members	243	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.1	91.3	90.7
Wood containers	244	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.2	106.6	105.0
Wood buildings and mobile homes	245	103.1	103.0	103.1	103.8	98.3	97.0	96.7	100.3	99.2	96.8
Miscellaneous wood products	249	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.4	131.2	141.3
Household furniture	251	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.3	125.8	128.7
Office furniture	252	95.0	94.1	102.5	103.2	100.5	101.1	106.4	118.3	113.1	109.8
Public building and related furniture	253	119.8	120.2	140.6	161.0	157.4	173.3	181.5	214.9	207.6	210.9
Partitions and fixtures	254	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.1	125.6	127.0
Miscellaneous furniture and fixtures	259	103.5	102.1	99.5	103.6	104.7	110.0	113.2	110.7	121.9	122.7
Pulp mills	261	116.7	128.3	137.3	122.5	128.9	131.9	132.6	82.3	86.6	88.4
Paper mills	262	102.3	99.2	103.3	102.4	110.2	118.6	111.6	112.0	114.9	122.7
Paperboard mills	263	100.6	101.4	104.4	108.4	114.9	119.5	118.0	126.7	127.8	131.0
Paperboard containers and boxes	265	101.3	103.4	105.2	107.9	108.4	105.1	106.3	109.7	113.5	113.5
Miscellaneous converted paper products	267	101.4	105.3	105.5	107.9	110.6	113.3	113.6	119.5	122.9	127.3
Newspapers	271	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	83.6	86.3
Periodicals	272	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	115.0	115.1
Books	273	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.6	101.0	105.4
Miscellaneous publishing	274	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	119.5	128.3
Commercial printing	275	102.5	102.0	108.0	106.9	106.5	107.2	108.3	108.8	109.9	115.2
Manifold business forms	276	93.0	89.1	94.5	91.1	82.0	76.9	75.2	77.9	76.7	73.6
Greeting cards	277	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	104.2	103.9
Blankbooks and bookbinding	278	99.4	96.1	103.6	98.7	105.4	108.7	114.5	114.2	116.4	123.3
Printing trade services	279	99.3	100.6	112.0	115.3	111.0	116.7	126.2	123.3	126.7	120.5
Industrial inorganic chemicals	281	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.8	145.8	170.7
Plastics materials and synthetics	282	100.9	100.0	107.5	112.0	125.3	128.3	125.3	135.4	142.2	145.7
Drugs	283	103.8	104.5	99.5	99.7	104.6	108.7	112.5	112.4	104.3	104.8
Soaps, cleaners, and toilet goods	284	103.8	105.3	104.4	108.7	111.2	118.6	120.9	126.4	122.7	116.8
Paints and allied products	285	106.3	104.3	102.9	108.8	116.7	118.0	125.6	126.4	126.8	125.6
Industrial organic chemicals	286	101.4	95.8	94.6	92.2	99.9	98.6	99.0	111.2	105.7	111.3
Agricultural chemicals	287	104.7	99.5	99.5	103.8	105.0	108.5	110.0	119.8	117.5	106.9

See footnotes at end of table.

42. Continued—Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Miscellaneous chemical products	289	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.3	120.6	128.1
Petroleum refining	291	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	155.7	169.5
Asphalt paving and roofing materials	295	98.0	94.1	100.4	108.0	104.9	111.2	113.1	123.1	124.7	115.7
Miscellaneous petroleum and coal products	299	94.8	90.6	101.5	104.2	96.3	87.4	87.1	96.5	98.5	90.7
Tires and inner tubes	301	103.0	102.4	107.8	116.5	124.1	131.1	138.8	149.1	144.2	145.5
Hose and belting and gaskets and packing	305	96.1	92.4	97.8	99.7	102.7	104.6	107.4	113.5	112.7	114.0
Fabricated rubber products, n.e.c.	306	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.3	132.3	140.8
Miscellaneous plastics products, n.e.c.	308	105.7	108.3	114.4	116.7	120.8	121.0	124.7	129.9	133.8	141.2
Footwear, except rubber	314	101.1	94.4	104.2	105.2	113.0	117.1	126.1	121.4	110.9	131.6
Flat glass	321	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	114.0	127.7
Glass and glassware, pressed or blown	322	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.3	135.2	143.6
Products of purchased glass	323	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.1	122.0	134.0
Cement, hydraulic	324	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	134.1	139.6
Structural clay products	325	109.6	109.8	111.4	106.8	114.0	112.6	119.6	111.9	114.8	124.0
Pottery and related products	326	98.6	95.8	99.5	100.3	108.4	109.3	119.3	123.2	127.1	120.8
Concrete, gypsum, and plaster products	327	102.3	101.2	102.5	104.6	101.5	104.5	107.3	107.6	112.8	114.4
Miscellaneous nonmetallic mineral products	329	95.4	94.0	104.3	104.5	106.3	107.8	110.4	114.6	114.7	114.6
Blast furnace and basic steel products	331	109.7	107.8	117.0	133.6	142.4	142.6	147.5	155.0	151.0	148.9
Iron and steel foundries	332	106.1	104.5	107.2	112.1	113.0	112.7	116.2	120.8	121.1	126.2
Primary nonferrous metals	333	102.3	110.7	101.9	107.9	105.3	111.0	110.8	112.0	125.8	131.2
Nonferrous rolling and drawing	335	92.7	91.0	96.0	98.3	101.2	99.2	104.0	111.3	115.2	122.7
Nonferrous foundries (castings)	336	104.0	103.6	103.6	108.5	112.1	117.8	122.3	127.0	131.5	130.8
Miscellaneous primary metal products	339	113.7	109.1	114.5	111.3	134.5	152.2	149.6	136.2	140.0	150.4
Metal cans and shipping containers	341	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.3	163.8	160.3
Cutlery, handtools, and hardware	342	97.3	96.8	100.1	104.0	109.2	111.3	118.2	114.6	115.7	123.9
Plumbing and heating, except electric	343	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.3	130.3	126.9
Fabricated structural metal products	344	98.8	100.0	103.9	104.8	107.7	105.8	106.5	111.9	112.7	112.7
Metal forgings and stampings	346	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	125.9	130.3
Metal services, n.e.c.	347	104.7	99.4	111.6	120.6	123.0	127.7	128.4	124.4	127.3	127.9
Ordnance and accessories, n.e.c.	348	82.1	81.5	88.6	84.6	83.6	87.6	87.5	93.7	96.6	92.2
Miscellaneous fabricated metal products	349	97.5	97.4	101.1	102.0	103.2	106.6	108.3	107.7	111.5	110.3
Engines and turbines	351	106.5	105.8	103.3	109.2	122.3	122.7	136.6	136.9	145.9	151.2
Farm and garden machinery	352	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.2	148.5	125.5
Construction and related machinery	353	107.0	99.1	102.0	108.2	117.7	122.1	123.3	132.5	137.5	137.2
Metalworking machinery	354	101.1	96.4	104.3	107.4	109.9	114.8	114.9	119.2	119.8	123.5
Special industry machinery	355	107.5	108.3	106.0	113.6	121.2	132.3	134.0	131.7	125.1	139.3
General industrial machinery	356	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.0	111.2	111.4
Computer and office equipment	357	138.1	149.6	195.7	258.6	328.6	469.4	681.3	960.2	1350.6	1840.2
Refrigeration and service machinery	358	103.6	100.7	104.9	108.6	110.7	112.7	114.7	115.0	121.4	123.2
Industrial machinery, n.e.c.	359	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.3	127.5	134.3
Electric distribution equipment	361	106.3	106.5	119.6	122.2	131.8	143.0	143.9	142.8	147.5	146.6
Electrical industrial apparatus	362	107.7	107.1	117.1	132.9	134.9	150.8	154.3	164.2	162.3	162.9
Household appliances	363	105.8	106.5	115.0	123.4	131.4	127.3	127.4	142.9	150.3	150.2
Electric lighting and wiring equipment	364	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.8	129.2	132.4
Communications equipment	366	123.8	129.1	154.9	163.0	186.4	200.6	229.5	275.3	276.0	327.1
Electronic components and accessories	367	133.4	154.7	189.3	217.9	274.1	401.5	514.9	613.4	768.0	107.0
Miscellaneous electrical equipment & supplies	369	90.6	98.6	101.3	108.2	110.5	114.1	123.1	128.3	135.3	140.7
Motor vehicles and equipment	371	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.3	125.2	136.5
Aircraft and parts	372	98.9	108.2	112.3	115.2	109.6	107.9	113.0	114.7	140.1	139.6
Ship and boat building and repairing	373	103.7	96.3	102.7	106.2	103.8	98.0	99.2	105.3	102.0	112.6
Railroad equipment	374	141.1	146.9	147.9	151.0	152.5	150.0	148.3	184.2	189.1	205.1
Motorcycles, bicycles, and parts	375	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.4	127.7	121.4
Guided missiles, space vehicles, parts	376	116.5	110.5	110.5	122.1	118.9	121.0	129.4	136.5	142.4	158.2
Search and navigation equipment	381	112.7	118.9	122.1	129.1	132.1	149.5	142.2	149.5	149.1	139.7
Measuring and controlling devices	382	106.4	113.1	119.9	124.0	133.8	146.4	150.5	142.4	143.5	152.9
Medical instruments and supplies	384	116.9	118.7	123.5	127.3	126.7	131.5	139.8	147.4	158.6	160.2
Ophthalmic goods	385	121.2	125.1	144.5	157.8	160.6	167.2	188.2	196.3	199.1	229.5
Photographic equipment & supplies	386	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.5	124.8	147.2
Jewelry, silverware, and plated ware	391	99.3	95.8	96.7	96.7	99.5	100.2	102.6	114.2	113.1	133.9
Musical instruments	393	97.1	96.9	96.0	95.6	88.7	86.9	78.8	82.9	81.4	86.4

See footnotes at end of table.

42. Continued—Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Toys and sporting goods	394	108.1	109.7	104.9	114.2	109.7	113.6	119.9	125.7	131.6	124.0
Pens, pencils, office, and art supplies	395	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.5	132.5	129.3
Costume jewelry and notions	396	105.3	106.7	110.8	115.8	129.0	143.7	142.2	118.0	131.2	150.2
Miscellaneous manufactures	399	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.4	108.5	111.2
Transportation											
Railroad transportation	4011	118.5	127.8	139.6	145.4	150.3	156.2	167.0	169.8	173.3	182.3
Trucking, except local [1]	4213	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	129.9	131.6
U.S. postal service [2]	431	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.7	110.3
Air transportation [1]	4512,13,22 (pts.)	92.9	92.5	96.9	100.2	105.7	108.6	111.1	111.6	110.7	108.3
Utitlities											
Telephone communications	481	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	170.3	189.1
Radio and television broadcasting	483	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.1	100.7	101.8
Cable and other pay TV services	484	92.6	87.6	88.5	85.3	83.4	84.5	81.9	84.7	83.5	81.5
Electric utilities	491,3 (pt.)	110.1	113.4	115.2	120.6	126.8	135.0	146.5	150.5	160.1	162.7
Gas utilities	492,3 (pt.)	105.8	109.6	111.1	121.8	125.6	137.1	145.9	158.6	144.4	145.0
Trade											
Lumber and other building materials dealers	521	104.3	102.3	106.4	111.4	118.9	117.8	121.6	121.8	134.2	142.3
Paint, glass, and wallpaper stores	523	106.8	100.4	107.6	114.2	127.8	130.9	133.5	134.8	163.5	163.2
Hardware stores	525	115.3	108.7	115.2	113.9	121.2	115.5	119.5	119.0	137.8	149.3
Retail nurseries, lawn and garden supply stores	526	84.7	89.3	101.2	107.1	117.0	117.4	136.4	127.5	133.7	151.2
Department stores	531	96.8	102.0	105.4	110.4	113.4	115.9	123.5	128.8	135.5	147.4
Variety stores	533	154.4	158.8	173.7	191.5	197.4	211.3	238.4	257.7	268.7	319.5
Miscellaneous general merchandise stores	539	118.6	124.8	140.4	164.2	164.8	167.3	167.6	170.3	185.7	195.2
Grocery stores	541	96.6	96.3	96.5	96.0	95.4	93.9	92.1	91.7	92.2	95.4
Meat and fish (seafood) markets	542	98.9	90.8	99.2	97.7	95.7	94.4	86.4	90.8	95.7	99.3
Retail bakeries	546	91.2	96.7	96.5	86.5	85.3	83.0	75.9	67.6	68.1	83.8
New and used car dealers	551	106.7	104.9	107.4	108.6	109.7	108.1	109.1	108.8	108.7	111.9
Auto and home supply stores	553	103.6	100.2	101.6	100.8	105.3	109.1	108.2	108.1	113.0	116.0
Gasoline service stations	554	103.0	104.8	110.2	115.9	121.1	127.2	126.1	126.1	133.9	140.6
Men's and boy's wear stores	561	115.6	121.9	122.3	119.5	121.8	121.4	129.8	136.3	145.2	154.6
Women's clothing stores	562	106.6	111.2	123.6	130.0	130.4	139.9	154.2	157.3	176.1	190.5
Family clothing stores	565	107.8	111.5	118.6	121.5	127.7	141.8	146.9	150.2	153.1	156.5
Shoe stores	566	107.9	107.8	115.5	117.3	130.7	139.2	151.9	148.4	145.0	151.1
Furniture and homefurnishings stores	571	104.6	105.4	113.9	113.3	114.7	117.4	123.6	124.2	127.2	134.1
Household appliance stores	572	104.3	106.7	115.5	118.0	121.5	138.4	140.7	153.5	181.4	183.9
Radio, television, computer, and music stores	573	121.1	129.8	139.9	154.5	179.1	199.3	208.1	218.4	260.3	314.6
Eating and drinking places	581	104.5	103.8	103.4	103.8	102.1	102.0	100.6	101.6	102.0	104.3
Drug and proprietary stores	591	106.3	108.0	107.6	109.5	109.9	111.1	113.9	119.7	125.6	129.8
Liquor stores	592	105.9	106.9	109.6	101.8	100.1	104.7	113.8	109.9	116.5	114.6
Used merchandise stores	593	103.0	102.3	115.7	116.8	119.5	120.6	132.7	140.3	163.6	181.9
Miscellaneous shopping goods stores	594	107.2	109.0	107.5	111.5	117.1	123.1	125.3	129.1	138.8	145.2
Nonstore retailers	596	111.1	112.5	126.5	132.2	149.0	152.4	173.3	186.5	208.0	222.2
Fuel dealers	598	84.5	85.3	84.2	91.8	99.0	111.4	112.4	109.0	105.8	115.1
Retail stores, n.e.c.	599	114.5	104.0	112.5	118.1	125.8	127.0	140.2	147.8	157.3	161.0
Finance and services											
Commercial banks	602	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	132.6	135.2
Hotels and motels	701	96.2	99.3	108.0	106.5	109.9	110.5	110.0	108.2	111.6	113.5
Laundry, cleaning, and garment services	721	102.3	99.9	99.3	99.9	105.0	106.6	109.8	109.0	116.2	121.8
Photographic studios, portrait	722	98.2	92.1	95.8	101.8	108.3	116.2	110.7	114.1	121.6	105.1
Beauty shops	723	97.5	95.8	100.9	97.0	101.1	104.8	107.6	108.5	110.5	113.3
Barber shops	724	100.7	94.9	113.2	121.9	118.8	115.7	128.8	150.4	157.4	138.0
Funeral services and crematories	726	91.2	89.9	103.8	98.7	104.3	100.2	97.6	101.9	104.2	99.7
Automotive repair shops	753	107.9	100.1	105.1	105.7	114.3	121.6	116.1	117.2	124.9	127.6
Motion picture theaters	783	118.1	118.2	114.8	113.8	110.4	105.0	104.1	103.4	106.1	110.5

[1] Refers to output per employee

[2] Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

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

Country	Annual average		1999				2000			
	1999	2000	I	II	III	IV	I	II	III	IV
United States	4.2	4.0	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.0
Canada	6.8	5.8	7.1	7.1	6.8	6.2	6.0	5.8	5.8	5.7
Australia	7.2	6.6	7.5	7.4	7.1	7.0	6.8	6.7	6.3	6.5
Japan[1]	4.7	4.8	4.7	4.8	4.8	4.7	4.8	4.7	4.7	4.8
France[1]	11.2	9.7	11.4	11.3	11.2	10.8	10.2	9.7	9.6	9.2
Germany[1]	8.7	8.3	8.8	8.8	8.8	8.7	8.4	8.3	8.2	8.1
Italy[1,2]	11.5	10.7	11.8	11.7	11.5	11.2	11.3	10.8	10.6	10.1
Sweden[1]	7.1	5.9	7.1	7.0	7.1	7.1	6.7	6.0	5.6	5.2
United Kingdom[1]	6.1	–	6.2	6.1	5.9	5.9	5.8	5.5	5.4	–

[1] Preliminary for 2000 for Japan, France, Germany (unified), Italy, and Sweden and for 1999 onward for 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, 1959–2000* (Bureau of Labor Statistics, Mar. 16, 2001).

Dash indicates data not available.

44. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Civilian labor force										
United States[1]	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863
Canada	14,128	14,168	14,299	14,387	14,500	14,650	14,936	15,216	15,513	15,745
Australia	8,490	8,562	8,619	8,776	9,001	9,127	9,221	9,347	9,470	9,682
Japan	64,280	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,090	66,990
France	24,470	24,570	24,640	24,780	24,830	25,090	25,210	25,540	25,860	–
Germany[2]	39,130	39,040	39,140	39,210	39,100	39,180	39,480	39,520	39,630	–
Italy	22,940	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130	–
Netherlands	6,780	6,940	7,050	7,200	7,230	7,440	7,510	7,670	7,750	–
Sweden	4,591	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430	–
United Kingdom	28,610	28,410	28,310	28,280	28,480	28,620	28,760	28,870	29,090	–
Participation rate[3]										
United States[1]	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2
Canada	66.7	65.9	65.5	65.2	64.9	64.7	65.0	65.4	65.8	65.9
Australia	64.1	63.9	63.6	63.9	64.6	64.6	64.3	64.4	64.2	64.7
Japan	63.2	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4	62.0
France	55.9	55.8	55.6	55.5	55.3	55.5	55.3	55.7	56.0	–
Germany[2]	58.9	58.3	58.0	57.6	57.3	57.4	57.7	57.7	57.9	–
Italy	47.7	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8	–
Netherlands	56.8	57.7	58.2	59.0	58.9	60.3	60.6	61.4	61.5	–
Sweden	67.0	65.7	64.5	63.7	64.1	64.0	63.3	62.8	63.2	–
United Kingdom	63.7	63.1	62.8	62.5	62.7	62.7	62.8	62.7	62.9	–
Employed										
United States[1]	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208
Canada	12,747	12,672	12,770	13,027	13,271	13,380	13,705	14,068	14,456	14,827
Australia	7,676	7,637	7,680	7,921	8,235	8,344	8,429	8,597	8,785	9,043
Japan	62,920	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,920	63,790
France	22,120	22,020	21,740	21,730	21,910	21,960	22,090	22,520	22,970	–
Germany[2]	36,920	36,420	36,030	35,890	35,900	35,680	35,570	35,830	36,170	–
Italy	21,360	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460	–
Netherlands	6,380	6,540	6,590	6,680	6,730	6,970	7,110	7,360	7,490	–
Sweden	4,447	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117	–
United Kingdom	26,090	25,530	25,340	25,550	26,000	26,280	26,740	27,050	27,330	–
Employment-population ratio[4]										
United States[1]	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5
Canada	60.2	58.9	58.5	59.0	59.4	59.1	59.7	60.4	61.3	62.1
Australia	57.9	57.0	56.6	57.7	59.1	59.1	58.8	59.2	59.6	60.4
Japan	61.8	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4	59.0
France	50.6	50.0	49.0	48.7	48.8	48.5	48.5	49.1	49.8	–
Germany[2]	55.5	54.4	53.4	52.8	52.6	52.2	52.0	52.3	52.8	–
Italy	44.5	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3	–
Netherlands	53.4	54.4	54.4	54.8	54.9	56.5	57.4	58.9	59.4	–
Sweden	64.9	62.0	58.5	57.6	58.3	57.7	56.9	57.6	58.7	–
United Kingdom	58.0	56.7	56.2	56.5	57.2	57.6	58.3	58.7	59.1	–
Unemployed										
United States[1]	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655
Canada	1,381	1,496	1,530	1,359	1,229	1,271	1,230	1,148	1,058	918
Australia	814	925	939	856	766	783	791	750	685	638
Japan	1,360	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170	3,200
France	2,350	2,550	2,900	3,060	2,920	3,130	3,130	3,020	2,890	–
Germany[2]	2,210	2,620	3,110	3,320	3,200	3,500	3,910	3,690	3,460	–
Italy	1,580	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670	–
Netherlands	400	390	460	520	510	470	400	310	260	–
Sweden	144	255	415	426	404	440	445	368	313	–
United Kingdom	2,520	2,880	2,970	2,730	2,480	2,340	2,020	1,820	1,760	–
Unemployment rate										
United States[1]	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
Canada	9.8	10.6	10.7	9.4	8.5	8.7	8.2	7.5	6.8	5.8
Australia	9.6	10.8	10.9	9.7	8.5	8.6	8.6	8.0	7.2	6.6
Japan	2.1	2.2	2.5	2.9	3.2	3.4	3.4	4.1	4.7	4.8
France	9.6	10.4	11.8	12.3	11.8	12.5	12.4	11.8	11.2	9.7
Germany[2]	5.6	6.7	7.9	8.5	8.2	8.9	9.9	9.3	8.7	–
Italy	6.9	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5	10.7
Netherlands	5.9	5.6	6.5	7.2	7.1	6.3	5.3	4.0	3.4	–
Sweden	3.1	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1	5.9
United Kingdom	8.8	10.1	10.5	9.7	8.7	8.2	7.0	6.3	6.1	–

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2000*, Mar. 16, 2001, on the Internet at **http://stats.bls.gov/flsdata.htm**.

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

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

NOTE: See Notes on the data for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden.

Dash indicates data are not available.

p = preliminary.

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

[1992 = 100]

Item and country	1960	1970	1980	1988	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999
Output per hour														
United States	–	–	70.5	96.9	95.7	96.9	97.8	102.1	107.3	113.8	117.0	121.1	127.0	134.8
Canada	38.7	56.6	75.1	90.9	93.7	95.7	95.3	104.5	109.9	111.0	109.5	112.8	112.5	115.2
Japan	14.0	38.0	63.9	84.8	89.5	95.4	99.4	100.5	101.8	109.3	115.8	121.4	120.4	124.1
Belgium	18.0	32.9	65.4	92.0	96.9	96.8	99.1	102.5	108.4	113.2	115.5	122.4	123.6	124.5
Denmark	29.9	52.7	90.3	94.1	99.6	99.1	99.6	104.5	–	–	–	–	–	–
France	21.8	43.0	66.5	87.5	91.9	93.5	96.9	100.6	108.5	114.5	115.0	122.6	124.0	128.9
Germany	29.2	52.0	77.2	91.5	94.6	99.0	99.0	101.6	110.1	113.2	116.8	122.4	126.7	128.5
Italy	20.2	37.9	65.9	86.7	89.4	92.5	95.2	102.9	105.6	109.3	109.5	111.5	111.1	112.9
Netherlands	18.6	38.1	69.2	93.7	97.1	98.6	99.6	101.4	112.7	117.7	119.7	125.7	127.8	–
Norway	36.7	57.8	76.7	92.1	94.6	96.6	97.5	100.6	101.4	102.0	102.0	103.0	103.9	103.9
Sweden	27.3	52.2	73.1	90.5	93.2	94.6	95.5	107.3	119.4	121.9	124.5	133.0	135.6	139.5
United Kingdom	31.2	44.7	56.1	82.3	86.2	88.3	92.2	104.0	106.8	104.8	103.2	104.0	104.6	109.2
Output														
United States	–	–	75.8	103.2	102.4	101.6	98.3	103.5	111.1	118.4	121.3	127.7	133.5	139.3
Canada	34.2	60.6	86.0	110.1	112.6	108.6	99.0	104.6	113.2	118.1	119.8	128.1	133.1	141.3
Japan	10.7	38.8	59.9	84.6	90.2	96.3	101.4	96.0	95.4	100.6	106.7	111.1	103.6	103.9
Belgium	30.7	57.6	78.2	93.3	99.1	101.0	100.7	97.0	101.4	104.2	105.1	109.9	111.8	113.8
Denmark	40.8	68.0	91.3	100.8	104.3	102.7	101.7	99.0	109.3	114.7	109.7	112.6	115.3	111.5
France	31.0	64.1	88.7	92.2	97.2	99.1	99.8	95.7	100.3	104.9	104.6	109.7	111.5	114.2
Germany	41.5	70.9	85.3	90.9	94.0	99.1	102.3	92.5	95.2	95.3	93.5	96.3	100.9	102.2
Italy	21.9	45.8	80.4	94.5	98.1	99.6	99.2	96.4	102.2	107.2	105.6	108.3	110.3	111.4
Netherlands	31.7	59.5	77.4	92.8	96.9	100.1	100.6	98.2	104.2	107.8	108.4	114.1	116.6	–
Norway	56.5	89.1	103.6	105.3	101.3	100.2	98.3	102.7	106.7	109.0	110.1	115.7	117.6	114.0
Sweden	45.9	80.7	90.7	109.8	110.9	110.1	104.1	101.9	117.1	128.4	131.1	138.6	144.6	150.7
United Kingdom	67.7	90.3	87.2	101.4	105.4	105.3	100.0	101.4	106.1	107.8	108.2	109.6	109.9	109.7
Total hours														
United States	92.1	104.4	107.5	106.6	107.1	104.8	100.4	101.4	103.6	104.0	103.7	105.5	105.2	103.3
Canada	88.3	107.1	114.6	121.2	120.2	113.5	103.9	100.1	103.0	106.4	109.4	113.5	118.3	122.7
Japan	76.3	102.3	93.8	99.8	100.8	100.9	102.0	95.6	93.7	92.0	92.2	91.5	86.1	83.8
Belgium	170.7	174.7	119.7	101.5	102.3	104.3	101.5	94.7	93.6	92.0	91.0	89.8	90.5	91.5
Denmark	136.5	129.0	101.1	107.2	104.7	103.7	102.1	94.8	–	–	–	–	–	–
France	142.3	149.0	133.3	105.4	105.8	105.9	103.0	95.1	92.4	91.6	91.0	89.5	89.9	88.6
Germany	142.3	136.3	110.5	99.3	99.3	100.1	103.3	91.0	86.5	84.2	80.1	78.7	79.6	79.5
Italy	108.7	120.9	122.0	108.9	109.7	107.7	104.2	93.6	96.7	98.0	96.5	97.1	99.3	98.6
Netherlands	170.6	156.2	111.8	99.0	99.8	101.5	101.0	96.9	92.4	91.6	90.5	90.8	91.2	–
Norway	154.0	154.3	135.0	114.3	107.1	103.7	100.8	102.1	105.2	106.9	107.9	112.3	113.2	109.8
Sweden	168.3	154.7	124.0	121.4	119.0	116.4	109.0	94.9	98.1	105.3	105.3	104.2	106.6	108.0
United Kingdom	217.3	202.1	155.3	123.2	122.3	119.2	108.5	97.5	99.4	102.9	104.8	105.4	105.0	100.5
Compensation per hour														
United States	14.9	23.7	55.6	84.0	86.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	123.2
Canada	9.9	17.0	47.7	77.8	82.5	89.5	94.7	99.6	100.4	103.6	102.8	106.7	110.8	110.8
Japan	4.3	16.5	58.6	79.2	84.2	90.7	95.9	104.6	106.7	109.5	110.9	113.9	115.8	117.7
Belgium	5.4	13.7	52.5	81.1	85.9	90.1	97.3	104.8	106.1	109.2	112.0	115.2	116.0	116.0
Denmark	4.6	13.3	49.6	82.9	87.7	92.7	95.9	104.6	–	–	–	–	–	–
France	4.3	10.3	40.8	81.6	86.0	90.6	96.2	103.0	105.6	108.4	110.2	113.0	114.9	119.3
Germany	8.1	20.7	53.6	79.1	83.2	89.4	92.1	106.1	112.3	118.5	125.2	128.0	128.9	130.8
Italy	1.6	4.7	28.4	69.3	75.9	84.4	93.6	107.5	107.8	112.8	120.3	125.4	123.0	126.5
Netherlands	6.4	20.2	64.4	87.7	88.5	90.8	95.2	103.7	108.2	110.6	113.2	115.8	118.3	–
Norway	4.7	11.8	39.0	83.3	87.2	92.3	97.5	101.5	104.4	109.2	113.6	118.7	126.2	133.4
Sweden	4.1	10.7	37.3	71.8	79.4	87.8	95.5	97.2	99.8	106.3	114.2	119.7	123.3	127.4
United Kingdom	3.1	6.3	33.2	67.7	72.9	80.9	90.5	104.3	106.5	107.4	108.2	111.4	117.0	122.6
Unit labor costs: National currency basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	25.6	30.1	63.2	85.2	88.0	92.3	99.7	97.6	94.3	95.5	95.9	95.9	98.8	98.1
Japan	30.9	43.3	91.7	93.4	94.0	95.0	96.5	104.1	104.9	100.1	95.8	93.8	96.2	94.9
Belgium	30.1	41.7	80.3	88.1	88.7	93.0	98.1	102.3	97.9	96.4	95.6	93.3	93.7	93.4
Denmark	15.4	25.2	55.0	88.2	88.1	93.6	96.3	100.1	93.0	93.8	100.9	102.0	102.8	108.9
France	19.5	24.0	61.3	93.3	93.6	96.8	99.3	102.4	97.3	94.7	95.9	92.2	92.7	92.6
Germany	27.8	39.8	69.4	86.5	87.9	90.3	93.1	104.5	102.0	104.7	107.2	104.6	101.8	101.8
Italy	7.9	12.4	43.1	79.9	84.9	91.3	98.4	104.4	102.1	103.2	109.9	112.4	110.8	112.0
Netherlands	34.4	52.9	93.0	93.6	91.1	92.1	95.5	102.3	96.0	94.0	94.6	92.2	92.5	–
Norway	12.9	20.4	50.8	90.4	92.2	95.6	100.0	100.9	102.9	107.1	111.4	115.2	121.5	128.5
Sweden	15.0	20.6	51.0	79.4	85.1	92.8	100.0	90.6	83.6	87.2	91.7	90.0	90.9	91.3
United Kingdom	9.8	14.1	59.1	82.2	84.6	91.6	98.2	100.3	99.7	102.5	104.8	107.1	111.9	112.3
Unit labor costs: U.S. dollar basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	32.0	34.8	65.3	83.6	89.8	95.6	105.1	91.4	83.4	84.1	85.0	83.6	80.5	79.8
Japan	10.9	15.3	51.3	92.4	86.3	83.1	90.9	118.8	130.1	135.1	111.7	98.3	93.1	105.7
Belgium	19.4	27.0	88.3	77.0	72.3	89.5	92.3	95.1	94.2	105.2	99.3	83.7	83.0	79.3
Denmark	13.5	20.3	58.9	79.0	72.6	91.3	90.8	93.2	88.3	101.1	105.0	93.1	92.6	94.1
France	21.1	23.0	76.8	82.9	77.6	94.1	93.1	95.6	92.9	100.6	99.2	83.6	83.2	79.6
Germany	10.4	17.1	59.6	76.9	73.0	87.3	87.5	98.6	98.2	114.1	111.3	94.1	90.3	86.6
Italy	15.6	24.4	62.0	75.6	76.2	93.8	97.6	81.8	78.1	78.0	87.8	81.3	78.6	75.9
Netherlands	16.0	25.7	82.3	83.2	75.5	88.9	89.8	96.8	92.8	103.0	98.6	83.0	82.0	–
Norway	11.3	17.8	63.9	86.1	82.9	95.0	95.7	88.3	90.7	105.0	107.1	101.1	100.0	102.2
Sweden	16.9	23.1	70.3	75.4	76.8	91.3	96.3	67.7	63.1	71.2	79.7	68.6	66.6	64.3
United Kingdom	15.6	19.2	77.8	82.9	78.5	92.5	98.2	85.3	86.5	91.6	92.6	99.3	105.0	102.8

NOTE: Data for Germany for years before 1992 are for the former West Germany. Data for 1992 onward are for unified Germany. Dash indicates data not available.

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

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]
PRIVATE SECTOR[5]												
Total cases	8.6	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3
Lost workday cases	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0
Lost workdays	76.1	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	10.9	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3
Lost workday cases	5.6	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9	3.4
Lost workdays	101.8	100.9	112.2	108.3	126.9	–	–	–	–	–	–	–
Mining												
Total cases	8.8	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9	4.4
Lost workday cases	5.1	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9	2.7
Lost workdays	152.1	137.2	119.5	129.6	204.7	–	–	–	–	–	–	–
Construction												
Total cases	14.6	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8	8.6
Lost workday cases	6.8	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0	4.2
Lost workdays	142.2	143.3	147.9	148.1	161.9	–	–	–	–	–	–	–
General building contractors:												
Total cases	14.0	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4	8.0
Lost workday cases	6.4	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9	3.7
Lost workdays	132.2	137.3	137.6	132.0	142.7	–	–	–	–	–	–	–
Heavy construction, except building:												
Total cases	15.1	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2	7.8
Lost workday cases	7.0	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1	3.8
Lost workdays	162.3	147.1	144.6	160.1	165.8	–	–	–	–	–	–	–
Special trades contractors:												
Total cases	14.7	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1	8.9
Lost workday cases	7.0	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1	4.4
Lost workdays	141.1	144.9	153.1	151.3	168.3	–	–	–	–	–	–	–
Manufacturing												
Total cases	13.1	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7	9.2
Lost workday cases	5.7	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7	4.6
Lost workdays	107.4	113.0	120.7	121.5	124.6	–	–	–	–	–	–	–
Durable goods:												
Total cases	14.2	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7	10.1
Lost workday cases	5.9	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0	4.8
Lost workdays	111.1	116.5	123.3	122.9	126.7	–	–	–	–	–	–	–
Lumber and wood products:												
Total cases	19.5	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2	13.0
Lost workday cases	10.0	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8	6.7
Lost workdays	189.1	177.5	172.5	172.0	165.8	–	–	–	–	–	–	–
Furniture and fixtures:												
Total cases	16.6	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4	11.5
Lost workday cases	7.3	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7	5.9
Lost workdays	115.7	–	–	–	128.4	–	–	–	–	–	–	–
Stone, clay, and glass products:												
Total cases	16.0	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8	10.7
Lost workday cases	7.5	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0	5.4
Lost workdays	141.0	149.8	160.5	156.0	152.2	–	–	–	–	–	–	–
Primary metal industries:												
Total cases	19.4	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0	12.9
Lost workday cases	8.2	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0	6.3
Lost workdays	161.3	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–
Fabricated metal products:												
Total cases	18.8	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9	12.6
Lost workday cases	8.0	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5	6.0
Lost workdays	138.8	147.6	155.7	146.6	144.0	–	–	–	–	–	–	–
Industrial machinery and equipment:												
Total cases	12.1	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5	8.5
Lost workday cases	4.7	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0	3.7
Lost workdays	82.8	86.8	88.9	86.6	87.7	–	–	–	–	–	–	–
Electronic and other electrical equipment:												
Total cases	8.0	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9	5.7
Lost workday cases	3.3	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8	2.8
Lost workdays	64.6	77.5	79.4	83.0	81.2	–	–	–	–	–	–	–
Transportation equipment:												
Total cases	17.7	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6	13.7
Lost workday cases	6.6	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6	6.4
Lost workdays	134.2	138.6	153.7	166.1	186.6	–	–	–	–	–	–	–
Instruments and related products:												
Total cases	6.1	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0	4.0
Lost workday cases	2.6	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9	1.8
Lost workdays	51.5	55.4	57.8	64.4	65.3	–	–	–	–	–	–	–
Miscellaneous manufacturing industries:												
Total cases	11.3	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1	8.4
Lost workday cases	5.1	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9	4.0
Lost workdays	91.0	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–

See footnotes at end of table.

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

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]
Nondurable goods:												
Total cases	11.4	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2	7.8
Lost workday cases	5.4	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3	4.2
Lost workdays	101.7	107.8	116.9	119.7	121.8	–	–	–	–	–	–	–
Food and kindred products:												
Total cases	18.5	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6	12.7
Lost workday cases	9.2	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5	7.3
Lost workdays	169.7	174.7	202.6	207.2	211.9	–	–	–	–	–	–	–
Tobacco products:												
Total cases	9.3	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4	5.5
Lost workday cases	2.9	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.4	2.2
Lost workdays	53.0	64.2	62.3	52.0	42.9	–	–	–	–	–	–	–
Textile mill products:												
Total cases	9.6	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	7.4	6.4
Lost workday cases	4.0	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4	3.2
Lost workdays	78.8	81.4	85.1	88.3	87.1	–	–	–	–	–	–	–
Apparel and other textile products:												
Total cases	8.1	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2	5.8
Lost workday cases	3.5	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6	2.8
Lost workdays	68.2	80.5	92.1	99.9	104.6	–	–	–	–	–	–	–
Paper and allied products:												
Total cases	13.1	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1	7.0
Lost workday cases	5.9	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7	3.7
Lost workdays	124.3	132.9	124.8	122.7	125.9	–	–	–	–	–	–	–
Printing and publishing:												
Total cases	6.6	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4	5.0
Lost workday cases	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8	2.6
Lost workdays	59.8	63.8	69.8	74.5	74.8	–	–	–	–	–	–	–
Chemicals and allied products:												
Total cases	7.0	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2	4.4
Lost workday cases	3.3	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1	2.3
Lost workdays	59.0	63.4	61.6	62.4	64.2	–	–	–	–	–	–	–
Petroleum and coal products:												
Total cases	7.0	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9	4.1
Lost workday cases	3.2	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8	1.8
Lost workdays	68.4	68.1	77.3	68.2	71.2	–	–	–	–	–	–	–
Rubber and miscellaneous plastics products:												
Total cases	16.3	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2	10.1
Lost workday cases	8.1	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8	5.5
Lost workdays	142.9	147.2	151.3	150.9	153.3	–	–	–	–	–	–	–
Leather and leather products:												
Total cases	11.4	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8	10.3
Lost workday cases	5.6	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5	5.0
Lost workdays	128.2	130.4	152.3	140.8	128.5	–	–	–	–	–	–	–
Transportation and public utilities												
Total cases	8.9	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3	7.3
Lost workday cases	5.1	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3	4.4
Lost workdays	118.6	121.5	134.1	140.0	144.0	–	–	–	–	–	–	–
Wholesale and retail trade												
Total cases	7.8	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5	6.1
Lost workday cases	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8	2.7
Lost workdays	60.9	63.5	65.6	72.0	80.1	–	–	–	–	–	–	–
Wholesale trade:												
Total cases	7.6	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5	6.3
Lost workday cases	3.8	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3	3.3
Lost workdays	69.2	71.9	71.5	79.2	82.4	–	–	–	–	–	–	–
Retail trade:												
Total cases	7.9	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5	6.1
Lost workday cases	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7	2.5
Lost workdays	57.6	60.0	63.2	69.1	79.2	–	–	–	–	–	–	–
Finance, insurance, and real estate												
Total cases	2.0	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	.7	1.8
Lost workday cases	.9	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8
Lost workdays	17.2	17.6	27.3	24.1	32.9	–	–	–	–	–	–	–
Services												
Total cases	5.4	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2	4.9
Lost workday cases	2.6	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4	2.2
Lost workdays	47.7	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.

Dash indicates data not available.

47. Fatal occupational injuries by event or exposure, 1993–98

Event or exposure[1]	Fatalities			
	1993–97	1997[2]	1998	
	Average	Number	Number	Percent
Total	6,335	6,238	6,026	100
Transportation incidents	2,611	2,605	2,630	44
Highway incident	1,334	1,393	1,431	24
Collision between vehicles, mobile equipment	652	640	701	12
Moving in same direction	109	103	118	2
Moving in opposite directions, oncoming	234	230	271	4
Moving in intersection	132	142	142	2
Vehicle struck stationary object or equipment	249	282	306	5
Noncollision incident	360	387	373	6
Jackknifed or overturned—no collision	267	298	300	5
Nonhighway (farm, industrial premises) incident	388	377	384	6
Overturned	214	216	216	4
Aircraft	315	261	223	4
Worker struck by a vehicle	373	367	413	7
Water vehicle incident	106	109	112	2
Railway	83	93	60	1
Assaults and violent acts	1,241	1,111	960	16
Homicides	995	860	709	12
Shooting	810	708	569	9
Stabbing	75	73	61	1
Other, including bombing	110	79	79	1
Self-inflicted injuries	215	216	223	4
Contact with objects and equipment	1,005	1,035	941	16
Struck by object	573	579	517	9
Struck by falling object	369	384	317	5
Struck by flying object	65	54	58	1
Caught in or compressed by equipment or objects	290	320	266	4
Caught in running equipment or machinery	153	189	129	2
Caught in or crushed in collapsing materials	124	118	140	2
Falls	668	716	702	12
Fall to lower level	591	653	623	10
Fall from ladder	94	116	111	2
Fall from roof	139	154	156	3
Fall from scaffold, staging	83	87	97	2
Fall on same level	52	44	51	1
Exposure to harmful substances or environments	586	554	572	9
Contact with electric current	320	298	334	6
Contact with overhead power lines	128	138	153	3
Contact with temperature extremes	43	40	46	1
Exposure to caustic, noxious, or allergenic substances	120	123	104	2
Inhalation of substances	70	59	48	1
Oxygen deficiency	101	90	87	1
Drowning, submersion	80	72	75	1
Fires and explosions	199	196	205	3
Other events or exposures[3]	26	21	16	–

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

[2] The BLS news release issued August 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

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

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

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I certify that the statements made by me above are correct and complete.

[signed] Richard M. Devens, Executive Editor

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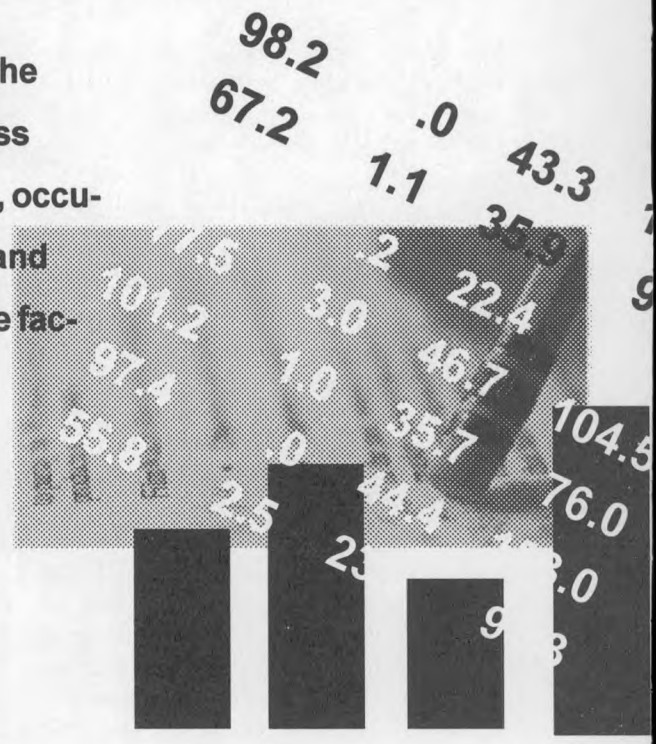

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Productivity and costs			November 7	3rd quarter	December 7	3rd quarter	2; 39–42
U.S. Import and Export Price Indexes	October 11	September	November 8	October	December 12	November	34–38
Producer Price Indexes	October 12	September	November 9	October	December 13	November	2; 31–33
Consumer Price indexes	October 19	September	November 16	October	December 14	November	2; 28–30
Real earnings	October 19	September	November 16	October	December 14	November	14, 16
Employment Cost Indexes	October 25	3rd quarter					1–3; 21–24