

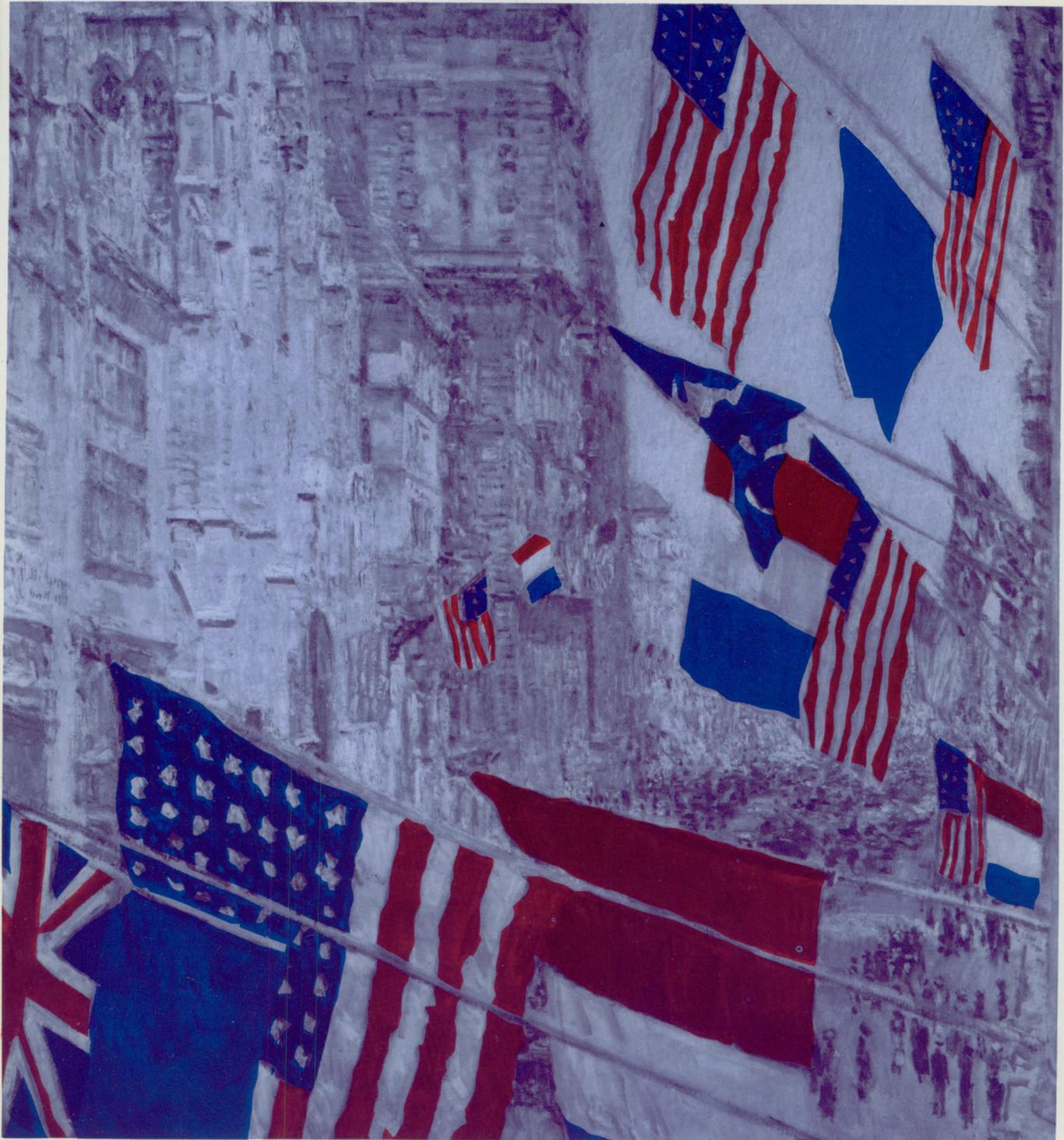


Monthly Labor Review

U.S. Department of Labor
Bureau of Labor Statistics
July 1994

In this issue:

Perspectives on earnings inequality
Women in the work force
Pension portability
Employment in public schools





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Robert B. Reich, *Secretary*

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Perspectives on earnings inequality

Gender-related shifts in the distribution of wages 3
Wage distribution became more unequal during the 1980's; the middle 'hollowed' out for men and 'filled in' for women
Paul Ryscavage

Earnings in the 1980's: an occupational perspective 16
Changes in occupational demand accounted for about one-third of the widening earnings gap between more and less educated workers
Maury Gittleman

Women in the work force

Women and jobs in recoveries: 1970-93 28
Shifts in the distribution of jobs during business cycles have a permanent effect on job distribution by gender
William Goodman

Are women leaving the labor force? 37
Recent interruptions in women's labor force participation do not appear to signal a reversal of their long-term gain
Howard V. Hayghe

Other articles

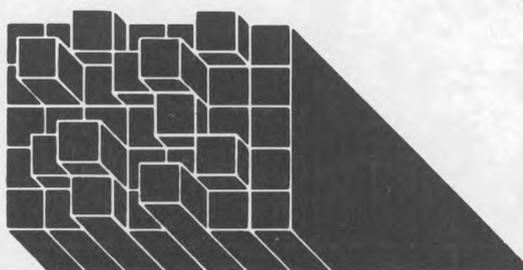
Employment in public schools: the student-to-employee ratio 40
Employment surged over the 1964-93 period, despite the recession and the aging of baby-boomers
Teresa L. Morisi

Portability of pension benefits among jobs 45
A worker's ability to maintain and transfer accumulated pension benefits when changing jobs is not widespread
Ann C. Foster

Departments

Labor month in review 2
Major agreements expiring next month 51
Developments in industrial relations 52
Book reviews 55
Current labor statistics 59

Labor month in review



Employees and health benefits

According to *Pension and Health Benefits of American Workers*, “[T]he majority of workers continued to work for firms that sponsored some type of health benefits plan.” The share of workers whose employer sponsored a plan had edged down, however, from about 81 percent in 1988 to 78 percent in 1993.

At the same time, the report notes, the percentage of workers actually receiving health coverage from their own employer was 61 percent in 1993, compared with 65 percent in 1988. Overall, the ratio of workers participating in a plan to those working for employers that provided one did not change much, so any decline in worker coverage was due to diminishing sponsorship rather than declining participation.

Among those not covered by their employers’ plans, about one-half elected not to participate and 38 percent were ineligible to participate. The most frequent reason given for declining to participate was coverage under another plan. The most frequent reason for ineligibility was part-time status.

The report, a joint effort by the Labor Department’s Pension and Welfare Benefits Administration, the Social Security Administration, the U. S. Small Business Administration and the Pension Benefit Guaranty Corporation, uses data from a special supplement to the April 1993 Current Population Survey.

Annual work hours reduced in Japan

According to Japan’s *Monthly Labor Survey*, average annual hours of work per person decreased by 59 hours (2.4 percent) over the 1992–93 period. Both scheduled hours and overtime hours dropped.

The survey was conducted among 16,700 establishments with 30 or more workers, and 33,000 establishments with 5 or more workers in nine major industries. For the first time, annual work hours of Japan’s three automakers—Toyota Motor Corp., Nissan Motor Co., and Mazda Motor Corp.—fell below 2,000 hours.

The protracted recession in the auto industry resulted in a drastic cut in overtime,

making it possible for automakers to “unintentionally achieve a reduction in work hours.” Japan’s autoworkers usually clock the longest annual hours and typify the country’s “diligent worker” image. The fact that annual work hours dropped for the top automakers received much attention.

Steel technology

Over the past several decades, steel industry employment has been on a downtrend. BLS Bulletin 2435, *Technology and Its Effect on the Steel Industry*, estimates the average annual decline from 1979 to 1992 at 6.1 percent. Over a roughly comparable period, output per employee hour accelerated to an average annual gain of 3.5 percent from the near zero growth registered from 1973 to 1979.

The productivity gains were attributed to the growth of highly efficient minimills, the restructuring of integrated producers into a smaller but more modern plant-and-equipment base, and the increased use of advanced steelmaking technology. These technologies often reduce employment requirements and always raise skill and training requirements. BLS studied seven specific technologies, the impacts of which are shown in table 1 below.

NAFTA review office

The National Administrative Office in the U.S. Department of Labor serves as the central point of contact for North American

Free Trade Agreement (NAFTA) complaints involving labor issues. The office has up to 60 days to decide if the complaint is valid, and an additional 120 days to issue a report resolving the matter. The National Administrative Office, located in the Bureau of International Labor Affairs, is headed, on an acting basis, by Jorge Perez-Lopez.

Employment growth in small firms

Overall employment increased in American small establishments in January. The good hiring conditions are expected to continue in the coming months, according to *Small Business News*, published by the National Federation of Independent Business. Nearly a quarter of the small businesses surveyed plan to increase employment; only 5 percent anticipate reducing their work forces. Seasonally adjusted employment plans of small businesses have weakened slightly since January, but chief economist William Dunkelberg explains that because the January figures were so strong, the decrease had little impact on overall employment. The percentage of small firms with job openings was 21 percent, seasonally adjusted, the highest level since the mid-1980’s. The hiring of temporary or leased workers rose slightly, in part because of the high nonwage costs of hiring permanent employees and the preference of some workers for less formal work arrangements.

Table 1. Impacts of new steelmaking technologies

Technology	Employment requirements	Skills/training requirements
Improved basic oxygen furnaces	Little change	Higher
Improved electrical furnaces	Some reduction	Higher
Ladle refining	Some increase	Higher
Continuous casting	Reduction	Higher
Direct casting	Reduction	Higher
New or upgraded rolling, shaping, and finishing facilities	Variable	Higher
Computer process control	More specialists	Higher

Gender-related shifts in the distribution of wages

The Nation's wage distribution grew more unequal during the 1980's, with the top and bottom becoming more concentrated at the expense of the middle; for men, the middle "hollowed out" considerably, while for women, the middle actually "filled in," with only a small increase in the bottom of the distribution

Paul Ryscavage

In recent years, U.S. wage earners have faced a variety of changes in the labor market. For example, computers and other information technologies have redefined the nature of many jobs, corporate downsizings and layoffs have altered the career paths of numerous workers, and stiffer global and domestic competition has sharpened concerns over labor costs on the part of employers. These developments and others have produced changes in the shape of the wage distribution and, for many wage earners, their location in it.

It is common knowledge today that the Nation's wage structure became more dispersed and unequal in the 1980's.¹ Not only did the gap between low-wage workers and high-wage workers widen, but the percentage of workers in the middle of the distribution thinned out, resulting in larger percentages of workers at the bottom and top. Research on growing wage inequality, which Frank Levy and Richard J. Murnane recently reviewed, has been voluminous.²

The cause of growing wage inequality in the 1980's, however, continues to be the subject of much research, and various explanations have been proposed. A leading candidate has been a shift in the demand for labor in favor of highly skilled and educated workers within industries. Two pairs of researchers—Lawrence F. Katz and

Kevin M. Murphy, and John Bound and George Johnson—have associated these shifts with skill-biased technological change, or changes in technology that require well-trained workers.³ The corollary to such shifts, of course, is the collapsing demand for unskilled workers during the 1980's.⁴

The growing concentration of workers with low wages and the perception that "middle class" jobs were disappearing also prompted much economic research. Not surprisingly, relative shifts in demand along skill and training dimensions were found to be responsible for the increase in low-wage employment. Gary Burtless recently wrote: "The problem they [unskilled workers] face is not an overabundance of bad jobs . . . but a surplus of unskilled workers in a market requiring more skill than ever."⁵ Some research has focused on specific groups. For example, McKinley L. Blackburn, David E. Bloom, and Richard B. Freeman examined the declining economic situation of unskilled white men aged 25 to 64 years and unskilled young men aged 25 to 34 years.⁶ Research of this kind, along with growing public concern over the increase in low-wage employment, prompted the Bureau of the Census to publish a report profiling the demographic and social characteristics of workers with low earnings.⁷

It is understandable why so much attention has been focused on the lower end of the wage dis-

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tribution: the greater incidence of low-wage employment among those persons who maintain families and households has serious economic and social implications. But changes have also taken place in other parts of the income distribution, changes that reflect our ever-evolving society, economy, and labor market. In a rapidly changing world of work, policymakers, the media, and the public should be aware of how the various segments of our wage distribution are being affected.

In the following descriptive analysis, attention is focused on the gender-related shifts that have taken place in the Nation's wage distribution in the 1980's. As has been observed, earnings of women have grown faster, on average, than those of men during the period. But the distributional consequences of these disparate trends have received little attention.

The analysis begins with a brief discussion of some issues pertaining to measuring the wage distribution with the data that are analyzed. Changes in the general shapes of the total wage distribution and the wage distributions for men and women between 1979 and 1989 are then discussed. Subsequent sections are devoted to changes in the proportions of men and women employed in specific segments of the distribution. These changes are further examined by age, education, and industrial sector, and then changes between 1989 and 1992 are presented. A concluding section summarizes the findings and suggests an avenue for further research.

Measurement issues and the data

Researchers have typically relied on the income and work experience data collected in the March supplement to the Current Population Survey (CPS) to approximate the wage distribution, and I shall do the same here. However, measurement issues exist. First, while the CPS does collect data on income derived from the labor market (for example, wages, salaries, and income from self-employment), it does not provide a complete measure of the wage, because noncash compensation (for instance, certain employer-provided fringe benefits) is excluded. Second, the unit of labor input is difficult to standardize with any accuracy because the measurement of labor supplied is based on survey respondents' recall. Third, labor income in the CPS is measured across individuals and not jobs (workers may obviously have more than one job at a point in time or across time), so the basic unit of analysis is the worker. And fourth, data on earnings in the CPS are truncated at upper limits for purposes of confidentiality, thereby obscuring actual earnings levels of the highest paid workers.⁸ Consequently, con-

clusions reached as to how the wage distribution has changed must bear these measurement issues in mind.

The primary universe for analysis is the annual *wage and salary earnings* received from all jobs by persons 15 years of age and older who usually worked 35 or more hours a week for 50 or more weeks in the year in 1979, 1989, and 1992—the universe of full-time, year-round workers. (Workers who derived earnings from self-employment are excluded because they reflect, in many instances, returns to capital as well as returns to labor.) This universe has been a popular one for economists to use in exploring inequality, because of the implicit control for hours worked.⁹ The focus of the analysis to be presented is changes in the distributions between 1979 and 1989. Wage inequality rose significantly between those years, and both years reflect similar stages of the business cycle (recessions began in the following year). By contrast, data for 1992 are the latest available from the CPS, but they reflect a much different stage of the business cycle.

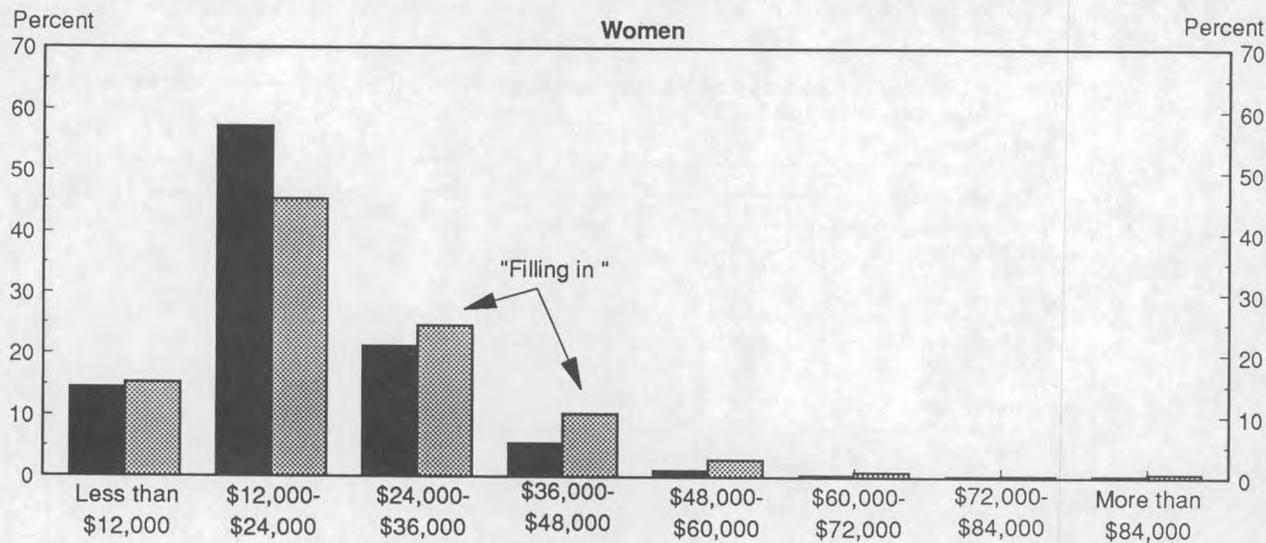
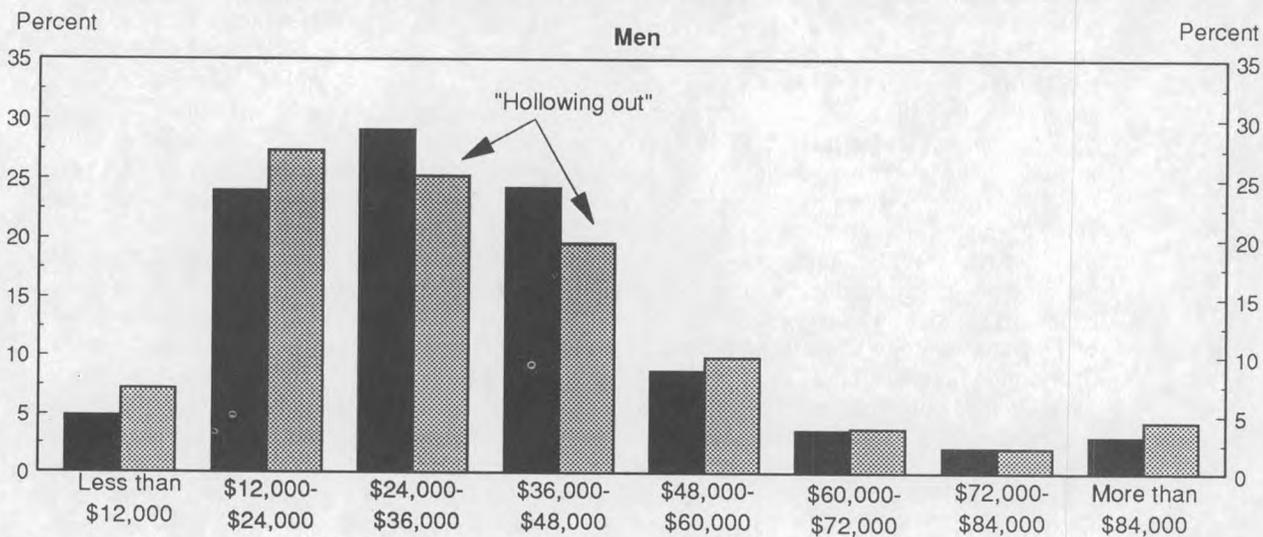
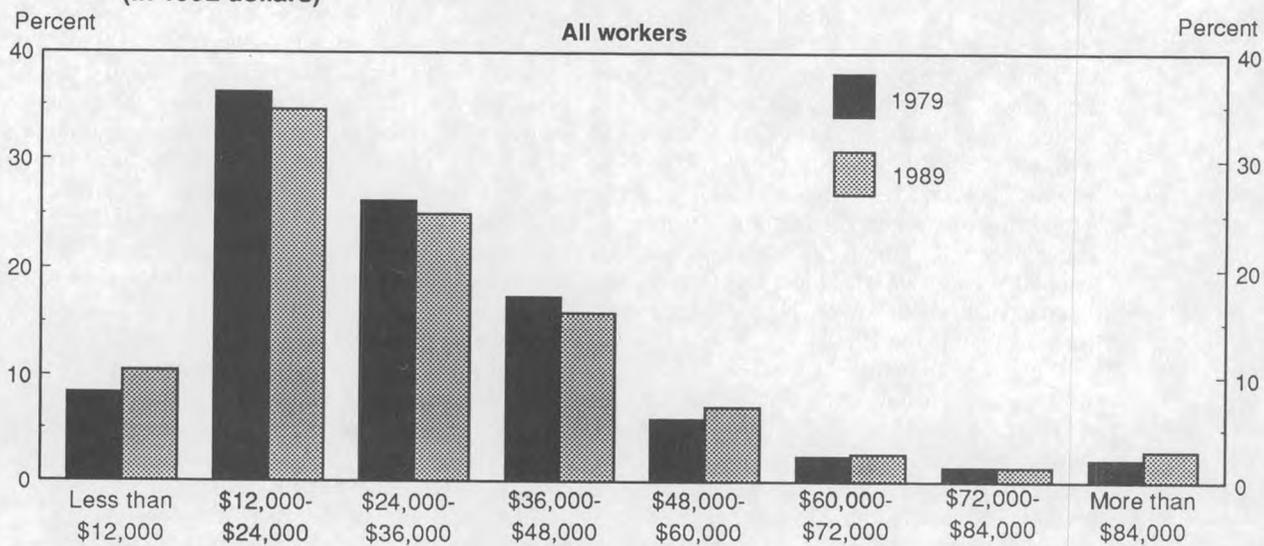
A secondary universe is the annual *earnings* (wage and salary earnings, plus net income from farms and self-employment) received by men and women employed full time, year round. This universe, which has the same limitations as the previous one, has a much more limited role in the analysis. It is used, first, to measure the long-term trend in earnings of men and women aged 15 and older between 1960 and 1992 and, second, to measure trends in the earnings of men and women aged 25 and older, by educational categories, between 1979 and 1989.¹⁰

The shapes of the distributions

If we assume that the distribution of wage and salary earnings of workers employed usually full time, year round in 1979 and 1989 are rough approximations of the Nation's wage structure in those years, it is clear that the shape of that wage structure has changed. Table 1 presents the proportions of workers, in constant 1992 dollar earnings intervals, in 1979 and 1989; the mean and median wage and salary earnings for those years; and the Gini index for the same years.¹¹ Chart 1, panel 1, depicts the shape of the distributions in those years.

The earnings distributions in both 1979 and 1989 sketch out a classic picture: distributions that are positively skewed, with a long tail to the right. A closer inspection of the chart and the table reveals the changes that have taken place during the 1980's. First, while mean earnings of year-round, full-time workers rose from \$30,485 to \$31,728 (in 1992 dollars), the median in 1989

Chart 1. Distribution of wages and salaries of full-time, year-round workers, 1979 and 1989
(in 1992 dollars)



Distribution of Wages, by Gender

was not much different from what it was in 1979. Second, and as might be expected from the first observation, the Gini index rose from .315 to .345, indicating that the distribution became substantially more unequal. And third, the proportion of workers in the great middle of the distribution, those who earned between \$24,000 and \$48,000, declined (as did the proportion of those earning between \$12,000 and \$24,000), while the proportion of workers earning lower wages and the proportion earning higher wages each increased.¹² These are what most people have come to understand about how the Nation's wage structure changed in the 1980's.

When we dip below the surface of these distributions and examine the distributions of men and women in the context of the overall distribution, however, other changes, some of which are not well known, emerge. To begin, shifts in the earnings distribution for men were more pronounced than in the overall distribution. Both table 1 and chart 1, panel 2, show that the thinning of the middle—those earning from \$24,000 to \$48,000—was more severe for men than for all workers: the middle proportion dropped from 53.4 percent of all men in 1979 to 44.9 percent in 1989.¹³ The proportions with earnings below this range increased from 28.9 percent to 34.6 percent, and the proportions with earnings above the range rose from 17.7 percent to 20.4 percent. So there was a definite thickening in the bottom of the distribution, which dragged down men's real median earnings, while the upper part of the distribution became slightly more concentrated, which helped pull up their real mean earnings.

Developments in the women's earnings distribution were different, even though inequality also increased, as measured by their Gini index. Chart 1, panel 3, shows that the women's earnings distribution, in both 1979 and 1989, was

considerably more compressed than the men's, but changes nevertheless took place. In sharp contrast to the situation for men, the proportion of women with earnings between \$24,000 and \$48,000—the important middle—actually increased from 26.6 percent to 34.9 percent of women wage and salary workers employed full time, year round during the 1980's. In other words, these intervals were “filling in” (unlike the situation for men), as were the intervals above the middle (from 1.8 percent to 4.5 percent). The source of this upward movement in the women's distribution (at least in the sense of net changes) was the large cluster of women in the \$12,000-to-\$24,000-a-year range, which declined by more than 10 percentage points. The percentage of women in full-time, year-round employment earning less than \$12,000 a year increased slightly, from 14.4 percent to 15.3 percent.

The reasons for the distributional developments among women are not well understood. It is known, of course, that the earnings of women in the 1980's advanced more rapidly than those of men.¹⁴ (As shown in table 1, the median wage and salary earnings of men fell from \$32,231 to \$30,549, or 5.2 percent, while for women, it increased from \$18,960 to \$20,932, or 10.4 percent.) As a consequence, the gender pay gap closed significantly.¹⁵

Long-term trends in median annual earnings (wage and salary earnings, plus net income from farm and nonfarm self-employment) for men and women with full-time, year-round employment are shown in chart 2. Both trends were fairly similar over the 1960's and 1970's, but then, in the 1980's, they diverged.

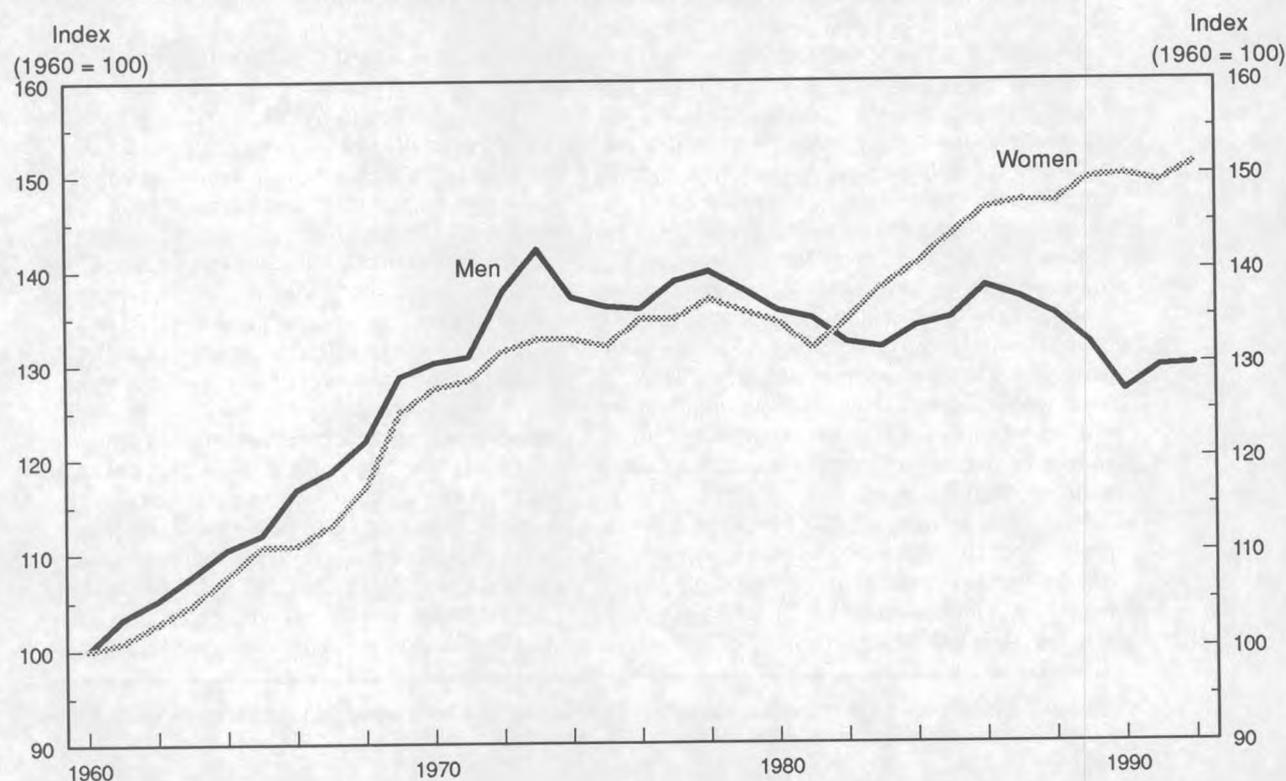
An explanation for the acceleration in women's earnings during the 1980's, at least in terms of higher wages or longer hours, appears to rest entirely on increases in earnings per

Table 1. Distribution of wage and salary earnings of full-time, year-round workers, by gender, 1979 and 1989

[In 1992 dollars]

Intervals	Total		Men		Women	
	1979	1989	1979	1989	1979	1989
Total (in thousands)	57,209	72,120	36,277	42,987	20,932	29,133
Total (in percent)	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$12,000	8.4	10.5	4.9	7.2	14.4	15.3
\$12,000 to \$23,999	36.2	34.6	24.0	27.4	57.2	45.3
\$24,000 to \$35,999	26.2	25.0	29.1	25.3	21.2	24.6
\$36,000 to \$47,999	17.4	15.9	24.3	19.6	5.4	10.3
\$48,000 to \$59,999	5.9	7.1	8.7	9.9	1.0	2.8
\$60,000 to \$71,999	2.4	2.6	3.7	3.9	.3	.8
\$72,000 to \$83,999	1.4	1.4	2.1	2.1	.2	.3
\$84,000 and over	2.1	2.9	3.2	4.5	.3	.6
Mean	\$30,485	\$31,728	\$36,065	\$37,051	\$20,816	\$23,874
Median	\$26,543	\$26,023	\$32,231	\$30,549	\$18,960	\$20,932
Gini index . . . . .	.315	.345	.293	.345	.253	.293

Chart 2. Trends in earnings of men and women who worked full time, year round, 1960-92



NOTE: Median earnings have been adjusted for inflation by the CPI-U-X1. In 1960, men earned \$23,389 and women, \$14,191.

hour.¹⁶ Beyond this, researchers, such as Bound and Johnson, have speculated that women's relatively greater wage growth may have been due to changes in technologies that were more favorable to them because of the types of occupations they work in, as well as to improvements in the quality of their labor.¹⁷

Regarding the latter factor, the proportion of women working full time, year round rose dramatically in the 1980's (from 43.4 percent to 51.1 percent), and much of this jump was no doubt related to the growing proportion of college-educated women. But even when educational attainment is controlled for, as in table 2, the earnings of women changed more favorably than did those of their male counterparts over the 1979-89 period.¹⁸ Because wages for women were rising faster than for men across educational classes, the occupations and industries (and the nature of the work) in which women are employed become important in explaining their wage gains and, ultimately, their distributional shifts.

Employment by wage and gender

The changes in employment of men and women across the wage distribution between 1979 and 1989 can be described in a more qualitative way. We can

relabel some of the constant 1992 dollar earnings intervals appearing in table 1 and collapse them into the following employment categories: *low-wage employment*, or employment yielding annual wage and salary earnings of less than \$12,000; *low-to-middle-wage employment*, or employment yielding earnings of \$12,000 to \$23,999; *middle-wage employment*, or employment yielding \$24,000 to \$47,999; *middle-to-high-wage employment*, or employment yielding \$48,000 to \$59,999; and *high-wage employment*, or employment yielding annual earnings in excess of \$60,000 a year.¹⁹

Table 3 shows the changing wage distribution in terms of these employment categories in 1979 and in 1989. The changes, of course, are very similar to those depicted in table 1 and chart 1. The proportions of men and the proportions of women falling into the various employment categories are quite different from one another, as are the changes between 1979 and 1989:

- Middle-wage employment was hollowing out for men, but filling in for women.
- Low-wage and low-to-middle-wage employment increased for men, but only low-wage employment increased for women.
- High-wage and middle-to-high-wage employment increased for both men and women.

Distribution of Wages, by Gender

The net changes in these employment categories, shown in table 4, highlight important developments in the men's and women's wage distributions. Although employment in the lower half of the distributions increased for both men and women, the economy was also generating middle-wage to high-wage employment opportunities. The gains in middle-wage employment—employment paying \$24,000 to \$48,000—were exclusively among women. Almost 4.6 million additional women entered the middle ranks of the Nation's wage distribution from 1979 to 1989. And even while employment gains above these pay levels were dominated by men, who increased their numbers in the upper levels of pay by 2.4 million, nearly 1.0 million women moved into the upper ranks of the distribution as well.²⁰

In the following sections, we examine these gender-related shifts in the employment categories by various characteristics. We do this primarily by examining changes in the *proportions* of workers in those categories.

Age and education

The increase of almost 15 million full-time, year-round wage and salary workers between 1979 and 1989 was nearly equally divided between men (45 percent) and women (55 percent). This was despite the fact that prior to then, full-time, year-round employment had been primarily the domain of men.

Table 5 presents the changes that occurred in the employment categories for two broad age classes of men and women: those aged 20 to 29 years and those aged 30 to 54 years. As has been reported in the literature, young workers, especially those with few skills, have experienced great difficulty in the job market in recent years.²¹ The table shows that, although the wage structure of young women was more heavily composed of low-wage and low-to-middle-wage employment than that of young men, the situation was changing in the 1980's. All of the decline in middle-wage employment for men was offset by rising proportions of low-wage and low-

Table 2. Mean annual earnings of full-time, year-round workers aged 25 and older, by gender and educational attainment, 1979 and 1989

[In 1992 dollars]

Educational attainment	Men			Women		
	1979	1989	Percent change	1979	1989	Percent change
Total	\$36,273	\$39,145	7.9	\$20,641	\$24,669	19.5
Less than 9 years	24,598	21,558	-12.4	14,261	14,278	.1
9 to 11 years	28,071	25,431	-9.4	16,491	16,584	.6
12 years	32,421	32,008	-1.2	19,028	20,710	8.8
13 to 15 years	36,027	37,444	3.9	21,631	24,982	15.5
16 years	46,399	49,630	7.0	25,222	31,282	24.0
17 or more years	56,137	62,736	11.8	32,096	38,422	19.7

Table 3. Distribution of wage and salary earnings of full-time, year-round workers, by gender and employment categories, 1979 and 1989

Gender and year	Total (thousands)	Total (percent)	Employment category ¹				
			Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Total:							
1979	57,209	100.0	8.4	36.2	43.7	5.9	5.9
1989	72,120	100.0	10.5	34.6	40.9	7.1	7.0
Change	14,911	—	2.1	-1.4	-2.8	1.2	1.1
Men:							
1979	36,277	100.0	4.9	24.0	53.4	8.7	8.9
1989	42,987	100.0	7.2	27.4	44.9	9.9	10.5
Change	6,710	—	2.3	3.4	-8.5	1.2	1.6
Women:							
1979	20,932	100.0	14.4	57.2	26.7	1.0	.7
1989	29,133	100.0	15.3	45.3	34.9	2.8	1.7
Change	8,201	—	.9	-11.9	8.2	1.8	1.0

¹ Categories are defined in terms of 1992 dollars as follows: low wage—annual earnings of less than \$12,000; low-to-middle wage—\$12,000 to \$23,999; middle wage—\$24,000 to \$47,999; middle-to-high wage—\$48,000 to \$59,999; high wage—\$60,000 or more.

Table 4. **Employment of full-time, year-round workers, by gender and employment categories, 1979 and 1989**

[Numbers in thousands]

Gender and year	Total	Employment category ¹				
		Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Total:						
1979	57,209	4,797	20,683	24,970	3,365	3,394
1989	72,120	7,569	24,969	29,464	5,099	5,019
Change	14,911	2,772	4,286	4,494	1,734	1,625
Men:						
1979	36,277	1,783	8,710	19,388	3,152	3,245
1989	42,987	3,108	11,785	19,298	4,275	4,520
Change	6,710	1,325	3,075	-90	1,123	1,275
Women:						
1979	20,932	3,014	11,974	5,582	214	149
1989	29,133	4,460	13,183	10,165	824	499
Change	8,201	1,446	1,209	4,583	610	350

¹ Categories are defined in terms of 1992 dollars as follows: low wage—annual earnings of less than \$12,000; low-to-middle wage—\$12,000 to \$23,999; middle wage—\$24,000 to \$47,999; middle-to-high wage—\$48,000 to \$59,999; high wage—\$60,000 or more.

to-middle-wage employment. By contrast, while there was some increase in low-wage employment (from 15.0 percent to 19.4 percent) for young women, there were larger increases in these women's middle-wage employment and above (from 20.8 percent to 28.4 percent).

Among older men and women, a similar situation prevailed. Middle-wage employment for men aged 30 to 54 was sharply reduced, from 57.2 percent to 48.6 percent of all such men; and while there was some relative increase in employment above that level, low-wage and low-to-middle-wage employment among older men increased from 19.7 percent to 26.2 percent. For women in this age range, on the other hand, the decline in low-to-middle-wage employment of 11.9 percentage points was offset by increases in middle-wage, middle-to-high-wage, and high-wage employment. (Their net change in low-wage employment was not statistically significant at the 10-percent level.)

As mentioned earlier, economists have found that educational attainment became an increasingly important factor in determining one's position in the wage distribution during the 1980's. Returns to education (as measured, for example, by relative wage differences between college-educated and high school-educated workers) rose sharply in that decade after falling during the 1970's.²² Table 5 also shows the changing wage distributions of young men and women and older men and women who completed 12 or fewer years of school (high school or less) and who completed 16 or more years of school (college or more). The changes reflect this educational effect, but also the effect of gender.

For young men and women aged 20 to 29 years with high school educations or less, the proportions with low-wage employment increased dra-

matically—from 9.6 percent to 17.4 percent for young men and from 19.0 percent to 28.3 percent for young women. In addition, for young men, low-to-middle-wage employment became more common. Consequently, job opportunities for young workers with high school educations or less changed radically in the 1980's. The situation was somewhat brighter for their counterparts with college educations—especially young women, for whom there was a large relative increase into middle-wage employment, from 38.3 percent to 52.6 percent—as a result of the over-the-decade decline in the percentage of low-to-middle-wage employment. Among young men, there was a modest decline in middle-wage employment, from 64.2 percent to 59.9 percent.

Older men and women with high school educations or less, of course, typically have more work experience than their younger counterparts, and in 1989, smaller proportions of them were in low-wage employment. Nevertheless, low-wage employment and low-to-middle-wage employment increased relatively for the men (from 26.8 percent to 38.5 percent), and low-wage employment increased for the women (from 16.2 percent to 18.7 percent). However, the older women also moved into middle-wage employment, which increased from 21.7 percent to 26.1 percent of all women in this age and education category.

The brightest picture, of course, was for college-educated men and women aged 30 to 54 years. While there was a slight increase in the percentage of low-to-middle-wage employment for men (from 7.4 percent to 9.2 percent), their proportions in middle-to-high-wage and high-wage employment rose from 42.9 percent to 48.0 percent between 1979 and 1989. College-educated women remained concentrated in middle-

Distribution of Wages, by Gender

wage employment paying \$24,000 to \$48,000 annually, but they did increase their proportions in middle-to-high and high-wage employment (from 7.4 percent to 15.2 percent).

Industrial attachment and education

One of the important developments often associated with growing wage inequality has been the changes taking place in the economy's industrial structure. Indeed, "deindustrialization," or the shift in employment from industries involved in the production of goods to industries involved in providing services, was considered a primary contributor to greater wage inequality.²³

The fact that wage inequality, however, was increasing *within* most industries suggested that other forces were at work as well.²⁴ In this section, we examine how the wage distributions of men and women changed across various industries.

Table 6 displays the proportions of men and women who worked full time, year round in the five employment categories as of 1979 and 1989, by four broad industrial sectors. Data for the manufacturing industry are displayed separately, because this industry is one of those often focused on in discussions such as the present one and because it represents a major part of all goods-producing industries. The other goods-producing industries are agriculture, forestry and

Table 5. Distribution of wage and salary earnings of full-time, year-round workers aged 20 to 29 years and 30 to 54 years, by employment categories, 1979 and 1989

Age, gender, and year	Total (thousands)	Total (percent)	Employment category ¹				
			Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Age 20 to 29 years							
Men:							
1979	9,595	100.0	7.5	38.6	49.3	3.3	1.4
1989	10,340	100.0	13.8	44.5	37.1	2.8	1.7
Change	745	...	6.3	5.9	-12.2	-0.5	0.3
Women:							
1979	6,562	100.0	15.0	64.2	20.1	0.4	0.3
1989	7,469	100.0	19.4	52.3	26.6	1.1	0.7
Change	907	...	4.4	-11.9	6.5	0.7	0.4
Age 30 to 54 years							
Men:							
1979	20,525	100.0	2.6	17.1	57.2	11.4	11.7
1989	27,188	100.0	4.3	21.9	48.6	12.0	13.1
Change	6,663	...	1.7	4.8	-8.6	0.6	1.4
Women:							
1979	10,910	100.0	12.2	54.4	31.1	1.5	0.9
1989	18,158	100.0	12.3	42.5	39.5	3.6	2.2
Change	7,248	...	0.1	-11.9	8.4	2.1	1.3
Age 20 to 29 years, high school or less							
Men:							
1979	5,525	100.0	9.6	43.7	44.4	2.3	0.9
1989	6,171	100.0	17.4	52.8	28.1	1.2	0.5
Change	546	...	7.8	9.1	-15.3	-1.1	-0.4
Women:							
1979	3,650	100.0	19.0	68.6	12.2	0.1	0.1
1989	3,527	100.0	28.3	58.2	12.9	0.5	0.2
Change	-123	...	9.3	-9.4	0.7	0.4	0.1
Age 20 to 29 years, college or more							
Men:							
1979	1,751	100.0	2.4	24.0	64.2	6.3	3.1
1989	2,072	100.0	5.2	22.2	59.9	7.3	5.4
Change	321	...	2.8	-1.8	-4.3	1.0	2.3
Women:							
1979	1,375	100.0	5.2	54.3	38.3	1.5	0.8
1989	1,977	100.0	5.8	37.1	52.6	2.7	1.9
Change	602	...	0.6	-17.2	14.3	1.2	1.1

See footnote at end of table

Table 5. Continued—Distribution of wage and salary earnings of full-time, year-round workers, aged 20 to 29 years and 30 to 54 years, by employment categories, 1979 and 1989

Age, gender, and year	Total (thousands)	Total (percent)	Employment category ¹				
			Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Age 30 to 54 years, high school or less							
Men:							
1979	11,249	100.0	3.5	23.3	59.9	8.6	4.7
1989	12,992	100.0	7.0	31.5	49.7	7.6	4.3
Change	1,743	...	3.5	8.2	-10.2	-1.0	-4
Women:							
1979	6,936	100.0	16.2	61.2	21.7	.6	.3
1989	9,421	100.0	18.7	53.5	26.1	1.1	.7
Change	2,485	...	2.5	-7.7	4.4	.5	.4
Age 30 to 54 years, college or more							
Men:							
1979	5,666	100.0	1.4	7.4	48.3	16.4	26.5
1989	8,405	100.0	1.4	9.2	41.3	18.5	29.5
Change	2,739	...	.0	1.8	-7.0	2.1	3.0
Women:							
1979	2,068	100.0	3.1	30.1	59.3	4.5	2.9
1989	4,663	100.0	2.9	20.4	61.4	9.6	5.6
Change	2,595	...	-2	-9.7	2.1	5.1	2.7

¹ Categories are defined in terms of 1992 dollars as follows: low wage—annual earnings of less than \$12,000; low-to-middle wage—\$12,000 to \$23,999; middle wage—\$24,000 to \$47,999; middle-to-high wage—\$48,000 to \$59,999; high wage—\$60,000 or more.

fisheries, mining, and construction. Service-producing industries have been divided into two groups for the purpose of this article: high-paying and low-paying service-producing industries. The former comprise transportation, communications, and public utilities; wholesale trade; finance, insurance, and real estate; professional and related services; and public administration. The latter consist of retail trade, business and repair services, personal services, and entertainment and recreation services. Obviously, there are many well-paid workers in the low-paying service-producing industries and many low-paid workers in the high-paying service-producing industries, but *average* pay levels suggest such groupings.²⁵

The table shows that the employment increases for men and women between 1979 and 1989 differed considerably by industry. For men, 43 percent of the 5.9 million employment gain was in the low-paying service-producing industries, while employment in manufacturing actually declined. For women, only 29 percent of their 8.2 million increase took place in low-paying service-producing industries, and 61 percent occurred in high-paying service-producing industries.

The impact of these changes on men's and women's wage distributions is also shown in

table 6. Clearly, the story for men across all sectors was that middle-wage employment eroded significantly between 1979 and 1989. Indeed, in manufacturing, the proportion of workers in middle-wage employment fell more than 10 percentage points (an absolute decline of 1.4 million men). Low-wage and low-to-middle-wage employment increased (5.9 percentage points), but so did middle-to-high-wage and high-wage employment (4.6 percentage points).

Developments for men in the high-paying and low-paying service-producing industries were quite different. In both sectors, middle-wage employment declined, but in the former, there was a slightly greater increase in employment in the upper part of the distribution than in the bottom. In the low-paying service-producing industries, low-wage employment increased from 9.1 percent to 13.9 percent between 1979 and 1989.

For women, the major development across all sectors was the increase in middle-wage employment and decline in low-to-middle-wage employment. This was particularly noteworthy in the high-paying service-producing industries, where the percentage with employment paying between \$24,000 and \$48,000 rose from 32.1 percent to 41.5 percent. Approximately 3.2 million of the total net increase in women's employment—39

Distribution of Wages, by Gender

percent—occurred in this single employment category. Even in manufacturing and low-paying service-producing industries, middle-wage employment expanded for women. Low-wage employment for women increased somewhat in the low-paying service-producing industries, but the increase in manufacturing was not statistically significant.

An additional perspective on these relative changes in men's and women's wage distributions is presented in table 7, which shows the absolute changes in the distributions in terms of three educational categories (a high school education or less, some college, and 4 or more years of college) and three *broad* wage categories (less

than \$24,000, \$24,000 to \$48,000, and \$48,000 or more). From the table, it is evident that, for men with high school educations or less, middle-wage employment—\$24,000 to \$48,000—was collapsing in the 1980's. In manufacturing alone, 1.4 million fewer men with high school educations or less were working in this wage category in 1989 than in 1979. Related to this development, of course, was the increase in employment across all industrial sectors paying less than \$24,000 a year: an additional 2.6 million men with high school educations or less fell into this category.

Perhaps even more disturbing was the 1.3 million increase in employment across all sectors paying less than \$24,000 a year for men who ei-

Table 6. Distribution of wage and salary earnings of full-time, year-round workers, by industrial sector and employment categories, 1979 and 1989

Industrial sector, gender, and year	Total (thousands)	Total (percent)	Employment category ¹				
			Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Men							
Manufacturing:							
1979	11,873	100.0	3.1	20.2	58.9	9.6	8.3
1989	11,534	100.0	4.7	24.5	48.3	11.9	10.6
Change	-339	...	1.6	4.3	-10.6	2.3	2.3
Other goods-producing industries:							
1979	3,924	100.0	10.3	27.3	46.9	8.4	7.1
1989	4,853	100.0	11.1	33.0	40.3	7.9	7.7
Change	929	...	.8	5.7	-6.6	-.5	.6
High-paying service-producing industries:							
1979	14,194	100.0	3.1	21.8	54.2	9.7	11.2
1989	16,959	100.0	4.4	22.5	48.5	11.5	13.2
Change	2,765	...	1.3	.7	-5.7	1.8	2.0
Low-paying service-producing industries:							
1979	6,286	100.0	9.1	34.2	45.6	4.9	6.2
1989	8,820	100.0	13.9	35.8	37.0	5.9	7.4
Change	2,534	...	4.8	1.6	-8.6	1.0	1.2
Women							
Manufacturing:							
1979	4,488	100.0	13.1	61.8	24.2	.7	.3
1989	5,022	100.0	14.7	49.5	32.0	2.4	1.3
Change	534	...	1.6	-12.3	7.8	1.7	1.0
Other goods-producing industries:							
1979	374	100.0	16.2	60.9	21.5	.3	1.1
1989	606	100.0	16.0	44.3	35.6	2.0	2.1
Change	232	...	-.2	-15.6	14.1	1.7	1.0
High-paying service-producing industries:							
1979	11,986	100.0	10.1	55.7	32.1	1.3	.9
1989	16,991	100.0	9.4	43.9	41.5	3.2	2.0
Change	5,005	...	-.7	-11.8	9.4	1.9	1.1
Low-paying service-producing industries:							
1979	4,085	100.0	28.5	56.3	14.0	.5	.7
1989	6,472	100.0	31.4	45.4	19.7	2.3	1.3
Change	2,387	...	2.9	-10.9	5.7	1.8	.6

¹ Categories are defined in terms of 1992 dollars as follows: low wage—annual earnings of less than \$12,000; low-to-middle wage—\$12,000 to \$23,999; middle wage—\$24,000 to \$47,999; middle-to-high wage—\$48,000 to \$59,999; high wage—\$60,000 or more.

NOTE: Figures for 1989 exclude persons who were members of the Armed Forces living off post or with their families on post.

Table 7. Net changes in employment of full-time, year-round workers between 1979 and 1989, by industrial sector, broad wage categories, and education categories

[Numbers in thousands]

Industrial sector and wage category	Education category ¹					
	Men			Women		
	High school or less	Some college	College or more	High school or less	Some college	College or more
Manufacturing:						
Less than \$24,000	448	64	95	-244	50	61
\$24,000 to \$47,999	-1,423	-39	43	108	202	213
\$48,000 or more	-24	108	388	22	27	96
Other goods-producing industries:						
Less than \$24,000	569	96	2	30	36	11
\$24,000 to \$47,999	21	60	35	44	45	46
\$48,000 or more	47	36	63	4	3	12
High-paying service-producing industries:						
Less than \$24,000	587	230	192	324	664	191
\$24,000 to \$47,999	-372	379	518	629	959	1,622
\$48,000 or more	-72	196	1,106	88	87	440
Low-paying service-producing industries:						
Less than \$24,000	1,044	390	225	923	393	189
\$24,000 to \$47,999	-35	160	267	160	223	317
\$48,000 or more	1	108	371	16	49	117

¹ Categories are defined as follows: high school or less—persons who have completed 12 or less years of education; some college—persons who have completed 13 to 15 years of education; college or more—persons who have completed 16 or more years of education.

NOTE: Figures for 1989 exclude persons who were members of the Armed Forces living off post or with their families on post.

Table 8. Distribution of wage and salary earnings of full-time, year-round workers, by employment categories, 1989 and 1992

Gender and year	Total (thousands)	Total (percent)	Employment category ¹				
			Low wage	Low-to-middle wage	Middle wage	Middle-to-high wage	High wage
Men:							
1989	42,987	100.0	7.2	27.4	44.9	9.9	10.5
1992	42,091	100.0	7.5	27.0	45.1	8.8	11.6
Change	-896	...	.3	-.4	.2	-1.1	1.1
Women:							
1989	29,133	100.0	15.3	45.3	34.9	2.8	1.7
1992	31,039	100.0	13.8	42.8	37.6	3.5	2.3
Change	1,906	...	-1.5	-2.5	2.7	.7	.6

¹ Categories are defined in terms of 1992 dollars as follows: low wage—annual earnings of less than \$12,000; low-to-middle wage—\$12,000 to \$23,999; middle wage—\$24,000 to \$47,999; middle-to-high wage—\$48,000 to \$59,999; high wage—\$60,000 or more.

ther had some experience in college or were college educated. This development suggests that some of these workers may have skill deficiencies that are not captured in, for example, CPS data.²⁶

The news was not all bad for men, however, as we have seen. For example, employment in jobs yielding \$48,000 or more a year expanded by 1.1 million for men with college educations or more in the high-paying service-producing industries.

Women with high school educations or less fared poorly as well. There was almost a 1.0 million increase in their numbers in employment paying less than \$24,000 in the low-paying service-producing industries between 1979 and 1989,

but there was also a 629,000 increase in women with this amount of education in employment paying \$24,000 to \$48,000 in the high-paying service-producing industries. And, of course, middle-wage employment for women with some college or with 4 or more years of college in the high-paying service-producing industries rose by 2.6 million during the 1980's.

Changes between 1989 and 1992

With the onset of the recession in 1990, the labor market situation changed. Consequently, comparisons of earnings distributions between 1989 and 1992 must bear these changes in mind.

Table 8 shows the basic wage employment categories for men and women full-time, year-round wage and salary workers in 1989 and 1992. The impact of the recession was felt more strongly by men than by women, with men's employment level declining by 900,000, while employment for women increased by 1.9 million over the period. While there was little change in middle-wage employment for men, modest changes for women, such as those that took place between 1979 and 1989, were observed. Smaller proportions of women were employed full time, year round in low-wage and low-to-middle-wage employment, while middle-wage employment continued to increase.

Conclusions

The Nation's wage distribution grew considerably more unequal in the 1980's. The middle of the distribution thinned out, and the bottom became thicker, as did the top, but to a lesser extent. These developments, however, mask the shifts that took place in the wage distributions of men and women employed full time, year round. Distributions for both genders became more unequal during the 1980's, but in different ways. The men's distribution polarized, as the middle hollowed out, and low-wage and high-wage employment became more concentrated. On the other hand, the middle of the distribution for women filled in, with only a small increase in the proportion of women with what might be considered low wages.

A popular explanation for these shifts focuses on the growing relative demand for skilled ver-

sus unskilled workers within industries. Increases in global and domestic competition caused employers to become more cost conscious and more concerned with enhancing productivity via new communication and production technologies. Such technologies required highly trained and well-educated workers, for whom employers were willing to pay a premium. The data presented in this article tend to support this explanation, even though there were increases in low-wage employment for young men with college educations and increases in middle-wage employment for some women with high school educations or less.

More generally, the overall shift in the women's distribution toward middle-wage employment at the same time that this part of the distribution for men was eroding raises interesting research questions. Relative shifts in labor demand for more skilled and educated workers within industries are measured by responses to specific survey questions on educational attainment and occupational attachment, which may not entirely capture the "true" skill and education profiles of workers.²⁷ For example, Alan B. Krueger recently found that workers who use computers on the job earn 10 to 15 percent higher wages than similar workers who do not and that women are more likely to be using them on the job than are men.²⁸ Consequently, subsequent research into understanding the gender-related shifts that took place in the wage distributions of men and women during the 1980's will somehow have to take into account the unobserved skills and abilities that workers possess. □

Footnotes

¹ It is not as well known, however, that wage inequality was on the rise (especially among men) before the 1980's. See, for example, Peter Henle and Paul Ryscavage, "The distribution of earned income among men and women, 1958-77," *Monthly Labor Review*, April 1980, pp. 3-10.

² See Frank Levy and Richard J. Murnane, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations," *Journal of Economic Literature*, September 1992, pp. 1333-81.

³ See Lawrence F. Katz and Kevin M. Murphy, "Changes in Relative Wages, 1963-1987: Supply and Demand Factors," *Quarterly Journal of Economics*, Vol. CVII, No. 1, February 1992, pp. 35-78; and John Bound and George Johnson, "Changes in the Structure of Wages in the 1980's: An Evaluation of Alternative Explanations," *American Economic Review*, Vol. 82, No. 3, June 1992, pp. 371-92. See also Maury Gittleman, "Earnings in the 1980's: an occupational perspective," this issue, pp. 16-27.

⁴ A major consequence of these relative wage shifts has been growing inequality in the distribution of incomes among families and households, for whom success or failure in the job market is usually the most important determinant of economic well-being.

Another contributing factor to rising income inequality among families and households mentioned in the literature has

been changes in family composition, especially a shift from married-couple to single-parent families. (See, for example, Lynn Karoly, "The Trend in Inequality among Families, Individuals, and Workers in the United States: A Twenty-Five Year Perspective," in Sheldon Danziger and Peter Gottschalk, eds., *Uneven Tides: Rising Inequality in the 1980s* (New York, Russell Sage Foundation, 1993); and Paul Ryscavage, Gordon Green, and Edward Welniak, "The Impact of Demographic, Social, and Economic Change on the Distribution of Income," in *Studies in the Distribution of Income*, Current Population Reports, Consumer Income, P60-183 (Washington, DC, Bureau of the Census, October, 1992).)

Lately, interest has focused on a rising correlation between recent gains in women's earnings and family income, particularly with regard to women in affluent families. (See Lynn A. Karoly and Gary Burtless, "The Effects of Rising Earnings Inequality on the Distribution of U.S. Income," unpublished manuscript, December 1993.)

⁵ See Gary Burtless, "Introduction and Summary," in Gary Burtless, ed., *A Future of Lousy Jobs? The Changing Structure of U.S. Wages* (Washington, DC, The Brookings Institution, 1990), p. 30.

⁶ See McKinley L. Blackburn, David E. Bloom, and Richard B. Freeman, "The Declining Economic Position of Less Skilled American Men," in Burtless, *A Future of Lousy Jobs?* pp. 31-76.

⁷ See John McNeil, *Workers with Low Earnings: 1964 to 1990*, Current Population Reports, Consumer Income, Series P-60, No. 178 (Washington, DC, Bureau of the Census, March 1992); updated to 1992 in "The Earnings Ladder," *Statistical Brief* (Washington, DC, Bureau of the Census, February 1994).

⁸ In March 1980, the highest amount that could be recorded on the CPS questionnaire for income earned on the longest held job (in 1979) was \$99,999, and the same amount could be recorded from all other jobs; in March 1990 and March 1993, the highest amount that could be recorded from the longest held job was \$299,999, and \$99,999 could be recorded from all other jobs (for income earned in 1989 and 1992, respectively). These maximum amounts in public-use data files are lower than those in internal files maintained by the Census Bureau.

⁹ Variation in hours is still present to some extent, however, not only because of the open-ended nature of the hours control, but also because some workers may actually have worked fewer than 35 hours in some weeks.

Another problem with the universe concerns selection bias, because this particular universe is a selected sample of all workers. Even though the primary years of analysis—1979 and 1989—reflect similar stages of the business cycle, workers employed full time, year round are not necessarily a random sample of all workers.

A last point about this universe is that these persons may have had more than one employer and a period of unemployment or an absence from the labor force for 1 or 2 weeks.

¹⁰ These data were obtained from various editions of *Money Income of Households, Families, and Persons in the United States: 1992*, Current Population Reports, Consumer Income, Series P-60-184 (Washington, DC, Bureau of the Census, September 1993).

¹¹ Workers' nominal wages and salaries were adjusted for price inflation using the experimental Consumer Price Index for all Urban Workers, or CPI-U-X1, of the Bureau of Labor Statistics (BLS).

The Gini index is a commonly used measure of inequality. If all wage earners received the same earnings, the Gini index would be equal to 0; if all earnings were received by just one wage earner, the index would be equal to 1. Rising inequality, therefore, is represented by a rising Gini index.

¹² Statistical changes in the distributions have been tested for significance at the 10-percent confidence level and can be assumed to be statistically significant unless otherwise stated.

¹³ Frank Levy and Richard J. Murnane characterize this development as "hollowing out." See Levy and Murnane, "U.S. Earnings Levels and Earnings Inequality," p. 1349.

¹⁴ Growth rates were also examined along points or segments of the distributions. For this analysis, changes in mean earnings of ventiles of the distributions between 1979 and 1989 were studied. It was found that for women, earnings decreases occurred only at the second and third ventiles, and thereafter progressively greater increases occurred. For men, earnings growth began only at the 14th ventile and then became progressively greater.

¹⁵ The gender pay gap, or, as defined here, the ratio of women's to men's median annual earnings for full-time, year-round workers, changed suddenly in the decade of the 1980's. In 1960 the ratio was .607, in 1970 .594, and in 1980 .602; but by 1989 it jumped to .685 (by 1992 it had reached .706). See *Money Income*, Table B-10, p. B-37.

¹⁶ See Michael W. Horrigan and James P. Markey, "Recent gains in women's earnings: better pay or longer hours?" *Monthly Labor Review*, July 1990, pp. 11-17.

¹⁷ See Bound and Johnson, "Changes in the Structure of Wages," p. 386.

¹⁸ Gender pay gaps by educational class narrowed accordingly, as shown in the following tabulation:

Years of schooling	Ratio of female to male earnings	
	1979	1989
Less than 9 years . . . . .	.580	.662
9 to 11 years . . . . .	.587	.652
12 years . . . . .	.587	.647
13 to 15 years . . . . .	.600	.667
16 years . . . . .	.544	.630
17 or more years . . . . .	.572	.612

¹⁹ Concern over the proliferation of low-wage jobs has prompted some researchers and Government agencies to characterize workers with annual earnings below the Federal Government's poverty threshold for a family of four (regardless of whether the worker maintains a family or a household) as low-wage earners. (See, for example, Gregory Acs and Sheldon Danziger, "Educational Attainment, Industrial Structure, and Male Earnings through the 1980s," *Journal of Human Resources*, Vol. 28, No. 3, Summer 1993, pp. 619-48; and McNeil, *Workers with Low Earnings*.)

The constant-dollar amount of \$11,999 used here as a measure of low-wage employment was slightly higher than the Federal Government's poverty line for a three-person family of \$11,186 in 1992. Average family size that year was 3.16.

²⁰ There are various ways to show how the distribution of wages by gender has changed. For example, we can calculate the proportion of women in the categories shown in the following tabulation:

	Percent	
	1979	1989
Total	36.6	40.4
Low-wage employment	62.8	58.9
Low-to-middle-wage employment	57.9	52.8
Middle-wage employment	22.4	34.5
Middle-to-high-wage employment	6.3	16.2
High-wage employment	4.4	9.9

Clearly, women continue to make up the majority of those in the lower pay categories, but their greater penetration into the middle of the distribution and higher during the 1980's is without question.

²¹ See, for example, Blackburn, Bloom, and Freeman, "Less Skilled American Men," in Burtless, *A Future of Lousy Jobs?*

²² Levy and Murnane, "Earnings Levels and Earnings Inequality."

²³ See, for example, Barry Bluestone and Bennett Harrison, *The Great American Job Machine: The Proliferation of Low Wage Employment in the U.S. Economy*, Report to the Joint Economic Committee of the U.S. Congress, Washington, DC, December 1986.

²⁴ This fact has been documented by many researchers. For example, see Henle and Ryscavage, "Distribution of earned income"; and Robert Z. Lawrence, "Sectoral Shifts and the Size of the Middle Class," *Brookings Review*, Fall 1984, pp. 3-11.

²⁵ Annual earning levels of men working full time, year round in 1987 were used in this classification scheme.

²⁶ See Gary Burtless, "Rising Wage Inequality and the Future of Work in America," unpublished manuscript, November 1993.

²⁷ Levy and Murnane ("Earnings Levels and Earnings Inequality," p. 1372), as well as Burtless ("Rising Wage Inequality," p. 26), have suggested as much.

²⁸ Alan B. Krueger, "How Computers Have Changed the Wage Structure: Evidence from Microdata, 1984-1989," *Quarterly Journal of Economics*, February 1993, pp. 33-60.

Earnings in the 1980's: an occupational perspective

The earnings gap between more and less educated workers increased during the 1980's; changes in occupational demand accounted for roughly a third of the increase

Maury Gittleman

The 1980's were a decade of dramatic change for the earnings structure in the United States. Differentials in earnings by education widened considerably, the average pay of older workers increased relative to that of younger workers, and the earnings gap between men and women narrowed markedly. By some measures, these and other changes in the wage structure caused overall levels of earnings inequality to rise to heights not previously seen in the post-World War II period.¹

Much research conducted in an attempt to document and explain the recent changes had focused almost exclusively on the demographic characteristics of workers.² A great deal has thus been learned about which groups have made relative gains, and which have lost, in the labor market. Unfortunately, much less is known about what kinds of jobs these different workers hold, how their distribution among jobs has changed over time, and what the trends imply about the match between skills being demanded by employers and those available in the work force.³

Explanations for the changes in the earnings structure can be classified into three categories: changes in the supply of labor of different types, changes in the demand for this labor, and changes in wage-setting institutions. The analysis set forth in this article fits best under the second category, as it assesses changes in the demand for skills in the workplace.

Directly measuring trends in the market for skills is obviously a formidable task. Accordingly, the analysis takes the approach that substantial insights into this issue can be gained by focusing on occupations as indicators of the skills being demanded in the workplace. Given that

each occupation differs in terms of the bundle of skills it requires, focusing on recent developments concerning the distribution of employment across occupations and concerning earnings by occupation (which can be thought of as a return to the bundle of skills utilized on the job) will give a better understanding of the changing market for skills. In part because demographic groups differ in the skills they have acquired, they will differ in how they are distributed across occupations and thus in the impact changes in occupational demand will have on their earnings.⁴ The article assesses how much trends in the skills market—looked at through the proxy of occupations—have influenced the aforementioned earnings trends. Or, put in the form of a question, Were those groups that gained ground in the 1980's able to do so because the skills they possessed—as evidenced by the occupations they were concentrated in—were in growing demand?

Changes in relative earnings

The relative earnings trends that are at the focus of the analysis presented in this article are shown in table 1.⁵ The calculations use the March Current Population Surveys (CPS) for 1974, 1980, and 1990, which contain data on earnings for the preceding year.⁶ The shifts between 1979 and 1989 are the primary focus, with the data for 1973–79 providing a context for comparing the 1970's with the 1980's and with the data for 1973–89 showing how demographic groups fared in the entire period since real wage growth began to stagnate in the mid-1970's.

A number of important trends are apparent from the earnings changes shown in the table for

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full-time, year-round workers. Most striking is the performance of men who did not graduate from high school. In real terms, their earnings declined by nearly 20 percent between 1979 and 1989, and by nearly 25 percent relative to college graduates.⁷ For women, there is a similar widening of the gap between the more and less educated, although in absolute terms, only those who did not graduate from high school suffered a decline in purchasing power. The gains by more educated groups are in sharp contrast to trends in the 1970's, when, on the whole, these groups *lost* ground. Also of note is that there has generally been an increase in returns to experience⁸ for men. To give the most dramatic example, between 1973 and 1989, earnings of men with 30 or more years of experience rose by 14.5 percent ($0.034 - (-0.111) = 0.145$) relative to those with 10–19 years of experience.⁹ Finally, women have gained substantial ground on men in recent years—12.3 percent between 1979 and 1989 alone.

Explanations of the changes

Why did these profound changes in the earnings structure occur in the 1980's? As noted earlier, alternative hypotheses can be grouped into three categories: changes in the supply of labor of different types, changes in the demand for this labor, and changes in institutions that affect the setting of wages.

The supply of workers. Economic theory tells us that an increase in the relative supply of a demographic group tends to depress that group's earning power. To give a prominent example, supply-side changes resulting from the entry into the work force of the baby-boomers was an important factor in the rise in returns to experience during the 1970's.¹⁰ An examination of supply patterns, however, reveals little support for simple supply-side explanations for the changes in the 1980's. The calculation of relative supply indexes (a measure of the share of jobs held by specific demographic groups), shown in table 2, demonstrates a striking increase in the average education level of the labor force.¹¹ For both men and women, college graduates were the fastest growing education group in the 1980's, with those without any college at all showing declines as a share of the labor force. Yet, this is exactly the opposite of what a supply-side explanation would predict. Indeed, the data show that those education groups with the fastest growth in earnings had the biggest rise in their share of the labor force. Similarly, women posted gains in their share of the labor force at the same time their earnings were moving closer to men's levels. With regard to potential experience, the picture is somewhat less clear. It suffices to say, how-

Table 1. **Changes in real earnings of full-time, year-round workers, 1973–89**

[Difference in averages of logarithms]			
Demographic group	1973–89	1973–79	1979–89
All	–0.023	–0.019	–0.004
Men	–.050	–.018	–.032
Women .....	.137	.047	.091
Years of schooling			
Men:			
0–11	–.247	–.051	–.196
12	–.155	–.041	–.113
13–15	–.071	–.044	–.028
16 or more	–.024	–.073	.049
Women:			
0–11	–.018	.041	–.059
12 .....	.042	.028	.015
13–15 .....	.076	.005	.071
16 or more .....	.122	–.019	.141
Years of potential experience¹			
Men:			
0–9	–.082	–.002	–.080
10–19	–.111	–.026	–.085
20–29	–.049	–.033	–.016
30 or more .....	.034	.029	.005
Women:			
0–9 .....	.107	.055	.051
10–19 .....	.135	.042	.093
20–29 .....	.157	.033	.125
30 or more .....	.095	.043	.051

¹ Potential labor market experience is defined as age, minus number of years of schooling, minus 6 years, to account for the preschool period. It is used because the Current Population Survey does not measure *actual* labor market experience.

NOTE: Earnings are deflated into 1989 dollars using the gross domestic product deflator for personal consumption expenditures.

ever, that there is no obvious pattern indicating that the groups with the largest increases in earnings have declined in their relative shares of the labor force.

With a simple supply-side explanation ruled out, it is worthwhile to consider more sophisticated supply-side hypotheses for the rise in returns to education. Some observers have speculated that a decline in the quality of high school education, perhaps coinciding with a decline in test scores that occurred during the 1970's, may have contributed to a widening gap between the productivity and, thus, the earnings of those who have gone on to college and those who have not. This hypothesis is inconsistent, however, with the fact that education-earnings differentials widened for cohorts that entered the labor force well before the postulated decline in the quality of high school education. Past research has found some support, however, for the idea that the position of the less educated—particularly those without a high school education—has worsened owing to the increase in the relative supply of less skilled labor resulting from a rise in the flow of immigrants into the labor force.¹²

June O'Neill and Solomon Polachek explore a supply-side hypothesis for the gains in earnings of women relative to men.¹³ They find that much of the contraction in the gap can be explained by forces relating to actual labor market experience: first, differences in actual labor market experience have narrowed, and second, differences in returns to this experience across the genders have narrowed, which they attribute to higher levels of on-the-job training for women.

The demand for workers. Perhaps the most prominent hypothesis on the demand side has been that shifts in the industrial composition of employment—particularly as a result of the decline in the employment share of manufacturing—have reduced the number of high-paying jobs available to workers with low levels of education. Recent research¹⁴ provides some support for this hypothesis in connection with the widening of education-earnings differentials, but overall, most of the increase in returns to education has occurred within industries. Similarly, past research has found that industry effects did *not* play a large role in the reduction of the earnings gap between men and women in the 1980's.¹⁵

Given that changes in industry composition do not explain the bulk of the changes in relative earnings, it is necessary to examine the rea-

sons why changes within industries have occurred. Candidates for within-industry shifts in demand in favor of more educated workers include changes in technology that shift demand toward more skilled workers, "outsourcing" to foreign locations of activities previously performed by unskilled workers, and changes in management techniques that favor one group over another. Older workers may experience what is in effect a favorable within-industry demand shift when seniority provisions protect them from layoffs during the restructuring of an industry. Women, too, can find occupational patterns changing as discrimination lessens or as changing cultural mores lead to greater similarity in career pursuits across the genders.

Of the forces leading to shifts in demand for labor within industries, the one that has received the most attention is the influence of technical change on the demand for educated workers. A number of related hypotheses involving the connection between technical change and returns to education have been put forth. One explanation draws on work by Richard R. Nelson and Edmund S. Phelps, who suggest that "the rate of return to education is greater the more technologically progressive the economy."¹⁶ This may occur because, in a technologically dynamic environment, educated workers have better "allocative ability in the sense of selecting the appropriate input bundles and of efficiently distributing inputs between competing uses,"¹⁷ because educated workers have a comparative advantage in adjusting to and implementing new technology,¹⁸ or because the introduction of new technology increases the need for learning by workers, and better educated workers are better learners.¹⁹ Apart from these studies, the argument that the returns to education are higher in industries with rapid technological progress has received empirical support from a number of sources.²⁰

Despite the empirical support for the linkage between technical change and returns to education at a given point in time, the findings about the relationship between technical progress and changes in the return to education over time are mixed. Alan Krueger observes that, because workers who use computers earn more than other workers, and because such workers are likely to be better educated, the expansion of computer use during the 1980's can account for an important part of the change in returns to education.²¹ Similarly, Jacob Mincer has found that, over time, expenditures on research and development and on new capital equipment have had a positive impact on the education wage premium.²² On the other hand, McKinley Blackburn, David Bloom, and Richard Freeman could not find evidence of such a relationship.²³

Table 2. Relative changes in the supply of all workers, 1973-89

[Change in logarithm of share of employment × 100]

Demographic group	1973-89	1973-79	1979-89
Men	-9.7	-6.2	-3.5
Women	11.7	7.7	4.0
Years of schooling			
Men:			
0-11	-64.8	-29.9	-34.9
12	-6.5	-4.5	-2.0
13-15	11.1	8.3	2.7
16 or more	26.7	10.0	16.7
Women:			
0-11	-59.0	-23.2	-35.8
12	4.3	8.1	-3.8
13-15	46.4	25.0	21.4
16 or more	64.2	30.3	33.9
Years of potential experience¹			
Men:			
0-9	-2.0	3.7	-23.8
10-19	31.3	7.0	24.3
20-29	-2.6	-18.4	15.8
30 or more	-47.0	-23.5	-23.5
Women:			
0-9	-4.8	11.2	-16.0
10-19	56.4	29.9	26.6
20-29	27.6	1.2	26.4
30 or more	-23.2	-12.5	-10.7

¹ Potential labor market experience is defined as age, minus number of years of schooling, minus 6 years, to account for the preschool period. It is used because the Current Population Survey does not measure *actual* labor market experience.

Wage-setting institutions. Finally, to shift focus to institutional factors that may have affected the wage structure, Blackburn, Bloom, and Freeman have found that, because of the existence of a union premium and the fact that the less educated are more likely to be union members, the decline in unionization in the United States has contributed to a widening of education-earnings differentials. Recent research has also determined that the decline in unionization is responsible for about one-seventh of the contraction of the gender gap. This result may be attributed to the fact that union membership rates have declined more slowly for women than for men, primarily because women were less concentrated in jobs where unionization was falling.²⁴ On the other hand, Blackburn, Bloom, and Freeman have found that the decline in the real value of the minimum wage has not played an important role in the changes in education-earnings differentials.²⁵

Occupations and the demand for skills

To sum up the findings of recent research, the evidence suggests that while supply and institutional factors may have played some role, *demand* clearly has shifted in favor of more educated workers. Breaking this down even further, the shifts in demand have occurred primarily within, rather than across, industries. In light of these findings, it is natural to ask whether one can detect, in changes in occupational composition, a shift in demand for skills that would favor the demographic groups that performed well in the labor markets of the 1980's.²⁶ Before doing so, however, it is instructive to outline the connections among occupations, skills, and relative earnings. Much recent work has speculated that many of the changes in the earnings structure—particularly the rise in returns to education—have come about as a result of a rise in the return to *skill*.²⁷ The definition of *skill* is usually not made precise, but the term is often spoken of in connection with education, implying that skill is developed in school. In fact, the skills required on the job are multidimensional, and not all of them are the kind of skills developed through formal education. To use one taxonomy, David R. Howell and Edward N. Wolff write of jobs as being “defined by a set of tasks requiring some combination of motor skills (manual dexterity, motor coordination), interpersonal skills, organizational and managerial skills (leadership, autonomy and responsibility), verbal and language skills, diagnostic skills (synthetic reasoning abilities), and analytical skills (mathematical and logical reasoning abilities).”²⁸

Measuring the demand for skills. Given the complexity of measuring the sets of skills re-

quired for just one job, it is apparent that determining the skill requirements for the economy as a whole, as well as changes in such requirements, is a difficult task. In light of the dearth of data directly measuring the skill requirements of jobs, an alternative approach is to focus on the occupational composition of the economy, as an occupation—if defined narrowly enough—can serve as a proxy for a set of skills. Using this approach, we can group changes in the skill requirements of jobs into three categories. First, shifts in the industrial composition of employment—resulting from changes in the demand for products and differences in productivity growth across sectors—will lead to changes in occupational composition and, thus, skill requirements because the distribution of employment by occupations differs across industries. For example, the secular shift of the economy away from manufacturing and toward services has contributed to a shift from blue-collar to white-collar work, leading to a decline in demand for the motor skills required in production work and an increase in the cognitive and interpersonal skills needed in clerical and professional positions.

Second, staffing patterns can change within industries themselves as a result of “outsourcing,” changes in management techniques, and other factors. For example, if firms move production activities abroad in order to take advantage of a less expensive pool of blue-collar labor, the proportion of white-collar employment at these companies will increase.

Finally, the skills required in an occupation itself can change, often owing to the introduction of new technology. The spread of word processors, to cite one example, has had a marked effect on skills, requiring secretaries to learn how to use personal computers rather than typewriters and leading many professionals to do for themselves many of the clerical responsibilities previously performed by their secretaries.

Skill requirements and the earnings of demographic groups. How do skill requirements of the economy affect the earnings of particular demographic groups? It is perhaps easiest to explain how the demand for different sets of skills will cause earnings to differ across education groups. A number of theories have been put forth to describe the relationships among level of schooling, occupation, and earnings by education group. According to one view prominent among academic economists studying the labor market—known as *human capital theory*—schooling develops the skills required to perform the tasks in a particular occupation, and the resulting enhancement of productivity leads to higher earnings.²⁹ An alternative to human capi-

tal theory is that a key function of education is "screening," that is, identifying individuals with preexisting skills and abilities required in particular jobs. According to this view, education is used to sort individuals into occupations with different pay, rather than to develop the abilities needed for those occupations.³⁰ A number of other views on how education affects earnings through the intermediary of occupations exist as well. What is important to keep in mind is that, regardless of one's views on the connections among education, occupations, and earnings, the differences in earnings among education groups will depend fundamentally on the occupational structure of the economy. That is, the payoff to education will depend on two factors: the effectiveness of additional years of schooling in qualifying individuals for higher paying jobs than they would be likely to obtain without the additional schooling; and how wide the gap is between high-paying and low-paying jobs.³¹ If changes in the skills that are demanded increase the likelihood that college graduates will move into high-paying occupations, and if the earnings of these high-paying jobs increase compared with those of other occupations, then the relative earnings of the more educated will increase.

The connections among experience, occupations, and earnings are similar to those among education, occupations, and earnings in some respects. Human capital theory asserts, analogously to the case of education, that with additional labor market experience, individuals will receive more on-the-job training, and the skills developed in this process will enable them to climb the occupational ladder and receive higher pay. An alternative view is that the skills of older workers may not differ much from those of younger workers, but seniority provisions have given the older workers more opportunities to move up in rank.

It is more difficult to make a case for why occupation distributions, and thus earnings, should differ across the genders because of skill differences, as there is no reason to assume that abilities should differ by gender (although differences in schooling and experience by gender may lead to differences in the development of skills). The human capital view does, however, offer an explanation based on skills: under the assumption that women will participate less in the labor force over the course of the life cycle (for example, because they may leave the labor force to care for a child), they will tend to invest in skills that do not depreciate as much during their time away from the labor force, and these skills will be suitable for particular occupations. For example, women, according to this view, would be unwilling to invest in the skills needed for many of the

professional occupations, because while they were away from the labor force, these skills would tend to atrophy.³² An alternative approach is that the culture of a society itself encourages men and women to follow different career paths, causing women to be "segregated" in occupations that, on the whole, tend to be less well paying than those held by men.³³ Finally, gender-related differences in occupational distributions may result from discrimination on the basis of gender.

From the preceding discussion, it is clear that there are ample reasons to expect demographic groups to be distributed differently across the economy's occupations. In some cases, these are the result of skill differences across groups, but in others, they are related to factors such as discrimination or seniority provisions. Regardless of their underlying cause, these differences in occupational structure across demographic groups will have an important impact on how the groups fare when the structure shifts: those more heavily concentrated in occupations in which demand is growing faster than average—as evidenced by employment growth or earnings increases or both—will tend to experience relative earnings gains.

Trends in employment and earnings

Employment by occupation. What were the important occupational employment shifts of the 1980's? Table 3 shows trends in occupational employment by the Census Bureau's major occupation groups. Most notable is the employment gain for sales occupations, up 3.2 percentage points in 1979–89. Other important gains were posted by executive, administrative, and managerial (up 1.5 points) and professional specialty (up 1.1 points) occupations, jobs where a high proportion of college graduates would be expected. On the other side of the ledger, a decline in blue-collar occupations is evident, particularly for machine operators (down 2.2 points) and precision production, craft, and repair occupations (down 1.6 points). These are occupations in which those without a college education historically have had a possibility of finding high-paying jobs. Administrative support occupations also showed a decline (1.1 points) in the period.

A clue as to whether the changes in the earnings structure in the 1980's were due to trends in occupational composition is provided by the degree to which the shifts during the 1980's differed from those in the 1970's. The decline of the blue-collar occupations clearly predated the 1980's, although it might have accelerated during that period. The growth of managerial and professional occupations also predated the 1980's. The only occupations in which there were

Table 3. Employment shares and earnings of all workers by occupation, selected years, 1973-89

Occupation	Employment shares (in percent)			Logarithm of earnings ¹		
	1973	1979	1989	1973	1979	1989
Executive, administrative, and managerial	9.2	9.8	11.3	10.24	10.13	10.19
Professional specialty	10.8	11.9	13.0	9.86	9.79	9.94
Technicians	2.5	3.0	3.6	9.72	9.71	9.85
Sales	8.5	8.1	11.3	9.12	9.03	9.24
Administrative support	17.5	18.4	17.3	9.24	9.25	9.35
Private household	1.3	.8	.7	7.48	7.39	7.58
Protective service	1.5	1.5	1.9	9.78	9.70	9.70
Other service	10.6	11.3	11.1	8.62	8.59	8.65
Farming, forestry, and fishing	2.2	1.9	1.9	8.50	8.53	8.60
Precision production, craft, and repair	13.7	13.0	11.4	9.92	9.89	9.84
Machine operators	11.2	9.7	7.5	9.40	9.46	9.40
Transportation and material-moving equipment	4.9	4.8	4.3	9.79	9.73	9.61
Handlers, cleaners, helpers, and laborers	6.2	5.7	4.8	9.09	9.07	8.93

¹ Earnings are deflated into 1989 dollars using the gross domestic product deflator for personal consumption expenditures.

important turnabouts between the two decades were sales and administrative support. The lack of a sharp contrast between the decades suggests that changes in occupational demand may not provide the complete explanation for the shifts in the earnings structure.

The changes in the occupational mix just noted can be attributed either to changes in industrial employment or to changes in occupational staffing patterns within industries. To determine which is the case, the following technique was used: the occupational composition for 1989 was predicted under the assumption that, for each industry, occupational staffing patterns did not change from 1979, so that the only changes in occupational employment that could have resulted were from shifts in industrial employment.³⁴ From these calculations, it is apparent that shifts in industrial employment generally have been in a direction consistent with the changing occupation mix. In other words, employment tended to shift toward those industries containing a relatively high proportion of the growing occupations and away from those sectors with a large share of declining occupations. The magnitudes of these shifts, however, are insufficient to predict the changes in occupational composition, indicating that other forces (such as technical change, "outsourcing," and changes in management techniques) were leading to shifts in staffing patterns within industries. For example, the method predicted that the share of executives, administrators, and managers in total employment would rise from 9.83 percent to 10.00 percent between 1979 and 1989, but the actual gain was to 11.30 percent.

Recent research has found some support for a role for technical change in shifting the composition of employment in manufacturing indus-

tries toward occupations requiring higher levels of education. For example, Ernst R. Berndt, Catherine J. Morrison, and Larry S. Rosenblum determined that the growth in white-collar, non-production-worker hours is positively related to increases in what they term the "high-tech composition of capital."³⁵ Similarly, Eli Berman, John Bound, and Zvi Griliches have found a shift away from production workers to be positively related to investments in computers and computer-related technology, as well as to expenditures on research and development.³⁶ It is an open question whether these results would hold for nonmanufacturing industries.

Earnings by occupation. Table 3 also provides earnings trends by Census Bureau major occupations. In the 1980's, those occupations with the fastest real earnings growth were sales (up 21 percent), private household occupations (up 19 percent), professional specialty occupations (up 15 percent), and technicians (up 14 percent). Those with real earnings declines were all blue-collar occupations, with the largest drops posted for handlers, cleaners, helpers, and laborers (down 14 percent) and transportation and material-moving equipment occupations (down 12 percent). In general, these trends suggest, not surprisingly, that occupations with more educated workers tended to experience gains in average earnings. The implications of the trends for gender and experience differentials are less transparent.

In contrast to the case of employment, earnings trends show a clear shift across decades. Some of the white-collar occupations—for example, executive, administrative, and managerial occupations, as well as professional specialty occupations—that did reasonably well in the 1980's had fared poorly in the 1970's; and blue-

collar machine operators, whose average earnings declined in the 1980's, had been among the few gainers in the 1970's.

Changes in the demand for skills

What have been the implications of the shifts in occupational demand for changes in the demand for skills? As previously described, changes in the demand for skills can come from shifts in industrial composition, changes in occupational patterns within industries, and changes in the skills required by occupations.

Impact of occupational and industrial employment shifts. The changes in occupational composition discussed in the previous section, which incorporate the impact of the first two categories of change mentioned, indicate that in the 1980's, demand was growing for the skills required in professional and managerial occupations. In these occupations, cognitive and interpersonal skills tend to be in high demand, but motor skills do not. Again, it is important to keep in mind that, in terms of compositional shifts, the 1980's may represent an *acceleration* in the rate at which the demand for cognitive and interpersonal skills is increasing, but not a major break from previous trends.

A study by Kevin M. Murphy and Finis Welch for the period 1940-90 has arrived at a finding consistent with the view that the demand for skills does not show a major break in trend in the 1980's.³⁷ Using education as the measure of skill,³⁸ they found that over this period employment shifted toward occupations with higher levels of schooling, but that there was no evidence that the demand for education grew particularly rapidly in the 1980's. In another study assessing the impact of changes in industrial and occupational composition on cognitive, interactive, and motor skill requirements, Howell and Wolff³⁹ determined that, with the exception of motor skills, changing employment patterns have had the effect of raising skill requirements. But they also found a sharp deceleration in the rate of growth in these requirements between 1960 and 1985.

The changing skill requirements of jobs. The studies just mentioned provide a perspective on the effects of occupational and industrial employment shifts on the skill requirements of jobs. But the lack of good data makes it difficult to assess trends in the third category of shifts affecting changes in the demand for skills: the skill requirements of jobs. For many years, there has been an ongoing debate in the social sciences about the effects of new technology on the demand for skills. One view is that technical change tends to increase the demand for cognitive skills

as the need for physical labor is reduced by automation. Another philosophy holds that technology is inherently "de-skilling," as management tries to reduce the amount of control workers have over their jobs. Yet a third school of thought argues that it is not possible to determine from first principles the effect of new technology on the demand for skills.⁴⁰ In a recent study of manufacturing establishments in the 1980's, Peter Cappelli has found that there was a significant increase in the level of skills required for most production jobs, but that clerical jobs are evenly split between those that have been "upskilled" and those that have been "de-skilled."⁴¹ Except for some cases studies, the literature is virtually silent on trends in the skill requirements of other occupations within manufacturing and of nonmanufacturing as a whole.

Quantitative aspects of the changes

Demand indexes. As a first pass at assessing whether the changes in occupational demand noted in the previous section play an important role in the changes in relative earnings by demographic group, an index of demand based on occupations is devised. For a given demographic group i , the shift in demand relative to other groups can be calculated as the weighted percent change in employment share by occupation; that is,

$$(1) \quad \frac{\Delta D_i}{D_i} = \sum a_{ij} \frac{\Delta EMP_j}{EMP_j},$$

where D_i is the demand for demographic group i , a_{ij} is the proportion of that group employed in the j th occupation in the base year, and EMP_j is the share of employment in the j th occupation. Table 4 shows this measure for different demographic groups; the occupations are the Census Bureau's detailed occupations listed in the technical documentation to the CPS, the sample is all workers, and the measure is computed as an annual average.⁴²

If workers of a particular group are overrepresented in an occupation, the growth of employment in that occupation will tend to increase the demand for that group and thus raise its relative pay. The demand indexes will then be highest for groups that are concentrated in growing occupations. Which groups have benefited most from the shifts in occupational demand during the 1980's? Table 4 indicates clearly that occupational shifts favored the more educated: for both men and women, the changes in the demand index are ordered by education. It is apparent, though, that this trend did not begin in the 1980's: in 1973-79, the demand for college graduates grew more quickly than for high school gradu-

ates and dropouts, for both men and women. The magnitudes of the changes do indicate, however, a modest acceleration in the shift toward the more highly educated in the 1980's, one that may even be greater than indicated here because demand shifts were highest for those groups with increasing earnings.

Categorical statements about which experience groups were favored by shifts in occupational demand are much harder to make. For both men and women, the differences in changes in the occupational demand index across experience groups were relatively small in the 1980's. For men, there is no apparent order to the shifts, while for women, the less experienced appear to have benefited more.

In light of the strong earnings gains by women relative to men during the 1980's, it is striking to note that shifts in occupational demand, at least by this measure, did not favor females. Shifts in occupational demand were actually slightly more favorable toward men than women in the 1980's, the opposite of the situation in the 1970's. This suggests that we must look outside the realm of changes in occupational demand to determine why women's earnings gained ground on men's during the 1980's.

Regression analysis. Although the preceding results are suggestive, it is useful to quantify the impacts of occupational shifts on relative earnings. To do this, regression-decomposition analysis is used. This framework is a convenient tool for attributing changes in a given earnings differential (for example, that between college graduates and high school graduates, or between those with 20 to 29 years of experience and those with 0 to 9 years of experience, or between men and women) to shifts in the distribution of occupations. The technique is applied in terms of education-earnings differentials as follows: a regression for the base year (year s) is run, regressing (\ln) earnings on variables representing years of schooling, years of potential labor market experience, race, region, whether the individual lived in a metropolitan area, part-time status, and weeks worked. The formula is

$$(2) \quad \ln \text{ Earnings} = a_{0s} + a_{1s} \text{LTHS} + a_{2s} \text{HS} + a_{3s} \text{SOME} + a_{4s} \mathbf{X} + e,$$

where LTHS is a variable indicating that the individual has less than a high school education; HS is a variable indicating that the individual has a high school education; SOME is a variable indicating that the individual has some college; \mathbf{X} is a vector representing the other variables mentioned; the a_{is} 's are the corresponding coefficients for the year s , and e is an error term. The coefficients on the variables representing the

Table 4. Annual average relative changes in demand based on detailed occupations, all workers, 1973-89

Demographic group	1973-89	1973-79	1979-89
Men	-0.25	-0.24	-0.23
Women	-.36	.03	-.38
Years of schooling			
Men:			
0-11	-.96	-.88	-1.04
12	-.46	-.44	-.62
13-15 .....	.22	.14	.19
16 or more	1.00	.99	1.05
Women:			
0-11	-1.04	-.99	-.98
12	-.36	.16	-.56
13-15 .....	.07	.77	-.08
16 or more .....	.34	.51	.43
Years of potential experience¹			
Men:			
0-9	-.33	-.29	-.32
10-19	-.12	-.11	-.07
20-29	-.09	-.09	-.13
30 or more	-.35	-.35	-.33
Women:			
0-9	-.23	.30	-.26
10-19	-.37	.05	-.36
20-29	-.35	.01	-.45
30 or more	-.56	-.37	-.57

¹ Potential labor market experience is defined as age, minus number of years of schooling, minus 6 years, to account for the preschool period. It is used because the Current Population Survey does not measure actual labor market experience.

schooling groups can be used to measure the average difference in earnings between one group and another, after controlling for other relevant variables that affect earning power. For example, a_{2s} measures the difference between earnings of high school graduates and college graduates. This same regression is then rerun for the end year, year t , and the change in the coefficients for schooling groups can be used to measure the change in relative earnings by schooling group. (For example, $a_{2s} - a_{2t}$ measures the change in the college graduate-high school graduate differential between year s and year t).⁴³

The same exercise is then repeated for the beginning and ending year of the period, this time including in the regressions variables representing the individual's occupations:

$$(3) \quad \ln \text{ Earnings} = b_{0s} + b_{1s} \text{LTHS} + b_{2s} \text{HS} + b_{3s} \text{SOME} + b_{4s} \mathbf{X} + b_{5s} \text{OCC} + e.$$

Here, the vector of occupation variables, OCC, controls for the differences across education groups in the distribution of these groups across occupations, as well as for differences in average earnings across occupations. Calculating the change in education-earnings differentials across years in this specification gives the change in relative earnings "net" of occupation factors (for example, $b_{2s} - b_{2t}$). Comparing the change in dif-

Occupational Earnings in the 1980's

ferential "net" of occupation factors with the previously calculated change (for example, $a_{2,s} - a_{2,p}$) allows a calculation of the share of the education-earnings differential that can be attributed to occupational factors. To summarize, changes in occupational demand will have two effects that lead to changes in relative earnings by demographic group. The first effect is to change the distribution of demographic groups across occupations, benefiting those groups with relative shifts to higher paying jobs. The second effect is to change the earnings premium associated with particular occupations, which favors those groups disproportionately concentrated in occupations with rising earnings premiums. It is also possible to assess the impact of industry factors in the same way, as will be done momentarily.

What would have happened to education-earnings differentials in the 1980's in the absence of shifts in occupational demand? Table 5 indicates that these differentials would have widened, but by a substantially smaller amount. For example, the differential between male college graduates and high school graduates increased by 16 percent, but without the shifts in occupational demand, this differential would have widened by 10 percent. And controlling for shifts in occupational demand reveals that the earnings of male college graduates relative to high school drop-outs would have increased by 16 percent instead of 23 percent. The results for education-earnings differentials for females are similar, with occupational effects accounting for roughly one-third of the widening gap. In other words, as suggested, college graduates have benefited disproportionately from the changes in occupational demand: relative to those with less education, they were able to shift into better paying jobs (such as those in the professions and management), and the jobs that they tended to hold became higher paying in relative terms as well (as shown in table 3).

Table 5 also shows how important industry factors have been in the widening of education-earnings differentials. In general, shifts in industry demand have not been quite as significant as changes in occupational structure. Finally, table 5 indicates that industry and occupation factors working together are not that much more potent than the effect of each separately, a reflection of the fact that many occupations are concentrated in a small number of industries.

Table 6 shows the result of an exercise conducted for experience-earnings differentials similar to the exercise carried out to generate table 5. As noted earlier, the increase in returns to experience during the 1980's was less dramatic than the rise in returns to education, providing less scope for occupational factors to have played a role. Even so, it is striking to note how little shifts in occupational demand have affected returns to experience: the inclusion of controls for occupation has virtually no impact on the changes in relative earnings by experience group. The same is true for the effect of industry controls.

Occupational factors played a nonnegligible, but still fairly small, role in the earnings gain of women relative to men during the 1980's, accounting for roughly one-quarter of the gain, as shown in table 6. Given the popular perception that women recently have made further inroads into the professions, it may seem surprising that they have not experienced greater movement into higher paying jobs relative to men. It should be kept in mind, however, that the secular increase in the labor force participation of women has meant an increase in the number of women in jobs across the entire earnings distribution, not just at the top. In addition, while the decline in high-paying blue-collar jobs certainly hurt men more than women, men benefited more from the rise in pay in the professional occupations, given their greater concentration there.

Table 5. Adding occupation and industry controls to estimates of education-earnings differentials, all workers, 1973-89

Demographic group	Period	Change in differential	Change in differential, controlling for occupation	Change in differential, controlling for industry	Change in differential, controlling for occupation and industry
Male college graduate—					
High school graduate	1973-79	-0.04	0.01	-0.02	0.01
High school graduate	1979-89	.16	.10	.11	.09
Less than high school graduate	1973-79	-.03	-.03	.01	-.04
Less than high school graduate	1979-89	.23	.14	.16	.12
Female college graduate—					
High school graduate	1973-79	-.06	-.03	-.05	-.03
High school graduate	1979-89	.14	.09	.09	.07
Less than high school graduate	1973-79	-.07	.00	-.05	.00
Less than high school graduate	1979-89	.21	.13	.14	.10

Table 6. Adding occupation and industry controls to estimates of experience-earnings and gender-earnings differentials, all workers, 1973-89

Demographic group	Period	Change in differential	Change in differential, controlling for occupation	Change in differential, controlling for industry	Change in differential, controlling for occupation and industry
Men:					
10-19 years ..	1973-79	-0.02	-0.01	-0.02	-0.02
10-19 years ..	1979-89	-.01	.00	-.01	-.00
20-29 years ..	1973-79	.01	.03	.01	.02
20-29 years ..	1979-89	.03	.04	.02	.03
30 or more years	1973-79	.03	.03	.03	.02
30 or more years	1979-89	.07	.07	.06	.07
Women:					
10-19 years ..	1973-79	.01	.01	.01	.01
10-19 years ..	1979-89	.07	.06	.06	.06
20-29 years ..	1973-79	-.02	-.03	-.02	-.03
20-29 years ..	1979-89	.11	.09	.09	.08
30 or more years	1973-79	.00	.00	.00	.00
30 or more years	1979-89	.04	.04	.03	.03
Men-women					
	1973-79	-.11	-.12	-.12	-.13
	1979-89	-.11	-.08	-.09	-.07

NOTE: For experience-earnings differentials, base = 0-9 years of potential labor market experience.

Summary and conclusions

Several interesting findings have emerged from the analysis presented in this article. During the 1980's, for education-earnings differentials, shifts in occupational demand accounted for roughly one-third of the change in the gap. The analysis indicates, however, that the rise in the demand for skills possessed by more educated workers is not a new phenomenon: changes in the occupational mix during the 1980's marked no abrupt departure from patterns in the 1970's. In light of this relative stability, why were the changes in the earnings structure so different across the decades? Partly, this is due to a mismatch between the growth in the demand for more educated workers and the increase in the supply of such workers: during the 1970's, the entry into the work force of

highly educated baby-boomers helped meet the growing demand for more educated workers, but in the 1980's, the growth of the proportion of college graduates in the work force decelerated as smaller cohorts entered the market.⁴⁴

What other factors explain the change in education-earnings differentials that occupational forces do not? Aside from the factors already mentioned, it seems likely that there was an increase in the return to the general skills possessed by college graduates (for example, the analytical and cognitive skills that are not specific to a particular job), and not just to the more specialized skills demanded in the types of occupations college graduates tend to fill.⁴⁵

Shifts in occupational and industrial demand turn out to be relatively unimportant in explaining changes in returns to experience during the 1980's. Supply-side shifts also do not seem to be part of the story: while the growth in the supply of less experienced workers was important in explaining the rise in returns to experience in the 1970's, the work force actually became more experienced in the 1980's as the baby-boomers aged. Katz and Murphy speculate that the rise in returns to experience—having been concentrated among the less educated—was actually related to the forces leading to the rise in returns to education.⁴⁶ Because older workers tend to be insulated from labor market forces by seniority provisions, and because they might possess skills specific to a firm, younger, less educated workers would tend to be hit harder than their older counterparts by the forces tilting demand toward workers with higher levels of schooling.

Changes in occupational demand played a nonnegligible, but small, role in narrowing the earnings gap between men and women in the 1980's. What else has been important? As mentioned earlier, the disproportionate effect of the decline in unionization on men is one factor. In addition, a decline in differences across the genders in actual labor market experience and in the return to that experience has been found to have been important. Finally, a decline in discrimination may have had an impact as well. □

Footnotes

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¹ See Claudia Goldin and Robert A. Margo, "The Great Compression: The Wage Structure in the United States at Mid-Century," *Quarterly Journal of Economics*, February 1992, pp. 1-34, for a long-term view of U.S. earnings inequality trends.

² For a survey of this literature, see Frank Levy and Richard J. Murnane, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations," *Journal of Economic Literature*, September 1992, pp. 1333-81.

³ One reason for the lack of focus on actual jobs in the economy is that changes in the occupational classification scheme by the Census Bureau have made it difficult to compare the occupational structure of the economy before and after 1983. To circumvent this problem, occupation data taken from the cps before 1983 were recoded in post-1983 terms. (See the appendix at the end of the article.)

⁴ It should be stressed at the outset that skills are not the only factor involved in the distribution of demographic

Occupational Earnings in the 1980's

groups across jobs. For example, differences between men and women in occupational attachment may be due to discrimination—both before entry into the labor market and at the workplace—and older workers may be higher up on the job ladder than their younger counterparts due to seniority.

⁵ In this table, average earnings are calculated only for full-time, year-round workers, in an attempt to control for differences in hours worked across groups. To assess trends in as broad a portion of the labor force as possible, the remaining tables include all workers and use regression techniques where appropriate to control for differences in hours worked.

⁶ The cps is a monthly survey of approximately 60,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. For inclusion in the samples used in the analysis presented in this article, the individual (1) had to be between the ages of 18 and 64 years, (2) could not be self-employed, and (3) had to have worked at least 1 week during the year in the civilian economy. Note in table 1 that because the March 1974 cps does not contain a continuous variable for weeks worked and usual hours worked, it is not possible to calculate an hourly wage rate for all 3 survey years combined.

⁷ Throughout this article, changes in the natural logarithm of earnings are used to approximate percent changes in earnings.

⁸ Because the cps does not measure actual labor market experience, potential labor market experience is used instead. This is defined as age, minus number of years of schooling, minus 6 years, to account for the preschool period. In some cases, the result of the calculation is a negative number, so a zero is substituted.

⁹ For women, the patterns are less clear and the significance even less so, given that the number of years of potential experience may not be a good proxy for actual labor market experience for many women and that the relationship between these two has changed over time as women's labor force participation has risen.

¹⁰ See, for example, Finis Welch, "Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust," *Journal of Political Economy*, Vol. 87, pp. S65-S97.

¹¹ There are a number of alternative methods for calculating supply indexes. The indexes shown here measure the logarithm of the change in the share of employment of all workers by demographic group. It would have been preferable to weight the employment by the number of hours worked during the year, but this was not done because the March 1974 cps does not contain data on usual hours worked per week, and the data for weeks worked during the year are grouped into categories. Another alternative (see Lawrence F. Katz and Kevin M. Murphy, "Changes in Relative Wages, 1963-87: Supply and Demand Factors," *Quarterly Journal of Economics*, February 1992, pp. 35-78) would be to use an efficiency unit concept, where employment is weighted by earnings. The evidence indicates that all of the alternatives provide similar results.

¹² See George J. Borjas, Richard B. Freeman, and Lawrence F. Katz, "On the Labor Market Effects of Immigration and Trade," NBER Working Paper No. 3761, June 1991.

¹³ See June O'Neill and Solomon Polachek, "Why the Gender Gap in Wages Narrowed in the 1980's," *Journal of Labor Economics*, January 1993, pp. 205-28. This is an issue that cannot be explored using the cps, since, as mentioned earlier, that survey can measure only potential rather than actual labor market experience.

¹⁴ See, for example, McKinley L. Blackburn, David E. Bloom, and Richard B. Freeman, "The declining economic position of less-skilled American men," in Gary Burtless, ed., *A Future of Lousy Jobs?* (Washington, DC: The Brookings Institution, 1990). See also Paul Ryscavage,

"Gender-related shifts in the distribution of wages," this issue, pp. 3-15.

¹⁵ See Francine D. Blau and Lawrence M. Kahn, "Race and Gender Pay Differentials," in David Lewin, Olivia S. Mitchell, and Peter D. Sherer, eds., *Research Frontiers in Industrial Relations and Human Resources* (Madison, WI: Industrial Relations Research Association Series, 1992).

¹⁶ Richard R. Nelson and Edmund S. Phelps, "Investment in Humans, Technological Diffusion and Economic Growth," *American Economic Review*, May 1966, p. 75.

¹⁷ See Finis Welch, "Education in Production," *Journal of Political Economy*, January/February 1970, pp. S65-S97.

¹⁸ See Ann P. Bartel and Frank R. Lichtenberg, "The Comparative Advantage of Educated Workers in Implementing New Technology," *Review of Economics and Statistics*, February 1987, pp. 1-11.

¹⁹ See Ann P. Bartel and Frank R. Lichtenberg, "Technical Change, Learning and Wages," NBER Working Paper No. 2732, October 1988.

²⁰ See Lee A. Lillard and Hong W. Tan, "Private Sector Training: Who Gets It and What Are Its Effects?" Rand Corporation, March 1986; Indermit S. Gill, "Technological Change, Education and Obsolescence of Human Capital: Some Evidence for the U.S.," unpublished manuscript, November 1989; Jacob Mincer and Yoshio Higuchi, "Wage Structures and Labor Turnover in the U.S. and in Japan," *Journal of the Japanese and International Economies*, June 1988; and Jacob Mincer, "Human Capital Responses to Technological Change in the Labor Market," NBER Working Paper No. 3207, December 1989.

²¹ See Alan Krueger, "How Computers Have Changed the Wage Structure: Evidence from Microdata," *Quarterly Journal of Economics*, February 1993, pp. 33-60.

²² See Jacob Mincer, "Human Capital, Technology and the Wage Structure: What Do Time Series Show?" unpublished manuscript, August 1991.

²³ Blackburn, Bloom, and Freeman, "Less-skilled American men."

²⁴ See William E. Even and David A. Macpherson, "The Decline of Private-Sector Unionism and the Gender Wage Gap," *Journal of Human Resources*, Spring 1993, pp. 279-98.

²⁵ Blackburn, Bloom, and Freeman, "Less-Skilled American Men."

²⁶ Focusing on changes in occupational demand as a measure of changes in demand for labor within industries is an approach that is complementary to assessing the impact of technical change and other within-industry forces mentioned earlier.

²⁷ See, for example, Chinhui Juhn, Kevin M. Murphy, and Brooks Pierce, "Wage Inequality and the Rise in Returns to Skill," *Journal of Political Economy*, June 1993, pp. 410-42.

²⁸ See David R. Howell and Edward N. Wolff, "Trends in the Growth and Distribution of Skills in the U.S. Workplace, 1960-85," *Industrial and Labor Relations Review*, April 1991, p. 487.

²⁹ See Gary S. Becker, *Human Capital* (New York, National Bureau of Economic Research, 1964), for an early elaboration of this view.

³⁰ See, for example, Paul J. Taubman and Terence J. Wales, "Higher Education, Mental Ability and Screening," *Journal of Political Economy*, Vol. 81, 1973.

³¹ For a discussion of the extent to which college graduates take jobs that do not require a college degree, see Daniel Hecker, "Reconciling conflicting data on jobs for college graduates," *Monthly Labor Review*, July 1992, pp. 3-12.

³²For an exposition of this aspect of the human capital theory, see Solomon William Polachek, "Occupational Self Selection: A Human Capital Approach to Sex Differences in Occupational Structure," *Review of Economics and Statistics*, February 1981, pp. 60-69.

³³For a recent analysis of segregation by gender and its impact on the earnings gap between men and women, see Judith Fields and Edward N. Wolff, "The Decline of Sex Segregation and the Wage Gap," *Journal of Human Resources*, Fall 1991, pp. 608-22.

³⁴The distribution of employment in the Census Bureau's 13 major occupations was calculated for each of the Census Bureau's 44 detailed industries at the beginning of the period. Assuming that the proportion of employment by occupation stayed constant, the distribution of employment by industry at the end of the period can be used to predict what the occupational composition would have been, given that staffing patterns did not change within industries.

³⁵See Ernst R. Berndt, Catherine J. Morrison, and Larry S. Rosenblum, "High-Tech Capital Formation and Labor Composition in U.S. Manufacturing Industries: An Exploratory Analysis," NBER Working Paper No. 4010, March 1992.

³⁶See Eli Berman, John Bound, and Zvi Griliches, "Changes in the Demand for Skilled Labor within U.S. Manufacturing Industries: Evidence from the Annual Survey of Manufacturing," unpublished manuscript, August 1992.

³⁷See Kevin M. Murphy and Finis Welch, "Occupational Change and the Demand for Skill, 1940-90," *American Economic Review*, May 1993, pp. 122-26.

³⁸It should be kept in mind that there is some controversy over the use of education as a measure of skill. The level of education of those in the work force will be influenced not only by the demand for skills developed in formal schooling, but also by the supply of skills, which in turn will be influenced by how well society can afford schooling. In other words, the well-known increase in the average schooling level of the work force is a result not only of rising demand for schooling, but also of society's increased ability to afford it. In addition, Howell and Wolff argue that "the usefulness of schooling measures is limited by such well-known problems as variations in the quality of

schooling, both over time and among regions, the use of credentials as a screening mechanism, and inflationary trends in credential and certification requirements" (Howell and Wolff, "Growth and Distribution of Skills," pp. 487-88). They also note that, while educational indices are highly correlated with cognitive and interactive skills, this is not the case for motor skills.

³⁹Howell and Wolff, "Growth and Distribution of Skills."

⁴⁰For a more detailed discussion of the issue, see Peter Cappelli, "Are Skill Requirements Rising? Evidence from Production and Clerical Jobs," *Industrial and Labor Relations Review*, April 1993, pp. 515-30.

⁴¹Cappelli, "Are Skill Requirements Rising?"

⁴²There are many other ways to calculate this measure. Ideally, the measure would control for hours, but because of limitations in the cps noted earlier, that is not possible. An alternative control for hours is to use only full-time, year-round workers, which gives results qualitatively similar to those shown in the table. Katz and Murphy, "Changes and Relative Wages," argue that wages of workers should be taken into account as well, to measure employment in terms of efficiency units. Again, it is unlikely that such a procedure will lead to results very different from the ones shown in the table.

⁴³The changes in relative earnings by demographic group calculated in this way give a picture similar to one that could be calculated from the earnings trends shown in table 1. There are two important differences, however: first, in the current calculations, regression techniques are used to control for other factors that may affect earnings; second, the sample here includes all workers, rather than just full-time, year-round workers, with differences in hours worked across individuals controlled for by the inclusion of variables for part-time status and weeks worked.

⁴⁴For a further discussion of this issue, see Katz and Murphy, "Changes in Relative Wages."

⁴⁵Some support for this notion is found in Erica Groshen, "Rising Inequality in a Salary Survey: Another Piece of the Puzzle," Federal Reserve Bank of Cleveland Working Paper No. 9121, December 1991.

⁴⁶See Katz and Murphy, "Changes in Relative Wages."

APPENDIX: Data and methods

Occupational recoding. The Census Bureau made dramatic changes in the scheme it used to classify occupations between the 1970 and 1980 Censuses of Population. Because the same scheme is used in the Current Population Survey, it is now exceedingly difficult to compare the occupation structure before 1983 (when the 1980 occupation system was adopted) with that after 1983. The Census Bureau has, however, developed imputation techniques to assign 1980 occupation codes to individuals, based on their 1970 occupation code and a number of demographic characteristics. (See Lynn Weidman, *Final Report: Industry and Occupation*, SRD Research Report Number Census/SRD/89/03, Aug. 20, 1989.) The Census Bureau generously provided the Bureau of Labor Statistics with the software used to recode occupations in the 1970 census, and this software was then adapted for

use with pre-1983 Current Population Surveys. Because the techniques involved rely on imputation, rather than on an exact match between 1970 and 1980 occupations, the Census Bureau recommends that they be applied five times and the results of statistical analyses be averaged over these five imputations. This is the approach followed in the body of this article.

Top coding. One difficulty in using the Current Population Survey to study relative earnings trends is that the true value of an individual's earnings is not revealed if the individual earned more than the amount specified in a top code. To circumvent this problem, earnings reported below the top code were fit to a Pareto distribution, and the parameters of the distribution were then used to predict the mean value of earnings for those above the top code.

Women and jobs in recoveries: 1970–93

During business cycles, the distribution of jobs by sex and industry undergoes large shifts; these changes have a permanent effect on job distribution by sex

William Goodman

Because men accounted for the vast majority of jobs that were cut in connection with the 1990–91 recession, one might expect that, as employment returned to the prerecession level, men would regain most of the lost jobs. Instead, women filled the majority of the jobs added in the latest recovery of employment (February 1992 to April 1993), and men still filled substantially fewer jobs than they had before the recession began. According to the Bureau of Labor Statistics survey of businesses,¹ this pattern occurred in each of the four most recent business cycles (from 1975 to 1993). Men lost a net 72 to 100 percent of the jobs cut in the last four cyclical declines, and women filled 51 to 59 percent of the jobs added as employment returned to prerecession peak levels—although the employment of men did eventually recover and reach new highs as employment of women continued to increase at a faster rate.

The lag in the rebound of men's employment was longer after the most recent recession than after any of the three previous downturns. It was not until March 1994 that men regained the number of jobs they had held at the prerecession peak of employment 3-3/4 years earlier. Meanwhile, the number of employed women increased by 2.2 million. (See chart 1.) This article explains why women gained most of the net new jobs in recent business cycles, and emphasizes the latest period of recovery in employment.

While employment always falls during recessions, the exact months in which it begins to decline and starts growing again often differ from the official peaks and troughs of the business cycle.² The turning points of the nonfarm pay-

roll employment series are used here to analyze gender shifts associated with recessions and recoveries. The period from the peak of employment preceding a falloff in jobs to the trough of employment is here termed a *decline*, and the period from the trough of employment to the point at which the number of jobs reaches the level of the preceding peak is called a *recovery*. The subsequent period preceding the next decline is defined here as an *expansion*; the combined decline, recovery, and expansion is called a *cycle of employment*. The employment recovery period reveals particularly well the recurring cyclical contrast of substantial job gains for women during a long interval of substantially reduced employment of men.

The latest recovery

In the latest *decline* in total employment, from the prerecession peak of June 1990 to the trough in February 1992, men lost 2.0 million jobs as women *gained* 125,000 net jobs. In the subsequent employment recovery, men gained 940,000 jobs and women acquired 1.1 million from the trough to April 1993, when employment first surpassed its 1990 peak level. The net result: although the total number of jobs was about the same in April 1993 as in June 1990, 1.2 million more women and 1.0 million fewer men had jobs.

Data from an alternate source, the Federal survey of households,³ confirms that women gained net jobs between June 1990 and April 1993 while men lost net jobs. (For purposes of a check on the business survey, the nonagricultural wage and salary worker estimate was selected from the

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many statistical time series of the household survey. That particular series closely approximates the coverage of the business survey, which also excludes agriculture and self-employed persons.) According to household data, from June 1990 to February 1992—the period of decline in employment—men with nonagricultural jobs decreased by 1.1 million, while women with nonfarm jobs increased by 100,000. From the trough to April 1993, when employment had fully recovered, household data show that the number of employed men excluding farmworkers increased by 700,000, and that of their female counterparts grew by 730,000. For the two periods combined, then, employed men lost 430,000 jobs and employed women gained 840,000.⁴

The figures above exclude the self-employed and farmworkers. When these groups are included, household data show that the trends are little affected except for an increase of 350,000 in self-employed men during the recovery period. If the self-employed and agricultural workers are included, the number of employed men increased more during the recovery period than did the number of employed women: the gain among men becomes 1.1 million, and that for women becomes 570,000. But the extent of self-

employment and the income derived from it, especially when a one-person business is just being started, may not be substantial. Anecdotal evidence suggests that some men try self-employment because they cannot find jobs.

During the decline and recovery combined, women still fared vastly better than men in net employment gain or loss, including self-employment and agricultural work. Employed and self-employed men show a decrease of 160,000 during the entire period, versus an increase of 500,000 for women.

Trends in unemployment also reflect the reduction in male employment. From the peak to the point of recovery, the number of unemployed men increased by 1.5 million while that of unemployed women increased by 1.0 million.⁵

Job trends in recessions

Before discussing the recovery of employment in the 1990's and its effects on jobs by sex, it will be helpful to review developments during the preceding decline in employment (from June 1990 to February 1992).⁶ The effects of the latest recession on male and female employment by industry was fairly representative of the effects of the four preceding recessions.

Chart 1. Employment of men and women in the latest recession and recovery, 1990-93

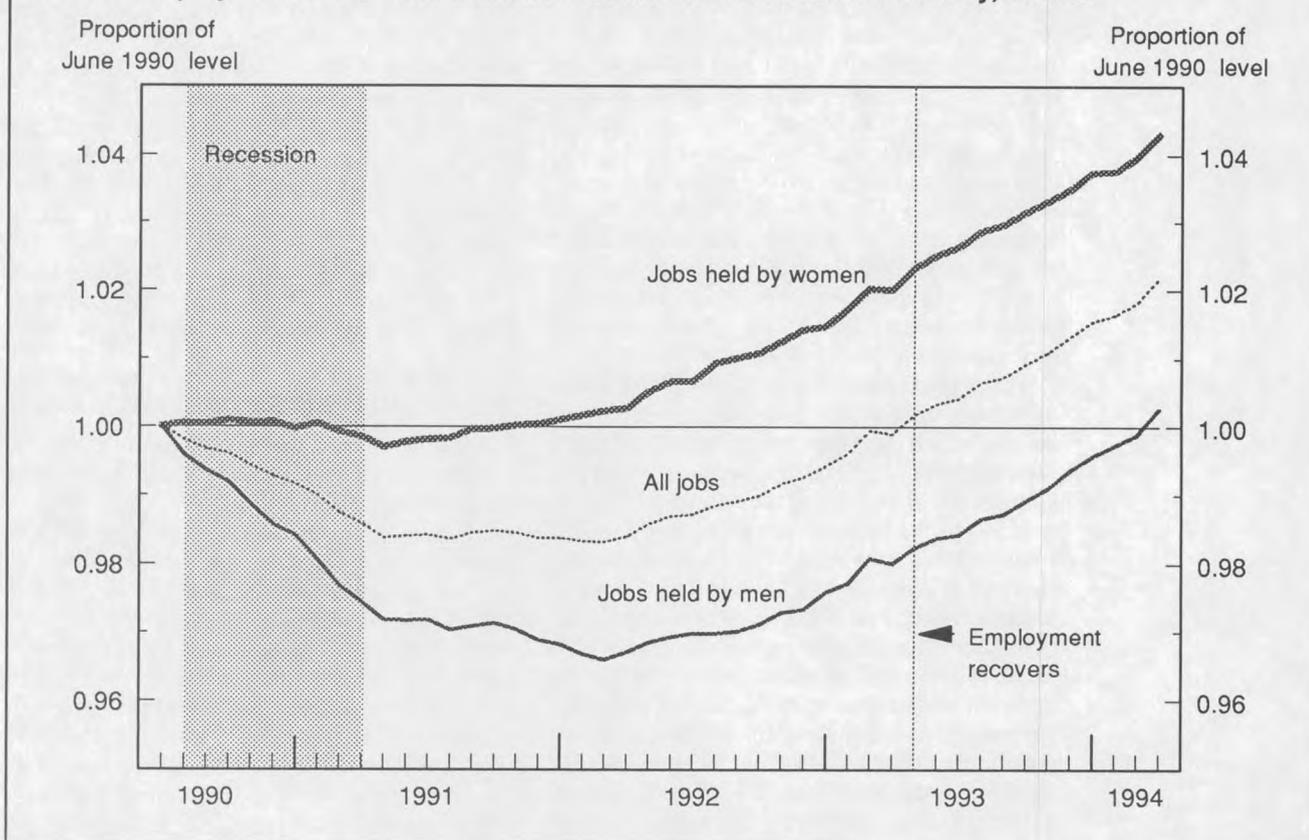


Table 1. Peak-to-trough changes in employment by sex and industry, June 1990–February 1992

[Numbers in thousands, seasonally adjusted]

Division	Changes in employment		
	Both sexes	Women	Men
Total nonfarm	-1,844	+124	-1,968
Goods-producing sector	-1,784	-370	-1,414
Mining	-66	-1	-65
Construction	-681	-42	-639
Manufacturing	-1,037	-327	-710
Service-producing sector	-60	+494	-554
Transportation, communication, and utilities	-83	-29	-54
Wholesale trade	-148	-42	-106
Retail trade	-366	-158	-208
Finance, insurance, and real estate ...	-136	-50	-86
Services	+700	+640	+60
Government	-27	+133	-160

Table 1 shows changes in nonfarm payroll employment by sex and industry from the peak in employment just before the recession to the trough or low point. As indicated, the goods-producing sector—especially manufacturing and construction—posted the heaviest losses by far. These losses were suffered primarily by men, because the mining, construction, and manufacturing industries employ far more men than women. Construction employment is about 90 percent male, and men hold about 2 out of 3 manufacturing jobs. During the general decline in employment, men accounted for 94 percent of the net jobs lost in the construction industry and 68 percent of the lost manufacturing jobs. Job losses in the much smaller mining industry also were incurred almost exclusively by men.

Retail trade posted the third heaviest losses, and many of the jobs terminated had been held by women. In this division, too, the losses were roughly in proportion to the gender composition of employment. About half of retailing employees are women.

The services division is a subset of the service-producing sector and includes industries such as health care, business services, and social services, among others. Employment in services continued to grow during the recession, with almost all of the increase occurring in the health and social services industries. Demand for such services as medical care and residential care of the elderly, driven in part by the aging of the population, continues to grow during recessions partially because these services are frequently of much higher priority to individuals than are various other purchases. In addition, the vast government funding of health services through medicare and medicaid has the effect of supporting health care jobs during recessions, as does the availability of private health insurance. Fur-

thermore, new treatments continually become available and support additional health care jobs. Women gained the vast majority of the jobs added to services during the decline in total employment, mainly because the proportions of women workers utilized in health care and social services are extraordinarily high (at 82 percent and 78 percent).

Although overall government employment fell slightly during the general decline in employment, women gained net government jobs. This fact is partially explained by the fact that, while employment in Federal Government dropped greatly because of the termination of workers hired to conduct the 1990 Decennial Census, the number of jobs in State and local governments—which employ a higher proportion of women—grew. Growth occurred especially in local public school systems, in which employment is 70 percent female.

The household survey shows that declines in employment among men from June 1990 to February 1992 were concentrated in the precision production, craft, and repair occupations (down 600,000) and among operators, fabricators, and laborers (down 750,000). These results are not surprising considering the industrial composition of job reductions.

The younger age groups among employed men suffered the greatest job losses. The youngest group of employed males, from 16 to 19 years old, shrank by 500,000; those aged 20 to 24 decreased by 400,000; and those aged 25 to 34 decreased by 600,000. The number of employed white men was reduced by 1 million, as employment of black men decreased by 200,000. Proportionately, however, the losses were greater for black men. Except for the decline in employed 16- to 19-year-old males, whose population was reduced, these changes were primarily economic effects rather than results of population shifts.

Job growth in recoveries

Comprehensive estimates of the numbers of women and men with nonagricultural jobs have been produced since 1964 from the survey of employers. Since then, five recessions and five recoveries have occurred. Table 2 shows job gain or loss for both sexes during each employment decline and recovery associated with these business cycles. In the earliest recovery shown in the table, from late 1970 to mid-1971, men gained more jobs than women did. In the remaining four recoveries, women gained substantially more jobs than did men. Interestingly, even in the earliest recovery of 1970 to 1971, men ended with fewer jobs than at the preceding peak of employment, and women ended with more jobs.

The main explanation for women's greater job gains in the last four recoveries, like the explanation for their smaller job losses in recessions, has to do with the widely varying proportions of male or female employees in the various industries and the extent of job growth or loss in those industries. The following tabulation shows the number of jobs lost or gained in the goods-producing and service-producing sectors in the last five recoveries:

Period	Change in employment (in thousands)—	
	Goods-producing	Service-producing
November 1970– September 1971	+282	+949
April 1975– February 1976	+830	+1,478
July 1980– January 1981	+552	+775
November 1982– November 1983	+997	+2,081
February 1992– April 1993	+11	+2,018

Clearly, the service-producing sector gained far more jobs in each case. It also employs a much greater proportion of women. In January 1994, women held 54 percent of the jobs in service-producing industries and 28 percent of the jobs in goods-producing industries. In January 1969, women held 43 percent of service-producing jobs and 24 percent of goods-producing jobs. (See chart 2.) Although the percentages changed considerably over time, women consistently had (and have) a much larger share of service-producing jobs than of goods-producing jobs. Women gained more jobs in recoveries primarily because the industries that added the greatest numbers of employees use larger percentages of women workers. Health services, social services, and public school systems are some of the most important industries which added many jobs in the latest recovery and employ more women than men.

In the latest cycle, these industries experienced relatively little or no recessionary decline and then, as other industries recovered, continued to grow at about the same rate or, in the case of health services, at about two-thirds of the previous rate. In the last five cycles, employment in the entire service-producing sector declined so little that it reached full recovery within 3 months after the trough of total employment, or even before it. In the last three cycles, the goods-producing sector never again reached the prerecession peak in employment because of the long-term and substantial decline in manufacturing employment.

The ratio of women workers to all employees within each major industry division changed

during the latest recovery, but only slightly. Changes in the gender distribution of jobs at the total level are mainly attributable to the shifts in the sizes of the various industries. In fact, the net effect of all *intradivision* changes in the proportions of women workers is actually in a *downward* direction—the effects of interindustry shifts in the numbers of jobs had to overcome internal changes in each division to yield a net upward effect on the proportion of women employees. Changes in employment by sex and industry in the latest employment recovery are shown in table 3. The major developments include some that are characteristic of the last five recoveries and some that are considerably different.

The trends characteristic of post-1964 employment recoveries are extensive. The *retail trade*, *services*, and *government* divisions added hundreds of thousands of jobs and hired vast numbers of women in this latest recovery, as in past ones. Services and government hired far more women than men. These two divisions were primarily responsible for the greater overall gains of women in the recovery. (However, services, government, and retail trade each performed

Table 2. Job gain or loss by sex in declines and recoveries of employment, 1970–93

[Numbers in thousands, seasonally adjusted]

Period	Description of period	Change in numbers of—	
		Employed men	Employed women
March 1970–November 1970	Decline	–968	–83
November 1970–September 1971	Recovery	+733	+498
October 1974–April 1975	Decline	–1,642	–629
April 1975–February 1976	Recovery	+1,138	+1,170
March 1980–July 1980	Decline	–1,151	–168
July 1980–January 1981	Recovery	+543	+784
July 1981–November 1982	Decline	–2,626	–135
November 1982–November 1983	Recovery	+1,476	+1,602
June 1990–February 1992	Decline	–1,968	+124
February 1992–April 1993	Recovery	+943	+1,086

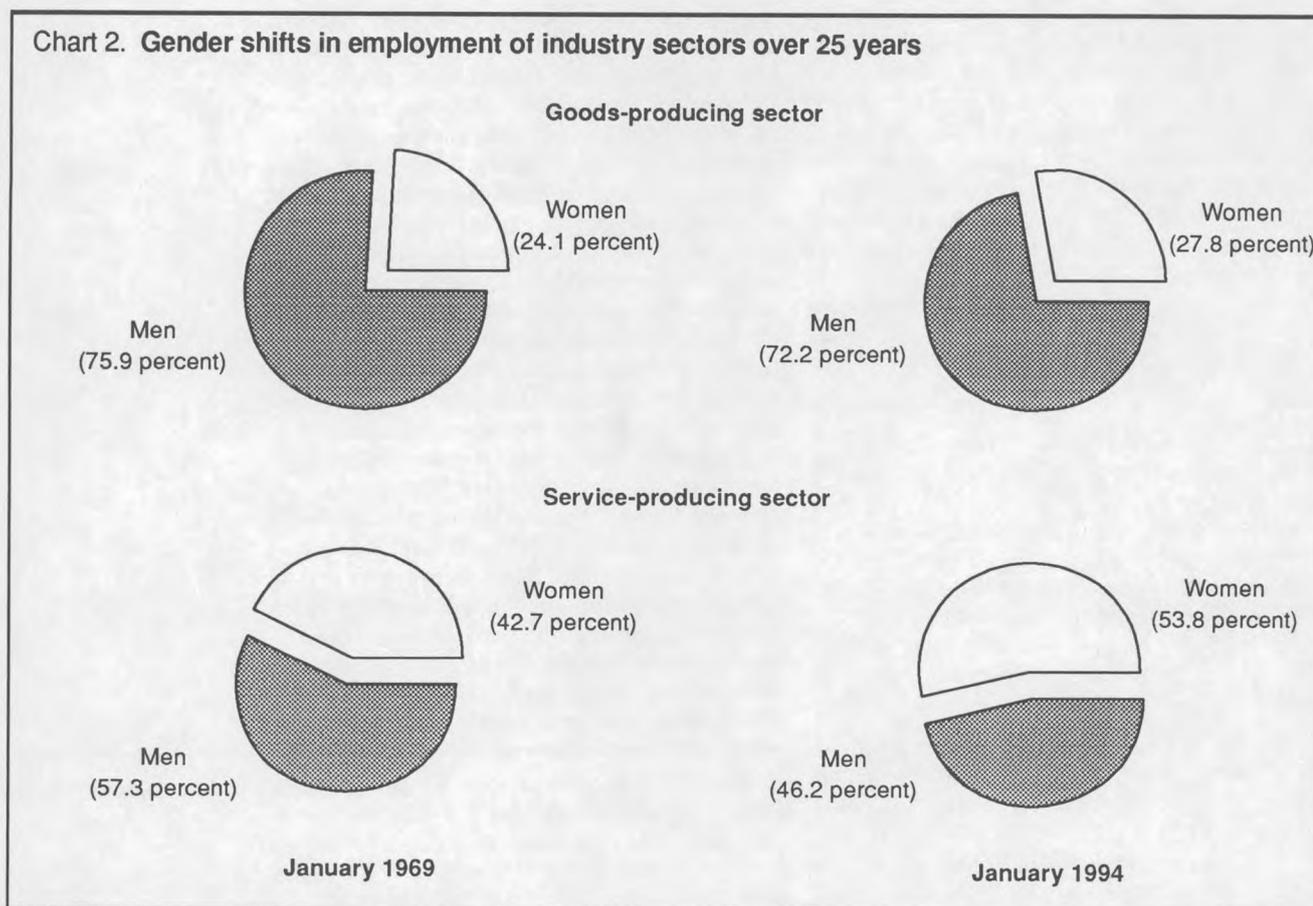
Table 3. Changes in employment by sex and industry in the latest recovery of employment, 1992–93

[Numbers in thousands, seasonally adjusted]

Division	Change in employment February 1992–April 1993 ¹		
	Total	Women	Men
Total nonfarm	+2,029	+1,086	+943
Mining	–35	–6	–29
Construction	+110	+4	+106
Manufacturing	–64	–41	–23
Transportation, communication, and utilities	+65	+22	+43
Wholesale trade	–88	–36	–52
Retail trade	+379	+102	+277
Finance, insurance, and real estate	+106	+53	+53
Services	+1,316	+781	+535
Government	+240	+207	+33

¹ Period of recovery in nonfarm payroll employment.

Chart 2. Gender shifts in employment of industry sectors over 25 years



unusually in some way in this latest recovery. The abnormal changes in these divisions and others are described in the next section.)

The loss of jobs in *mining* during the latest recovery was not unique. A large number of mining jobs also was lost during the preceding recovery. In the two latest recoveries (1982–83 and 1992–93), the job cuts in mining were primarily in oil and gas extraction. Eighty-six percent of mining workers are men, and men accounted for most of the mining jobs that were gone by the ends of the latest two recoveries of nonfarm jobs.

The increase in *construction* from February 1992 to May 1993 was middling compared with other recoveries. As in the past, the new construction jobs went to men as the number of women in construction was almost unchanged.

Unusual developments

Several trends in the latest recovery were dramatic departures from preceding business cycles. Possibly the most striking contrast was the loss of 60,000 *manufacturing* jobs during the recovery. In previous recoveries, manufacturing gained hundreds of thousands of jobs, although the even larger losses during the declines were not fully regained. The main factors resulting in the re-

cent failure of manufacturing jobs to show any net gain while the economy expanded include increasing automation, foreign competition, defense cutbacks, and reduced demand for commercial, as well as military, aircraft. The losses were concentrated in the durable goods industries, especially instruments and aircraft and parts; instruments lost 40,000 jobs, and aircraft and parts lost 70,000 jobs. Primary metals and electronic and other electrical equipment each lost about 20,000 jobs. Partly compensating for the losses were gains elsewhere in manufacturing, particularly in lumber and wood products and rubber and plastics products. Women as well as men in manufacturing lost jobs this time, but had gained hundreds of thousands of jobs in each of the three preceding recoveries.

Services gained 1.3 million jobs in the 1992–93 recovery, far more than the number added in previous recovery periods. The gains in the latest recovery were concentrated in health services, business services (especially help supply—the furnishing of mainly temporary workers to client firms), and social services. Each of these industries grew at a faster rate than did services as a whole and gained far more jobs in the latest recovery than in the preceding one (1982–83).

Their growth over the two latest recoveries in total employment is summarized in the following tabulation:

Industry	Growth in jobs (in thousands)	
	November 1982– November 1983	February 1992– April 1993
Business services	+368	+509
Health services	+147	+315
Social services	+43	+137

Almost 800,000 of the new services jobs went to women. In preceding recoveries, women gained at most about 65 percent of that number.

Until the latest episode, changes in employment in *retail trade* during recoveries were generally in proportion to the gender makeup of the industry. But in the most recent recovery, women got only about a quarter of the jobs added in retailing, although they held about half of the jobs in the division. (The overall increase in retailing jobs was also relatively weak—about 100,000 jobs short of the average gain in preceding recoveries.) This time, the more specific retailing industries in which women are most concentrated, including *general merchandise stores* and *apparel and accessory stores*, had substantially smaller employment increases than in the previous recovery. Precarious financial positions and major layoffs have characterized the department store field in the last few years. Competition from discount stores, warehouse clubs, and more specialized stores has been a large part of the problem.⁷ In addition, this time women gained only 34 percent of the quarter-million jobs added to the eating and drinking places industry. In the preceding recovery, women got half of the jobs added to that industry.

Government employment rose by almost a quarter of a million during the recovery, and this increase was far greater than those of the three previous recoveries, as shown below:

Period	Change (in thousands)	
	All employees	Women
November 1970– September 1971	+242,000	+95,000
April 1975– February 1976	+186,000	+2,000
July 1980–January 1981	–52,000	+53,000
November 1982– November 1983	+31,000	+131,000
February 1992– April 1993	+240,000	+207,000

Although women hold about half of government jobs, most of the new public-sector jobs were filled by women in the latest recovery. A partial explanation for women's gains has to do with the more specific parts of the government sector that gained or lost employment. While total government jobs increased greatly, the Postal Service and civilian employment in the Department of Defense were cut, by 20,000 and 50,000 jobs respectively. (Uniformed military personnel are excluded from the survey.) About two-thirds of the civilian jobs in each of these two organizations were held by men. The gains in government were at the State and local levels, especially in local public school systems, in which women constitute about 70 percent of employees. Local public education gained approximately 155,000 jobs, and most of them were filled by women.

The unusual changes in employment of women in manufacturing, retail trade, services, and government are illustrated in chart 3. Combined, these movements that break with the past resulted in even larger proportions of women getting the net new jobs than in most past recoveries. While two of the industries shown hired reduced numbers of women, government and especially services hired so many more women than in past recoveries that the overall percentage of jobs filled by women increased from all of the earlier recoveries except that of 1980 to 1981.

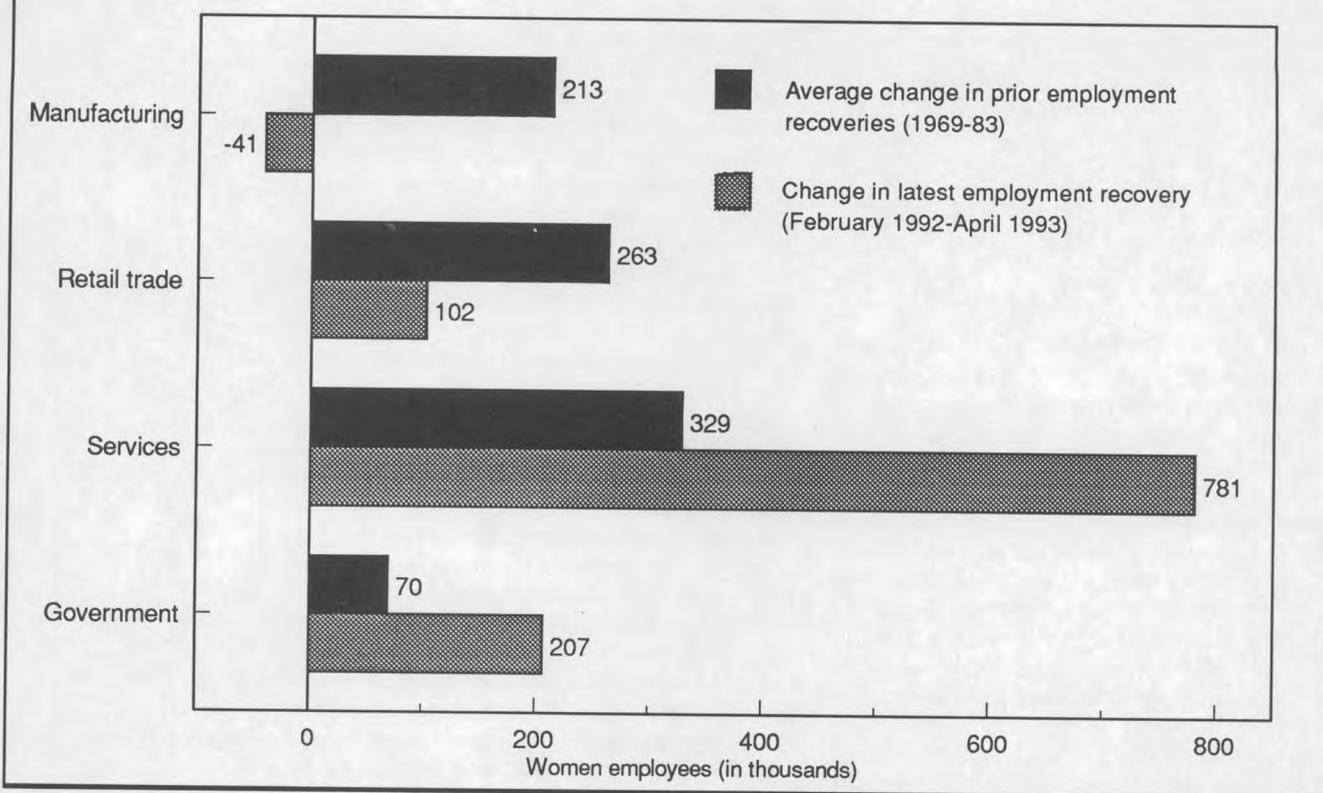
Women's demographics, occupations

During the most recent recovery, employment gains among women were concentrated among those 35 to 64 years of age, while women aged 25 to 34 showed a decline. The changes were fairly proportionate to shifts in the population of women by age, so that the ratio of working women to all women in each age group was fairly stable. The following tabulation shows changes in women's employment by age:

Age group	Job gain or loss	Percent change in employment	Change in population ratio
16–19	–2,000	0	–1
20–24	+32,000	+1	0
25–34	–354,000	–3	0
35–44	+292,000	+2	0
45–54	+634,000	+7	+1
55–64	+144,000	+3	+1
65 and older	–37,000	–3	–1

During the recovery, the ratio of employed persons to population also was fairly stable among white women and black women, indicating that job growth in the two groups was about propor-

Chart 3. Growth in employment of women during employment recoveries, selected industries, 1970-93



tionate to growth in population. This ratio remained at 54 percent for white women and 50 percent for black women. The increase in employed white women was about 300,000, while that for employed black women was about 100,000. Employment growth among black women was boosted because the black population is growing much faster than the white population.

Women's gains were greatest in the executive, administrative, and managerial; professional specialty; and service occupations. The gain in the executive, administrative, and managerial group was about 450,000. The professional specialty occupation including the largest number of women is "teacher, excluding college and university teacher"; this category accounted for nearly all of the job growth among women in professional specialties.

Periods of expansion

During further growth of employment following re-attainment of the prerecession peak in jobs, women have generally continued to gain more jobs than men have. The same long-term factors that increase women's proportionate share of jobs during recovery periods are responsible for the

faster growth of employed women during periods of expansion in jobs. The tabulation below compares job growth for men and women during past periods of expansion (based on the survey of businesses):

Period	Change in numbers of—	
	Employed men	Employed women
September 1971–		
October 1974	+3,169,000	+3,873,000
February 1976–		
March 1980	+5,262,000	+7,127,000
January 1981–		
July 1981	+78,000	+329,000
November 1983–		
June 1990	+6,717,000	+11,467,000

The relatively short 11-month period from April 1993, when employment recovered to the June 1990 peak level, to March 1994 has not followed the pattern shown above. Men gained 1.2 million jobs, and women gained 1.0 million. During this period, gains among men were concentrated in the services, retail trade, and construction industries—and, more specifically, in eating and drinking places, auto dealers and service

stations, food stores, health services, help supply, and social services. Half of men's gains were in services, and almost 20 percent were in retail trade. This distribution contrasts greatly with the first 11 months of earlier expansions, during which manufacturing was much stronger and services was less strong than in the recent period.

Whether the greater recent gains of men will persist is unknown. The current period of expansion in employment, after re-attainment of the prerecession level, is very young compared with past completed expansions, which ran for an average of 43 months. In one of the previous 11-month periods at the beginning of an expansion, men gained more jobs than women did (September 1971 to August 1972, 1.3 million jobs versus 1.1 million). By the end of the 1971-74 expansion, however, women caught up with and overtook men in job gains.

Net effects

The combined effects of employment changes in economic declines and subsequent recoveries have included vast shifts in the industry and gender makeup of U.S. employment. In general, industries that declined most have not recovered fully by the time total nonfarm employment has returned to its prerecession level—and one division (services) has grown substantially during both general declines and general recoveries. In the latest recovery, construction regained only 100,000 jobs after losing 700,000 during the general employment decline. Manufacturing lost a million jobs in the general decline and lost more jobs as total employment recovered. Services

gained more than half a million jobs during the decline and an additional 1-1/3 million in the recovery. Government also had a large net gain. The changes in jobs by industry and gender in the recovery were greatly different from simple returns to prerecession levels. At the point when jobs recovered to the prerecession level, male employment was down by a million, and female employment was up by a million. Male employment stayed below its level at the prerecession peak for over 3-1/2 years, through February 1994.

Table 4 shows the net effects of these shifts during the latest cycle. The movements are influenced by both cyclical and long-term factors. Manufacturing has been in long-term decline since 1979 and has lost a total of 3 million jobs. Services, government, and retail trade have been experiencing long-term growth. Long-term influences have substantially contributed to the shift toward service-producing jobs, particularly those that traditionally are held largely by women, and consequently toward more women as employees. These influences include greater automation, which reduces the need for production workers in goods-producing industry, and greater longevity, which increases the elderly population, substantially boosting demand for medical and social services. Public demand for quality education is another long-term factor.

Long-term influences can be stronger than cyclical ones. Services jobs increased during the latest general decline; manufacturing jobs continued to decline in the recovery. The transition in the long term from a primarily goods-producing economy to a largely service-producing one has resulted in greater demand for occupations

Table 4. Changes in employment by sex and industry in the latest employment decline and recovery, 1990-93

[Numbers in thousands, seasonally adjusted]

Division	Change in employment					
	Women			Men		
	June 1990-February 1992 ¹	February 1992-April 1993 ²	Net change, June 1990-May 1993	June 1990-February 1992 ¹	February 1992-April 1993 ²	Net change, June 1990-May 1993
Total nonfarm	+124	+1,086	+1,210	-1,968	+943	-1,025
Mining	-1	-6	-7	-65	-29	-94
Construction	-42	+4	-38	-639	+106	-533
Manufacturing	-327	-41	-368	-710	-23	-733
Transportation, communication, and utilities	-29	+22	-7	-54	+43	-11
Wholesale trade	-42	-36	-78	-106	-52	-158
Retail trade	-158	+102	-56	-208	+277	+69
Finance, insurance, and real estate	-50	+53	+3	-86	+53	-33
Services	+640	+781	+1,421	+60	+535	+595
Government	+133	+207	+340	-160	+33	-127

¹ Period of decline in nonfarm payroll employment.

² Period of recovery in nonfarm payroll employment.

generally held by women and less demand for labor in industries staffed primarily with men. As a result, women's employment growth has exceeded

men's, and every cycle since 1974 has included a considerable period of reduced male employment following the recovery of total employment. □

Footnotes

¹ The Current Employment Statistics (CES) program produces estimates of employees on all nonfarm payrolls, based on a monthly survey of about 390,000 workplaces. Data from the program appear in the Bureau's monthly periodical *Employment and Earnings*.

All CES data in this article are seasonally adjusted.

² The official starting and ending points of business cycles are determined by the National Bureau of Economic Research, a private, nonprofit organization which tracks developments in a number of economic indicators.

³ The Current Population Survey produces estimates of all civilian employment and unemployment based on a monthly survey of 60,000 households. This sample includes 0.1 percent of persons in the United States. Results of the survey, like estimates from the Current Employment Survey, appear in the monthly periodical *Employment and Earnings*. Information on survey techniques and the magnitudes of errors for each survey can be found in the explanatory notes of any monthly issue of *Employment and Earnings*. See, for example, pp. 228-63 of the March 1994 edition.

⁴ To keep analysis of the two surveys comparable, the timespans used are based on peaks and troughs as indicated by the survey of establishments.

⁵ The survey of households was recently found to underestimate the employment of women, and its interviewing

techniques were changed (as of January 1994), for that reason among others. Also, beginning with estimates for January 1994, new external methods of determining the population figures used to determine numbers of persons by age, race, and sex were introduced. The revision of data for earlier months was not possible. In January 1994, when the new techniques were introduced, the number of employed women was estimated at a level 1.6 million higher than the December estimate (based on the older techniques), while the January figure for employed men was estimated at a level only 0.4 million higher than the December estimated level. Because of the changes in methodology, comparisons using household data cannot be made over spans starting before January 1994 and ending in or after January 1994. For more information on the changes to the survey of households, see Sharon R. Cohany, Anne E. Polivka, and Jennifer M. Rothgeb, "Revisions in the Current Population Survey Effective January 1994," *Employment and Earnings*, February 1994, pp. 13-39.

⁶ For a fuller report on employment by sex in declines, see William Goodman, Stephen Antczak, and Laura Freeman, "Women and jobs in recessions: 1969-92," *Monthly Labor Review*, July 1993, pp. 26-35.

⁷ *U.S. Industrial Outlook 1994* (U.S. Department of Commerce, 1994), pp. 39-3,4.

Are women leaving the labor force?

Recent interruptions in women's labor force gains do not appear to signal a reversal in their trend of increasing participation

Howard V. Hayghe

For nearly three decades, the participation rates of women—the proportion of their population working or looking for work—rose consistently, regardless of economic contraction (recession) or expansion. However, between 1989 and 1991, this trend was interrupted and, while the proportion increased again in 1992, it flattened out in 1993.

This sudden interruption generated a great deal of speculation regarding its cause and meaning. Indeed, some observers believed it indicated that women were leaving the labor force to care for their children or to become homemakers. The Bureau of Labor Statistics attributed the 1989–91 interruption to three factors: the business cycle; a pronounced rise in births; and changes in the generally erratic participation trends of 16- to 24-year-old women, particularly teenagers.¹

The resumption of labor force growth among women in 1992 temporarily silenced some of the speculation. But when growth again halted in 1993, analysts speculated that a trend reversal had reemerged. These speculations were reflected in such statements as: “In just the past two years, a quiet counterrevolution has begun . . . the exodus of women from the labor force. . . . The two-paycheck family is on the decline; the traditional one-paycheck family is now the fastest growing household unit.”²

Do these statements accurately reflect today's labor force trends? Are major new shifts occurring in women's labor force participation and in

family employment patterns? These questions are addressed in this report, which examines data on trends in labor force participation among women (particularly those under age 45) and on trends in employment patterns in two-parent families. The data are from the Current Population Survey.³

What the data show

Women 16 to 24 years old are at an age when the transition from youth and school to work and adulthood occurs. During this transition the labor market attachment is often tenuous, especially for teenagers. In 1993, the labor force participation rate of teenage girls (aged 16 to 19) was 49.9 percent, 12 percentage points higher than in 1965. However, this growth did not proceed as a steady progression. (See table 1.) Instead, the movements in this group's labor force participation rate appear to parallel the business cycle, growing during periods of economic expansion and shrinking during periods of contraction.

Family formation certainly did not play a major role in the most recent decline in labor force participation among these teenagers, as the proportions who were married (5 percent) or had children (8 percent) were unchanged over the period. School enrollment, however, may have played a role, because students are considerably less likely to participate in the labor force than are nonstudents of the same age. In 1993, 64

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Are Women Leaving the Labor Force

percent of the teenage girls were in school, up 4 percentage points from 1989.

The trend in the participation rate of women aged 20 to 24 was much smoother, increasing steadily, and peaking at 73 percent in 1987. Subsequently, it began edging downward, reaching 70 percent in 1991. Again, marital status or motherhood appears to have had little to do with this decline. The proportion who were married was somewhat lower in 1993 than in 1987 (28 percent versus 33 percent), reflecting the trend toward later marriages, while the proportion with children (30 percent) remained unchanged. School enrollment is probably the major factor underlying these women's post-1987 labor force trend: the proportion who were in school increased from nearly 20 percent in 1987 to 26 percent by 1993.

Other age groups. The increase in labor force participation among women aged 25 to 34 and 35 to 44 began slowing in the late 1980's; since 1990, their participation rates appear to have flattened. The participation rates of women aged 45 to 54 continued to advance through the early 1990's, while those for women aged 55 and older remained flat.

Two-parent families. The participation rates discussed so far do not differentiate between women with family and child-care responsibilities and those without such responsibilities. Therefore, the data may obscure any indications that married mothers are leaving the work place to return to homemaking roles.

Changes in employment patterns of families from 1987 to 1992 show that this is not the case; women are not leaving the work force to return to the lifestyles that prevailed more than 30 years ago. The "traditional" family in which the husband, but not the wife, is an earner was somewhat less prevalent in 1992 than in 1987. (See table 2.) Also, the proportion of dual-earner families (two-parent families in which both parents are earners) was about the same in both years. If a reversal of women's long-term labor force trends and a movement toward a more traditional family role for women had been underway during the period, one would expect an increase in the number and proportion of "traditional" families, accompanied by a decline in dual-earner families.

Although the number or proportion of "traditional" families did not increase in the 1987-92 period, the numbers and proportions of "tradi-

Table 1. Labor force participation rates of women by age, annual averages, 1965-93

[In percent]

Year	Total, 16 years and older	16 to 19 years	20 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 years and older
1965	39.3	38.0	49.9	38.5	46.1	50.9	24.6
1966	40.3	41.4	51.5	39.8	46.8	51.7	24.8
1967	41.1	41.6	53.3	41.9	48.1	51.8	25.0
1968	41.6	41.9	54.5	42.6	48.9	52.3	25.0
1969	42.7	43.2	56.7	43.7	49.9	53.8	25.5
1970	43.3	44.0	57.7	45.0	51.1	54.4	25.3
1971	43.4	43.4	57.7	45.6	51.6	54.3	25.1
1972	43.9	45.8	59.1	47.8	52.0	53.9	24.5
1973	44.7	47.8	61.1	50.4	53.3	53.7	23.8
1974	45.7	49.1	63.1	52.6	54.7	54.6	23.0
1975	46.3	49.1	64.1	54.9	55.8	54.6	23.1
1976	47.3	49.8	65.0	57.3	57.8	55.0	23.0
1977	48.4	51.2	66.5	59.7	59.6	55.8	22.9
1978	50.0	53.7	68.3	62.2	61.6	57.1	23.1
1979	50.9	54.2	69.0	63.9	63.6	58.3	23.2
1980	51.5	52.9	68.9	65.5	65.5	59.9	22.8
1981	52.1	51.8	69.6	66.7	66.8	61.1	22.7
1982	52.6	51.4	69.8	68.0	68.0	61.6	22.7
1983	52.9	50.8	69.9	69.0	68.7	61.9	22.4
1984	53.6	51.8	70.4	69.8	70.1	62.9	22.2
1985	54.5	52.1	71.8	70.9	71.8	64.4	22.0
1986	55.3	53.0	72.4	71.6	73.1	65.9	22.1
1987	56.0	53.3	73.0	72.4	74.5	67.1	22.0
1988	56.6	53.6	72.7	72.7	75.2	69.0	22.3
1989	57.4	53.9	72.4	73.5	76.0	70.5	23.0
1990	57.5	51.8	71.6	73.6	76.5	71.2	23.0
1991	57.3	50.2	70.4	73.3	76.6	72.0	22.8
1992	57.8	49.2	71.2	74.1	76.8	72.7	23.0
1993	57.9	49.9	71.3	73.6	76.7	73.5	23.0

Table 2. **Two-parent families with children under age 18, by earner status of father and mother, 1987–92**

[Numbers in thousands]

Year	Total two-parent families	Father earner, not mother		Father and mother earners		Father not earner ¹	
		Number	Percent of total	Number	Percent of total	Number	Percent of total
1987	24,635	6,557	26.6	17,120	69.5	958	3.9
1988	24,751	6,474	26.2	17,321	70.0	956	3.9
1989	24,552	6,336	25.8	17,299	70.5	917	3.7
1990	24,435	6,360	26.0	17,200	70.4	875	3.6
1991	24,460	6,020	24.6	17,377	71.0	1,063	4.3
1992	24,746	6,281	25.4	17,285	69.8	1,180	4.8

¹ Includes families in which mother and/or other family members are earners, or in which there are no earners.

NOTE: Data on earner status of individuals during a specific calendar year is collected in March of the following year.

tional” and dual-earner families fluctuated noticeably between 1990 and 1992. These movements—which have not resolved into any identifiable trends—are probably the result of the poor conditions in the labor market that prevailed during the period. Not only did the number and proportion of “traditional” and dual-earner families fluctuate during the period, but a sharp increase occurred in two-parent families in which the father was *not* an earner. Such families include those in which the mother or other relatives (excluding the father), or both, were earners, and families without earners at all. In fact, two-thirds of the gain in number of these other families was accounted for by families in which only the mother was an earner.

What the data mean

Individually, large numbers of women enter or leave the labor force in the course of a year. But the suggestion that the balance has tipped in favor of a flow of women out of the labor force is not supported by the data.

A closer look at trends in women’s labor force activity does not reveal evidence that women are leaving the labor force in large numbers to be-

come homemakers. Among the 16- to 19- and 20- to 24-year-old women—whose labor force participation rates have indeed declined in recent years—the overwhelming majority have neither husbands nor children. An increase in school enrollment and the recessionary job market of the early 1990’s are the most likely causes of a decline in their work activity. The labor force participation rates of women aged 25 to 44 have not moved up or down consistently since 1990.

Similarly, data on families do not support the notion that women are leaving the labor force. While the numbers and proportions of “traditional” and dual-earner families changed in the early 1990’s, these fluctuations did not exhibit signs of establishing trends. The movements also appear to reflect the recessionary labor market of the period, which also is the likely reason for the sharp increase in the number and proportion of two-parent families in which the father was not an earner.

The cessation in the secular growth in women’s labor force participation, as shown in the 1989–93 data, is meaningful. But it is too early to proclaim that the trend of increasing labor force participation rates of women has been halted. □

Footnotes

¹ See “Women’s labor force growth appears stalled,” *Issues in Labor Statistics*, Summary 92–2 (Bureau of Labor Statistics, January 1992).

² See Maggie Mahar, “A change of place,” *Barron’s* March 21, 1992, pp. 33–38.

³ The current Population Survey (CPS) is a nationwide sample survey of about 60,000 households conducted each month by the Bureau of the Census for the Bureau of Labor Statistics. The survey obtains information on the labor market activity of persons 16 years and older in the civilian noninstitutional population.

Employment in public schools and the student-to-employee ratio

Through the stampede of the baby-boom generation entering and leaving the school systems and the stormy recessionary periods, employment in local government education surged over the 1964–93 period

Teresa L. Morisi

Employment in public schools has doubled since 1964. As a result, the student-to-employee ratio fell from 13.3 in 1964 to 6.4 in 1990.¹ Schools had fared well even in recessionary periods, when the student-to-employee ratio continued to drop or at least held steady. In the most recent recession, however, the student-to-employee ratio rose for the first time in the history of the data series. By 1993, the student-to-employee ratio returned to the 1990 level. It is unclear whether the ratio will decline further, as tightly constrained Federal, State, and local budgets will be forced to accommodate a rising student population in the coming years.

Enrollment linked to ‘baby-boomers’

Enrollment in public elementary and secondary schools grew steadily from 1964, peaking at 46 million in 1971. The rise was caused by the “baby-boom generation” (persons born during the 1946–62 period) entering the public school system.² As the members of the baby-boom generation graduated or left school, enrollment fell steadily for the next 13 years — a total decline of 7 million students. Enrollment again began to climb in 1984 when the children of those born during the baby-boom period began attending school. Enrollment has risen by 4 million since 1984, but still remains 3 million below the 1971 peak level. (See chart 1 and table 1.)

Trends in total employment

The surge in public school employment over the 1964–93 period occurred despite four small annual declines (1978, and the 1981–83 period), falling enrollment, and the recessions.

Employment growth during falling enrollment. Employment in public schools rose in all but 4 years between 1972 and 1984, even though enrollment fell by 7 million during the period. The student-to-employee ratio continued to decline in 1978, despite the fact that public school employment fell for the first time since 1964. Employment again declined in 1981 and through 1983, but the student-to-employee ratio remained steady.

By 1982, the yearly enrollment declines began to lessen in magnitude. In 1984, enrollment declined only slightly and employment returned to its growth trend; as a result, the student-to-employee ratio resumed its decline.

Employment during recessions. Of the five recessions that occurred between 1964 and 1993,³ only the last two recessions appeared to have any effect on local government education employment. (See box.) During the 1981–82 recession, employment declined both years, with a spillover effect of a small decline in 1983. The student-to-employee ratio remained constant during this recession.

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However, the 1990–91 recession had a more serious effect on employment in local government education. Between 1989 and 1991, enrollment surged by 1.5 million; growth of this magnitude had not occurred since the late 1960's. Although employment did not decline as it had in the previous recessions, the number of employees added in 1991 was the smallest since the decrease in 1983. This growth was not large enough to offset the gain in the number of students; therefore, the student-to-employee ratio increased for the first time in the history of the series.

Despite the fact that the recession had ended over a year earlier, hiring in 1992 was just enough to allow the student-to-employee ratio to remain unchanged. This sluggishness indicates that local governments, like much of the private sector, recovered slowly from the latest recession. By 1993, the student-to-employee ratio returned to the 1990 level. (See chart 2.) It is unclear whether the trend of a declining ratio will resume as government revenues improve. The student-to-employee ratio may be at such a low level that further declines are not possible.

Teachers and other staff

Data from the National Center for Education Statistics show a growth of 860,000 full-time equivalent teaching positions over the 1964–93 period. The student-to-teacher ratio displayed the same trend as the student-to-employee ratio, although the rate of decline was less sharp. In the late 1970's the declines in enrollment finally caught up with teachers as their number dropped by 71,000 between 1975 and 1981. Since 1981, teaching staffs have grown by 380,000.

Although teachers have continued to constitute the largest share of education staff, their share of full-time equivalent education positions declined from 60 percent in 1969 to 53 percent in 1990.⁴ Over this period, the number of teaching positions grew by 16 percent. This was dwarfed by the 85-percent rise in teacher aide positions, the largest percentage increase among education staff.⁵ The number of guidance counselors grew 40 percent between 1969 and 1990, while the number of principals and assistants grew 29 percent. Only librarian positions experienced slower growth than teaching positions. (See chart 3.)

What caused the employment growth?

One of the most important factors affecting employment growth in public schools has been the advent of the Federal Government assuming a larger role in education. Beginning in 1965, the Federal Government began spending millions of dollars on education programs for students with

special needs in elementary and secondary schools. Much of the money has gone toward the hiring of specialists and aides to staff these programs. Programs for remedial and bilingual education and for disabled students have contributed the most to the growth in the number of education employees. Each program has its own staff and curriculum, and many students participate in more than one program.

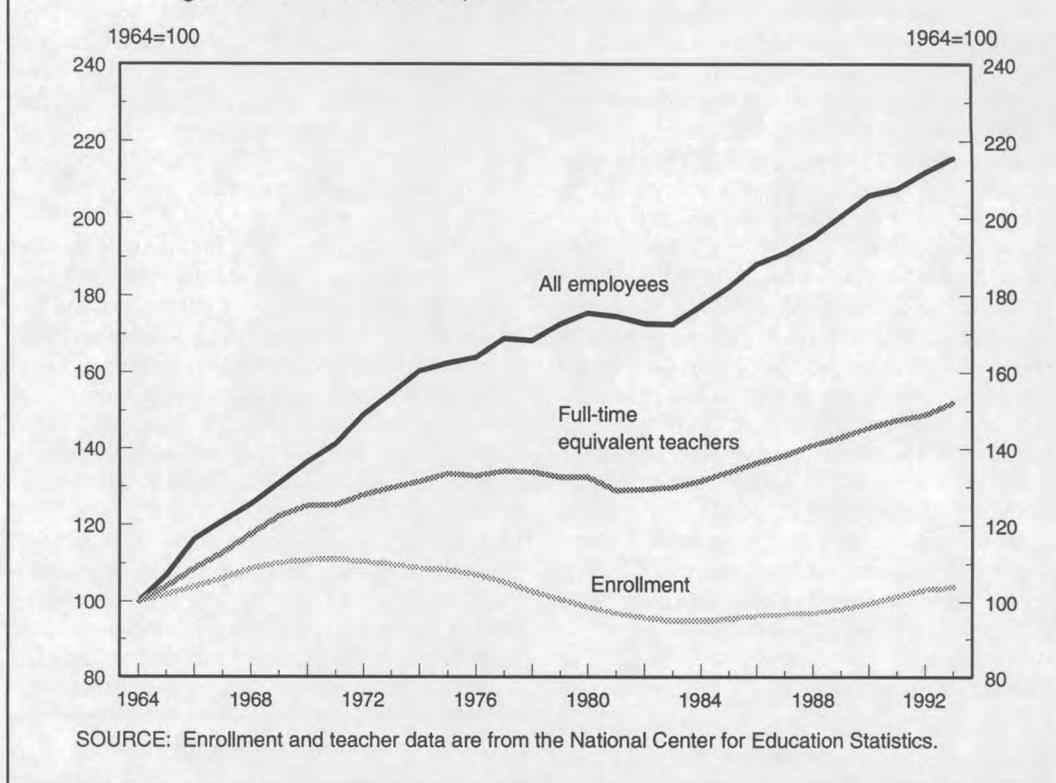
Remedial education. The first, and by far the largest, Federal program for elementary and secondary schools was Title I/Chapter 1 of the Elementary and Secondary Education Act of 1965. Chapter 1 provides remedial services to disadvantaged students; outside the classroom, the students are tutored by instructional staff. More than 90 percent of the Nation's school districts receive Chapter 1 support. Of the 172,000 positions funded by Chapter 1 in the 1991–92 school year, teacher aides accounted for 41 percent of positions, close to the 45-percent share held by teachers.⁶ Schools have an incentive to hire teacher aides for these positions because their salaries are lower than those for teachers; indeed, a criticism some make of the program is that aides

Data sources

The student-to-employee ratio is calculated by dividing autumn public elementary and secondary school enrollment by November employment in local government education. Data on fall public school enrollment are actual counts published by the National Center for Education Statistics, U.S. Department of Education. Data on local government education employment is from the Bureau of Labor Statistics Current Employment Statistics program. The November employment data are used, because that is the last month of employment buildup related to a new school year.

Employment data include both the full-time and part-time workers on school payrolls. Thus, clerical, cafeteria, and custodial workers are included, as well as teachers and administrators. BLS counts the number of employees who receive wages during the pay period that includes the 12th of the month. Voluntary workers are not counted. In this analysis, trends of total employment in public schools are augmented with the data on education staff from the National Center for Education Statistics. However, because data from the National Center for Education Statistics are adjusted to full-time equivalents, they are not directly comparable to Current Employment Statistics data. Therefore, data from the two sources are analyzed separately.

Chart 1. Index of employment and student enrollment in local government education, 1964-93



with little training are being used to instruct the neediest students.⁷

Some of the studies analyzing the effects of Chapter 1 instruction on achievement have been positive and some have been negative. The general agreement is that although disadvantaged students are helped by this program, more could be done. In 1992, a study by the Commission on Chapter 1 concluded that the practice of pulling students out of class for special instruction was no longer adequate; that the regular curriculum needed to be upgraded in order for special needs students to acquire more advanced skills than the basic skills they were currently receiving.⁸ The commission recommended that schools in poorer districts receive more Chapter 1 funding, and that incentives be created to ensure that schools improve the academic performance of needy students.⁹

Bilingual instruction. The Federal Government first provided funds for bilingual education in 1968 with Title VII of the Elementary and Secondary Education Act of 1965; by 1974, Congress specified that the money be spent on native language instruction.¹⁰ Consequently, schools had to hire certified bilingual teachers because English could no longer be the primary language of instruction. As immigration has increased, so has the demand for bilingual instruction. Studies on the effects of native language instruction

have been contradictory; advocates against such instruction argue that students who mainly receive instruction in their native languages do not learn enough English to later succeed as adults.¹¹

Education of disabled children. Funding for educating disabled children was first provided in 1966; legislation and court decisions culminated in the Education for All Handicapped Act of 1975, later renamed the Individuals with Disabilities Education Act. It requires that school districts provide a free, appropriate public education for handicapped and learning disabled students. The schools must hire not only special education teachers and aides, but also pay for "related services," which includes specially trained personnel.¹² In 1977, children who did not have a physical handicap but had a specific learning disability were declared eligible for these services under the Individuals with Disabilities Education Act; as a result, the share of children with learning disabilities rose from 22 percent of participants in this program during the 1976-77 school year to 44 percent in 1989-90.¹³

In recent years, the trend has been to place severely disabled children into regular classrooms. This usually requires the presence of a special education teacher or aide in the classroom along with the regular teacher. The increased practice of putting disabled children into regular

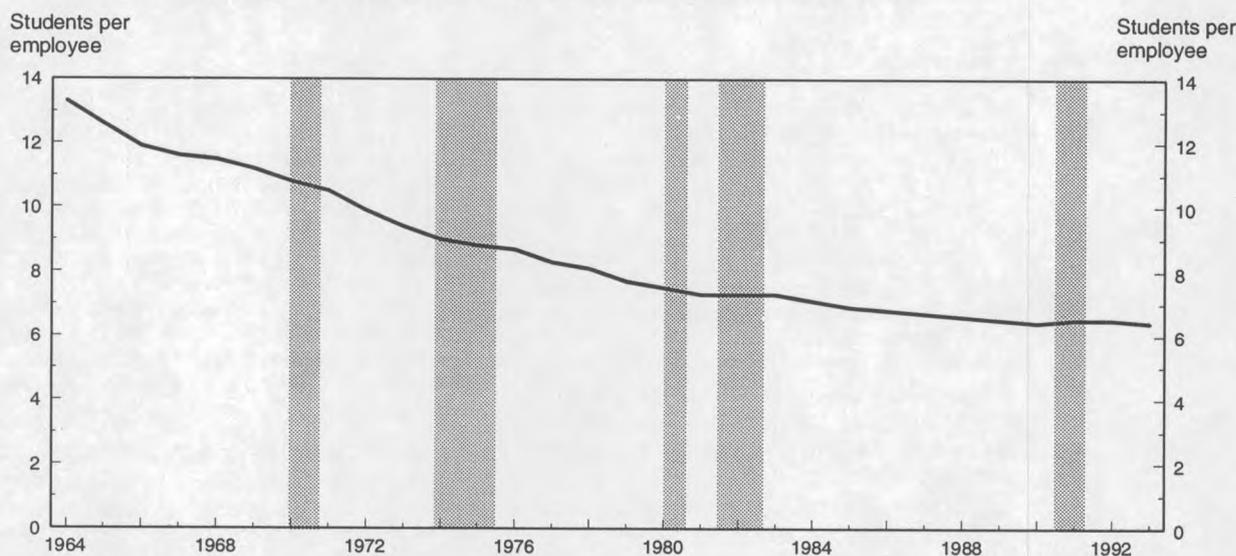
Table 1. Student enrollment, all employees and teachers in local government education, and student-to-employee and student-to-teacher ratios, 1964–93

[Numbers in thousands]

Year	Student enrollment in public schools grades K-12, fall ¹		Employment of all workers in local government education, November		Employment of full-time equivalent teachers ¹		Student-to-employee ratio	Student-to-teacher ratio
	Level	Change	Level	Change	Number	Change		
1964	41,416	—	3,122	—	1,648	—	13.3	25.1
1965	42,173	757	3,334	212	1,710	62	12.6	24.7
1966	43,039	866	3,626	292	1,789	79	11.9	24.1
1967	43,891	852	3,776	150	1,855	66	11.6	23.7
1968	44,944	1,053	3,913	137	1,936	81	11.5	23.2
1969	45,550	606	4,085	172	2,016	80	11.2	22.6
1970	45,894	344	4,257	172	2,059	43	10.8	22.3
1971	46,071	177	4,404	147	2,063	4	10.5	22.3
1972	45,726	-345	4,641	237	2,106	43	9.9	21.7
1973	45,444	-282	4,825	184	2,136	30	9.4	21.3
1974	45,073	-371	5,008	183	2,165	29	9.0	20.8
1975	44,819	-254	5,071	63	2,198	33	8.8	20.4
1976	44,311	-508	5,120	49	2,189	-9	8.7	20.2
1977	43,577	-734	5,269	149	2,209	20	8.3	19.7
1978	42,551	-1,026	5,259	-10	2,207	-2	8.1	19.3
1979	41,651	-900	5,389	130	2,185	-22	7.7	19.1
1980	40,877	-774	5,473	84	2,185	0	7.5	18.7
1981	40,044	-833	5,452	-21	2,127	-58	7.3	18.8
1982	39,566	-478	5,392	-60	2,133	6	7.3	18.5
1983	39,252	-314	5,388	-4	2,139	6	7.3	18.4
1984	39,208	-44	5,536	148	2,168	29	7.1	18.1
1985	39,422	214	5,689	153	2,206	38	6.9	17.9
1986	39,753	331	5,870	181	2,244	38	6.8	17.7
1987	40,008	255	5,960	90	2,279	35	6.7	17.6
1988	40,189	181	6,092	132	2,323	44	6.6	17.3
1989	40,526	337	6,263	171	2,357	34	6.5	17.2
1990	41,217	691	6,430	167	2,398	41	6.4	17.2
1991	² 42,000	783	6,484	54	² 2,432	34	² 6.5	² 17.3
1992	² 42,731	731	6,612	128	² 2,454	22	² 6.5	² 17.4
1993	³ 43,353	622	6,728	116	³ 2,507	53	³ 6.4	³ 17.3

¹ Based on data from the National Center for Education Statistics. ² Preliminary. ³ Estimated.

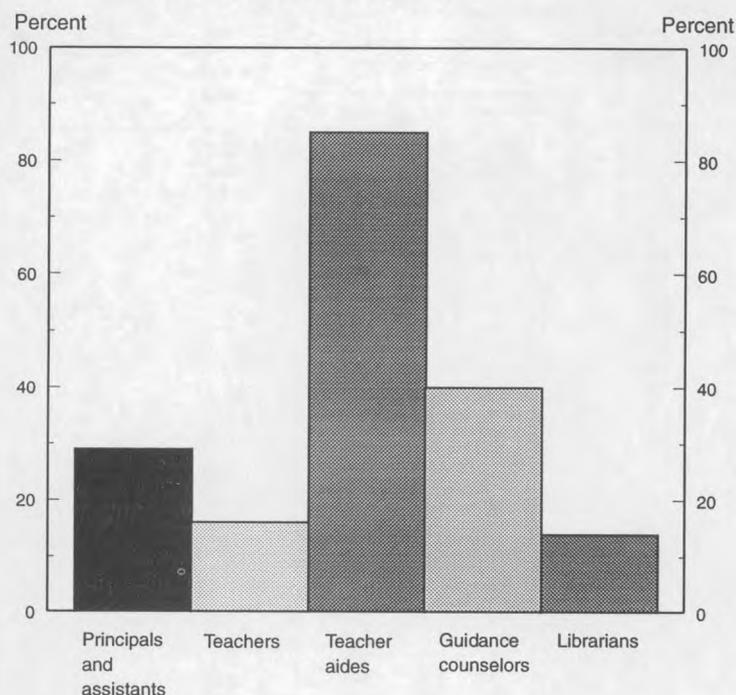
Chart 2. Student-to-employee ratio in local government education, 1964–93



NOTE: Ratio is calculated by dividing fall public school enrollment by November employment in local government education. Shaded areas denote recessions as identified by the National Bureau of Economic Research.

SOURCE: Enrollment data are published by the National Center for Education Statistics.

Chart 3. Growth of full-time equivalent education staff in public schools, 1969-90



SOURCE: National Center for Education Statistics.

classrooms has therefore contributed to the demand for special education staff.

Other trends. Employment growth in public schools is also positively influenced by:

- Shifts toward smaller classes, which are believed to be beneficial for learning. Many States have passed laws mandating smaller class sizes.
- Establishment of vocational training centers for high school students and “magnet” schools that offer specialized instruction.
- Increases in the amount of money spent per pupil. The current expenditure per student rose from \$2,162 in the 1965-66 school year to \$5,054 (estimated) in 1992-93 (1991-92 dollars).¹⁴ Disposable income has risen; at the same time there has been a decrease in the ratio of the number of students to the population as a whole.¹⁵ This allows more money to be spread among fewer pupils.

Will the surge continue?

Public school enrollment is projected to grow throughout the 1990's; by 1998, enrollment is projected to surpass the 1971 peak.¹⁶ This surge in enrollment will require State and local governments to hire more teachers and other staff just to maintain the current student-to-employee ratio.

Even if there are more Federal funds for remedial, bilingual, and special education programs, State and local budgets will likely be strained by the increase in school-age children. As a result, there may not be enough money available to allow the student-to-employee ratio to decline further. Thus, the recent pattern of a stable, or even increasing student-to-employee ratio in public education, established since 1990, may remain for some time. □

Footnotes

¹ Data from 1964 forward are used because enrollment data prior to 1964 encompassed the entire school year. For 1964 and later years, enrollment figures are for fall only and thus can be compared with fall employment data.

² National Center for Education Statistics, *Digest of Education Statistics 1992*, NCES 92-097 (Washington, DC, National Center for Education Statistics, October 1992), p. 1.

³ These recessionary periods, as identified by the National Bureau of Economic Research, are: December 1969–November 1970; November 1973–March 1975; January 1980–July 1980; July 1981–November 1982; and July 1990–March 1991.

⁴ *Digest of Education Statistics 1992*, table 78.

⁵ Data on support staff and school administrative staff are not comparable prior to 1984. Therefore, they are not used in this comparison.

⁶ Chapter 1 office, U.S. Department of Education, Washington, DC.

⁷ *Who is Teaching Our Children: A Look at the Use of Aides in Chapter 1*, Issue Paper (International Reading Association, January 1994).

⁸ Rochelle Stanfield, “A Blistering Report Card,” *Washington Update: Policy and Politics in Brief* (Washington, DC, The National Journal, 1992), p. 2899.

⁹ Mary Jordan, “Panel Says Poor Children Disserved by School Aid,” *The Washington Post*, Dec. 11, 1992, p. A10.

¹⁰ Edward B. Fiske, “The Controversy Over Bilingual Education in America’s Schools; One Language or Two?” *The New York Times*, Nov. 10, 1985, p. 1.

¹¹ Marilyn Elias, “Kids’ Best Interests the Crux of Bilingual Education Debate,” *USA Today*, July 21, 1993, p. 7D.

¹² Eileen M. Gardner, “The Growth of the Federal Role in Education,” *Critical Issues: A New Agenda for Education* (Washington, DC, The Heritage Foundation, 1985), p. 27.

¹³ *Digest of Education Statistics 1992*, table 50.

¹⁴ *Digest of Education Statistics 1992*, table 156.

¹⁵ National Center for Education Statistics, *Projections of Education Statistics to 2002*, NCES 91-490 (Washington, DC, National Center for Education Statistics, December 1991), p. 77.

¹⁶ *Projections of Education Statistics to 2002*, table 1.

Portability of pension benefits among jobs

A worker's ability to maintain and transfer accumulated pension benefits when changing jobs is not widespread among defined benefit pension plans, although portability provisions vary a great deal

Ann C. Foster

American workers hold numerous jobs over their working lives.¹ These workers often receive lower retirement benefits from employer-sponsored retirement plans than do workers who remain with one employer because of the way such plans determine benefits.² A "portable" pension, which ties a pension to a worker instead of a job, may provide an alternative solution to this pattern.

A worker's ability to maintain and transfer accumulated pension benefits when changing jobs is generally less of a problem in defined contribution plans than in defined benefit plans. An account is established in defined contribution plans for each participating employee. The employer and, in some cases, the employee, make fixed (or defined) contributions to the account. Benefits are not predetermined, but depend on contributed amounts and investment earnings. With comparable contributions and rates of return, a worker who switches jobs (and leaves his or her funds in the plan of each organization) could have the same benefit amount upon retirement as a worker with an identical salary history who worked for only one employer.³

In contrast, defined benefit plans use predetermined formulas to calculate retirement benefits. Benefits generally are based on salary and years of service with the employer sponsoring the plan. If a "vested"⁴ employee leaves a job before retirement, the final salary at the time of leaving is used to determine retirement benefits. For the employee who stays at the same job until retirement, benefit calculations are based on

preretirement salary levels, most often the highest salary. In addition, these high earnings are multiplied over more years of employment.

The following illustrates the financial consequences of changing employers when covered by defined benefit plans that are not portable. Individual A and Individual B work for 30 years and have the same salary pattern. Their pension benefits are calculated using the formula; annual benefit = 1 percent x final average salary x years of service. The only difference is in their employment histories: B changed employers after 15 years, while A remained with the same company for 30 years.

	<i>Individual A</i>	<i>Individual B</i>
Starting salary	\$10,000	\$10,000
Salary after 15 years . .	20,000	20,000
		<i>(Changed jobs)</i>
Salary after 30 years . .	40,000	40,000
Annual pension benefit:		
First employer	12,000	3,000
	(30 percent of \$40,000)	(15 percent of \$20,000)
Second employer . . . . .	...	6,000
		(15 percent of \$40,000)
Total	\$12,000	\$ 9,000

As shown, changing jobs yields only 75 percent of the retirement income for B as A received,

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although both had the same earnings throughout their work lives. Individual B's retirement income is lower because much of the pension is based on the \$20,000 final salary with the first employer.

Portability provisions

Portability provisions in defined benefit plans generally cover assets, credited service, or both. Portability of assets allows workers to withdraw accumulated pension benefits or transfer them to another retirement arrangement,⁵ or both.

Because few defined benefit plans are available with portability or reciprocity agreements, most lump-sum withdrawals are transferred directly to the worker. According to one study, if lump-sum withdrawals were put into an individual retirement account, a worker could have a retirement amount larger than what would have been available from the defined benefit plan.⁶ However, research indicates that most workers spend their preretirement distributions.⁷

Portability of credited service allows years of service with a previous employer to be included when determining pension benefits from a subsequent employer. For example, it allows a worker to keep years of service credited to one plan when changing jobs, even if he or she has not met the vesting requirements of that plan. Service credit portability is often found in multiemployer plans. A multiemployer pension plan is a trust fund established in collective bargaining between one or more labor unions and employers of covered union members. These plans allow workers who leave one participating employer to continue their credited service if they work for another participating employer. In 1990, 4.95 million active participants were covered by multiemployer defined benefit pension plans.⁸

A multiemployer pension plan can be a defined benefit or a defined contribution plan. It provides benefits to workers in unionized industries, such as transportation and trucking, where workers tend to be highly mobile and work for several employers a year. Multiemployer plans are arranged by industry on a local, regional, or national level; without these plans, workers would be required to switch pension plans as often as they switch employers, resulting in reduced or incomplete pension coverage.⁹

Although workers covered under a multiemployer plan continue to earn benefits if they switch to another participating employer, they could lose benefits or not gain additional benefits if they subsequently work for an employer participating in another fund. Loss of pension benefits can be reduced or prevented if a worker participates in a plan with a reciprocity agree-

ment with other multiemployer plans. A reciprocity agreement is a mutual exchange of privileges or rights designed to prevent the loss of pension credits for participants who switch employers. In 1987, nearly half of all multiemployer funds included reciprocity agreements.¹⁰

Reciprocity agreements

The two reciprocity systems most widely used in multiemployer defined benefit pension plans are pro rata reciprocity and "money follows the man." In a pro rata arrangement, money is not transferred between funds; instead, pension credits are maintained by each fund. Upon retirement, a partial, or pro rata, benefit is paid by each fund in which the worker participated, based on the pension credits earned in that fund. Vested status or pension eligibility, or both, are based on the credits earned in all funds.

An example of such an arrangement is among the provisions of a multiemployer pension plan covering members of an International Brotherhood of Teamsters local in the New York City area.¹¹ The plan's partial reciprocal pension arrangement is for participants whose years of service are divided between the local plan and related plans, and who also are ineligible for a regular pension from any of the plans.¹² For these participants, credited service under the local plan and related plans are counted for eligibility purposes.¹³

The partial reciprocal pension amount is determined by the following formula:

$$\text{Monthly pro rata pension} = \text{total pension amount} \times A/A + B$$

where: A = the number of years of local pension credit; and

B = the number of years of pension credit earned under related funds.

As an example, local and related pension plan credits entitle the worker to a total pension amount of \$1,200. The employee has 8 years of service under the local plan, plus 7 years of service with local Y, and 9 years with local Z. The monthly pro rata pension from the local plan would be $\$1,200 \times 8/24 = \400 . The employee also will receive a pro rata pension from the local Y and local Z plans.

Another example is a construction trades pension fund. In this plan, a reciprocal pension is available to participants who would be ineligible for a pension or whose pensions would be less than the full amount because their working years were divided between employment in the plan and employment in related pension plans.

The related plans include signatories to a national pro rata pension agreement or an international re-

reciprocal agreement, or any other pension plan authorized by the board of trustees as a related plan.

As in the previous example, a participant is eligible for a pro rata pension if all pension credits earned in related funds and the local plan were enough to allow the participant to be eligible for a full pension in the local plan. The participant must have at least 1 year of pension credit in the plan and 1 year of pension credit in each related plan to qualify for a reciprocal pension. Although pension credits of a related plan are required for eligibility, they are not used when determining the monthly pro rata pension. For example, a participant retires at age 65 with 9 years of pension credit in the plan and 6 years of credit in a related plan. The monthly amount of a regular pension is \$30 multiplied by years of pension credit. The participant's reciprocal pension would be \$270 ($\30×9). The related plan would determine and pay any benefits for the 6 years of related pension credit.

The "money follows the man" arrangement assigns each worker to a "home" fund. If a worker is employed outside the home fund's jurisdiction, monetary contributions to the local area fund are transferred to the home fund. When the worker retires, the home fund pays the entire pension, according to the fund's benefit formula. If participating funds have different contribution levels, the home fund may have gains or losses, depending on its contribution rate relative to the other funds. The worker's benefit remains at the level it would have been had all his employment been within the home fund's jurisdiction.

An example of a "money follows the man" arrangement is a construction trades pension fund. If a participant works for an employer covered by the union's collective bargaining agreement, the employer is required to contribute monthly to the plan. These contributions equal the number of hours the participant worked multiplied by the rate per hour specified in the agreement. The plan has reciprocity agreements that allow participants to increase retirement benefits while working in certain other jurisdictions. Unlike the previous examples, contributions made on the participant's behalf may be transferred to the fund. The participant, however, must request transfers of contributions. If hours and contributions are transferred, they are treated as if they had resulted from work in the fund's jurisdiction.

Multiple employer trusts also can provide portability. These trusts are not the same as multiemployer plans established in collective bargaining agreements. While more than one employer contributes to a multiple employer trust, a collective bargaining agreement is not involved.

An example of a multiple employer trust involves a group of financial institutions, such as

savings and loan associations and Federal home loan banks. The participating employers provide a defined benefit pension plan for employees. A participant who leaves employment before becoming vested in 5 years, but is reemployed by the same institution or another participating institution, is immediately reenrolled in the plan. If the employee's break in service was 60 months or fewer, the vesting service is reinstated; if the break is 12 months or fewer, vesting service credit for the break period also will be reinstated.

A single-employer portability plan

Portability provisions are not commonly found in single employer defined benefit pension plans. One exception is the mandatory portability arrangement for employees of the former Bell System, a telecommunications firm.

Before the AT&T divestiture in January 1984, employees who transferred from one Bell System company to another carried with them their credited service and any accrued benefits. Many of the companies had previously participated in the Bell System pension plans, one for management employees, and another for nonmanagement employees. The plans provided automatic portability when changing employment in the Bell System. But after divestiture, these companies were no longer affiliated.

The Divestiture Interchange Agreement, which was approved as part of the court approved divestiture, continued the predivestiture practice of service credit recognition for employees who moved from one former Bell System company to another in 1984. In addition, Section 559 of the Deficit Reduction Act of 1984, known as the Pension Portability Act, requires that the service credit of covered employees who move from one former Bell System company to another on or after January 1, 1985, be recognized by the hiring company under the same terms as the Divestiture Interchange Agreement. Those covered are primarily nonmanagement employees who were on the Bell System payroll on December 31, 1983, and management employees who earned less than \$50,000 a year and were on the Bell System payroll on December 31, 1983. Unless covered by one of these agreements, employees who leave one former Bell System company and are later hired by another former Bell System company, are considered new employees for benefits related purposes.¹⁴

The Bell System companies affected by the Portability Act have signed a Mandatory Portability Agreement that spells out their obligations. At the time of divestiture, each affected company sponsored defined benefit plans with identical provisions, including benefit computa-

tion and rules for crediting service. Former Bell System companies also had common pension administration and actuarial methods. Nonmanagement employees were represented primarily by two unions and, until divestiture, pension negotiations were conducted nationally. Despite these common features, it took nearly 1 year for the 11 companies that are part of the Mandatory Portability Agreement to resolve most of the issues regarding crediting of service, asset transfer, and eligibility for other benefits.¹⁵

The Mandatory Portability Agreement outlines the actuarial determination of the amount of pension fund assets to be transferred when a covered employee changes to another former Bell System company and sets forth other relevant terms and conditions for administering portability.¹⁶ The agreement also protects the employee's accrued pension benefit given that it cannot be reduced if the worker changes to a company with lower pension benefit levels.

The transfer of fund assets is not automatic. A covered employee who changes to another former Bell System company must notify the new company's employment office before the transfer can occur. Once notified, the new companies and those they succeeded verify portability eligibility and provide for the appropriate fund transfer.

Public employee plans

Defined benefit plans remain the dominant retirement plan for State and local government employees. In 1992, 87 percent of full-time State and local government employees participated in defined benefit plans, compared with 9 percent in defined contribution plans.¹⁷

Sometimes plan information booklets will state that membership is "portable" among employers. This is not entirely accurate; benefits usually remain intact only if the participant's job change is to another branch or agency of the same government employer that also participates in the same pension plan. The participant is not working for a different employer as in the case of a multiemployer plan.

Many State and local governments maintain separate funds for teachers, firefighters, police officers, and general employees. State and local governments often have reciprocity where, for example, a participant in a teachers retirement fund who later works in a position covered by the general employees fund may have contributions or credited service, or both, taken into account in the new job.

How this is taken into account varies among government jurisdictions. In one State system, the State's teachers retirement system maintains reciprocity with the State's general employees

retirement system. A participant in one system who later works in a position covered by the other system can request "multiple service," which allows the employee's previous credited service and contributions to be taken into account at retirement. The system from which the person retires will calculate the retirement benefit based on the average of the highest 3 years of salary in either system and the combined contributions, interest, and years of credited service.

Another example is a county system that maintains reciprocity with the State employees retirement system and several other county systems. This reciprocity, however, involves a direct transfer of credited service to the other systems.

One State system provides reciprocity among the teachers, general employees, and the police and firefighters retirement systems. Each requires an employee contribution based on age at the time of system enrollment, with younger entrants making smaller contributions. At any given age, however, the employee contribution varies with each system.

A participant in one system who later takes a position covered by another system may request a transfer of previous credits to the new system. This transfer involves credited service and the reserves the participant has accumulated. If the reserves are not enough to cover the benefits provided by the new system, "public employers" make up the difference. A participant entering a new system will make the same contribution he or she made in the previous system, not one based on age at enrollment in the new system.

While not considered a portability provision, many public employee plans allow participants who have worked for public employers in other States to purchase service credit based on these previous jobs. These provisions allow participants with previous job changes to increase their pension benefits. Participants are often limited to the purchase of 1 year of credit for previous employment per 12-month period in the current job. A limit is often placed on the total amount of credit (for example, up to 10 years of comparable service) that can be purchased. In addition, a stipulation is usually included that the participant not be eligible for, or currently receiving, pension benefits based on this service. Some plans also allow participants to purchase credit for military service if they are not eligible for retirement benefits based on this service.¹⁸

Improving portability data

The issue of pension portability is often confusing, partially due to the varying definitions of portability. Even if a definition has been agreed upon, illustrations may not conform to the given definition.

The Bureau of Labor Statistics Employee Benefits Survey first requested information on portability in 1991.¹⁹ The 1991 survey defined portability as the ability to transfer years of credited service or accumulated benefits from one employer to another. In 1991–92, about 13 percent of full-time workers participating in defined benefit pension plans were covered by portability provisions. The incidence of portability varied by industrial sector and occupation, as shown in the following tabulation:

	All	White collar	Blue collar
Total	13	11	16
Private sector	12	9	15
Medium and large firms	9	9	9
Small firms	19	9	31
State and local government	16	16	18

The Employee Benefits Survey also categorized portability provisions by type of provision:

- transfer years of service credits in limited groups of employers (multiemployer plans);
- transfer years of service credits to another employer's plan (single-employer plans with portability or reciprocity agreements);
- transfer pension benefits or assets to another employer's plan; and
- option to cash out vested benefits with a current value greater than \$3,500 (portability of assets).

A study of these data indicated that these categories were incomplete and, in some instances, not mutually exclusive. For this reason, BLS has not published data by type of portability provision. For example, the 1991 and 1992 surveys showed that while multiemployer plans allow participants to work for several employers and continue to accrue benefits, employers make contributions to the plan on the participant's behalf. No transfer is ever made between employers and no transfer is made if a subsequent employer contributes to the same plan. Even with a

reciprocity agreement, there may be no transfer if there is a pro rata pension involved. Thus, while multiemployer plans usually were included in "transfer years of service credits within limited groups of employers," such plans used a variety of portability and reciprocity arrangements.

Another problem was that the categories were set up for transfers to be reported as only assets or only service credits. As earlier noted, many plans with portability provisions provide for the transfer of both.

State government plans were particularly difficult to categorize. While plan information may have used the term portable, the intent is only to allow participants to retain benefits if they change to jobs covered by the same plan or to switch between related plans. One example is a participant in a State teachers retirement fund who later works for another school district that also participates in the plan; another example would be a teacher being able to transfer to the State general employees fund if he or she later takes a job with a State agency. Portability is not provided for participants who work for a private employer or for a government agency in another State.

For the 1994 Employee Benefits Survey, changes have been made to improve the usefulness of pension portability data. The categories used to measure portability are:

- transfer of service credits;
- transfer of assets;
- transfer of service credits and assets;
- lump sum of more than \$3,500 paid to separated employee; and
- multiemployer plan.

For multiemployer plans, the Employee Benefits Survey also indicates whether reciprocity agreements have been made with other plans or jurisdictions and, if so, whether contributions are sent to a home fund; or a pro rata pension is paid by several funds.

An additional question asks if State government plans allow employees to purchase credit for previous government service in another State. □

Footnotes

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¹ Workers typically hold 10 or 11 jobs during their working lives. See Robert E. Hall, "The importance of lifetime jobs in the U.S. economy," *American Economic Review*, September 1982, pp. 716–24.

² See William J. Wiatrowski, "Factors affecting retirement income," *Monthly Labor Review*, March 1993, pp. 25–35;

and Emily S. Andrews, "Pension Portability and What It Can Do for Retirement Income: A Simulation Approach," *EBRI Issue Brief* No. 65, April 1987.

³ If funds from former employers' plans were rolled over into an Individual Retirement Account, the job switcher would have a larger retirement benefit if the rate of return on IRA funds was greater than that of the employers' plans. Similarly, if the rate of return on IRA funds was lower, the job switcher would have a smaller retirement benefit than the worker with one employer. See Andrews, "Pension Portability."

⁴ Pension plan participants usually gain nonforfeitable and nonrevocable (vested) rights to benefits after meeting spe-

Pension Portability

cific service or age and service requirements. The Employee Retirement Income Security Act of 1974 requires private single employer plans to provide full vesting (100 percent) after 5 years of plan participation (with no partial vesting before that time) or graded (gradual) vesting of 20 percent after 3 years of service and 20 percent for each subsequent year of service with full vesting reached after 7 years of service. Multiemployer plans also may use a 10-year cliff vesting schedule in which participants have no vested rights to employer contributions until they have completed 10 years of service at which time they become 100 percent vested. See *Fundamentals of Employee Benefit Programs, 4th Edition* (Washington, DC, Employee Benefit Research Institute, 1990), pp. 30–31.

⁵ The Employee Retirement Income Security Act of 1974 permits sponsors of defined benefit plans to cash out separated participants with accrued benefits of \$3,500 or less. In these cases, workers receive a lump sum whether or not they want it. Lump-sum withdrawals of more than \$3,500 require approval of the plan and the participant.

⁶ As in the case of a defined contribution rollover, a job switcher who rolls over funds from a defined benefit plan into an Individual Retirement Account earning a rate of return greater than that guaranteed by the plan's benefits formula will have a benefit amount greater than what would have been received had the funds remained in the plan. Similarly, the benefit amount would be reduced if IRA funds earn less than what would have been received had the funds remained in the pension plan. Unlike the defined contribution plan, the job switcher who leaves funds in a former employer's defined benefit plan usually receives a benefit amount substantially lower than a worker with an identical salary history who remains with that employer throughout his working life. See Andrews, "Pension Portability."

⁷ See Paul Yakoboski, "Retirement Program Lump-Sum Distributions: Hundreds of Billions in Hidden Pension Income," *EBRI Issue Brief No. 146* (Washington, DC, Employee Benefit Research Institute, February 1994); Phyllis A. Fernandez, "Preretirement Lump-Sum Distributions," in John A. Turner and Daniel J. Beller, eds., *Trends in Pensions, 1992* (U.S. Department of Labor, 1992) pp. 285–317; and Joseph S. Piacentini, "Preservation of Pension Benefits," *EBRI Issue Brief No. 98*. Washington, DC: Employee Benefit Research Institute, June 1990.

⁸ See U.S. Department of Labor, "Abstract of 1990 Form 5500 Annual Reports." *Private Pension Plan Bulletin*, No. 2, 1993, p. 24. Also included are participants in multiple-employer collective bargaining plans that chose not to be treated as multiemployer plans in the Multiemployer Pension Plan Amendments Act of 1980.

⁹ See Cynthia J. Drinkwater, "Multiemployer Plans," in Jerry S. Rosenbloom, ed., *The Handbook of Employee Ben-*

efits—Design, Funding and Administration (3rd Edition), Vol. II (Brookfield, VT, International Foundation of Employee Benefit Plans, 1992), pp. 507–21.

¹⁰ See "Reciprocity and Multiemployer Funds: A Model of Portability," *Employee Benefit Notes*, Vol. 8, No. 2, February 1987, pp. 5–7.

¹¹ The public may obtain information on this and other pension plans from the U.S. Department of Labor, Pension and Welfare Benefits Administration, Office for Public Disclosure, Washington, DC.

¹² Plan provisions define a related plan as the pension plan of any other Teamster local union that has entered into a reciprocal agreement with the local plan.

¹³ To be eligible for a partial reciprocal pension, a participant must meet all of the following requirements: be eligible for a regular pension from the local plan had all pension credit earned in related plans been earned in the local plan; have at least 2 years of pension credit for which contributions were made to the local plan; be entitled to a partial reciprocal pension from the plan in which the employee was covered before retirement; and be ineligible for a regular pension from a related plan.

¹⁴ In certain circumstances the prevestiture vesting service of an employee not covered by one of the agreements may be recognized by the hiring Bell System company. April 7, 1994, telephone interview with Scott J. Macey, executive vice president and general counsel, AT&T Actuarial Sciences Associates, Inc.

¹⁵ A more detailed discussion can be found in Ronald D. Hovis, "Portability: A Case Study of the Bell System Model," *Employee Benefits Notes*, Vol. 7, No. 3, March 1986, pp. 4–7.

¹⁶ Since divestiture occurred, changes have been made in the pension plans of all former Bell System companies. These changes have increased the difficulty of administering the MPA. April 7, 1994, telephone interview with Scott J. Macey, executive vice president and general counsel, AT&T Actuarial Sciences Associates, Inc.

¹⁷ Included are 3 percent of State and local government employees participating in defined benefit and defined contribution plans. See *Employee Benefits in State and Local Governments, 1992*, Bulletin 2444. (Bureau of Labor Statistics, 1994).

¹⁸ See Dan M. McGill, "Public Employee Pension Plans," in Jerry S. Rosenbloom, ed., *The Handbook of Employee Benefits — Design, Funding and Administration (3rd Edition)* Vol. II, (Brookfield, VT, International Foundation of Employee Benefit Plans, 1992), pp. 522–36.

¹⁹ See *Employee Benefits in Medium and Large Private Establishments, 1991*, Bulletin 2422 (Bureau of Labor Statistics, 1993).

Major agreements expiring next month



This list of collective bargaining agreements that expire in August is based on information collected by the Bureau's Office of Compensation and Working Conditions. It includes agreements covering 1,000 workers or more. Private industry is arranged in order of Standard Industrial Classification. Labor organizations listed are affiliated with the AFL-CIO, except where noted as independent (Ind.).

Private sector

Construction

Associated Underground Contractors, Inc., Michigan; Laborers, 2,500 workers

Associated Underground Contractors, Inc., Michigan; Operating Engineers, 1,250 workers

National Electrical Contractors Association, American Line Builders Chapter (utility projects), District of Columbia, Kentucky, Maryland, Ohio, Virginia, and West Virginia; Electrical Workers (IBEW), 2,500 workers

National Electrical Contractors Association, Atlanta, GA; Electrical Workers (IBEW), 2,400 workers

National Electrical Contractors Association, Kansas City, MO; Electrical Workers (IBEW), 1,200 workers

Painting and Decorating Contractors Association, St. Louis, MO; Painters, 2,000 workers

Apparel and other textile products

Cotton Garment Negotiating Group, interstate; Clothing and Textile Workers, 38,000 workers

Lumber and wood products

Champion International Corp., Idaho, Montana, and Oregon; Western Council of Industrial Workers and Woodworkers, 2,400 workers

Chemicals and allied products

Minnesota Mining and Manufacturing Co., St. Paul, MN; Oil, Chemical and Atomic Workers, 1,230 workers

Electrical and electronic equipment

Eagle Electric Manufacturing Co., Long Island City, NY; Automobile Workers, 1,300 workers

Westinghouse Electric Corp. (hourly employees), interstate; various unions, 10,200 workers

Westinghouse Electric Corp. (salaried employees), interstate; Federation of Westinghouse Independent Salaried Unions (Ind.), 4,300 workers

Transportation equipment

Bath Iron Works Corp., Bath, ME; Machinists, 6,500 workers

Hughes Missile Systems Co., Pomona, CA; Machinists, 1,536 workers

Communications

General Telephone Co. of Michigan, Muskegon, MI; Electrical Workers (IBEW), 1,950 workers

Western Union Telegraph Co., interstate; Telegraph Workers (CWA), 1,800 workers

Services

Hotel Employers Association of San Francisco, San Francisco, CA; Hotel Employees and Restaurant Employees, 4,000 workers

Stanford University Medical Center (technical, service, and maintenance employees), Palo Alto, CA; Service Employees, 1,250 workers

Public sector

Education

Boise public schools (teachers), Boise, ID; Education (NEA—Ind.), 1,600 workers

Boston public schools (teachers and related professionals), Boston, MA; Teachers (AFT), 6,932 workers

Christina public schools (teachers), Christina, DE; Education (NEA—Ind.), 1,300 workers

Denver public schools (teachers), Denver, CO; Education (NEA—Ind.), 4,000 workers

Elgin public schools (teachers), Elgin, IL; Elgin Teachers Association (NEA—Ind.), 1,700 workers

Grand Rapids Board of Education (teachers and related professionals), Grand Rapids, MI; Education (NEA—Ind.), 1,735 workers

Indianapolis public schools (teachers), Indianapolis, IN; Education (NEA—Ind.), 3,100 workers

Lee County public schools (teachers), Lee County, FL; Education (NEA—Ind.), 2,600 workers

Little Rock public schools (teachers), Little Rock, AK; Education (NEA—Ind.), 2,000 workers

Livonia public schools (teachers), Livonia, MI; Education (NEA—Ind.), 1,028 workers

Northshore School District (teachers), Bothell, WA; Education (NEA—Ind.), 1,070 workers

Okaloosa County public schools (teachers), Okaloosa County, FL; Education (NEA—Ind.), 1,700 workers

Omaha Board of Education (teachers), Omaha, NE; Education (NEA—Ind.), 2,900 workers

Philadelphia Board of Education (paraprofessionals), Philadelphia, PA; Philadelphia Federation of Teachers (AFT), 1,633 workers

Philadelphia Board of Education (per diem employees), Philadelphia, PA; Philadelphia Federation of Teachers (AFT), 2,000 workers

Philadelphia Board of Education (reading assistants), Philadelphia, PA; Philadelphia Federation of Teachers (AFT), 1,062 workers

Philadelphia Board of Education (secretaries), Philadelphia, PA; Philadelphia Federation of Teachers (AFT), 1,332 workers

Philadelphia Board of Education (teachers), Philadelphia, PA; Philadelphia Federation of Teachers (AFT), 13,062 workers

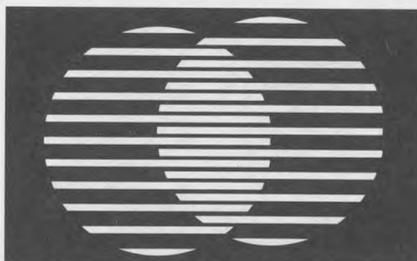
Trenton Board of Education (teachers and related professionals), Trenton, NJ; Education (NEA—Ind.), 1,200 workers

Tulsa public schools (teachers), Tulsa, OK; Tulsa Classroom Teachers Association (Ind.), 2,700 workers

Public administration

Alameda County (general unit), Alameda County, CA; Service Employees, 6,000 workers

Developments in industrial relations



Early settlement at NYNEX

More than 16 months before their labor contract was to expire, NYNEX, the parent company of the New York and New England Telephone companies, and its major union, the Communications Workers of America, extended their collective bargaining agreement for 3 years. The pact, which covers 35,000 workers, provides nearly full protection against layoffs, downgrades, and involuntary transfers for union members while the company cuts its work force by 16,800 over the next 3 years. NYNEX is downsizing to meet the competitive challenges of being a player in a multimedia industry.

The agreement provides breakthroughs in education assistance, allowing employees to upgrade their skills and further their formal education and allowing the company to tackle imbalances in the work force. A 2-year associate degree program in telecommunications technology is instituted for all craftworkers. If accepted in the program, participants work 4 days a week and attend school on company time on the fifth day. In addition, full-time employees with at least 5 years of service are eligible for up to 2 years of educational leave without pay, but with full benefits and seniority and up to \$10,000 of tuition assistance each year.

Under terms of the job protection program, which the union claims "sets new employment security standards for the industry," adversely affected employees have a number of options available to them. They can, in order, voluntarily transfer to vacancies in their occupations, accept early retirement, voluntarily separate from the company with a severance package, or transfer

"Developments in Industrial Relations" is prepared by Michael H. Cimini and Susan L. Behrmann of the Division of Developments in Labor-Management Relations, Bureau of Labor Statistics, and is based largely on information from secondary sources.

to jobs within their geographic area. The company also agreed to return to the bargaining unit work that previously had been subcontracted, to refrain from using temporary workers, and to offer adversely affected employees job sharing if they still face layoffs.

The agreement provides wage increases of 4 percent in August 1994 and 1995 and 3.5 percent in August 1996; bonuses of \$500 in March 1996, \$600 in March 1997, and \$700 in March 1998 if NYNEX meets service standards established by State regulations; and a cost-of-living adjustment in May 1997 equal to 0.75 percent of pay for each percentage point rise in the Consumer Price Index for Wage Earners and Clerical Workers above 8 percent in the previous 2 years.

In the pension area, the contract provides incentives to encourage early retirement by crediting employees with 6 years of service and 6 years of age to qualify for normal retirement (employees qualify for normal retirement after they work 30 years or their age and number of years of service equal or exceed 75), provides a monthly supplement of \$500 or 30 percent of pay until age 62, and increases the minimum monthly pension to \$400 after 15 years of service. It also boosts the pension benefits by at least 5 percent in 1998.

The agreement calls for the company to continue to pay for the full cost of health insurance. It also maintains the current indemnity plan and provides monetary incentives for employees to participate in an optional managed care program, a \$300 lump-sum payment per employee if at least 40 percent join the new plan and \$400 if at least 70 percent join.

The contract increases the company's flexibility in making work assignments; enhances job security by reducing the number of work classifications for technicians and clerical workers; extends employer neutrality towards the union and recognition through a card check

to new lines of business established or acquired by NYNEX; boosts dependent care funding by \$1.5 million each year, providing \$7 million over the term of the agreement; makes employees eligible for direct subsidies for dependent care; and allows workers returning from maternity leave to work part time for up to 12 months.

Settlement at Anheuser-Busch

Anheuser-Busch, Inc. and the Brewery and Soft Drink Workers Conference of the International Brotherhood of Teamsters signed a 4-year master contract for 9,000 production and maintenance workers at 13 breweries across the country. Anheuser-Busch, the world's largest brewer, produces 14 brands of beer, including Budweiser, O'Doul's, and Ice Draft.

The accord provides wage increases of 40 cents an hour in the second and third years and 45 cents an hour in the last year, plus lump-sum payments of \$1,250 in the first year and \$1,000 in each of the last 3 years.

Two new contract provisions address issues of job security and pension enhancements. One provision calls for nationwide transfer opportunities for permanently displaced employees to relocate to breweries with job openings, with moving expenses equal to \$3 per mile. The second offers special early retirement benefits to employees, age 55 or older with at least 10 years of service, when the number of workers to be laid off exceeds the number who accept transfers. Retirees will receive \$500 a month or their anticipated monthly Social Security benefit (whichever is less) at age 62 in the form of a monthly payment until age 65. Payment will be made as a direct one-time lump-sum payment, or as a one-time payment to their IRA account.

The settlement gives employees the option to either stay in the current in-

demnity health care plan or participate in a new managed care health program. Employees choosing to remain under the indemnity plan are required to pay that portion of premiums that is in excess of premium costs for the managed care plan. The managed care plan requires no employee copayments for in-network hospital stays, and 20 percent copayments for out-of-network services, with maximum out-of-pocket expenses of \$2,000 per person and \$5,000 per family. The plan penalizes working spouses when their income equals or exceeds \$16,000 a year. Other contract features allow participants to nominate their current physicians as primary care physicians to the network, provide a \$25 a year deductible for dental coverage, and extend spousal and dependent medical coverage for 2 years after a participating member's death.

Several other benefit provisions were modified: the company's matching contribution to an employee's investment in the 401(k) savings plan increases from 48 percent to 100 percent and the company's contributions to the pension trust fund over the term of the agreement increases by 30 cents an hour per employee. Other major economic terms include a \$55 increase over the term in weekly supplementary workers compensation benefits, up to \$1 million in company contributions to the supplementary unemployment benefit fund, and up to \$10 million in company payments for the job security package.

Changes in contract language that affect work rules and working conditions include permitting seasonal employment of up to 20 persons between May 1 and September 30 to help meet peak production demands, with seasonal workers receiving \$12 an hour plus pension and health and welfare benefits; giving the union the right to refer individuals for employment before vacancies are filled; and revising the language dealing with the apprenticeship program, weekend relief, employee training, and supervisory training.

Pact at Morrell plant

Negotiators for John Morrell & Co. and Local 304A of the United Food and Commercial Workers reached agreement on a 5-year contract extension,

covering some 2,800 meatpacking and processing workers in the company's Sioux City, SD, plant, that may help to keep the facility open. Morrell's parent company, Chiquita Brands International, previously had announced plans to divest itself of its meatpacking and processing operations.

The contract provides wage increases of 20 cents an hour in the first and second years, 15 cents an hour in the third and fourth years, and 30 cents an hour in the final year, and suspends the cost-of-living adjustment provision during the term of the agreement. At the time of the extension, plant production workers earned \$9 an hour.

In the health care area, terms call for annual deductibles ranging from \$300 to \$1,000 and annual maximum out-of-pocket expenses ranging from \$1,000 to \$3,000, with the amount of employee payments depending on the employee's contribution level. The contract maintains employee contributions until January 1995, when employees must make new annual coverage and contribution schedule options. The contribution schedule will range from \$8.22 to \$29.91 a month for single coverage and from \$18.23 to \$61.88 a month for family coverage. Under terms of the settlement, the company will pay for health insurance premium increases of up to 5 percent each year, and employees will pay for increases in excess of 5 percent. In addition, the pact establishes a joint committee for cost containment that is charged with developing changes in plan coverage and cost containment strategies.

Other changes in benefits deal with pension and welfare benefits. To pay for health insurance costs, employees retiring under "30-and-out" provisions will receive a \$100 a month pension supplement until they reach age 62 and an additional \$100 a month supplement until age 65. The \$5,000 cap on outside earnings is dropped, but retirees' contractual pension benefits will be offset by their outside earnings. The maximum employee investment in the retirement savings plan increases to 15 percent of qualified earnings each year, and additional alternate investment options may be adopted if the options do not increase the company's administration costs for the plan.

Changes in work rules include a switch from divisions to departments

for seniority purposes, a guarantee of 36 hours of work for all regular full-time hourly paid employees unless the employee is laid off no later than the last scheduled work day of the preceding week, and time and one-half plus 8 hours pay for working on a holiday. As part of the new seniority arrangements, new rules are imposed for areas such as job bidding, transfers, layoffs, and temporary work or temporary shutdowns.

The early negotiations for the contract extension were agreed to as part of a strategy to keep the plant operating. The State of South Dakota has presented Morrell with a \$10 million economic development package in exchange for the company's pledge to maintain the plant's operations, and the governments of the city of Sioux Falls and Minnehaha County are expected to contribute to the development package.

Second emergency board report

The second presidential emergency board created within a 4-month period to hear the dispute between the Long Island Rail Road and the United Transportation Union chose the carrier's final offer to resolve the 2-1/2 year stalemate. The board was established last February under the emergency dispute procedures of the Railway Labor Act—the Federal law that regulates collective bargaining in the railroad industry—to make nonbinding recommendations to resolve an impasse involving the New York City area commuter rail carrier and about 2,300 train, track, and car workers; maintenance-of-way supervisors; and special service attendants represented by the United Transportation Union. The dispute as presented to the original emergency board involved more than 100 work rules and a number of wage, pension, and health and welfare proposals.

The current board was appointed after the first emergency board, established in October 1993, was unable to bring the parties to settlement. Under the section of the Railway Labor Act which deals with commuter rail carriers, a second board can be established at the request of either party or the governor of the State in which the rail carrier is located. In this case, the Long Island Rail Road requested the appointment of the board.

After examining the parties' final offers, the board chose the proposal made by the Long Island Rail Road. In the report, board members explained that their statutory charge was to select "the most reasonable offer," and they, as would other board members in their position, selected "the least unreasonable offer." Among the board's recommendations was a 52-month agreement that called for an immediate lump-sum payment equal to 3 percent of an employee's qualified earnings, three wage increases of 3 percent each, and health care coverage under the New York State Empire Plan.

New York City building service

The Realty Advisory Board on Labor Relations and Local 32B-32J of the Service Employees International Union reached agreement on a 3-year contract covering 30,000 porters, door attendants, repair personnel, elevator operators, and other building service workers in New York City. The Advisory Board negotiated for owners of about 2,500 rental, cooperative, and condominium residential buildings.

The agreement boosts wages by 1.9 percent in the first and second years and 2.2 percent in the third year. It provides increases over the term of the contract in building owners' contributions to the union's benefit fund, to \$31 a week per employee. In addition, new hires now have a 60-day probationary period (formerly, 30 days) and now must wait 3 months (formerly, 1 month) before eligibility for health care coverage.

Buyouts at Eagle Food Center

Buyouts for senior workers were an integral part of the settlement between Eagle Food Center stores and Locals 1540 and 881 of the United Food and Commercial Workers. The 3-year contract extensions, which cover about 2,000 grocery workers in the Chicago, IL, area, also featured general wage increases and lump-sum payments. Local 881 bargained for 300 grocery clerks in the immediate Chicago area and Local 1540 represented about 1,700 clerks in Chicago's western suburbs and in northwestern Illinois.

Under the buyout program, all bargaining unit employees earning more than \$8.60 an hour will be eligible for a buyout payment equal to 26 weeks of

pay based on an employee's average weekly hours worked in 1993. Workers who accept the buyouts also will retain health care coverage for 26 weeks.

The agreements provide wage increases of 50 cents an hour for top-rated employees on November 19, 1995. They call for lump-sum payments in March 1995 equal to 3 percent of an employee's earnings during the preceding calendar year, and a similar payment in March 1996. The lump-sum payments are limited to top-rated full-time and part-time clerks earning more than \$8.00 an hour. (Top-rated workers currently are paid between \$8.50 and \$10.85 an hour.) Settlement terms also increase the company's contributions to the health care fund over the term of the agreement, from \$1.43 an hour per employee to \$2.10.

Settlement at Cincinnati Gas

Members of Local 1347 of the International Brotherhood of Electrical Workers ratified a 3-year contract with the Cincinnati Gas & Electric Co. for 1,600 utility workers, including lineworkers and generating station personnel, in the company's electric production, systems operations, electric distribution engineering, construction, and transportation departments.

The agreement provides wage increases of 3.5 percent retroactive to April 1, 1994, and 3.25 percent on April 1 of 1995 and 1996, and quarterly cost-of-living adjustments equal to 1 cent an hour for each 0.2-point change in the Consumer Price Index for Wage Earners and Clerical Workers. It also increases shift differentials by 5 cents, to 90 cents an hour for the second shift and 95 cents an hour for the third shift. At the expiration of the prior contract, the average hourly rate was \$17.10.

The contract improves the formula for calculating pension benefits by crediting employees with their highest 4 years of earnings during the last 10 years, instead of the highest 5 years; and boosts supplemental pension benefits from \$100 to \$125 per month for employees retiring at age 60 or older and from \$120 to \$150 a month for employees retiring at age 62 or older.

Settlement terms introduce an optional flexible benefits plan that provides flexible spending accounts for

medical and dental benefits, dependent care, and life insurance coverage; guarantee that no layoffs will occur during the duration of the contract; and introduce a 10-hour, 4-day workweek for some employees. Other terms increase the company's matching contribution to the 401(k) savings plan from 50 percent to 55 percent of an employee's investment (the investment is limited to 5 percent of the employee's straight time earnings), and liberalize vacation eligibility requirements to allow 3 weeks of paid leave after 7 years of service (formerly, 8 years) and 5 weeks after 22 years (formerly, 23 years).

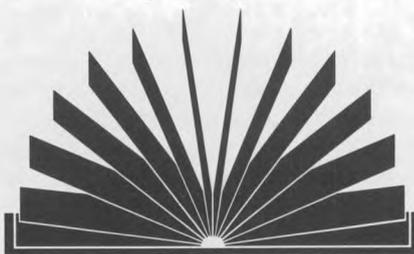
Newspaper Guild-Times

The New York Times and the Newspaper Guild signed a 7-year contract covering 1,600 editorial and commercial employees. The settlement, which was the last in a series of negotiations between the newspaper and its major unions during the past 2 years, was reached after the parties came to terms regarding layoff protection provisions.

The agreement provides wage increases of 3.5 percent retroactive to March 31, 1993, 3.2 percent on March 31, 1994, and 3.1 percent on March 31, 1995. It also calls for a wage reopener in 1996, with binding arbitration if the parties cannot resolve their differences in negotiation.

Settlement terms increase the years of service (from 10 years to 16) that an employee needs to be protected against layoffs, extend benefit coverage to domestic partners, and provide an additional one-time \$170,000 contribution to the parties' jointly administered benefit fund. It also includes a buyout program that is similar to that for management. A flexible work schedule program is established for employees who have child care or family illness problems, and employees may accumulate up to 4 weeks of compensatory time each year and can cash out banked hours not used during the preceding 2 years. Terms also call for a guaranteed company match of 25 percent of an employee's investment in the 401(k) savings plan, which is limited to 6 percent of the employee's earnings, and an additional match of 25 percent if the newspaper earns a profit; and establish two additional floating holidays, Presidents' Day and Martin Luther King, Jr.'s birthday. □

Book reviews



Retirement benefits in the 1990's

Pensions in a Changing Economy.

Richard V. Burkhauser and Dallas L. Salisbury, eds. Washington, DC, Employee Benefits Research Institute, 1993, 120 pp., \$15.00.

Pensions and Corporate Restructuring in American Industry: A Crisis of Regulation. By Gordon L. Clark. The Johns Hopkins University Press, Baltimore, MD, 1993, 259 pp., \$39.95.

Retirement income has become an increasingly important issue as the average age of workers in the United States has risen, and as many workers rely on employer-provided pension benefits as a primary source of retirement income. In the past two decades, legislation and changing demographics have been significant forces driving employer-provided pension benefits.

Passage of the Employee Retirement Income Security Act (ERISA) in 1974 substantially increased the protection of pension rights of U.S. workers. While ERISA did not explicitly guarantee pension coverage or impose standard benefit levels, it ensured protection of binding promises of coverage. Since ERISA's passage, several trends have emerged in pension coverage: the number of private pension plans more than doubled from 1975 to 1989, while plan participation increased by nearly 50 percent. Much of this growth can be attributed to coverage under defined contribution plans that specify only the level of the employer's annual contribution to the plan, shifting much of the risk to the employee. Coverage under defined benefit plans, which include specific formulas to determine an employee's benefit upon retirement, also increased but at a much lower rate than that under defined contribution plans.

Pensions in a Changing Economy, a compilation of papers published by the Employee Benefits Research Institute, addresses the current state of the employer pension system. The chapters confront a variety of issues, including the economic well-being of today's retirees, pension coverage for women and minorities, trends in current plan provisions, and tax and regulatory policies aimed at improving the current employer pension system. The essays provide a framework from which policymakers can draw significantly as they attempt to resolve the issues raised.

Although ERISA did not require employer-provided pension coverage, an objective of the bill was to broaden the scope of coverage. In her essay, "The Role of Pensions in Retirement Income," Virginia P. Reno, director of the Disability Income Project at the National Academy of Social Insurance, draws from a variety of sources to indicate that this has not necessarily been the case. Reno begins with a discussion of current private pension recipients, showing that the percentage of the elderly who received private pensions grew steadily from 1976 to 1990. However, the proportion of income derived from these employer pensions remained largely unchanged.

In terms of private pension coverage for current employees, Reno presents valuable findings. First, although women became more likely to be covered by an employer-provided pension, men became less likely to have such coverage. Second, employees with no education above the high school level saw a marked decline in coverage during this time period. Finally, Reno argues that nearly all the growth in private pension coverage can be traced to increases in participation in defined contribution plans. She attributes this phenomenon to two factors: shifts in

employment from the manufacturing sector, which traditionally provided defined benefit pension plans, and the increased administrative requirements imposed by ERISA on defined benefit plans.

Thomas H. Paine, a consultant to organizations on benefit and compensation strategy and a former researcher at the Bureau of Labor Statistics, continues the discussion Reno began as he explores the reasons behind the shift toward defined contribution pension plans. In "The Changing Character of Pensions: Where Employers are Headed," Paine argues that this trend will continue unless policymakers encourage fundamental changes in the employer-provided pension system. Paine suggests that regulations pertaining to private pension plans be simplified; vested pension amounts be rolled over into another retirement savings plan; vested benefits be portable to allow service credits earned with one employer to be transferred to another; and benefits be paid as an annuity rather than as a lump sum to prevent retirees from cashing out and spending their retirement benefits. Without these changes, Paine believes that private employers' incentives to create and maintain pension plans will diminish.

Other essays should be mentioned briefly. Gordon P. Goodfellow, an associate of the Wyatt Company's Research and Information Center, and Sylvester J. Schieber, a vice-president of the Wyatt Co. and director of the firm's Research and Information Center, assess the role of Federal tax law on the private pension system. Federal tax law provides incentives that encourage employers to provide pension plans for their employees. In "The Role of Tax Expenditures in the Provision of Retirement Income Security," Goodfellow and Schieber present a model that suggests that these pension-related tax ben-

efits favor middle-class workers. They argue that a solution to this would be government policy aimed at increasing the Social Security benefits provided to low-wage workers rather than increasing private pension plan coverage. Finally, several brief essays present corporate, consumer advocate, and regulatory responses to proposed pension reform.

A companion to the Employee Benefits Research Institute collection in the discussion of retirement income benefits, *Pensions and Corporate Restructuring in American Industry: A Crisis of Regulation*, by Gordon L. Clark, takes a critical look at ERISA and its aftermath. Clark, director of the Institute of Ethics and Public Policy at Monash University in Melbourne, Australia, discusses ERISA, and draws his conclusions, largely in three case studies of U.S. industry in the 1970's and 1980's. His subjects are the LTV Corp., International Harvester Corp., and Continental Can Corp.

In effect, Clark uses ERISA and its impact on the private pension system as a springboard to his larger assault on the overall state of the regulatory process in the United States. In that sense, the book is less an assessment of the private pension system than it is an overview of the general regulatory environment in which corporations must operate and compete.

Yet Clark offers some insightful observations about ERISA and the private pension system. For instance, he argues that ERISA cannot provide complete protection against the forces of economic imperatives because it does not operate within a general regulatory framework through which competing claims can be resolved. To demonstrate this, Clark shows how the legislation was formulated and adopted with little regard to the issue of who would be responsible for the entire private pension system. Additionally, the legislation virtually ignored the authority of ERISA with respect to the competing interests of labor law and bankruptcy laws.

Clark develops a convincing theory about the fundamentals of corporate restructuring. Through this, he demonstrates the difficulties that confront corporate strategy-makers and the problems that pension plan obligations can

present in this process. As U.S. industries continue to face greater worldwide competition, restructuring efforts will undoubtedly continue. The lessons provided in Clark's book should prove quite helpful.

—Michael Bucci
Division of Occupational Pay
and Employee Benefit Levels
Bureau of Labor Statistics

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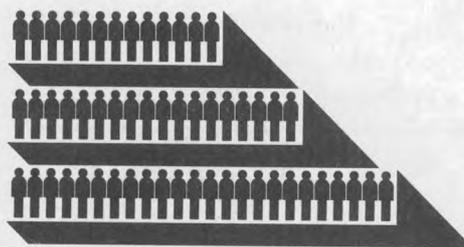
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Current labor statistics



Notes on Current Labor Statistics	60	Labor compensation and collective bargaining data—Continued	
Comparative indicators		28. Specified changes in cost of compensation in private industry settlements covering 5,000 workers or more ..	92
1. Labor market indicators	70	29. Specified compensation and wage adjustments, State and local government bargaining situations covering 1,000 workers or more	93
2. Annual and quarterly percent changes in compensation, prices, and productivity	71	30. Work stoppages involving 1,000 workers or more	93
3. Alternative measures of wages and compensation changes	71		
Household and establishment survey data		Price data	
4. Employment status of the population, data seasonally adjusted	72	31. Consumer Price Index: U.S. city average, by expenditure category and commodity and service groups	94
5. Selected employment indicators, data seasonally adjusted	73	32. Consumer Price Index: U.S. city average and local data, all items	97
6. Selected unemployment indicators, data seasonally adjusted	74	33. Annual data: Consumer Price Index, all items and major groups	98
7. Unemployment rates by sex and age, data seasonally adjusted	75	34. Producer Price Indexes by stage of processing	99
8. Unemployed persons by reason for unemployment, data seasonally adjusted	75	35. Producer Price Indexes for the net output of major industry groups	100
9. Duration of unemployment, data seasonally adjusted	75	36. Annual data: Producer Price Indexes by stage of processing	100
10. Unemployment rates by State, seasonally adjusted	76	37. U.S. export price indexes by Standard International Trade Classification	101
11. Employment of workers by State, seasonally adjusted	76	38. U.S. import price indexes by Standard International Trade Classification	102
12. Employment of workers by industry, data seasonally adjusted	77	39. U.S. export price indexes by end-use category	103
13. Average weekly hours by industry, data seasonally adjusted	79	40. U.S. import price indexes by end-use category	103
14. Average hourly earnings by industry, data seasonally adjusted	79	41. U.S. International price indexes for selected categories of services	104
15. Average hourly earnings by industry	80		
16. Average weekly earnings by industry	81	Productivity data	
17. Diffusion indexes of employment change, data seasonally adjusted	82	42. Indexes of productivity, hourly compensation, and unit costs, data seasonally adjusted	104
18. Annual data: Employment status of the population	82	43. Annual indexes of multifactor productivity	105
19. Annual data: Employment levels by industry	83	44. Annual indexes of productivity, hourly compensation, unit costs, and prices	105
20. Annual data: Average hours and earnings levels by industry	83	45. Annual indexes of output per hour for selected industries	106
Labor compensation and collective bargaining data		International comparisons data	
21. Employment Cost Index, compensation, by occupation and industry group	84	46. Unemployment rates in nine countries, data seasonally adjusted	108
22. Employment Cost Index, wages and salaries, by occupation and industry group	86	47. Annual data: Employment status of the civilian working-age population, 10 countries	109
23. Employment Cost Index, benefits, private industry workers, by occupation and industry group	87	48. Annual indexes of productivity and related measures, 12 countries	110
24. Employment Cost Index, private nonfarm workers, by bargaining status, region, and area size	88		
25. Participants in employer-provided benefit plans	89	Injury and illness data	
26. Specified compensation and wage rate changes from contract settlements, and effective wage rate changes, agreements covering 1,000 workers or more	90	49. Annual data: Occupational injury and illness incidence rates	111
27. Average specified compensation and wage rate changes, bargaining agreements covering 1,000 workers or more	91		

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; collective bargaining settlements; 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, 42, and 46. Seasonally adjusted labor force data in tables 1 and 4-9 were revised in the February 1994 issue of the *Review* and reflect the experience through 1993. Seasonally adjusted establishment survey data shown in tables 12-14 and 16-17 were revised in the July 1994 *Review* and reflect the experience through March 1994. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 42 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 \times 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*, BLS Bulletin 2414. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, BLS Report 793. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on cover 4 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 data from the household survey are published in *Labor Force Statistics Derived From the Current Population Survey*, BLS Bulletin 2307. Historical seasonally adjusted data are available from the Bureau upon request. Historically comparable unadjusted and seasonally adjusted data from the establishment survey are published in *Employment, Hours, and Earnings, United States*, a BLS annual bulletin. Additional information on labor force data for sub-States are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

More detailed information on employee compensation and collective bargaining settlements is published in the monthly periodical, *Compensation and Working Conditions*. For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975-93*, BLS Bulletin 2434. 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. Historical data on the collective bargaining settlements series appear in the April issue of *Compensation and Working Conditions*.

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 CPI reflecting 1982-84 expenditure patterns, see *The Consumer Price Index: 1987 Revision*, BLS Report 736. Additional data on international prices appear in monthly news releases.

For a listing of available industry productivity indexes and their components, see *Productivity Measures for Selected Industries and Government Services*, BLS Bulletin 2421.

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 may also 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 persons who are retired, those engaged in their own housework, those not working while attending school, those unable to work because of long-term illness, those discouraged from seeking work because of personal or job-market factors, and

those who are voluntarily idle. 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 based on the experience through December 1993. 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 end of each calendar year, seasonally adjusted data for the previous 5 years are revised, and projected seasonal adjustment factors are calculated for use during the January-June period. 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) 606-6378.

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 more than 390,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual*. In most industries, the sampling probabili-

Revisions to household survey data

Beginning with data for January 1994, a number of changes have been introduced into the Current Population (household) Survey that affect all data comparisons. These changes include (1) the results of a major redesign of the survey questionnaire and collection methodology, and (2) the introduction of population controls based on the 1990 census, adjusted for the estimated population undercount. Thus, data for 1994 are not directly comparable with those for 1993 and prior years. An explanation of the changes and their effect on labor force data appears in the February 1994 issue of *Employment and Earnings*, a monthly publication of the Bureau of Labor Statistics.

ties 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 non-supervisory 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 1993 benchmarks, was made with the release of May 1994 data, published in the July 1994 issue of the *Review*. Coincident with the benchmark adjustments, seasonally adjusted data were revised to reflect the experience through March 1994. Comparable revisions in State data (table 11) occurred with the publication of January 1994 data. Unadjusted data from April 1993 forward and seasonally adjusted data from January 1990 forward are subject to revision in future benchmarks.

The BLS also uses the X-11 ARIMA methodology to seasonally adjust establishment survey data. Beginning in June 1989, projected seasonal adjustment factors are calculated and published twice a year. The change makes the procedure used for the establishment survey data more parallel to that used in adjusting the household survey data. 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.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9–20.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 606-6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from two major sources—the Current Population Survey (CPS) and 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 and the Public Works and Economic Development Act. Seasonally adjusted unemployment rates are presented in table 11. 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 11 States—California, Florida, Illinois, Massachusetts, Michigan, New York, New Jersey, North Carolina, Ohio, Pennsylvania, and Texas—are obtained directly from the CPS because the size of the sample is large enough to meet BLS standards of reliability. Data for the remaining 39 States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates for the 11 States are revised to new population controls, usually with publication of January estimates. For the remaining States and the District of Columbia, data are benchmarked to annual average CPS levels. Data for 1994 are not directly comparable with those for 1993 as a result of the redesign of the CPS and other methodological changes. See "Revisions in State and Area Estimates Effective January 1994," *Employment and Earnings*, March 1994.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 606-6392 (table 10) or (202) 606-6589 (table 11).

Compensation and Wage Data

(Tables 1–3; 21–30)

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 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) of the quarterly rates of change are presented in the March issue of the BLS periodical, *Compensation and Working Conditions*.

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Division of Employment Cost Trends: (202) 606-6199.

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 6,000 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.

The survey covers paid leave benefits such as lunch and rest periods, holidays and vacations, and personal, funeral, jury duty, military, parental, and sick leave; sickness and accident, 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 parental 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, and obligate the employer to provide those benefits. Benefits are generally based on salary or 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 care 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 establishments are conducted in even-numbered years and surveys of medium and large establishments are 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 Division of Occupational Pay and Employee Benefit Levels: (202) 606–6222.

Collective bargaining settlements

Description of the series

Collective bargaining settlements data provide statistical measures of negotiated changes (increases, decreases, and zero change) in wage rates alone and in compensation (wages and benefits), quarterly for private nonagricultural industries and semi-annually for State and local governments. Wage rate changes cover collective bargaining settlements negotiated in the reference period involving 1,000 or more workers and compensation changes cover settlements reached in the reference period involving 5,000 or more workers. These data are not seasonally adjusted and are calculated using information obtained from bargaining agreements on file with the Bureau, parties to the agreements, and secondary sources, such as newspaper accounts.

The wage and compensation rate changes are the percent difference between the average rate per work hour just prior to the start of a new agreement and the average rate per work hour that would exist at the end of the first 365 days of the new agreement (first-year measure) or at its expiration date (over-the-life measure). These data exclude lump-sum payments.

The compensation cost change is the percent difference between the average cost of compensation per work hour, including the hourly cost of lump-sum payments made during the term of the expiring agreement, just prior to the start of a new agreement and the average cost of compensation per work hour under the settlement. The timing of the changes in compensation rates is reflected in the compensation cost series, but not in compensation rate series.

Data on changes in settlements exclude potential changes under cost-of-living ad-

justment clauses. Averages reflect the change under each settlement weighted by the number of workers covered. Estimates of changes are based on the assumption that conditions existing at the time of the settlement (for example, composition of the labor force or methods of funding pensions) will remain constant over the term of the agreement.

Wage rate changes under all major agreements (those covering 1,000 or more workers) measure all wage increases, decreases, and zero changes occurring in the reference period, regardless of the settlement date. Included are changes from settlements reached in the calendar year, changes deferred from settlements negotiated in earlier years, and changes under cost-of-living adjustment (COLA) clauses. The change in the wage rate for each agreement is the percent difference between the average wage rate just prior to the start of the reference period and the average wage rate at the end of the reference period. The change for each agreement is weighted by the number of workers covered to determine the average change under all agreements.

Definitions

Wage rate is the average straight-time hourly wage rate plus shift premiums.

Compensation rates include the wage rate, premium pay (for example, for overtime and holidays); paid leave; life, health, and sickness and accident insurance; pension and other retirement plans; severance pay; and legally required benefits.

Compensation costs include the items covered by compensation rates plus specified lump-sum payments, the cost of contractually required training programs that are not a cost of doing business, and the additional costs of changes in legally required insurance known at the time of settlement to be mandated during the contract term.

Cash payments include wages and lump-sum payments.

Contingent pay provisions are clauses which could provide compensation changes beyond those specified in the settlement. COLA clauses and lump-sum provisions that call for a payment only if a company's profits exceed a specific amount are examples.

Notes on the data

Comparisons of major collective bargaining settlements for State and local government with those for private industry should note differences in occupational mix, bargaining practices, and settlement characteristics. Professional and white-collar employees, for example, make up a much larger proportion of the workers covered by government than by private industry settle-

ments. Lump-sum payments and COLA clauses, on the other hand, are rare in government but common in private industry settlements. Also, State and local government bargaining frequently excludes items such as pension benefits and holidays, that are prescribed by law, while these items are typical bargaining issues in private industry.

FOR ADDITIONAL INFORMATION on collective bargaining settlements, contact the Division of Developments in Labor–Management Relations: (202) 606–6276 (private industry data) or (202) 606–6280 (State and local government data).

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 time lost because of stoppage.

Data are largely from newspaper accounts 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 Division of Developments in Labor–Management Relations: (202) 606–6288.

Price Data

(Tables 2; 31–41)

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 1982–84 buying habits of about 80 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 19,000 retail establishments and 57,000 housing units in 85 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 15 major urban centers are presented in table 32. 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 measured 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 homeownership 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 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 606-7000.

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 Producer Price Indexes 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.

Notes on the data

Beginning with the January 1986 issue, the *Review* is no longer presenting tables of Producer Price Indexes for commodity groupings or special composite groups. However, these data will continue to be presented in the Bureau's monthly publication, *Producer Price Indexes*.

The Bureau has completed the first major stage of its comprehensive overhaul of the theory, methods, and procedures used to construct the Producer Price Indexes. Changes include the replacement of judgment sampling with probability sampling techniques; expansion to systematic coverage of the net output of virtually all industries in the mining and manufacturing sectors; a shift from a commodity to an industry orientation; the exclusion of imports from, and the inclusion of exports in, the survey universe; and the respecification of commodities priced to conform to Bureau of the Census definitions. These and other changes have been phased in gradually since 1978. The result is a system of indexes that is easier to use in conjunction with data on wages, productivity, and employment and other series that are organized in terms of the Standard Industrial Classification and the census product class designations.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 606-7705.

International Price Indexes

Description of the series

The **International Price Program** produces 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 1990.

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 re-pricing of the item.

For the export price indexes, the preferred pricing basis 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) 606-7155.

Productivity Data

(Tables 2: 42-45)

Business sector and major sectors

Description of the series

The productivity measures relate real physical output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per unit of labor input (output per hour) 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 value of goods and services in constant prices produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the value of goods and services in constant dollars produced per unit of capital services input.

Multifactor productivity is the value of goods and services in constant prices produced per combined unit of labor and capital inputs. Changes in this measure reflect changes in a number of factors which affect the production process, such as changes in technology, shifts in the composition of the labor force, changes in capacity utilization, research and development, skill and effort of the work force, management, and so forth. Changes in the output per hour measures reflect the impact of these factors as well as the substitution of capital for labor.

Compensation per hour is the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, and the wages, salaries, and supplementary payments for the self-employed (except for nonfinancial corporations in which there are no self-employed)—the sum divided by hours at work. **Real compensation per hour** is compensation per hour deflated by the change in 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.

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 output. The indexes for capital services and combined units of labor and capital 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

The output measure for the business sector is equal to constant-dollar gross national product, but excludes the rental value of owner-occupied dwellings, the rest-of-world sector, the output of nonprofit institutions, the output of paid employees of private households, general government, and the statistical discrepancy. Output of the nonfarm business sector is equal to business sector output less farming. The measures are derived from data supplied by the U.S. Department of Commerce's Bureau of Economic Analysis and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of manufacturing output (gross product originating) from the Bureau of Economic Analysis.

Compensation and hours data are developed from data of the Bureau of Labor Statistics and the Bureau of Economic Analysis.

The productivity and associated cost measures in tables 42–45 describe the relationship between output in real terms and the labor time and capital services 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; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 606–5606.

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. 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 employee hour is derived by dividing an index of industry output by an index of aggregate hours of all employees. Output indexes are based on quantifiable units of products or services, or both, combined with fixed-period weights. Whenever possible, physical quantities are used as the unit of measurement for output. If quantity data are not available for a given industry, data on the constant-dollar value of production are used.

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

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Sta-

tistics, the Departments of Commerce, Interior, and Agriculture, the Federal Reserve Board, regulatory agencies, trade associations, and other sources.

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

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 606–5618.

International Comparisons

(Tables 46–48)

Labor force and unemployment

Description of the series

Tables 46 and 47 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.

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 age 16 and older in France, Sweden, and from 1973 onward, the United Kingdom; 15 and older in Canada, Australia, Japan, Germany, Italy, the Netherlands, and prior to 1973, the United Kingdom; and 14 and older in Italy prior to 1993. The institutional population is included in the de-

terminator 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 are, therefore, subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1994), Italy (1986, 1991, 1993), and Sweden (1987, 1993). For the United States, the break in series reflects a number of changes in the labor force survey beginning with data for January 1994. Data for 1994 are not directly comparable with those for earlier years. See the Notes section on Employment and Unemployment Data of the *Review* for further information about the U.S. revisions.

For Italy, the 1986 break in series reflects more accurate enumeration of the number of people reported as seeking work in the last 30 days. The impact was to increase the Italian unemployment rates approximating U.S. concepts by about 1 percentage point. In 1991, the survey sample was modified to obtain more reliable estimates by sex and age. The impact was to raise the adjusted Italian unemployment rate by approximately 0.3 percentage point. In 1993, 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 persons who had not actively sought work in the past 30 days.) The break in 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 1.1 percentage points. These changes did not affect employment significantly, except 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the 4.5 percent indicated by the data

shown in table 47. This difference is attributable mainly to the incorporation of the 1991 population census benchmarks in the 1993 data. Data for earlier years have not yet been adjusted to incorporate the 1991 census results.

Sweden introduced a new questionnaire in 1987. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes result in lowering Sweden's unemployment rate by 0.5 percentage point. 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 points. The data for 1993 onward are not seasonally adjusted because the previous seasonal adjustment pattern is not applicable following the 1993 break in series.

Preliminary estimates by the Swedish Statistics Bureau indicate that employment linked for the 1993 break in series declined by about 5-1/2 percent in 1993 rather than the nearly 7 percent indicated by the data shown in table 47.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 606-5654.

Manufacturing productivity and labor costs

Description of the series

Table 48 presents comparative measures of manufacturing labor productivity, hourly compensation costs, and unit labor costs for the United States, Canada, and nine European countries. These measures are limited to trend comparisons — that is, intercountry series of changes over time — rather than level comparisons because reliable international comparisons of the levels of manufacturing output are unavailable. The hours and compensation measures refer to all employed persons, including self-employed persons and unpaid family workers, in the United States and Canada and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing (gross product originating) in constant prices from the national accounts of each country. However, output for Japan prior to 1970 and the Netherlands from 1969 to 1977 are indexes of industrial production. The national accounts measures

for the United Kingdom are essentially identical to its indexes of industrial production. While methods of deriving national accounts measures differ substantially from country to country, the use of different procedures does not, in itself, connote lack of comparability — rather, it reflects differences among countries in the availability and reliability of underlying data series.

Hours refer 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 the Bureau using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked.

Compensation (labor cost) includes all payments in cash or kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. In addition, for some countries, compensation is increased to account for other significant taxes on payrolls or employment (or reduced to reflect subsidies), even if they are not for the direct benefit of workers, because such taxes are regarded as labor costs. However, compensation does not include all items of labor cost. The costs of recruitment, employee training, and plant facilities and services — such as cafeterias and medical clinics — are not covered because data are not available for most countries. The compensation measures are from the national accounts, except those for Belgium, which are developed by the Bureau using statistics on employment, average hours, and hourly compensation. Self-employed workers are included in the U.S. and Canadian figures 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, Italy (beginning 1970), and the United Kingdom (beginning 1971) refer to mining and manufacturing less energy-related products; the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966; and the measures for the Netherlands exclude petroleum refining and include coal mining from 1969 to 1976.

The figures for one or more recent years are generally based on current indicators of

manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation and are considered preliminary until the 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) 606-5654

Occupational Injury and Illness Data

(Table 49)

Description of the series

The Annual Survey of Occupational Injuries and Illnesses is designed to collect data on injuries and illnesses based on records which employers in the following industries maintain under the Occupational Safety and Health Act of 1970: agriculture, forestry, and fishing; oil and gas extraction; construction; manufacturing; transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. Excluded from the survey are self-employed individuals, farmers with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies.

Because the survey is a Federal-State cooperative program and the data must meet the needs of participating State agencies, an independent sample is selected for each State. The sample is selected to represent all private industries in the States and territories. The sample size for the survey is dependent upon (1) the characteristics for which estimates are needed; (2) the industries for which estimates are desired; (3) the characteristics of the population being sampled; (4) the target reliability of the estimates; and (5) the survey design employed.

While there are many characteristics upon which the sample design could be based, the total recorded case incidence rate is used because it is one of the most important characteristics and the least variable; therefore, it requires the smallest sample size.

The survey is based on stratified random sampling with a Neyman allocation and a ratio estimator. The characteristics used to stratify the establishments are the Standard Industrial Classification (SIC) code and size of employment.

Definitions

Recordable occupational injuries and illnesses are: (1) occupational deaths, regardless of the time between injury and death,

or the length of the illness; or (2) nonfatal occupational illnesses; or (3) nonfatal occupational injuries which 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, amputation, and so forth, which results from a work accident or from exposure involving a single incident in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental 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 cases are cases which involve days away from work, or days of restricted work activity, or both.

Lost workday cases involving restricted work activity are those cases which result in restricted work activity only.

Lost workdays away from work are the number of workdays (consecutive or not) on which the employee would have worked but could not because of occupational injury or illness.

Lost workdays—restricted work activity are the number of workdays (consecutive or not) on which, because of injury or illness: (1) the employee was assigned to

another job on a temporary basis; (2) the employee worked at a permanent job less than full time; or (3) the employee worked at a permanently assigned job but could not perform all duties normally connected with it.

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 even though able to work.

Incidence rates represent the number of injuries and/or illnesses or lost workdays per 100 full-time workers.

Notes on the data

Estimates are made for industries and employment-size classes and for severity classification: fatalities, lost workday cases, and nonfatal cases without lost workdays. Lost workday cases are separated into those in which the employee would have worked but could not and those in which work activity was restricted. Estimates of the number of cases and the number of days lost are made for both categories.

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses or lost workdays per 100 full-time employees. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail of the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses in the United States, by Industry*.

Comparable data for individual States are available from the BLS Office of Safety, Health, and Working Conditions.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration, respectively. Data from these organizations are included in BLS and State publications. Federal employees experience is compiled and published by the Occupational Safety and Health Administration. Data on State and local government employees are collected by about half of the States and territories; these data are not compiled nationally.

The Supplementary Data System provides detailed information describing various factors associated with work-related injuries and illnesses. These data are obtained from information reported by employers to State workers' compensation agencies. The Work Injury Report program examines selected types of accidents through an employee survey which focuses on the circumstances surrounding the injury. These data are available from the BLS Office of Safety, Health, and Working Conditions.

The definitions of occupational injuries and illnesses and lost workdays are from *Recordkeeping Requirements under the Occupational Safety and Health Act of 1970*.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Division of Safety and Health Statistics: (202) 606-6166.

Current Labor Statistics: Comparative Indicators

1. Labor market indicators

Selected indicators	1992	1993	1992			1993				1994
			II	III	IV	I	II	III	IV	I
Employment data¹										
Employment status of the civilian noninstitutionalized population (household survey): ²										
Labor force participation rate	66.3	66.2	66.4	66.4	66.2	66.1	66.2	66.1	66.2	66.6
Employment-population ratio	61.4	61.6	61.5	61.4	61.3	61.4	61.6	61.7	61.9	62.3
Unemployment rate	7.4	6.8	7.5	7.5	7.3	7.0	7.0	6.7	6.5	6.6
Men	7.8	7.1	7.9	7.9	7.6	7.3	7.3	7.1	6.7	6.6
16 to 24 years	15.3	14.3	15.4	15.3	14.8	14.6	14.9	14.2	13.5	13.9
25 years and over	6.4	5.8	6.5	6.5	6.3	6.0	5.8	5.8	5.5	5.3
Women	6.9	6.5	7.0	7.1	6.9	6.7	6.6	6.4	6.3	6.5
16 to 24 years	13.0	12.2	13.0	13.6	12.8	13.0	12.6	11.7	11.6	12.3
25 years and over	5.7	5.4	5.7	5.8	5.7	5.5	5.4	5.3	5.3	5.3
Employment, nonfarm (payroll data), in thousands: ²										
Total	108,604	110,525	108,446	108,720	109,128	109,717	110,251	110,755	111,363	111,976
Private sector	89,959	91,708	89,829	90,028	90,416	90,969	91,461	91,910	92,470	93,057
Goods-producing	23,231	23,256	23,264	23,209	23,189	23,274	23,256	23,215	23,275	23,350
Manufacturing	18,104	18,003	18,134	18,103	18,061	18,103	18,025	17,951	17,942	17,973
Service-producing	85,373	87,269	85,182	85,512	85,938	86,443	86,995	87,540	88,088	88,626
Average hours:										
Private sector	34.4	34.5	34.4	34.4	34.4	34.3	34.5	34.5	34.5	34.6
Manufacturing	41.0	41.4	41.1	41.1	41.2	41.3	41.4	41.5	41.7	41.7
Overtime	3.8	4.1	3.8	3.8	3.9	4.1	4.1	4.1	4.4	4.6
Employment Cost Index										
Percent change in the ECI, compensation:										
All workers (excluding farm, household, and Federal workers)	3.5	3.5	.6	1.1	.6	1.2	.7	1.0	.6	.9
Private industry workers	3.5	3.6	.7	.8	.7	1.3	.8	.9	.6	1.0
Goods-producing ³	3.8	3.9	.7	.9	.7	1.6	.9	.7	.6	1.0
Service-producing ³	3.2	3.6	.7	.7	.7	1.0	.8	1.0	.7	.9
State and local government workers	3.7	2.8	.4	1.9	.6	.6	.3	1.5	.4	.6
Workers by bargaining status (private industry):										
Union	4.3	4.3	.8	1.1	.6	1.6	1.1	.8	.8	.8
Nonunion	3.2	3.5	.6	.8	.7	1.1	.8	.9	.6	1.0

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

² Quarterly data seasonally adjusted.

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	1992	1993	1992			1993				1994
			II	III	IV	I	II	III	IV	I
Compensation data:^{1, 2}										
Employment Cost Index--compensation (wages, salaries, benefits):										
Civilian nonfarm	3.5	3.5	0.6	1.1	0.6	1.2	0.7	1.0	0.6	0.9
Private nonfarm	3.5	3.6	.7	.8	.7	1.3	.8	.9	.6	1.0
Employment Cost Index--wages and salaries										
Civilian nonfarm	2.7	3.1	.5	.8	.5	.8	.6	1.0	.6	.6
Private nonfarm	2.6	3.1	.6	.5	.6	.9	.6	1.0	.6	.7
Price data:¹										
Consumer Price Index (All urban consumers): All items	2.9	2.7	.6	.8	.4	1.2	.6	.5	.5	1.0
Producer Price Index:										
Finished goods	1.6	.2	1.4	-.5	.4	.7	.6	-1.4	.2	.7
Finished consumer goods	1.6	-.2	1.8	-.3	.0	.7	.8	-1.5	-.2	.7
Capital equipment	1.7	1.8	.0	-.6	1.6	.8	-.2	-.5	1.7	.9
Intermediate materials, supplies, components	1.0	1.0	1.6	.3	-.9	1.0	.6	.1	-.7	.7
Crude materials	3.3	.1	4.3	.3	-1.5	1.7	1.6	-3.1	.0	3.8
Productivity data:³										
Output per hour of all persons:										
Business sector	3.3	1.8	2.5	4.2	3.8	-1.6	.0	3.3	7.1	.5
Nonfarm business sector	3.1	1.7	2.8	3.6	4.2	-1.8	-.4	4.0	6.4	.5
Nonfinancial corporations ⁴	4.1	2.4	4.8	5.8	4.5	-4.0	3.9	3.7	6.1	-

¹ Annual changes are December-to-December change. 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.

- Data not available.

3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ended--					
	1992	1993				1994	1992	1993				1994
	IV	I	II	III	IV	I	IV	I	II	III	IV	I
Average hourly compensation:¹												
All persons, business sector	4.6	3.3	2.5	3.9	2.8	5.5	5.1	4.5	4.1	3.6	3.1	3.7
All persons, nonfarm business sector	4.6	2.9	1.9	3.7	2.8	5.6	5.2	4.5	3.8	3.3	2.8	3.5
Employment Cost Index--compensation:												
Civilian nonfarm ² .....	.6	1.2	.7	1.0	.6	.9	3.5	3.5	3.6	3.6	3.5	3.2
Private nonfarm .....	.7	1.3	.8	.9	.6	1.0	3.5	3.5	3.6	3.7	3.6	3.3
Union .....	.6	1.6	1.1	.8	.8	.8	4.3	4.2	4.5	4.2	4.3	3.5
Nonunion .....	.7	1.1	.8	.9	.6	1.0	3.2	3.3	3.4	3.6	3.5	3.3
State and local governments .....	.6	.6	.3	1.5	.4	.6	3.7	3.6	3.4	3.0	2.8	2.8
Employment Cost Index--wages and salaries:												
Civilian nonfarm ² .....	.5	.8	.6	1.0	.6	.6	2.7	2.7	2.8	3.0	3.1	2.9
Private nonfarm .....	.6	.9	.6	1.0	.6	.7	2.6	2.7	2.7	3.1	3.1	2.9
Union .....	.5	.7	.7	.8	.8	.7	3.1	3.0	2.8	2.8	3.0	3.0
Nonunion .....	.6	.9	.6	1.0	.6	.7	2.5	2.6	2.7	3.1	3.1	2.9
State and local governments .....	.6	.5	.2	1.6	.3	.6	3.0	3.0	2.8	2.9	2.7	2.7
Total effective wage adjustments³												
From current settlements .....	.4	.5	.9	.8	.7	.4	3.1	3.0	2.9	2.6	3.0	2.9
From prior settlements .....	.2	.1	.2	.1	.5	.1	.8	.8	.7	.6	.9	.8
From cost-of-living provision .....	.2	.3	.7	.6	.2	.3	1.9	1.8	1.8	1.8	1.9	1.8
From cost-of-living provision .....	.1	.1	.1	(⁴)	(⁴)	(⁴)	.4	.4	.4	.3	.2	.2
Negotiated wage adjustments from settlements:³												
First-year adjustments	1.8	2.5	2.5	1.1	2.8	3.2	2.7	2.6	2.5	2.0	2.3	2.4
Annual rate over life of contract	2.6	2.7	2.5	1.7	2.0	2.5	3.0	2.9	2.7	2.3	2.1	2.1
Negotiated wage and benefit adjustments from settlements:⁵												
First-year adjustment	1.4	3.1	3.2	1.0	3.8	3.0	3.0	3.0	2.9	2.1	3.0	3.0
Annual rate over life of contract	2.7	3.2	2.6	1.4	2.5	2.6	3.1	3.1	2.9	2.4	2.4	2.3

¹ Seasonally adjusted.

² Excludes Federal and household workers.

³ Limited to major collective bargaining units of 1,000 workers or more. The most recent data are preliminary.

⁴ Data round to zero.

⁵ Limited to major collective bargaining units of 5,000 workers or more. The most recent data are preliminary.

Current Labor Statistics: Employment Data

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

(Numbers in thousands)

Employment status	Annual average		1993								1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
TOTAL															
Civilian noninstitutional population ¹	191,576	193,550	193,283	193,456	193,633	193,793	193,971	194,151	194,321	194,472	195,953	196,090	196,213	196,363	196,510
Civilian labor force	126,982	128,040	128,075	128,056	128,102	128,334	128,108	128,580	128,662	128,898	130,667	130,776	130,580	130,747	130,774
Participation rate	66.3	66.2	66.3	66.2	66.2	66.2	66.0	66.2	66.2	66.3	66.7	66.7	66.6	66.6	66.5
Employed	117,598	119,306	119,180	119,187	119,370	119,692	119,568	119,941	120,332	120,661	121,971	122,258	122,037	122,338	122,872
Employment-population ratio ²	61.4	61.6	61.7	61.6	61.6	61.8	61.6	61.8	61.9	62.0	62.2	62.3	62.2	62.3	62.5
Unemployed	9,384	8,734	8,895	8,869	8,732	8,642	8,540	8,639	8,330	8,237	8,696	8,518	8,543	8,408	7,902
Unemployment rate	7.4	6.8	6.9	6.9	6.8	6.7	6.7	6.7	6.5	6.4	6.7	6.5	6.5	6.4	6.0
Not in labor force	64,593	65,509	65,208	65,400	65,531	65,459	65,863	65,571	65,659	65,574	65,286	65,314	65,633	65,616	65,736
Men, 20 years and over															
Civilian noninstitutional population ¹	84,891	85,907	85,816	85,872	85,950	86,002	86,075	86,156	86,245	86,373	86,778	86,820	86,901	86,946	87,000
Civilian labor force	65,638	66,069	66,134	66,087	66,140	66,221	66,038	66,306	66,198	66,321	66,806	66,764	66,723	66,701	66,692
Participation rate	77.3	76.9	77.1	77.0	77.0	77.0	76.7	77.0	76.8	76.8	77.0	76.9	76.8	76.7	76.7
Employed	61,019	61,865	61,849	61,805	61,869	62,006	61,901	62,172	62,315	62,444	62,842	62,778	62,857	62,958	63,192
Employment-population ratio ²	71.9	72.0	72.1	72.0	72.0	72.1	71.9	72.2	72.3	72.3	72.4	72.3	72.3	72.4	72.6
Agriculture	2,355	2,263	2,246	2,220	2,235	2,193	2,264	2,223	2,334	2,300	2,352	2,339	2,358	2,376	2,412
Nonagricultural industries	58,664	59,602	59,603	59,585	59,634	59,813	59,637	59,949	59,981	60,144	60,490	60,439	60,499	60,582	60,780
Unemployed	4,619	4,204	4,285	4,282	4,271	4,215	4,137	4,134	3,883	3,877	3,964	3,986	3,866	3,743	3,500
Unemployment rate	7.0	6.4	6.5	6.5	6.5	6.4	6.3	6.2	5.9	5.8	5.9	6.0	5.8	5.6	5.2
Women, 20 years and over															
Civilian noninstitutional population ¹	93,524	94,388	94,264	94,315	94,425	94,490	94,575	94,656	94,709	94,764	95,109	95,159	95,225	95,282	95,329
Civilian labor force	54,594	55,146	55,016	55,132	55,100	55,249	55,251	55,462	55,621	55,783	56,368	56,611	56,487	56,410	56,548
Participation rate	58.4	58.4	58.4	58.5	58.4	58.5	58.4	58.6	58.7	58.9	59.3	59.5	59.3	59.2	59.3
Employed	51,181	51,912	51,777	51,875	51,901	52,084	52,072	52,243	52,423	52,631	53,014	53,403	53,121	53,265	53,521
Employment-population ratio ²	54.7	55.0	54.9	55.0	55.0	55.1	55.1	55.2	55.4	55.5	55.7	56.1	55.8	55.9	56.1
Agriculture	627	599	597	596	616	614	596	601	597	599	744	766	773	837	787
Nonagricultural industries	50,553	51,313	51,180	51,279	51,285	51,470	51,476	51,642	51,826	52,032	52,270	52,638	52,348	52,428	52,734
Unemployed	3,413	3,234	3,239	3,257	3,199	3,165	3,179	3,219	3,198	3,152	3,354	3,208	3,366	3,145	3,027
Unemployment rate	6.3	5.9	5.9	5.9	5.8	5.7	5.8	5.8	5.7	5.7	6.0	5.7	6.0	5.6	5.4
Both sexes, 16 to 19 years															
Civilian noninstitutional population ¹	13,161	13,255	13,203	13,270	13,258	13,301	13,321	13,339	13,367	13,335	14,066	14,111	14,087	14,135	14,181
Civilian labor force	6,751	6,826	6,925	6,837	6,862	6,864	6,819	6,812	6,843	6,794	7,493	7,401	7,370	7,636	7,534
Participation rate	51.3	51.5	52.5	51.5	51.8	51.6	51.2	51.1	51.2	50.9	53.3	52.4	52.3	54.0	53.1
Employed	5,398	5,530	5,554	5,507	5,600	5,602	5,595	5,526	5,594	5,586	6,115	6,076	6,059	6,116	6,159
Employment-population ratio ²	41.0	41.7	42.1	41.5	42.2	42.1	42.0	41.4	41.8	41.9	43.5	43.1	43.0	43.3	43.4
Agriculture	225	212	231	215	192	198	233	197	183	197	236	287	295	245	236
Nonagricultural industries	5,174	5,317	5,323	5,292	5,408	5,404	5,362	5,329	5,411	5,389	5,879	5,790	5,764	5,870	5,923
Unemployed	1,352	1,296	1,371	1,330	1,262	1,262	1,224	1,286	1,249	1,208	1,378	1,325	1,311	1,520	1,375
Unemployment rate	20.0	19.0	19.8	19.5	18.4	18.4	17.9	18.9	18.3	17.8	18.4	17.9	17.8	19.9	18.3
White															
Civilian noninstitutional population ¹	162,658	163,921	163,748	163,857	163,971	164,074	164,190	164,309	164,421	164,516	165,014	165,096	165,168	165,259	165,351
Civilian labor force	108,526	109,359	109,234	109,373	109,393	109,646	109,492	110,009	109,804	110,016	110,802	110,934	110,633	110,673	110,797
Participation rate	66.7	66.7	66.7	66.7	66.7	66.8	66.7	67.0	66.8	66.9	67.1	67.2	67.0	67.0	67.0
Employed	101,479	102,812	102,612	102,721	102,835	103,179	103,094	103,273	103,662	103,807	104,355	104,669	104,314	104,450	105,038
Employment-population ratio ²	62.4	62.7	62.7	62.7	62.7	62.9	62.8	62.9	63.0	63.1	63.2	63.4	63.2	63.2	63.5
Unemployed	7,047	6,547	6,622	6,652	6,558	6,467	6,398	6,736	6,142	6,209	6,447	6,264	6,319	6,222	5,760
Unemployment rate	6.5	6.0	6.1	6.1	6.0	5.9	5.8	6.1	5.6	5.6	5.8	5.6	5.7	5.6	5.2
Black															
Civilian noninstitutional population ¹	21,958	22,329	22,280	22,313	22,346	22,375	22,408	22,442	22,475	22,504	22,723	22,751	22,774	22,799	22,824
Civilian labor force	13,891	13,943	13,944	13,922	13,920	13,969	13,952	13,945	14,057	14,011	14,368	14,487	14,573	14,523	14,497
Participation rate	63.3	62.4	62.6	62.4	62.4	62.4	62.3	62.1	62.5	62.3	63.2	63.7	64.0	63.7	63.5
Employed	11,933	12,146	12,140	12,076	12,134	12,225	12,202	12,292	12,297	12,397	12,482	12,624	12,749	12,813	12,825
Employment-population ratio ²	54.3	54.4	54.5	54.1	54.3	54.6	54.5	54.8	54.7	55.1	54.9	55.5	56.0	56.2	56.2
Unemployed	1,958	1,796	1,804	1,846	1,786	1,744	1,750	1,653	1,760	1,614	1,887	1,863	1,824	1,710	1,672
Unemployment rate	14.1	12.9	12.9	13.3	12.8	12.5	12.5	11.9	12.5	11.5	13.1	12.9	12.5	11.8	11.5

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		1993								1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Hispanic origin															
Civilian noninstitutional population ¹	15,244	15,753	15,681	15,729	15,777	15,824	15,871	15,917	15,967	16,014	17,849	17,896	17,942	17,993	18,041
Civilian labor force	10,131	10,377	10,247	10,285	10,375	10,331	10,433	10,586	10,575	10,625	11,746	11,835	11,871	11,880	11,929
Participation rate	66.5	65.9	65.3	65.4	65.8	65.3	65.7	66.5	66.2	66.3	65.8	66.1	66.2	66.0	66.1
Employed	8,971	9,272	9,226	9,221	9,250	9,311	9,394	9,384	9,476	9,513	10,495	10,650	10,680	10,595	10,801
Employment-population ratio ²	58.9	58.9	58.8	58.6	58.6	58.8	59.2	59.0	59.3	59.4	58.8	59.5	59.5	58.9	59.9
Unemployed	1,160	1,104	1,021	1,064	1,125	1,020	1,039	1,202	1,099	1,112	1,251	1,185	1,190	1,285	1,127
Unemployment rate	11.4	10.6	10.0	10.3	10.8	9.9	10.0	11.4	10.4	10.5	10.6	10.0	10.0	10.8	9.5

¹ The population figures are not seasonally adjusted.

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

NOTE: 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.

Detail for the above race and Hispanic-origin groups will not sum to totals because data 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		1993								1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
CHARACTERISTIC															
Employed, 16 years and over	117,598	119,306	119,180	119,187	119,370	119,692	119,568	119,941	120,332	120,661	121,971	122,258	122,037	122,338	122,872
Men	63,805	64,700	64,687	64,642	64,728	64,904	64,756	64,971	65,144	65,259	65,963	65,921	65,940	66,036	66,301
Women	53,793	54,606	54,493	54,545	54,642	54,788	54,812	54,970	55,188	55,402	56,007	56,336	56,097	56,302	56,571
Married men, spouse present ..	40,303	40,869	41,057	40,958	40,877	40,792	40,826	40,816	40,842	40,951	41,483	41,328	41,331	41,380	41,367
Married women, spouse present	30,136	30,512	30,393	30,340	30,322	30,536	30,509	30,641	30,872	31,051	31,579	31,709	31,310	31,345	31,324
Women who maintain families ..	6,582	6,764	6,804	6,772	6,806	6,840	6,833	6,784	6,704	6,693	6,796	7,133	7,369	7,191	7,094
CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,696	1,637	1,604	1,602	1,626	1,566	1,667	1,657	1,719	1,724	1,641	1,677	1,719	1,693	1,757
Self-employed workers	1,398	1,332	1,365	1,336	1,323	1,312	1,319	1,274	1,311	1,269	1,590	1,633	1,661	1,710	1,654
Unpaid family workers	113	105	111	103	93	110	90	97	89	92	78	55	41	43	40
Nonagricultural industries:															
Wage and salary workers	105,540	107,011	106,751	106,887	107,057	107,370	107,331	107,727	107,975	108,247	109,526	109,547	109,365	109,749	110,243
Government	18,086	18,504	18,577	18,553	18,435	18,527	18,507	18,476	18,493	18,503	18,163	18,152	18,481	18,393	18,473
Private industries	87,454	88,507	88,174	88,334	88,622	88,843	88,824	89,251	89,482	89,744	91,364	91,395	90,883	91,356	91,770
Private households	1,116	1,105	1,095	1,059	1,081	1,128	1,123	1,179	1,103	1,104	928	1,074	1,035	1,043	997
Other	86,338	87,402	87,079	87,275	87,541	87,715	87,701	88,072	88,379	88,640	90,436	90,321	89,849	90,313	90,773
Self-employed workers	8,619	9,003	9,180	9,102	9,093	9,026	8,949	8,961	9,011	9,053	8,990	9,312	9,146	8,982	9,138
Unpaid family workers	232	218	197	150	203	245	250	229	223	217	142	143	117	131	121
PERSONS AT WORK															
PART TIME¹															
All industries:															
Part time for economic reasons ..	6,385	6,348	6,490	6,435	6,451	6,469	6,394	6,202	6,126	6,217	5,167	4,643	4,992	4,757	4,878
Slack work or business conditions	3,220	3,140	3,185	3,378	3,099	3,202	3,167	3,072	3,037	3,099	2,561	2,301	2,538	2,363	2,571
Could only find part-time work ..	2,867	2,908	2,986	2,842	2,986	2,935	2,937	2,872	2,810	2,828	2,171	2,028	2,138	2,101	2,026
Part time for noneconomic reasons	14,759	15,062	15,083	15,272	15,121	15,216	15,182	15,201	15,290	15,373	17,744	17,674	17,519	17,072	17,346
Nonagricultural industries:															
Part time for economic reasons ..	6,116	6,106	6,219	6,192	6,213	6,216	6,173	5,957	5,904	5,934	4,842	4,384	4,762	4,613	4,688
Slack work or business conditions	3,037	2,977	3,012	3,220	2,920	3,049	3,006	2,927	2,905	2,922	2,439	2,169	2,411	2,241	2,449
Could only find part-time work ..	2,792	2,832	2,888	2,770	2,931	2,856	2,879	2,773	2,719	2,739	2,075	1,944	2,089	2,078	1,993
Part time for noneconomic reasons	14,329	14,637	14,657	14,847	14,707	14,814	14,757	14,788	14,858	14,909	17,056	17,081	16,893	16,463	16,721

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

NOTE: 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.

Current Labor Statistics: Employment Data

6. Selected unemployment indicators, monthly data seasonally adjusted

(Unemployment rates)

Selected categories	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
CHARACTERISTIC																
Total, all workers	7.4	6.8	6.9	6.9	6.8	6.7	6.7	6.7	6.5	6.4	6.7	6.5	6.5	6.4	6.0	
Both sexes, 16 to 19 years	20.0	19.0	19.8	19.5	18.4	18.4	17.9	18.9	18.3	17.8	18.4	17.9	17.8	19.9	18.3	
Men, 20 years and over	7.0	6.4	6.5	6.5	6.5	6.4	6.3	6.2	5.9	5.8	5.9	6.0	5.8	5.6	5.2	
Women, 20 years and over	6.3	5.9	5.9	5.9	5.8	5.7	5.8	5.8	5.7	5.7	6.0	5.7	6.0	5.6	5.4	
White, total	6.5	6.0	6.1	6.1	6.0	5.9	5.8	6.1	5.6	5.6	5.8	5.6	5.7	5.6	5.2	
Both sexes, 16 to 19 years	17.1	16.2	16.8	16.3	15.6	15.9	15.6	17.0	15.6	15.2	16.4	15.8	15.6	17.5	15.5	
Men, 16 to 19 years	18.4	17.6	17.2	18.4	17.7	17.7	16.8	17.9	17.7	16.9	18.5	16.7	16.7	19.0	17.3	
Women, 16 to 19 years	15.7	14.6	16.3	14.0	13.4	14.0	14.3	16.0	13.3	13.4	14.0	14.7	14.6	16.0	13.5	
Men, 20 years and over	6.3	5.6	5.7	5.7	5.8	5.6	5.5	5.7	5.0	5.2	5.3	5.2	5.2	5.0	4.6	
Women, 20 years and over	5.4	5.1	5.1	5.3	5.1	5.0	5.0	5.3	5.1	4.9	5.1	4.8	5.0	4.7	4.5	
Black, total	14.1	12.9	12.9	13.3	12.8	12.5	12.5	11.9	12.5	11.5	13.1	12.9	12.5	11.8	11.5	
Both sexes, 16 to 19 years	39.8	38.9	39.5	41.6	36.4	33.5	36.2	36.7	39.5	37.0	31.7	35.3	34.0	36.2	39.9	
Men, 16 to 19 years	42.0	40.1	40.2	38.8	37.9	34.9	39.7	40.6	39.2	38.8	38.1	40.1	37.5	40.8	42.8	
Women, 16 to 19 years	37.2	37.5	38.7	44.8	34.7	32.0	32.3	32.8	39.7	35.2	25.5	30.5	30.2	31.3	36.5	
Men, 20 years and over	13.4	12.1	12.2	12.6	11.8	12.0	12.1	11.0	12.3	10.5	12.3	12.1	10.2	10.0	9.9	
Women, 20 years and over	11.7	10.6	10.4	10.7	11.0	10.5	10.2	10.0	9.7	9.7	11.5	11.0	12.1	10.6	9.9	
Hispanic origin, total	11.4	10.6	10.0	10.3	10.8	9.9	10.0	11.4	10.4	10.5	10.6	10.0	10.0	10.8	9.5	
Married men, spouse present	5.0	4.4	4.5	4.4	4.5	4.4	4.2	4.4	4.0	3.9	4.1	4.3	4.1	3.9	3.7	
Married women, spouse present	5.0	4.6	4.5	4.7	4.7	4.5	4.6	4.8	4.4	4.3	4.4	4.3	4.4	4.1	4.0	
Women who maintain families	9.9	9.5	9.8	9.7	9.6	9.0	9.0	9.3	9.0	10.2	9.4	9.7	9.6	9.1	8.9	
Full-time workers	7.4	6.8	6.9	6.9	6.8	6.7	6.6	6.6	6.3	6.4	6.8	6.6	6.6	6.4	6.0	
Part-time workers	7.4	7.1	6.9	7.1	6.7	6.8	6.9	7.2	6.9	6.6	6.2	5.9	6.3	6.5	6.2	
INDUSTRY																
Nonagricultural private wage and salary workers	7.7	7.0	7.2	7.1	7.0	7.0	6.9	6.9	6.7	6.6	7.0	6.8	6.8	6.6	6.2	
Mining	7.9	7.3	10.7	6.8	5.9	7.2	7.5	6.5	7.2	6.9	5.1	4.0	5.5	6.8	7.6	
Construction	16.7	14.3	15.2	15.1	15.7	14.7	14.1	13.7	12.2	12.7	13.9	13.3	13.5	12.6	11.6	
Manufacturing	7.8	7.2	7.2	7.3	7.3	7.3	7.2	6.9	6.7	6.5	6.1	6.1	6.1	5.8	5.5	
Durable goods	8.0	7.1	7.1	7.4	7.0	7.2	7.3	6.9	6.5	6.3	5.3	5.5	5.7	5.5	5.2	
Non-durable goods	7.5	7.3	7.3	7.1	7.8	7.4	7.2	6.9	7.0	6.8	7.3	7.1	6.8	6.3	5.8	
Transportation and public utilities	5.5	5.1	5.4	4.5	4.9	5.4	5.3	5.5	5.2	5.1	5.5	5.2	4.7	5.6	4.6	
Wholesale and retail trade	8.4	7.8	8.1	7.9	7.5	7.6	7.5	7.9	7.7	7.4	8.1	8.0	7.9	7.7	7.3	
Finance, insurance, and real estate	4.5	4.1	4.0	4.5	3.9	4.2	4.0	3.7	3.7	3.7	3.7	3.6	2.9	3.4	3.5	
Services	6.5	6.1	5.9	6.1	6.0	5.7	5.9	5.9	5.9	5.9	6.6	6.3	6.5	6.1	5.8	
Government workers	3.5	3.3	3.1	3.4	3.4	3.3	2.8	3.1	3.0	3.1	3.8	3.2	3.9	3.5	3.3	
Agricultural wage and salary workers	12.3	11.6	10.8	11.8	11.5	12.1	10.4	11.8	10.3	11.3	13.6	14.3	13.8	10.7	8.3	

NOTE: 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.

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

(Civilian workers)

Sex and age	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
	Total, 16 years and over	7.4	6.8	6.9	6.9	6.8	6.7	6.7	6.7	6.5	6.4	6.7	6.5	6.5	6.4	6.0
16 to 24 years	14.2	13.3	14.0	13.4	13.1	13.2	12.7	12.9	12.7	12.3	13.6	12.7	13.2	13.4	12.5	
16 to 19 years	20.0	19.0	19.8	19.5	18.4	18.4	17.9	18.9	18.3	17.8	18.4	17.9	17.8	19.9	18.3	
16 to 17 years	23.0	21.3	21.2	23.2	20.4	20.0	19.1	20.7	20.5	19.0	21.2	21.8	19.9	24.1	20.5	
18 to 19 years	18.1	17.5	19.0	17.4	17.1	17.2	16.9	17.7	16.8	17.1	16.1	15.3	16.5	17.1	16.8	
20 to 24 years	11.3	10.5	11.1	10.4	10.5	10.6	10.0	9.9	9.9	9.5	11.0	10.0	10.9	9.9	9.4	
25 years and over	6.1	5.6	5.6	5.7	5.6	5.5	5.5	5.6	5.3	5.3	5.4	5.3	5.2	5.0	4.7	
25 to 54 years	6.3	5.8	5.8	5.9	5.8	5.7	5.7	5.8	5.5	5.5	5.5	5.4	5.3	5.1	4.8	
55 years and over	4.8	4.3	4.2	4.2	4.3	4.3	4.7	4.5	4.2	4.2	4.6	4.3	4.6	4.2	4.1	
Men, 16 years and over	7.8	7.1	7.2	7.2	7.2	7.1	6.9	6.9	6.6	6.5	6.8	6.7	6.5	6.5	6.1	
16 to 24 years	15.3	14.3	14.9	14.6	14.3	14.5	13.7	13.8	13.6	13.2	14.7	13.3	13.8	14.2	13.4	
16 to 19 years	21.5	20.4	20.5	21.1	20.4	20.1	19.4	20.3	19.9	19.4	20.7	19.0	19.0	21.5	20.1	
16 to 17 years	24.4	22.8	22.9	26.2	22.4	21.7	20.3	22.0	21.7	19.9	23.9	21.9	22.2	25.3	23.0	
18 to 19 years	19.5	18.8	19.3	18.4	19.1	19.0	18.2	19.2	18.5	18.9	18.1	17.1	17.1	18.8	18.5	
20 to 24 years	12.2	11.3	12.1	11.4	11.3	11.7	10.9	10.6	10.4	10.1	11.5	10.5	11.1	10.4	9.9	
25 years and over	6.4	5.8	5.8	5.9	5.9	5.7	5.7	5.7	5.3	5.4	5.4	5.4	5.1	5.0	4.6	
25 to 54 years	6.6	5.9	5.9	6.1	6.0	5.9	5.8	5.9	5.5	5.5	5.5	5.5	5.2	5.0	4.7	
55 years and over	5.2	4.7	4.7	4.4	4.8	4.9	5.3	4.8	4.5	4.7	4.7	4.7	4.6	4.4	4.3	
Women, 16 years and over	6.9	6.5	6.6	6.6	6.4	6.3	6.3	6.4	6.4	6.2	6.5	6.3	6.6	6.4	6.0	
16 to 24 years	13.0	12.2	13.1	12.1	11.8	11.8	11.6	11.9	11.7	11.3	12.3	12.0	12.6	12.6	11.4	
16 to 19 years	18.5	17.4	19.1	17.6	16.2	16.5	16.4	17.3	16.5	16.1	15.8	16.7	16.5	18.2	16.3	
16 to 17 years	21.4	19.6	19.4	19.6	18.1	18.1	17.8	19.4	19.2	18.1	18.2	21.7	17.4	22.8	17.8	
18 to 19 years	16.5	16.0	18.7	16.4	14.9	15.1	15.5	16.0	14.9	15.1	13.8	13.2	15.8	15.3	15.0	
20 to 24 years	10.2	9.6	10.0	9.3	9.6	9.4	9.1	9.0	9.3	8.8	10.4	9.5	10.6	9.4	8.8	
25 years and over	5.7	5.4	5.3	5.5	5.3	5.3	5.3	5.4	5.3	5.2	5.4	5.1	5.4	5.1	4.9	
25 to 54 years	6.0	5.6	5.6	5.7	5.6	5.5	5.6	5.7	5.6	5.5	5.4	5.3	5.5	5.2	5.1	
55 years and over	4.2	3.8	3.6	4.0	3.6	3.5	3.9	4.2	3.8	3.6	4.5	3.8	4.6	3.9	3.9	

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

(Numbers in thousands)

Reason for unemployment	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
Job losers ¹	5,291	4,769	4,752	4,845	4,872	4,864	4,699	4,779	4,444	4,442	4,442	4,185	4,037	3,790	3,531	
On temporary layoff	1,246	1,104	1,144	1,131	1,183	1,190	1,112	1,216	963	1,060	1,196	1,109	983	947	785	
Not on temporary layoff	4,045	3,664	3,608	3,714	3,689	3,674	3,587	3,563	3,481	3,382	3,246	3,075	3,054	2,843	2,746	
Job leavers	975	946	960	940	915	882	926	957	960	932	762	888	873	825	796	
Reentrants	2,228	2,145	2,237	2,201	2,117	2,081	2,075	2,084	2,084	2,018	2,831	2,898	3,054	3,235	2,838	
New entrants	890	874	890	894	870	834	843	839	833	797	651	641	643	689	609	
PERCENT OF UNEMPLOYED																
Job losers ¹	56.4	54.6	53.8	54.6	55.5	56.2	55.0	55.2	53.4	54.2	51.1	48.6	46.9	44.4	45.4	
On temporary layoff	13.3	12.6	12.9	12.7	13.5	13.7	13.0	14.0	11.6	12.9	13.8	12.9	11.4	11.1	10.1	
Not on temporary layoff	43.1	42.0	40.8	41.8	42.0	42.4	42.0	41.1	41.8	41.3	37.4	35.7	35.5	33.3	35.3	
Job leavers	10.4	10.8	10.9	10.6	10.4	10.2	10.8	11.1	11.5	11.4	8.8	10.3	10.1	9.7	10.2	
Reentrants	23.7	24.6	25.3	24.8	24.1	24.0	24.3	24.1	25.0	24.6	32.6	33.7	35.5	37.9	36.5	
New entrants	9.5	10.0	10.1	10.1	9.9	9.6	9.9	9.7	10.0	9.7	7.5	7.4	7.5	8.1	7.8	
PERCENT OF CIVILIAN LABOR FORCE																
Job losers ¹	4.2	3.7	3.7	3.8	3.8	3.8	3.7	3.7	3.5	3.4	3.4	3.2	3.1	2.9	2.7	
Job leavers .....	.8	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.7	.7	.6	.6
Reentrants	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	2.2	2.2	2.3	2.5	2.2	
New entrants .....	.7	.7	.7	.7	.7	.6	.7	.7	.6	.6	.5	.5	.5	.5	.5

¹ Includes persons who completed temporary jobs.

9. Duration of unemployment, monthly data seasonally adjusted

(Numbers in thousands)

Weeks of unemployment	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
Less than 5 weeks	3,270	3,160	3,242	3,232	3,223	3,046	3,052	3,156	2,946	3,063	3,349	2,574	2,758	2,863	2,631	
5 to 14 weeks	2,760	2,522	2,526	2,758	2,543	2,608	2,457	2,491	2,401	2,247	2,336	2,727	2,549	2,434	2,437	
15 weeks and over	3,354	3,052	3,046	3,025	3,007	3,000	3,047	3,030	2,971	2,864	3,027	3,103	3,110	2,951	2,801	
15 to 26 weeks	1,424	1,274	1,270	1,257	1,258	1,259	1,297	1,284	1,216	1,150	1,314	1,359	1,264	1,168	1,093	
27 weeks and over	1,930	1,778	1,776	1,768	1,749	1,741	1,750	1,746	1,755	1,714	1,713	1,744	1,847	1,782	1,708	
Mean duration, in weeks	17.9	18.1	17.8	17.8	17.9	18.3	18.4	18.4	18.9	18.2	18.3	18.7	19.2	19.1	19.6	
Median duration, in weeks	8.8	8.4	8.3	8.3	8.3	8.4	8.9	8.3	8.5	8.2	8.5	9.0	9.1	9.2	9.2	

NOTE: In the three tables above, 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.

Current Labor Statistics: Employment Data

10. Unemployment rates by State, seasonally adjusted

State	Apr. 1993	Mar. 1994	Apr. 1994 ^P	State	Apr. 1993	Mar. 1994	Apr. 1994 ^P
Alabama	7.4	6.5	5.8	Montana	6.1	5.1	5.2
Alaska	7.8	8.3	8.3	Nebraska	2.8	3.2	3.1
Arizona	6.5	5.5	5.6	Nevada	7.1	5.0	5.2
Arkansas	6.3	5.0	5.1	New Hampshire	6.6	4.6	4.6
California	8.9	8.6	9.6	New Jersey	8.9	7.9	7.2
Colorado	5.3	5.2	5.4	New Mexico	7.4	5.2	5.1
Connecticut	6.4	5.2	4.9	New York	7.5	8.1	8.2
Delaware	5.0	5.2	5.5	North Carolina	5.3	4.4	3.9
District of Columbia	8.5	9.8	7.3	North Dakota	4.4	4.8	3.8
Florida	6.8	7.3	7.4	Ohio	6.6	5.9	6.3
Georgia	5.7	6.1	5.6	Oklahoma	6.1	6.7	6.5
Hawaii	4.4	5.3	5.6	Oregon	7.4	6.3	5.9
Idaho	6.5	5.2	4.7	Pennsylvania	6.9	6.8	6.6
Illinois	8.0	6.0	5.5	Rhode Island	7.9	7.6	6.2
Indiana	5.6	5.1	4.9	South Carolina	7.5	6.7	7.0
Iowa	4.1	3.6	3.6	South Dakota	3.4	3.0	2.8
Kansas	5.0	5.8	5.9	Tennessee	5.8	5.4	4.7
Kentucky	6.3	4.8	4.9	Texas	6.9	7.4	6.3
Louisiana	7.5	8.1	8.4	Utah	4.0	3.4	3.5
Maine	7.7	6.9	6.4	Vermont	5.4	4.8	4.0
Maryland	6.2	5.7	5.4	Virginia	5.2	4.9	5.1
Massachusetts	6.8	5.9	6.1	Washington	7.6	6.5	5.9
Michigan	6.8	6.5	5.7	West Virginia	11.3	10.2	8.9
Minnesota	5.2	4.3	4.2	Wisconsin	4.9	4.8	4.7
Mississippi	6.8	6.9	7.2	Wyoming	5.4	6.5	6.7
Missouri	6.3	5.9	5.0				

^P = preliminary

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

(In thousands)

State	Apr. 1993	Mar. 1994	Apr. 1994 ^P	State	Apr. 1993	Mar. 1994	Apr. 1994 ^P
Alabama	1,713.0	1,730.2	1,736.7	Nebraska	762.2	767.0	770.2
Alaska	250.5	258.3	256.9	Nevada	661.3	706.1	709.0
Arizona	1,565.3	1,615.6	1,622.0	New Hampshire	499.8	514.3	514.1
Arkansas	986.3	1,005.8	1,006.7	New Jersey	3,484.4	3,519.0	3,540.6
California	12,029.2	11,955.2	11,963.6	New Mexico	622.1	641.8	648.1
Colorado	1,658.8	1,701.6	1,701.8	New York	7,733.7	7,793.5	7,796.9
Connecticut	1,528.8	1,525.8	1,529.2	North Carolina	3,222.7	3,317.3	3,320.7
Delaware	346.8	350.6	354.0	North Dakota	283.7	291.1	291.0
District of Columbia	673.7	664.2	663.6	Ohio	4,902.6	4,942.1	4,935.5
Florida	5,542.5	5,701.5	5,737.6	Oklahoma	1,238.9	1,247.9	1,249.8
Georgia	3,083.0	3,214.0	3,224.5	Oregon	1,305.8	1,336.5	1,338.3
Hawaii	541.6	533.0	533.3	Pennsylvania	5,111.3	5,134.5	5,147.4
Idaho	431.1	456.6	458.0	Rhode Island	426.9	430.5	432.3
Illinois	5,299.8	5,375.2	5,374.7	South Carolina	1,567.7	1,591.7	1,591.5
Indiana	2,577.2	2,634.2	2,635.9	South Dakota	312.0	325.5	325.9
Iowa	1,270.7	1,297.7	1,301.6	Tennessee	2,314.6	2,372.1	2,373.0
Kansas	1,128.3	1,153.1	1,147.1	Texas	7,432.7	7,622.9	7,662.6
Kentucky	1,533.1	1,547.2	1,549.5	Utah	795.4	847.1	848.9
Louisiana	1,641.6	1,663.5	1,673.5	Vermont	256.3	258.9	260.0
Maine	517.9	520.8	524.8	Virginia	2,902.2	2,988.2	2,998.9
Maryland	2,096.8	2,106.3	2,115.7	Washington	2,246.9	2,277.7	2,279.2
Massachusetts	2,828.7	2,897.7	2,916.9	West Virginia	649.9	665.6	666.0
Michigan	3,977.2	4,067.2	4,074.3	Wisconsin	2,395.1	2,441.8	2,444.3
Minnesota	2,233.7	2,293.0	2,297.4	Wyoming	208.5	212.0	212.0
Mississippi	991.4	1,023.0	1,024.8	Puerto Rico	-	-	-
Missouri	2,386.7	2,436.8	2,454.7	Virgin Islands	-	-	-
Montana	324.5	332.3	331.8				

^P = preliminary

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

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

(In thousands)

Industry	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P	
TOTAL	108,604	110,525	110,285	110,372	110,628	110,714	110,923	111,112	111,366	111,610	111,711	111,919	112,298	112,656	112,847	
PRIVATE SECTOR	89,959	91,708	91,497	91,568	91,802	91,892	92,036	92,239	92,479	92,692	92,810	93,003	93,357	93,684	93,878	
GOODS-PRODUCING	23,231	23,256	23,281	23,225	23,232	23,207	23,206	23,245	23,281	23,298	23,328	23,327	23,395	23,491	23,499	
Mining¹	635	611	616	608	606	602	605	605	604	618	616	612	609	606	604	
Metal mining	53	50	51	50	50	47	50	50	50	51	50	50	50	50	50	
Oil and gas extraction	353	351	347	349	353	357	357	356	355	351	349	346	344	341	339	
Nonmetallic minerals, except fuels	102	101	101	100	100	100	100	101	101	101	102	101	100	100	101	
Construction	4,492	4,642	4,636	4,632	4,653	4,659	4,667	4,700	4,733	4,738	4,744	4,745	4,806	4,893	4,905	
General building contractors	1,077	1,111	1,112	1,110	1,110	1,106	1,107	1,120	1,133	1,138	1,139	1,134	1,152	1,165	1,158	
Heavy construction, except building	711	708	705	711	713	711	711	709	712	710	713	709	710	725	726	
Special trades contractors	2,704	2,823	2,819	2,811	2,830	2,842	2,849	2,871	2,888	2,890	2,892	2,902	2,944	3,003	3,021	
Manufacturing	18,104	18,003	18,029	17,985	17,973	17,946	17,934	17,940	17,944	17,942	17,968	17,970	17,980	17,992	17,990	
Production workers	12,287	12,290	12,300	12,270	12,261	12,247	12,255	12,261	12,285	12,292	12,320	12,341	12,358	12,381	12,379	
Durable goods	10,277	10,172	10,176	10,145	10,135	10,121	10,123	10,135	10,142	10,153	10,182	10,182	10,190	10,206	10,207	
Production workers	6,822	6,815	6,808	6,793	6,784	6,776	6,792	6,806	6,822	6,843	6,869	6,881	6,892	6,916	6,920	
Lumber and wood products	680	703	697	697	699	701	705	709	712	716	723	723	723	725	725	
Furniture and fixtures	478	485	486	485	486	484	484	485	487	489	492	492	493	493	495	
Stone, clay, and glass products	513	516	516	515	515	515	516	517	518	521	521	521	523	527	527	
Primary metal industries	695	679	681	677	676	675	675	675	678	678	679	680	680	678	678	
Blast furnaces and basic steel products	250	239	240	238	237	236	237	237	238	237	238	236	235	231	230	
Fabricated metal products	1,329	1,333	1,332	1,329	1,328	1,327	1,328	1,332	1,335	1,338	1,345	1,345	1,348	1,352	1,355	
Industrial machinery and equipment	1,929	1,918	1,920	1,918	1,916	1,912	1,913	1,914	1,916	1,918	1,922	1,925	1,927	1,937	1,939	
Electronic and other electrical equipment	1,528	1,520	1,520	1,515	1,516	1,515	1,516	1,518	1,521	1,524	1,524	1,528	1,535	1,539	1,540	
Transportation equipment	1,830	1,750	1,750	1,741	1,734	1,732	1,730	1,731	1,725	1,724	1,730	1,726	1,723	1,719	1,717	
Motor vehicles and equipment	813	833	820	821	824	829	832	840	843	853	874	868	867	869	866	
Aircraft and parts	612	542	551	544	537	530	528	522	515	507	502	496	491	486	485	
Instruments and related products	929	893	898	892	889	886	882	880	877	873	871	868	864	860	856	
Miscellaneous manufacturing industries	368	375	376	376	376	374	374	374	374	375	375	374	374	376	375	
Nondurable goods	7,827	7,831	7,853	7,840	7,838	7,825	7,811	7,805	7,802	7,789	7,786	7,788	7,790	7,786	7,783	
Production workers	5,466	5,475	5,492	5,477	5,477	5,471	5,463	5,455	5,463	5,449	5,451	5,460	5,466	5,465	5,459	
Food and kindred products	1,663	1,676	1,676	1,673	1,674	1,678	1,671	1,678	1,675	1,671	1,667	1,672	1,670	1,667	1,664	
Tobacco products	48	43	43	43	43	42	42	42	42	42	41	40	41	41	40	
Textile mill products	674	675	678	676	675	672	672	672	671	671	672	673	674	673	670	
Apparel and other textile products	1,007	985	994	990	985	980	977	970	966	959	956	954	956	955	953	
Paper and allied products	690	689	692	691	690	688	687	686	685	685	686	685	684	683	682	
Printing and publishing	1,507	1,513	1,514	1,513	1,514	1,516	1,515	1,514	1,515	1,514	1,517	1,518	1,521	1,521	1,524	
Chemicals and allied products	1,084	1,078	1,082	1,080	1,081	1,077	1,076	1,073	1,071	1,070	1,065	1,062	1,059	1,057	1,057	
Petroleum and coal products	158	151	152	151	151	150	150	150	151	149	148	148	147	148	149	
Rubber and miscellaneous plastics products	878	904	904	905	907	905	905	903	909	911	917	920	922	926	930	
Leather and leather products	120	118	118	118	118	117	116	117	117	117	117	116	116	115	114	
SERVICE-PRODUCING	85,373	87,269	87,004	87,147	87,396	87,507	87,717	87,867	88,085	88,312	88,383	88,592	88,903	89,165	89,348	
Transportation and public utilities	5,721	5,787	5,788	5,789	5,800	5,786	5,783	5,798	5,800	5,792	5,793	5,803	5,816	5,758	5,842	
Transportation	3,498	3,587	3,581	3,585	3,600	3,589	3,590	3,606	3,613	3,611	3,611	3,622	3,638	3,580	3,664	
Railroad transportation	254	250	250	250	252	246	249	246	247	248	247	248	248	246	245	
Local and interurban passenger transit	361	374	373	377	382	379	371	373	374	376	377	380	382	386	383	
Trucking and warehousing	1,611	1,685	1,678	1,680	1,690	1,693	1,695	1,712	1,715	1,704	1,705	1,711	1,721	1,663	1,752	
Water transportation	173	167	167	167	167	164	165	166	166	165	165	166	168	165	167	
Transportation by air	730	737	738	737	735	733	736	734	735	741	739	739	739	738	734	
Pipelines, except natural gas	19	18	19	18	18	18	18	18	18	18	18	18	18	18	18	
Transportation services	348	356	356	356	356	356	356	357	358	359	360	360	362	364	365	
Communications and public utilities	2,223	2,201	2,207	2,204	2,200	2,197	2,193	2,192	2,187	2,181	2,182	2,181	2,178	2,178	2,178	
Communications	1,269	1,257	1,261	1,259	1,256	1,255	1,252	1,252	1,250	1,246	1,249	1,249	1,248	1,251	1,255	
Electric, gas, and sanitary services	954	943	946	945	944	942	941	940	937	935	933	932	930	927	923	
Wholesale trade	5,997	5,958	5,959	5,949	5,962	5,954	5,962	5,965	5,971	5,976	5,990	6,003	6,013	6,032	6,038	
Retail trade	19,356	19,717	19,672	19,695	19,735	19,770	19,805	19,822	19,848	19,931	19,924	19,965	20,026	20,128	20,159	
Building materials and garden supplies	758	781	774	778	782	786	790	794	798	803	808	812	818	829	834	
General merchandise stores	2,451	2,461	2,461	2,451	2,457	2,452	2,455	2,454	2,451	2,446	2,421	2,433	2,432	2,444	2,445	
Food stores	3,180	3,208	3,205	3,213	3,213	3,218	3,216	3,220	3,210	3,214	3,215	3,223	3,232	3,228	3,237	
Automotive dealers and service stations	1,966	2,021	2,006	2,012	2,020	2,029	2,039	2,048	2,060	2,074	2,084	2,101	2,117	2,132	2,137	

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		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P	
Apparel and accessory stores	1,131	1,147	1,146	1,149	1,149	1,152	1,153	1,148	1,144	1,154	1,146	1,148	1,154	1,147	1,143	
Furniture and home furnishings stores	800	828	820	823	829	832	839	844	849	852	855	862	866	876	883	
Eating and drinking places	6,609	6,811	6,801	6,811	6,825	6,843	6,854	6,850	6,869	6,917	6,928	6,915	6,928	6,983	6,993	
Miscellaneous retail establishments	2,461	2,460	2,459	2,458	2,460	2,458	2,459	2,464	2,467	2,471	2,467	2,471	2,479	2,489	2,487	
Finance, insurance, and real estate	6,602	6,712	6,694	6,704	6,718	6,724	6,735	6,748	6,763	6,769	6,771	6,776	6,781	6,790	6,775	
Finance	3,160	3,217	3,205	3,212	3,222	3,225	3,230	3,240	3,245	3,250	3,252	3,254	3,256	3,257	3,251	
Depository institutions	2,096	2,079	2,083	2,080	2,082	2,076	2,072	2,072	2,068	2,064	2,057	2,050	2,044	2,040	2,036	
Nondepository institutions	406	448	440	445	449	452	457	463	467	472	477	483	486	487	485	
Security and commodity brokers	440	468	461	465	468	472	475	479	483	486	489	492	496	499	500	
Holding and other investment offices	219	223	221	222	223	225	226	226	227	228	229	229	230	231	230	
Insurance	2,152	2,181	2,178	2,181	2,183	2,185	2,187	2,187	2,192	2,190	2,187	2,186	2,185	2,190	2,185	
Insurance carriers	1,496	1,518	1,515	1,518	1,521	1,521	1,524	1,525	1,530	1,527	1,525	1,525	1,524	1,528	1,523	
Insurance agents, brokers and service	657	662	663	663	662	664	663	662	662	663	662	661	661	662	662	
Real estate	1,290	1,314	1,311	1,311	1,313	1,314	1,318	1,321	1,326	1,329	1,332	1,336	1,340	1,343	1,339	
Services¹	29,052	30,278	30,103	30,206	30,355	30,451	30,545	30,661	30,816	30,926	31,004	31,129	31,326	31,485	31,565	
Agricultural services	490	515	509	510	512	516	522	526	533	538	539	530	528	535	547	
Hotels and other lodging places	1,576	1,591	1,588	1,593	1,594	1,590	1,596	1,602	1,599	1,599	1,602	1,599	1,608	1,606	1,595	
Personal services	1,116	1,136	1,133	1,135	1,138	1,136	1,131	1,134	1,137	1,140	1,149	1,143	1,138	1,138	1,133	
Business services	5,315	5,785	5,706	5,743	5,799	5,838	5,877	5,950	6,016	6,062	6,092	6,161	6,244	6,318	6,324	
Personnel supply services	1,629	1,924	1,873	1,895	1,937	1,961	1,984	2,033	2,066	2,103	2,130	2,173	2,230	2,281	2,277	
Auto repair services, and parking	881	944	934	941	947	955	962	965	975	986	992	1,002	1,017	1,027	1,029	
Miscellaneous repair services	347	362	361	362	362	363	364	366	368	370	373	375	375	376	379	
Motion pictures	401	415	409	411	413	416	421	423	425	432	435	443	450	462	472	
Amusement and recreation services	1,188	1,246	1,249	1,247	1,254	1,258	1,255	1,249	1,250	1,254	1,251	1,252	1,271	1,272	1,279	
Health services	8,490	8,767	8,736	8,756	8,782	8,802	8,830	8,852	8,873	8,890	8,909	8,922	8,959	8,985	9,001	
Hospitals	3,750	3,787	3,791	3,789	3,790	3,790	3,791	3,790	3,789	3,787	3,788	3,787	3,791	3,793	3,796	
Legal services	914	928	927	928	929	930	934	934	935	934	937	939	940	941	940	
Educational services	1,678	1,686	1,680	1,680	1,690	1,693	1,697	1,696	1,707	1,708	1,710	1,720	1,730	1,731	1,756	
Social services	1,959	2,086	2,062	2,078	2,109	2,124	2,117	2,121	2,139	2,154	2,162	2,175	2,190	2,205	2,216	
Museums and botanical and zoological gardens	73	76	75	76	76	76	77	77	77	77	77	78	78	79	79	
Membership organizations	1,973	2,032	2,030	2,036	2,035	2,036	2,035	2,036	2,040	2,040	2,042	2,041	2,044	2,047	2,050	
Engineering and management services	2,471	2,536	2,529	2,535	2,540	2,543	2,553	2,556	2,567	2,567	2,560	2,575	2,580	2,589	2,591	
Government	18,645	18,817	18,788	18,804	18,826	18,822	18,887	18,873	18,887	18,918	18,901	18,916	18,941	18,972	18,969	
Federal	2,969	2,915	2,914	2,908	2,903	2,906	2,902	2,901	2,900	2,915	2,893	2,892	2,884	2,883	2,873	
State	4,408	4,484	4,477	4,476	4,488	4,487	4,518	4,504	4,505	4,511	4,492	4,511	4,520	4,528	4,526	
Education	1,799	1,829	1,825	1,822	1,831	1,831	1,856	1,840	1,841	1,841	1,824	1,838	1,846	1,846	1,843	
Other State government	2,610	2,655	2,652	2,654	2,657	2,656	2,662	2,664	2,664	2,670	2,668	2,673	2,674	2,682	2,683	
Local	11,267	11,417	11,397	11,420	11,435	11,429	11,467	11,468	11,482	11,492	11,516	11,513	11,537	11,561	11,570	
Education	6,220	6,348	6,331	6,357	6,367	6,374	6,383	6,378	6,382	6,390	6,404	6,392	6,410	6,434	6,436	
Other local government	5,048	5,070	5,066	5,063	5,068	5,055	5,084	5,090	5,100	5,102	5,112	5,121	5,127	5,127	5,134	

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		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P	
PRIVATE SECTOR	34.4	34.5	34.7	34.4	34.5	34.6	34.4	34.5	34.6	34.5	34.8	34.3	34.6	34.7	34.9	
MINING	43.9	44.3	44.5	44.2	44.6	44.5	44.2	45.1	44.3	44.1	44.2	44.1	44.4	45.0	45.1	
MANUFACTURING	41.0	41.4	41.4	41.3	41.4	41.5	41.5	41.6	41.7	41.7	41.7	41.3	42.1	42.2	42.1	
Overtime hours	3.8	4.1	4.1	4.1	4.1	4.1	4.2	4.3	4.4	4.4	4.5	4.5	4.7	4.8	4.7	
Durable goods	41.5	42.1	42.0	41.9	42.0	42.2	42.3	42.4	42.5	42.5	42.7	42.2	43.0	43.1	42.9	
Overtime hours	3.7	4.3	4.2	4.2	4.2	4.3	4.3	4.5	4.7	4.7	4.8	4.9	5.0	5.2	4.9	
Lumber and wood products	40.6	40.8	40.6	40.5	40.7	40.8	41.0	41.2	41.4	41.2	41.7	40.6	41.3	41.4	41.3	
Furniture and fixtures	39.7	40.1	39.8	39.8	40.0	40.4	40.0	40.4	40.7	40.2	40.2	39.0	40.6	40.2	40.2	
Stone, clay, and glass products	42.2	42.7	42.7	42.6	42.6	42.8	42.7	42.8	43.3	43.1	43.3	42.3	45.6	43.5	43.9	
Primary metal industries	43.0	43.7	43.6	43.5	43.5	43.6	43.6	43.8	44.1	44.2	44.2	44.2	44.6	45.1	45.0	
Blast furnaces and basic steel products	43.5	44.1	44.2	44.1	44.2	43.9	44.1	43.8	44.0	44.2	43.9	44.3	44.7	45.3	45.4	
Fabricated metal products	41.6	42.1	41.9	42.0	42.0	42.1	42.2	42.3	42.5	42.5	42.6	42.3	42.8	43.0	42.7	
Industrial machinery and equipment	42.2	43.0	42.9	42.9	43.1	43.0	43.0	43.2	43.2	43.3	43.4	43.1	43.9	43.9	43.8	
Electronic and other electrical equipment	41.2	41.8	41.8	41.4	41.8	42.0	42.0	42.1	42.0	41.9	42.1	41.7	42.4	42.6	42.3	
Transportation equipment	41.8	43.0	42.7	42.6	42.6	43.2	43.6	43.5	43.8	44.1	44.0	44.0	44.5	44.7	44.3	
Motor vehicles and equipment	42.4	44.3	44.0	43.7	43.4	44.4	45.1	45.1	45.9	46.1	46.2	46.3	46.5	46.3	46.0	
Instruments and related products	41.1	41.1	41.3	41.2	41.3	41.0	41.1	41.1	41.0	41.2	41.4	41.0	41.7	41.6	41.8	
Miscellaneous manufacturing	39.9	39.8	39.8	39.6	39.7	39.8	39.8	39.7	39.8	39.9	40.1	38.9	40.1	40.4	40.1	
Nondurable goods	40.4	40.6	40.5	40.5	40.6	40.5	40.5	40.6	40.6	40.6	40.6	40.1	41.0	41.1	41.0	
Overtime hours	3.8	4.0	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.0	4.1	4.1	4.3	4.3	4.3	
Food and kindred products	40.6	40.7	40.5	40.6	40.7	40.7	40.6	40.9	40.7	40.7	40.7	40.8	41.2	41.2	41.1	
Textile mill products	41.1	41.4	41.6	41.3	41.3	41.4	41.5	41.5	41.8	41.8	41.5	40.4	42.2	42.0	41.7	
Apparel and other textile products	37.2	37.2	37.3	37.2	37.2	37.2	37.0	36.9	37.1	37.1	36.9	35.8	37.6	38.0	37.9	
Paper and allied products	43.6	43.6	43.7	43.6	43.5	43.6	43.8	43.8	43.7	43.7	43.7	43.2	44.1	44.0	43.9	
Printing and publishing	38.1	38.3	38.2	38.4	38.4	38.2	38.3	38.4	38.4	38.3	38.3	38.0	38.4	38.8	38.7	
Chemicals and allied products	43.1	43.1	43.3	43.0	43.4	43.2	42.9	43.2	43.0	43.1	43.2	42.8	43.3	43.3	43.3	
Rubber and miscellaneous plastics products	41.7	41.8	41.7	41.7	41.7	41.8	41.7	41.8	42.0	42.0	41.9	41.6	42.6	42.4	42.2	
Leather and leather products	38.0	38.6	38.6	37.9	38.2	38.4	38.7	38.7	38.5	38.5	38.6	37.7	38.6	39.1	38.8	
TRANSPORTATION AND PUBLIC UTILITIES	38.9	39.6	39.7	39.5	39.6	39.8	39.7	39.8	39.7	39.7	40.1	39.7	39.8	40.2	40.2	
WHOLESALE TRADE	38.2	38.2	38.3	38.2	38.2	38.3	37.9	38.2	38.2	38.1	38.5	38.1	38.3	38.4	38.5	
RETAIL TRADE	28.8	28.8	29.0	28.7	28.9	28.9	28.6	28.9	28.8	28.8	29.0	28.6	28.9	29.0	29.0	
SERVICES	32.5	32.5	32.9	32.5	32.5	32.6	32.3	32.4	32.5	32.4	32.8	32.3	32.4	32.5	32.9	

^P = preliminary
NOTE: See "Notes on the data" for a description of the most recent benchmark adjustment.

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

Industry	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P	
PRIVATE SECTOR (in current dollars)	\$10.57	\$10.83	\$10.81	\$10.81	\$10.82	\$10.86	\$10.88	\$10.92	\$10.94	\$10.96	\$11.02	\$11.03	\$11.02	\$11.05	\$11.11	
Mining	14.54	14.60	14.73	14.59	14.56	14.57	14.55	14.62	14.51	14.68	14.88	14.81	14.77	14.86	15.01	
Construction	14.15	14.37	14.35	14.35	14.40	14.41	14.41	14.43	14.46	14.41	14.43	14.54	14.47	14.52	14.59	
Manufacturing	11.46	11.74	11.69	11.71	11.73	11.77	11.82	11.84	11.87	11.93	11.95	12.01	12.00	12.00	12.01	
Excluding overtime	10.95	11.18	11.15	11.17	11.18	11.21	11.25	11.25	11.28	11.32	11.34	11.40	11.37	11.33	11.38	
Transportation and public utilities	13.45	13.63	13.61	13.63	13.63	13.63	13.63	13.66	13.70	13.73	13.80	13.82	13.79	13.78	13.84	
Wholesale trade	11.39	11.73	11.75	11.71	11.75	11.80	11.79	11.84	11.80	11.82	11.92	11.88	11.88	11.95	12.01	
Retail trade	7.12	7.29	7.27	7.28	7.28	7.31	7.30	7.35	7.35	7.37	7.41	7.42	7.43	7.45	7.47	
Finance, insurance, and real estate	10.82	11.35	11.35	11.30	11.35	11.46	11.44	11.56	11.58	11.61	11.73	11.67	11.69	11.77	11.89	
Services	10.54	10.79	10.77	10.77	10.76	10.81	10.82	10.87	10.88	10.89	10.97	10.96	10.95	10.99	11.06	
PRIVATE SECTOR (in constant (1982) dollars)	7.41	7.39	7.38	7.38	7.38	7.39	7.40	7.39	7.39	7.40	7.43	7.42	7.39	7.40	-	

- Data not available.
^P = preliminary
NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

Current Labor Statistics: Employment Data

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

Industry	Annual average		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P	
PRIVATE SECTOR	\$10.57	\$10.83	\$10.82	\$10.76	\$10.75	\$10.78	\$10.91	\$10.94	\$10.96	\$10.97	\$11.06	\$11.06	\$11.04	\$11.07	\$11.11	
MINING	14.54	14.60	14.73	14.59	14.49	14.44	14.54	14.47	14.43	14.67	15.06	14.92	14.84	14.95	15.01	
CONSTRUCTION	14.15	14.37	14.33	14.24	14.37	14.45	14.52	14.55	14.47	14.46	14.41	14.45	14.44	14.49	14.58	
MANUFACTURING	11.46	11.74	11.71	11.71	11.72	11.70	11.85	11.80	11.87	12.00	11.96	12.00	11.99	12.01	12.02	
Durable goods	12.02	12.33	12.30	12.31	12.28	12.29	12.44	12.40	12.49	12.62	12.56	12.61	12.59	12.61	12.62	
Lumber and wood products	9.44	9.61	9.56	9.56	9.65	9.67	9.73	9.71	9.67	9.72	9.74	9.70	9.69	9.74	9.79	
Furniture and fixtures	9.01	9.27	9.17	9.23	9.29	9.33	9.40	9.40	9.44	9.44	9.42	9.41	9.39	9.46	9.47	
Stone, clay, and glass products	11.60	11.85	11.81	11.83	11.90	11.89	12.03	11.92	11.99	11.95	11.96	11.96	11.93	12.01	12.11	
Primary metal industries	13.66	13.99	13.93	14.01	14.06	14.00	14.20	14.00	14.09	14.26	14.16	14.24	14.20	14.17	14.22	
Blast furnaces and basic steel products	15.87	16.36	16.25	16.50	16.49	16.40	16.57	16.42	16.51	16.56	16.56	16.57	16.63	16.57	16.67	
Fabricated metal products	11.42	11.69	11.69	11.69	11.65	11.67	11.81	11.74	11.82	11.91	11.87	11.89	11.89	11.90	11.87	
Industrial machinery and equipment	12.41	12.73	12.65	12.67	12.76	12.74	12.83	12.82	12.87	12.99	12.92	12.95	12.94	12.94	12.94	
Electronic and other electrical equipment	11.00	11.25	11.18	11.25	11.26	11.26	11.32	11.29	11.37	11.52	11.41	11.45	11.46	11.46	11.51	
Transportation equipment	15.20	15.80	15.79	15.77	15.53	15.67	15.98	15.99	16.19	16.42	16.26	16.35	16.36	16.41	16.40	
Motor vehicles and equipment	15.45	16.09	16.11	16.10	15.66	15.89	16.34	16.33	16.56	16.88	16.69	16.78	16.80	16.91	16.86	
Instruments and related products	11.89	12.23	12.20	12.18	12.24	12.24	12.33	12.32	12.36	12.46	12.41	12.43	12.41	12.42	12.39	
Miscellaneous manufacturing	9.15	9.38	9.33	9.36	9.39	9.32	9.42	9.41	9.47	9.58	9.57	9.56	9.55	9.60	9.62	
Nondurable goods	10.73	10.98	10.94	10.95	11.01	10.96	11.09	11.02	11.07	11.16	11.16	11.18	11.18	11.20	11.22	
Food and kindred products	10.20	10.45	10.48	10.47	10.49	10.43	10.51	10.38	10.55	10.63	10.59	10.57	10.62	10.64	10.65	
Tobacco products	16.92	16.79	17.86	18.00	18.39	17.22	16.13	15.84	16.20	16.55	16.69	17.94	18.40	19.19	19.86	
Textile mill products	8.60	8.89	8.86	8.86	8.87	8.91	8.96	8.95	8.98	9.01	9.03	9.04	9.03	9.09	9.07	
Apparel and other textile products	6.95	7.09	7.05	7.07	7.01	7.07	7.15	7.14	7.18	7.24	7.22	7.22	7.25	7.27	7.27	
Paper and allied products	13.07	13.42	13.36	13.38	13.49	13.40	13.67	13.55	13.54	13.61	13.56	13.60	13.61	13.66	13.74	
Printing and publishing	11.74	11.93	11.82	11.83	11.91	11.96	12.09	12.04	12.01	12.11	12.06	12.04	12.10	12.06	12.04	
Chemicals and allied products	14.51	14.84	14.77	14.75	14.82	14.76	14.97	14.89	14.95	15.06	15.00	15.04	15.03	15.10	15.14	
Petroleum and coal products	17.90	18.54	18.56	18.47	18.43	18.36	18.70	18.57	18.67	18.71	18.84	19.26	19.36	18.98	18.98	
Rubber and miscellaneous plastics products	10.36	10.57	10.55	10.54	10.58	10.53	10.66	10.60	10.61	10.67	10.70	10.71	10.68	10.70	10.72	
Leather and leather products	7.42	7.62	7.59	7.57	7.56	7.63	7.69	7.67	7.80	7.86	7.88	7.92	7.97	7.96	7.98	
TRANSPORTATION AND PUBLIC UTILITIES	13.45	13.63	13.57	13.57	13.63	13.62	13.67	13.66	13.69	13.74	13.83	13.85	13.80	13.79	13.80	
WHOLESALE TRADE	11.39	11.73	11.75	11.66	11.73	11.75	11.80	11.81	11.80	11.85	11.95	11.93	11.87	11.99	12.01	
RETAIL TRADE	7.12	7.29	7.27	7.26	7.24	7.24	7.32	7.36	7.36	7.36	7.45	7.45	7.45	7.47	7.47	
FINANCE, INSURANCE, AND REAL ESTATE	10.82	11.35	11.36	11.23	11.27	11.39	11.41	11.52	11.57	11.65	11.79	11.77	11.75	11.81	11.90	
SERVICES	10.54	10.79	10.76	10.66	10.62	10.66	10.83	10.87	10.93	10.98	11.06	11.05	11.02	11.01	11.05	

^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		1993								1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	May ^P
PRIVATE SECTOR															
Current dollars	\$363.61	\$373.64	\$375.45	\$372.30	\$374.10	\$378.38	\$376.40	\$378.52	\$378.12	\$380.66	\$379.36	\$376.04	\$379.78	\$381.92	\$387.74
Seasonally adjusted	-	-	375.11	371.86	373.29	375.76	374.27	376.74	378.52	378.12	383.50	378.33	381.29	383.44	387.74
Constant (1982) dollars	254.99	254.87	256.45	254.13	255.18	257.40	255.71	255.93	255.49	257.38	255.98	253.06	254.89	255.81	-
MINING	638.31	646.78	652.54	644.88	639.01	648.36	647.03	658.39	645.02	654.28	664.15	652.00	652.96	665.28	675.45
CONSTRUCTION	537.70	551.81	561.74	559.63	567.62	572.22	556.12	571.82	558.54	553.82	533.17	521.65	550.16	554.97	580.28
MANUFACTURING															
Current dollars	469.86	486.04	483.62	484.79	480.52	485.55	491.78	493.24	498.54	508.80	496.34	490.80	502.38	504.42	504.84
Constant (1982) dollars	329.50	331.54	330.34	330.91	327.78	330.31	334.09	333.50	336.85	344.02	334.91	330.28	337.17	337.86	-
Durable goods	498.83	519.09	516.60	518.25	510.85	517.41	523.72	527.00	534.57	547.71	532.54	527.10	538.85	540.97	541.40
Lumber and wood products	383.26	392.09	391.00	390.05	391.79	398.40	401.85	401.99	400.34	404.35	398.37	386.06	397.29	402.26	407.26
Furniture and fixtures	357.70	371.73	361.30	366.43	368.81	379.73	377.88	382.58	386.10	390.82	375.86	358.52	378.42	378.40	376.91
Stone, clay, and glass products	489.52	506.00	509.01	511.06	510.51	516.03	520.90	518.52	522.76	512.66	502.32	491.56	510.60	522.44	536.47
Primary metal industries	587.38	611.36	607.35	613.64	611.61	607.60	620.54	611.80	622.78	637.42	625.87	625.14	631.90	634.82	639.90
Blast furnaces and basic steel products	690.35	721.48	715.00	734.25	737.10	721.60	734.05	715.91	726.44	738.58	723.67	725.77	736.71	743.99	753.48
Fabricated metal products	475.07	492.15	489.81	493.32	482.31	491.31	492.48	500.12	507.08	518.09	503.29	498.19	505.33	508.13	506.85
Industrial machinery and equipment	523.70	547.39	541.42	543.54	543.58	542.72	546.56	553.82	558.56	576.76	562.02	556.85	568.07	565.48	565.48
Electronic and other electrical equipment	453.20	470.25	465.09	466.88	462.79	469.54	472.04	475.31	483.23	495.36	480.36	475.18	484.76	484.76	484.57
Transportation equipment	635.36	679.40	678.97	678.11	649.15	670.68	688.74	700.36	712.36	737.26	710.56	712.86	728.02	731.89	731.44
Motor vehicles and equipment	655.08	712.79	720.12	719.67	665.55	700.75	728.76	741.38	758.45	786.61	757.73	766.85	779.52	788.01	787.36
Instruments and related products	488.68	502.65	500.20	503.03	496.94	498.17	504.30	505.12	511.70	524.57	515.02	509.63	517.50	515.43	514.19
Miscellaneous manufacturing	365.09	373.32	369.47	369.72	365.27	370.94	375.86	378.28	384.48	388.95	379.93	368.06	382.96	385.92	383.84
Nondurable goods	433.49	445.79	441.98	444.57	443.70	446.07	453.58	450.72	454.98	459.79	450.86	443.85	455.03	456.96	457.78
Food and kindred products	414.12	425.32	421.30	424.04	425.89	429.72	435.11	429.73	436.77	439.02	426.78	423.86	431.17	430.92	434.52
Tobacco products	653.11	627.95	655.46	694.80	662.04	644.03	614.55	613.01	610.74	618.97	625.88	635.08	695.52	756.09	778.51
Textile mill products	353.46	368.05	368.58	370.35	362.78	372.44	375.42	373.22	378.96	380.22	372.04	357.98	376.55	380.87	378.22
Apparel and other textile products	258.54	263.75	262.26	264.42	259.37	264.42	263.84	265.61	269.97	272.22	265.70	255.59	271.15	272.63	274.81
Paper and allied products	569.85	585.11	581.16	583.37	582.77	581.56	602.85	596.20	597.11	605.65	592.57	580.72	593.40	598.31	600.44
Printing and publishing	447.29	456.92	446.80	449.54	453.77	459.26	467.88	464.74	465.99	471.08	458.28	453.91	465.85	465.52	461.13
Chemicals and allied products	625.38	639.60	636.59	635.73	637.26	633.20	649.70	641.76	648.83	662.64	648.00	640.70	650.80	652.32	652.53
Petroleum and coal products	784.02	819.47	829.63	814.53	810.92	809.68	824.67	850.51	819.61	812.01	830.84	841.66	863.46	852.20	848.41
Rubber and miscellaneous plastics products	432.01	441.83	440.99	442.68	434.84	439.10	443.46	444.14	448.80	454.54	448.33	442.32	452.83	453.68	453.46
Leather and leather products	281.96	294.13	292.97	291.45	288.79	292.99	295.30	296.83	302.64	306.54	303.38	294.62	304.45	308.05	309.62
TRANSPORTATION AND PUBLIC UTILITIES	523.21	539.75	538.73	538.73	545.20	548.89	544.07	545.03	543.49	546.85	547.67	545.69	545.10	550.22	554.76
WHOLESALE TRADE	435.10	448.09	451.20	446.58	449.26	451.20	449.58	452.32	450.76	453.86	456.49	452.15	452.25	459.22	463.59
RETAIL TRADE	205.06	209.95	210.10	210.54	214.30	215.03	210.82	211.97	210.50	215.65	210.09	209.35	212.33	214.39	215.88
FINANCE, INSURANCE, AND REAL ESTATE	387.36	406.33	411.23	399.79	401.21	414.60	406.20	411.26	413.05	415.91	429.16	421.37	418.30	422.80	431.97
SERVICES	342.55	350.68	351.85	347.52	348.34	352.85	349.81	352.19	354.13	355.75	359.45	355.81	355.95	356.72	362.44

- Data not available.

^P = preliminary

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

Current Labor Statistics: Employment Data

17. Diffusion indexes of employment change, seasonally adjusted

(In percent)

Time span and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Private nonfarm payrolls, 356 industries												
Over 1-month span:												
1992	42.1	46.1	48.3	57.7	53.1	50.4	52.8	46.5	53.4	56.9	52.5	57.3
1993	57.9	61.7	49.0	56.0	57.0	51.1	58.8	50.0	56.7	57.4	61.0	57.4
1994	56.6	58.3	62.9	61.2	50.6	-	-	-	-	-	-	-
Over 3-month span:												
1992	39.7	42.3	51.0	56.2	57.6	54.1	50.4	49.9	51.7	56.2	58.6	59.8
1993	64.0	61.4	59.7	55.8	54.9	57.7	54.6	55.9	55.8	62.4	61.5	60.8
1994	62.1	64.5	64.6	62.1	-	-	-	-	-	-	-	-
Over 6-month span:												
1992	43.5	46.3	47.2	52.0	54.2	56.6	52.8	53.1	55.8	56.3	64.2	62.2
1993	61.4	60.8	59.0	59.8	54.4	54.5	57.9	58.8	59.7	60.8	62.8	63.6
1994	66.4	64.5	-	-	-	-	-	-	-	-	-	-
Over 12-month span:												
1992	47.2	42.3	42.7	44.1	48.0	52.5	55.8	60.7	59.7	60.4	60.1	60.7
1993	60.0	61.1	60.7	62.2	63.2	62.1	62.4	60.8	63.5	61.8	62.9	-
1994	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing payrolls, 139 industries												
Over 1-month span:												
1992	38.1	40.6	45.0	57.9	47.8	50.0	53.2	41.7	49.3	47.8	52.5	51.8
1993	52.5	57.6	47.8	41.7	46.0	40.3	49.3	42.8	46.8	50.0	55.4	51.1
1994	54.3	53.6	51.1	54.0	48.9	-	-	-	-	-	-	-
Over 3-month span:												
1992	30.9	36.3	45.3	50.7	55.4	53.6	47.1	47.1	42.4	50.0	51.1	55.0
1993	60.1	58.3	51.4	40.6	37.1	43.5	40.3	41.0	43.2	52.9	54.7	56.1
1994	56.1	57.6	54.0	51.4	-	-	-	-	-	-	-	-
Over 6-month span:												
1992	34.2	37.1	41.0	48.6	52.2	54.7	46.4	49.3	50.4	48.9	57.9	56.8
1993	54.0	51.8	48.6	47.1	37.1	34.2	39.6	45.7	47.8	50.4	54.3	55.8
1994	57.2	55.8	-	-	-	-	-	-	-	-	-	-
Over 12-month span:												
1992	42.4	36.7	36.3	36.0	39.6	45.7	50.0	55.8	57.9	55.4	52.9	52.9
1993	50.0	52.5	48.6	49.3	50.7	48.9	50.0	48.9	50.0	49.3	51.1	-
1994	-	-	-	-	-	-	-	-	-	-	-	-

- 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 increasing 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	1985	1986	1987	1988	1989	1990	1991	1992	1993
Civilian noninstitutional population	178,206	180,587	182,753	184,613	186,393	188,049	189,765	191,576	193,550
Civilian labor force	115,461	117,834	119,865	121,669	123,869	124,787	125,303	126,982	128,040
Labor force participation rate	64.8	65.3	65.6	65.9	66.5	66.4	66.0	66.3	66.2
Employed	107,150	109,597	112,440	114,968	117,342	117,914	116,877	117,598	119,306
Employment-population ratio	60.1	60.7	61.5	62.3	63.0	62.7	61.6	61.4	61.6
Agriculture	3,179	3,163	3,208	3,169	3,199	3,186	3,233	3,207	3,074
Nonagricultural industries	103,971	106,434	109,232	111,800	114,142	114,728	113,644	114,391	116,232
Unemployed	8,312	8,237	7,425	6,701	6,528	6,874	8,426	9,384	8,734
Unemployment rate	7.2	7.0	6.2	5.5	5.3	5.5	6.7	7.4	6.8
Not in labor force	62,744	62,752	62,888	62,944	62,523	63,262	64,462	64,593	65,509

19. Annual data: Employment levels by industry

(In thousands)

Industry	1985	1986	1987	1988	1989	1990	1991	1992	1993
Total employment	97,387	99,344	101,958	105,210	107,895	109,419	108,256	108,604	110,525
Private sector	80,992	82,651	84,948	87,824	90,117	91,115	89,854	89,959	91,708
Goods-producing	24,842	24,533	24,674	25,125	25,254	24,905	23,745	23,231	23,256
Mining	927	777	717	713	692	709	689	635	611
Construction	4,668	4,810	4,958	5,098	5,171	5,120	4,650	4,492	4,642
Manufacturing	19,248	18,947	18,999	19,314	19,391	19,076	18,406	18,104	18,003
Service-producing	72,544	74,811	77,284	80,086	82,642	84,514	84,511	85,373	87,269
Transportation and public utilities	5,233	5,247	5,362	5,514	5,625	5,793	5,762	5,721	5,787
Wholesale trade	5,727	5,761	5,848	6,030	6,187	6,173	6,081	5,997	5,958
Retail trade	17,315	17,880	18,422	19,023	19,475	19,601	19,284	19,356	19,717
Finance, insurance, and real estate	5,948	6,273	6,533	6,630	6,668	6,709	6,646	6,602	6,712
Services	21,927	22,957	24,110	25,504	26,907	27,934	28,336	29,052	30,278
Government	16,394	16,693	17,010	17,386	17,779	18,304	18,402	18,645	18,817
Federal	2,875	2,899	2,943	2,971	2,988	3,085	2,966	2,969	2,915
State	3,832	3,893	3,967	4,076	4,182	4,305	4,355	4,408	4,484
Local	9,687	9,901	10,100	10,339	10,609	10,914	11,081	11,267	11,417

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	1985	1986	1987	1988	1989	1990	1991	1992	1993
Private sector:									
Average weekly hours	34.9	34.8	34.8	34.7	34.6	34.5	34.3	34.4	34.5
Average hourly earnings (in dollars)	8.57	8.76	8.98	9.28	9.66	10.01	10.32	10.57	10.83
Average weekly earnings (in dollars)	299.09	304.85	312.50	322.02	334.24	345.35	353.98	363.61	373.64
Mining:									
Average weekly hours	43.4	42.2	42.4	42.3	43.0	44.1	44.4	43.9	44.3
Average hourly earnings (in dollars)	11.98	12.46	12.54	12.80	13.26	13.68	14.19	14.54	14.60
Average weekly earnings (in dollars)	519.93	525.81	531.70	541.44	570.18	603.29	630.04	638.31	646.78
Construction:									
Average weekly hours	37.7	37.4	37.8	37.9	37.9	38.2	38.1	38.0	38.4
Average hourly earnings (in dollars)	12.32	12.48	12.71	13.08	13.54	13.77	14.00	14.15	14.37
Average weekly earnings (in dollars)	464.46	466.75	480.44	495.73	513.17	526.01	533.40	537.70	551.81
Manufacturing:									
Average weekly hours	40.5	40.7	41.0	41.1	41.0	40.8	40.7	41.0	41.4
Average hourly earnings (in dollars)	9.54	9.73	9.91	10.19	10.48	10.83	11.18	11.46	11.74
Average weekly earnings (in dollars)	386.37	396.01	406.31	418.81	429.68	441.86	455.03	469.86	486.04
Transportation and public utilities:									
Average weekly hours	39.5	39.2	39.2	38.8	38.9	38.9	38.7	38.9	39.6
Average hourly earnings (in dollars)	11.40	11.70	12.03	12.26	12.60	12.97	13.22	13.45	13.63
Average weekly earnings (in dollars)	450.30	458.64	471.58	475.69	490.14	504.53	511.61	523.21	539.75
Wholesale trade:									
Average weekly hours	38.4	38.3	38.1	38.1	38.0	38.1	38.1	38.2	38.2
Average hourly earnings (in dollars)	9.15	9.34	9.59	9.98	10.39	10.79	11.15	11.39	11.73
Average weekly earnings (in dollars)	351.36	357.72	365.38	380.24	394.82	411.10	424.82	435.10	448.09
Retail trade:									
Average weekly hours	29.4	29.2	29.2	29.1	28.9	28.8	28.6	28.8	28.8
Average hourly earnings (in dollars)	5.94	6.03	6.12	6.31	6.53	6.75	6.94	7.12	7.29
Average weekly earnings (in dollars)	174.64	176.08	178.70	183.62	188.72	194.40	198.48	205.06	209.95
Finance, insurance, and real estate:									
Average weekly hours	36.4	36.4	36.3	35.9	35.8	35.8	35.7	35.8	35.8
Average hourly earnings (in dollars)	7.94	8.36	8.73	9.06	9.53	9.97	10.39	10.82	11.35
Average weekly earnings (in dollars)	289.02	304.30	316.90	325.25	341.17	356.93	370.92	387.36	406.33
Services:									
Average weekly hours	32.5	32.5	32.5	32.6	32.6	32.5	32.4	32.5	32.5
Average hourly earnings (in dollars)	7.90	8.18	8.49	8.88	9.38	9.83	10.23	10.54	10.79
Average weekly earnings (in dollars)	256.75	265.85	275.93	289.49	305.79	319.48	331.45	342.55	350.68

Current Labor Statistics: Compensation & Industrial Relations

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

(June 1989 = 100)

Series	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 1994										
Civilian workers²	113.5	114.2	115.4	116.1	117.5	118.3	119.5	120.2	121.3	0.9	3.2
Workers, by occupational group:											
White-collar workers	113.9	114.6	115.8	116.6	117.9	118.6	119.9	120.6	121.8	1.0	3.3
Professional specialty and technical	115.4	116.2	118.2	119.1	120.1	120.6	122.0	122.5	123.7	1.0	3.0
Executive, administrative, and managerial	113.0	113.4	114.3	115.0	116.9	117.5	118.6	119.4	120.6	1.0	3.2
Administrative support, including clerical	113.9	114.6	115.9	116.8	118.3	119.3	120.4	121.3	122.6	1.1	3.6
Blue-collar workers	112.6	113.5	114.4	115.2	116.7	117.8	118.8	119.4	120.4	.8	3.2
Service occupations	114.1	114.7	116.2	116.7	117.9	118.7	119.9	120.5	121.6	.9	3.1
Workers, by industry division:											
Goods-producing	113.5	114.3	115.3	116.2	118.0	119.1	120.0	120.6	121.9	1.1	3.3
Manufacturing	114.0	114.7	115.7	116.5	118.6	119.7	120.6	121.3	122.5	1.0	3.3
Service-producing	113.5	114.2	115.4	116.2	117.2	118.0	119.3	120.0	121.0	.8	3.2
Services	115.5	116.3	118.2	119.2	120.1	120.6	122.2	122.9	123.8	.7	3.1
Health services	117.5	118.4	120.2	121.3	122.3	123.2	124.4	125.4	126.1	.6	3.1
Hospitals	117.3	118.1	119.8	121.0	122.0	122.6	123.9	125.0	125.9	.7	3.2
Educational services	115.7	116.1	118.9	119.7	120.1	120.2	122.6	122.9	123.2	.2	2.6
Public administration ³	114.0	114.6	115.8	116.3	117.6	118.0	119.3	120.0	121.5	1.3	3.3
Nonmanufacturing	113.3	114.1	115.3	116.0	117.1	117.9	119.2	119.8	120.9	.9	3.2
Private industry workers	113.1	113.9	114.8	115.6	117.1	118.0	119.1	119.8	121.0	1.0	3.3
Excluding sales occupations	113.3	114.1	115.1	115.9	117.5	118.5	119.5	120.2	121.4	1.0	3.3
Workers, by occupational group:											
White-collar workers	113.4	114.2	115.1	115.9	117.4	118.3	119.4	120.2	121.5	1.1	3.5
Excluding sales occupations	113.8	114.6	115.8	116.6	118.3	119.2	120.2	121.0	122.4	1.2	3.5
Professional specialty and technical occupations	115.3	116.4	118.0	119.0	120.4	121.3	122.2	122.9	124.6	1.4	3.5
Executive, administrative, and managerial occupations	112.7	113.1	113.9	114.5	116.5	117.2	118.1	118.9	120.3	1.2	3.3
Sales occupations	111.6	112.2	111.8	112.6	112.9	113.8	115.6	116.5	117.2	.6	3.8
Administrative support occupations, including clerical	113.6	114.4	115.5	116.4	118.1	119.2	120.3	121.2	122.5	1.1	3.7
Blue-collar workers	112.5	113.4	114.3	115.0	116.6	117.7	118.7	119.3	120.3	.8	3.2
Precision production, craft, and repair occupations	112.2	113.1	114.3	115.0	116.6	117.6	118.7	118.9	120.2	1.1	3.1
Machine operators, assemblers, and inspectors	113.9	114.6	115.0	115.8	117.8	119.0	120.0	120.8	121.3	.4	3.0
Transportation and material moving occupations	110.4	111.4	112.5	113.0	113.9	115.2	115.9	117.0	118.5	1.3	4.0
Handlers, equipment cleaners, helpers, and laborers	112.6	113.4	114.6	115.3	116.8	117.6	118.4	119.1	120.2	.9	2.9
Service occupations	113.5	114.2	115.4	115.9	117.2	118.0	118.9	119.5	120.6	.9	2.9
Production and nonsupervisory occupations ⁴	113.0	113.8	114.8	115.5	116.9	117.9	119.0	119.7	120.7	.8	3.3
Workers, by industry division:											
Goods-producing	113.5	114.3	115.3	116.1	118.0	119.1	119.9	120.6	121.8	1.0	3.2
Excluding sales occupations	113.4	114.1	115.2	115.9	117.8	118.8	119.6	120.1	121.4	1.1	3.1
White-collar occupations	113.6	114.5	115.5	116.7	118.6	119.6	120.5	121.1	123.0	1.6	3.7
Excluding sales occupations	113.2	113.9	115.1	116.2	118.1	119.0	119.7	119.9	121.9	1.7	3.2
Blue-collar occupations	113.4	114.1	115.1	115.8	117.6	118.7	119.6	120.2	121.1	.7	3.0
Service occupations	113.8	115.5	116.9	117.5	120.0	120.6	121.5	122.4	123.5	.9	2.9
Construction	110.6	111.7	113.1	113.8	114.9	116.0	116.8	116.5	118.6	1.8	3.2
Manufacturing	114.0	114.7	115.7	116.5	118.6	119.7	120.6	121.3	122.5	1.0	3.3
White-collar occupations	113.6	114.6	115.5	116.6	118.7	119.7	120.5	121.3	122.7	1.2	3.4
Excluding sales occupations	113.0	113.8	115.0	115.9	118.0	118.8	119.5	119.9	121.3	1.2	2.8
Blue-collar occupations	114.2	114.8	115.7	116.4	118.5	119.6	120.5	121.3	122.3	.8	3.2
Service occupations	113.9	115.4	117.0	117.6	120.3	120.7	121.7	122.7	123.8	.9	2.9
Durables	114.1	114.8	115.8	116.7	119.0	120.0	121.0	121.9	122.9	.8	3.3
Nondurables	113.8	114.7	115.4	116.3	117.9	119.0	119.7	120.3	121.7	1.2	3.2
Service-producing	112.8	113.6	114.4	115.2	116.4	117.3	118.5	119.3	120.4	.9	3.4
Excluding sales occupations	113.2	114.0	115.1	115.9	117.3	118.3	119.3	120.2	121.4	1.0	3.5
White-collar occupations	113.4	114.1	114.9	115.7	116.9	117.8	119.0	119.8	121.0	1.0	3.5
Excluding sales occupations	114.1	114.9	116.1	116.8	118.4	119.3	120.4	121.4	122.7	1.1	3.6
Blue-collar occupations	110.4	111.6	112.4	113.2	114.3	115.5	116.6	117.2	118.4	1.0	3.6
Service occupations	113.4	114.1	115.2	115.7	116.8	117.7	118.6	119.1	120.2	.9	2.9
Transportation and public utilities	111.1	111.9	112.9	113.5	114.8	116.0	116.8	117.5	119.2	1.4	3.8
Transportation	109.9	110.5	111.7	111.8	112.8	114.1	114.8	115.7	117.1	1.2	3.8
Public utilities	112.6	113.7	114.4	115.6	117.4	118.3	119.2	119.9	121.7	1.5	3.7
Communications	111.8	112.7	113.4	114.7	116.5	117.5	118.5	119.2	121.0	1.5	3.9
Electric, gas, and sanitary services	113.7	115.0	115.9	116.7	118.6	119.4	120.2	120.8	122.7	1.6	3.5
Wholesale and retail trade	111.4	112.5	113.0	113.7	114.7	115.9	116.4	117.1	117.6	.4	2.5
Excluding sales occupations	111.5	112.7	113.5	114.1	115.4	116.2	117.0	118.0	118.6	.5	2.8
Wholesale trade	112.5	113.5	113.2	114.4	115.3	116.4	116.6	117.8	117.9	.1	2.3
Excluding sales occupations	112.5	113.5	114.1	114.9	116.0	116.8	117.6	118.7	119.3	.5	2.8
Retail trade	110.8	112.1	112.9	113.4	114.5	115.6	116.2	116.8	117.5	.6	2.6
Food stores	112.6	113.6	114.2	115.1	115.9	117.2	117.1	118.3	119.6	1.1	3.2
General merchandise stores	111.7	112.9	113.3	113.3	114.1	114.7	115.5	116.3	115.3	-.9	1.1

See footnotes at end of table.

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

(June 1989=100)

Series	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 1994	
Finance, insurance, and real estate	111.7	110.8	111.1	111.3	112.6	113.1	115.7	116.4	117.7	1.1	4.5
Excluding sales occupations	112.5	112.2	112.5	113.0	114.9	116.4	117.5	118.2	119.7	1.3	4.2
Banking, savings and loan, and other credit agencies	110.2	110.0	111.0	111.4	114.6	116.0	116.9	117.8	118.7	.8	3.6
Insurance	113.2	114.7	114.9	115.2	114.3	116.1	117.4	119.7	119.9	.2	4.9
Services	115.3	116.4	117.8	118.9	120.1	120.9	122.3	123.1	124.4	1.1	3.6
Business services	112.5	113.6	115.2	115.9	116.5	117.4	118.1	118.6	121.3	2.3	4.1
Health services	117.9	118.9	120.6	121.8	123.0	124.0	125.0	126.0	126.7	.6	3.0
Hospitals	117.7	118.5	120.2	121.6	122.7	123.4	124.5	125.6	126.7	.9	3.3
Educational services	115.8	116.3	119.3	120.0	120.5	120.6	123.8	124.1	124.5	.3	3.3
Colleges and universities	116.8	117.4	120.3	120.8	121.5	121.5	125.0	125.3	125.7	.3	3.5
Nonmanufacturing	112.7	113.5	114.4	115.1	116.3	117.2	118.4	119.0	120.3	1.1	3.4
White-collar occupations	113.4	114.1	114.9	115.7	117.0	117.9	119.0	119.9	121.1	1.0	3.5
Excluding sales occupations	114.1	114.9	116.0	116.9	118.5	119.4	120.4	121.4	122.8	1.2	3.6
Blue-collar occupations	110.7	111.8	112.8	113.4	114.6	115.6	116.6	117.1	118.2	.9	3.1
Service occupations	113.4	114.1	115.2	115.7	116.8	117.7	118.6	119.1	120.2	.9	2.9
State and local government workers	115.2	115.7	117.9	118.6	119.3	119.6	121.4	121.9	122.6	.6	2.8
Workers, by occupational group:											
White-collar workers	115.4	115.8	118.1	118.9	119.5	119.6	121.5	121.9	122.6	.6	2.6
Professional specialty and technical	115.5	116.0	118.5	119.2	119.6	119.7	121.7	122.0	122.5	.4	2.4
Executive, administrative, and managerial	115.0	115.2	116.8	117.8	119.0	119.2	121.0	121.6	122.8	1.0	3.2
Administrative support, including clerical	115.4	115.7	117.5	118.5	119.2	119.6	121.0	121.6	122.7	.9	2.9
Blue-collar workers	114.2	115.3	116.9	117.8	118.3	118.7	120.5	121.4	122.3	.7	3.4
Workers, by industry division:											
Services	115.8	116.2	118.8	119.6	120.0	120.2	122.2	122.6	123.1	.4	2.6
Services excluding schools ⁵	115.1	115.6	117.5	118.6	119.6	120.0	121.4	121.9	122.8	.7	2.7
Health services	115.9	116.8	118.6	119.4	120.2	120.7	122.2	123.1	124.2	.9	3.3
Hospitals	115.9	116.7	118.6	119.4	120.0	120.4	122.0	123.3	123.7	.3	3.1
Educational services	115.7	116.1	118.9	119.7	120.0	120.1	122.3	122.7	122.9	.2	2.4
Schools	116.0	116.4	119.2	119.9	120.2	120.3	122.5	122.9	123.2	.2	2.5
Elementary and secondary	116.6	117.1	119.9	120.7	120.7	120.8	123.0	123.6	123.7	.1	2.5
Colleges and universities	114.0	114.1	116.9	117.2	118.4	118.5	120.8	120.7	121.5	.7	2.6
Public administration ³	114.0	114.6	115.8	116.3	117.6	118.0	119.3	120.0	121.5	1.3	3.3

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

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

³ Consist 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.

Current Labor Statistics: Compensation & Industrial Relations

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

(June 1989=100)

Series	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 1994										
Civilian workers ¹	111.5	112.1	113.0	113.6	114.5	115.2	116.4	117.1	117.8	0.6	2.9
Workers, by occupational group:											
White-collar workers	112.2	112.8	113.7	114.5	115.4	116.0	117.4	118.1	118.8	.6	2.9
Professional specialty and technical	113.6	114.4	116.0	116.7	117.5	118.0	119.5	120.0	120.7	.6	2.7
Executive, administrative, and managerial	111.9	112.2	112.8	113.5	115.0	115.5	116.5	117.3	118.1	.7	2.7
Administrative support, including clerical	111.8	112.5	113.4	114.2	115.3	116.1	117.1	118.0	118.9	.8	3.1
Blue-collar workers	109.8	110.6	111.3	111.9	112.7	113.4	114.4	115.0	115.8	.7	2.8
Service occupations	111.9	112.4	113.4	113.8	114.5	115.2	116.1	116.6	117.5	.8	2.6
Workers, by industry division:											
Goods-producing	110.7	111.4	112.2	112.9	113.8	114.6	115.4	116.2	117.0	.7	2.8
Manufacturing	111.5	112.2	112.9	113.7	114.7	115.5	116.3	117.3	118.0	.6	2.9
Service-producing	111.8	112.4	113.3	114.0	114.8	115.5	116.8	117.5	118.2	.6	3.0
Services	113.7	114.3	115.9	116.7	117.4	117.8	119.5	120.0	120.9	.8	3.0
Health services	115.4	116.2	117.7	118.6	119.5	120.3	121.4	122.2	122.8	.5	2.8
Hospitals	115.2	115.7	117.1	118.0	118.9	119.5	120.7	121.7	122.4	.6	2.9
Educational services	114.1	114.4	116.9	117.5	117.9	118.0	120.4	120.7	121.0	.2	2.6
Public administration ²	111.9	112.4	113.1	113.6	114.4	114.9	115.9	116.6	117.9	1.1	3.1
Nonmanufacturing	111.5	112.0	113.0	113.6	114.4	115.1	116.4	117.0	117.7	.6	2.9
Private industry workers	110.9	111.6	112.2	112.9	113.9	114.6	115.7	116.4	117.2	.7	2.9
Excluding sales occupations	111.1	111.8	112.5	113.2	114.2	115.0	115.9	116.6	117.5	.8	2.9
Workers, by occupational group:											
White-collar workers	111.7	112.3	112.9	113.7	114.7	115.5	116.7	117.5	118.3	.7	3.1
Excluding sales occupations	112.1	112.8	113.7	114.4	115.7	116.4	117.4	118.2	119.0	.7	2.9
Professional specialty and technical occupations	113.0	114.0	115.3	116.0	117.1	117.9	118.9	119.5	120.4	.8	2.8
Executive, administrative, and managerial occupations	111.6	112.0	112.5	113.2	114.7	115.3	116.2	117.0	117.8	.7	2.7
Sales occupations	109.7	110.1	109.7	110.7	110.5	111.6	113.8	114.7	114.8	.1	3.9
Administrative support occupations, including clerical	111.6	112.4	113.2	114.0	115.2	116.1	117.1	118.0	119.0	.8	3.3
Blue-collar workers	109.7	110.4	111.1	111.6	112.5	113.2	114.1	114.8	115.6	.7	2.8
Precision production, craft, and repair occupations	109.3	110.1	111.0	111.5	112.4	113.2	114.2	114.7	115.5	.7	2.8
Machine operators, assemblers, and inspectors	110.9	111.6	111.7	112.4	113.2	113.8	114.7	115.6	116.2	.5	2.7
Transportation and material moving occupations	107.4	108.3	109.3	109.7	110.0	111.2	111.7	112.6	113.5	.8	3.2
Handlers, equipment cleaners, helpers, and laborers	110.6	111.3	112.1	112.6	113.6	114.3	114.9	115.7	116.6	.8	2.6
Service occupations	111.2	111.6	112.5	112.9	113.5	114.1	114.9	115.3	116.3	.9	2.5
Production and nonsupervisory occupations ³	110.6	111.3	112.0	112.6	113.4	114.2	115.3	115.9	116.6	.6	2.8
Workers, by industry division:											
Goods-producing	110.7	111.4	112.1	112.8	113.8	114.5	115.3	116.1	116.9	.7	2.7
Excluding sales occupations	110.5	111.2	112.0	112.6	113.5	114.2	114.9	115.6	116.4	.7	2.6
White-collar occupations	111.7	112.5	113.2	114.2	115.4	116.4	117.3	118.2	119.1	.8	3.2
Excluding sales occupations	111.3	112.0	112.9	113.7	114.9	115.6	116.4	116.8	117.7	.8	2.4
Blue-collar occupations	110.1	110.7	111.4	111.9	112.8	113.4	114.1	114.9	115.6	.6	2.5
Service occupations	110.1	111.0	112.2	113.1	113.9	114.4	115.7	116.9	116.4	-.4	2.2
Construction	107.2	107.9	108.7	108.9	109.5	110.4	111.3	111.1	112.2	1.0	2.5
Manufacturing	111.5	112.2	112.9	113.7	114.7	115.5	116.3	117.3	118.0	.6	2.9
White-collar occupations	111.9	112.9	113.6	114.6	116.0	116.9	117.7	118.8	119.5	.6	3.0
Excluding sales occupations	111.4	112.2	113.0	114.0	115.3	115.9	116.7	117.2	118.0	.7	2.3
Blue-collar occupations	111.1	111.7	112.4	113.1	113.9	114.5	115.2	116.2	116.9	.6	2.6
Service occupations	110.1	111.0	112.3	113.4	114.3	114.5	116.0	117.3	116.8	-.4	2.2
Durables	111.2	111.8	112.7	113.4	114.4	115.1	115.9	117.2	117.8	.5	3.0
Nondurables	111.8	112.8	113.2	114.3	115.5	116.3	116.9	117.5	118.3	.7	2.4
Service-producing	111.1	111.7	112.3	113.0	113.9	114.7	115.9	116.6	117.3	.6	3.0
Excluding sales occupations	111.5	112.2	113.0	113.7	114.8	115.6	116.6	117.4	118.3	.8	3.0
White-collar occupations	111.7	112.2	112.8	113.6	114.5	115.2	116.5	117.3	118.0	.6	3.1
Excluding sales occupations	112.4	113.1	114.0	114.7	116.0	116.8	117.8	118.7	119.6	.8	3.1
Blue-collar occupations	108.7	109.7	110.3	111.0	111.9	112.9	114.1	114.6	115.5	.8	3.2
Service occupations	111.3	111.7	112.6	112.9	113.5	114.1	114.9	115.2	116.3	1.0	2.5
Transportation and public utilities	109.7	110.6	111.2	111.8	112.9	114.0	114.7	115.4	116.4	.9	3.1
Transportation	108.3	109.2	109.8	109.9	110.8	112.0	112.6	113.4	114.2	.7	3.1
Public utilities	111.4	112.4	113.0	114.1	115.4	116.4	117.2	117.9	119.1	1.0	3.2
Communications	110.8	111.7	112.2	113.5	114.7	115.6	116.5	117.1	118.4	1.1	3.2
Electric, gas, and sanitary services	112.2	113.3	114.2	114.8	116.3	117.4	118.2	118.8	119.9	.9	3.1

See footnotes at end of table.

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

(June 1989 = 100)

Series	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 1994										
Wholesale and retail trade	109.9	111.2	111.5	112.3	113.0	114.2	114.7	115.4	115.5	0.1	2.2
Excluding sales occupations	110.1	111.4	112.1	112.6	113.6	114.4	115.2	116.1	116.5	.3	2.6
Wholesale trade	111.4	112.5	111.9	113.5	113.9	115.1	115.1	116.4	116.2	-.2	2.0
Excluding sales occupations	111.5	112.7	113.3	114.1	114.7	115.5	116.3	117.5	117.8	.3	2.7
Retail trade	109.3	110.6	111.3	111.8	112.6	113.8	114.5	115.0	115.2	.2	2.3
Food stores	110.9	112.3	112.9	113.7	114.6	115.4	114.9	115.9	117.0	.9	2.1
General merchandise stores	111.1	111.7	111.7	111.8	112.4	113.4	114.5	115.0	114.0	-.9	1.4
Finance, insurance, and real estate	109.5	108.2	108.2	108.3	109.3	109.3	112.3	112.9	113.7	.7	4.0
Excluding sales occupations	110.6	109.9	109.9	110.2	112.0	113.1	114.0	114.6	115.5	.8	3.1
Banking, savings and loan, and other credit agencies	108.2	107.7	108.6	109.0	112.1	112.9	113.7	114.5	114.7	.2	2.3
Insurance	111.2	112.7	112.7	112.7	111.2	112.9	113.9	116.6	116.0	-.5	4.3
Services	113.2	114.0	115.2	116.1	117.0	117.6	118.9	119.6	120.8	1.0	3.2
Business services	111.0	111.7	113.3	113.9	114.2	114.6	115.3	115.7	118.8	2.7	4.0
Health services	115.6	116.3	117.9	118.9	119.8	120.7	121.7	122.6	123.1	.4	2.8
Hospitals	115.4	115.9	117.3	118.3	119.3	119.9	121.0	122.0	122.8	.7	2.9
Educational services	113.4	113.6	116.5	117.1	117.5	117.4	120.7	120.9	121.2	.2	3.1
Colleges and universities	114.2	114.5	117.3	117.6	118.0	117.7	121.3	121.6	122.0	.3	3.4
Nonmanufacturing	110.7	111.3	111.9	112.6	113.4	114.2	115.4	116.0	116.8	.7	3.0
White-collar occupations	111.6	112.1	112.8	113.5	114.4	115.2	116.4	117.2	117.9	.6	3.1
Excluding sales occupations	112.3	113.0	113.9	114.6	115.8	116.6	117.6	118.5	119.4	.8	3.1
Blue-collar occupations	108.2	109.1	109.7	110.2	111.1	111.9	113.0	113.4	114.2	.7	2.8
Service occupations	111.3	111.7	112.6	112.9	113.4	114.1	114.8	115.1	116.3	1.0	2.6
State and local government workers	113.8	114.2	115.9	116.6	117.2	117.4	119.3	119.7	120.4	.6	2.7
Workers, by occupational group:											
White-collar workers	114.0	114.3	116.2	116.9	117.5	117.6	119.6	119.9	120.6	.6	2.6
Professional specialty and technical	114.5	114.8	117.0	117.6	118.1	118.2	120.4	120.7	121.1	.3	2.5
Executive, administrative, and managerial	113.3	113.5	114.7	115.5	116.5	116.6	118.2	118.8	119.8	.8	2.8
Administrative support, including clerical	112.7	112.9	114.1	114.9	115.4	115.9	117.2	117.8	118.9	.9	3.0
Blue-collar workers	112.5	113.7	115.0	115.6	116.2	116.5	118.4	119.0	119.7	.6	3.0
Workers, by industry division:											
Services	114.4	114.7	116.9	117.5	118.1	118.2	120.3	120.6	121.1	.4	2.5
Services excluding schools ⁴	114.8	115.2	116.4	117.4	118.4	118.7	120.1	120.4	121.3	.7	2.4
Health services	114.9	115.7	116.7	117.4	118.1	118.8	120.4	121.0	121.9	.7	3.2
Hospitals	114.5	115.2	116.5	117.1	117.6	118.2	119.9	120.7	121.2	.4	3.1
Educational services	114.3	114.6	116.9	117.6	118.0	118.1	120.3	120.6	120.9	.2	2.5
Schools	114.3	114.6	117.0	117.5	117.9	118.0	120.3	120.7	121.0	.2	2.6
Elementary and secondary	114.9	115.3	117.9	118.5	118.7	118.8	121.1	121.6	121.7	.1	2.5
Colleges and universities	112.3	112.3	114.1	114.3	115.5	115.6	117.8	117.7	118.6	.8	2.7
Public administration ²	111.9	112.4	113.1	113.6	114.4	114.9	115.9	116.6	117.9	1.1	3.1

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	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 1994										
Private industry workers	118.6	119.7	121.2	122.2	125.2	126.7	127.7	128.3	130.7	1.9	4.4
Workers, by occupational group:											
White-collar workers	118.4	119.4	121.0	122.0	124.7	125.9	126.8	127.6	130.5	2.3	4.7
Blue-collar workers	118.7	119.7	121.2	122.2	125.5	127.3	128.4	128.9	130.5	1.2	4.0
Workers, by industry group:											
Goods-producing	119.7	120.6	122.3	123.4	127.3	129.0	130.0	130.3	132.7	1.8	4.2
Service-producing	117.7	118.8	120.4	121.2	123.4	124.6	125.7	126.7	128.9	1.7	4.5
Manufacturing	119.3	120.1	121.5	122.6	126.8	128.6	129.7	130.0	132.0	1.5	4.1
Nonmanufacturing	118.2	119.4	121.0	122.0	124.2	125.5	126.5	127.4	129.9	2.0	4.6

Current Labor Statistics: Compensation & Industrial Relations

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

(June 1989 = 100)

Series	1992				1993				1994	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 1994										
COMPENSATION											
Workers, by bargaining status¹											
Union	113.1	114.0	115.2	115.9	117.8	119.1	120.0	120.9	121.9	0.8	3.5
Goods-producing	114.0	114.6	115.7	116.4	118.7	120.0	121.0	121.9	122.5	.5	3.2
Service-producing	111.9	113.2	114.6	115.2	116.7	117.7	118.6	119.6	121.0	1.2	3.7
Manufacturing	114.8	115.2	116.1	116.9	119.8	121.1	121.9	123.0	123.6	.5	3.2
Nonmanufacturing	111.8	113.1	114.5	115.1	116.3	117.4	118.5	119.3	120.5	1.0	3.6
Nonunion	113.1	113.8	114.7	115.5	116.8	117.7	118.8	119.5	120.7	1.0	3.3
Goods-producing	113.3	114.1	115.1	116.0	117.7	118.6	119.4	119.9	121.5	1.3	3.2
Service-producing	113.0	113.7	114.4	115.2	116.3	117.2	118.4	119.2	120.3	.9	3.4
Manufacturing	113.6	114.5	115.5	116.4	118.1	119.0	120.0	120.6	122.0	1.2	3.3
Nonmanufacturing	112.9	113.5	114.3	115.1	116.3	117.2	118.3	119.0	120.2	1.0	3.4
Workers, by region¹											
Northeast	113.9	114.5	115.5	116.4	117.8	119.1	120.2	120.7	121.6	.7	3.2
South	112.5	113.3	114.1	114.8	116.2	117.0	118.1	118.8	120.0	1.0	3.3
Midwest (formerly North Central)	113.8	114.6	115.3	116.1	117.9	119.3	120.1	121.2	122.8	1.3	4.2
West	111.9	112.9	114.1	114.9	116.2	116.4	117.8	118.1	119.4	1.1	2.8
Workers, by area size¹											
Metropolitan areas	113.1	113.9	114.8	115.6	117.1	118.1	119.1	119.8	120.9	.9	3.2
Other areas	113.1	113.7	114.8	115.6	117.0	117.8	118.7	119.7	121.3	1.3	3.7
WAGES AND SALARIES											
Workers, by bargaining status¹											
Union	109.8	110.8	111.7	112.3	113.1	113.9	114.8	115.7	116.5	.7	3.0
Goods-producing	109.6	110.2	111.1	111.7	112.2	113.0	113.8	114.8	115.4	.5	2.9
Service-producing	110.1	111.5	112.5	113.1	114.2	115.1	116.0	116.8	118.0	1.0	3.3
Manufacturing	110.4	110.9	111.7	112.5	113.2	113.9	114.6	115.9	116.6	.6	3.0
Nonmanufacturing	109.4	110.7	111.7	112.2	113.0	113.9	114.9	115.5	116.4	.8	3.0
Nonunion	111.2	111.8	112.4	113.1	114.1	114.8	115.9	116.6	117.4	.7	2.9
Goods-producing	111.2	111.9	112.6	113.3	114.4	115.2	116.0	116.7	117.6	.8	2.8
Service-producing	111.2	111.7	112.3	113.0	113.8	114.6	115.9	116.6	117.2	.5	3.0
Manufacturing	111.9	112.7	113.4	114.2	115.4	116.1	117.0	117.9	118.6	.6	2.8
Nonmanufacturing	110.9	111.4	112.0	112.7	113.5	114.3	115.5	116.1	116.9	.7	3.0
Workers, by region¹											
Northeast	111.7	112.2	113.0	113.7	114.6	115.7	116.8	117.3	117.8	.4	2.8
South	110.8	111.5	112.0	112.7	113.6	114.3	115.3	116.0	116.6	.5	2.6
Midwest (formerly North Central)	110.7	111.3	111.8	112.5	113.5	114.6	115.2	116.5	117.5	.9	3.5
West	110.2	111.1	112.2	112.8	113.6	113.7	115.3	115.7	116.6	.8	2.6
Workers, by area size¹											
Metropolitan areas	110.9	111.6	112.3	112.9	113.9	114.7	115.8	116.5	117.2	.6	2.9
Other areas	110.7	111.2	112.0	112.8	113.5	114.4	115.0	115.8	117.0	1.0	3.1

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, 1980-91

Item	Medium and large private establishments ¹										Small private establishments ²	State and local governments ³	
	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1990	1987	1990
Time-off plans													
Participants with:													
Paid lunch time	10	10	9	11	9	10	10	11	10	8	8	⁴ 17	11
Average minutes per day	-	-	25	25	26	27	27	29	26	30	37	34	36
Paid rest time	75	75	76	74	73	72	72	71	67	48	48	⁴ 58	56
Average minutes per day	-	-	25	25	26	26	26	26	26	26	27	29	29
Paid funeral leave	-	-	-	-	-	88	88	85	84	80	47	56	63
Average days per occurrence	-	-	-	-	-	3.2	3.2	3.2	3.3	3.3	2.9	3.7	3.7
Paid holidays	99	99	99	99	99	98	99	96	97	92	84	81	74
Average days per year	10.1	10.2	10.0	9.8	9.8	10.1	10.0	9.4	9.2	10.2	9.5	10.9	13.6
Paid personal leave	20	23	24	25	23	26	25	24	22	21	11	38	39
Average days per year	-	-	3.8	3.7	3.6	3.7	3.7	3.3	3.1	3.3	2.8	2.7	2.9
Paid vacations	100	99	99	100	99	99	100	98	97	96	88	72	67
Paid sick leave	62	65	67	67	67	67	70	69	68	67	47	97	95
Unpaid maternity leave	-	-	-	-	-	-	-	33	37	37	17	57	51
Unpaid paternity leave	-	-	-	-	-	-	-	16	18	26	8	30	33
Insurance plans													
Participants in medical care plans	97	97	97	96	97	96	95	90	92	83	69	93	93
Participants with coverage for:													
Home health care	-	-	-	37	46	56	66	76	75	81	79	76	82
Extended care facilities	58	60	62	58	62	67	70	79	80	80	83	78	79
Mental health care	98	99	99	99	99	99	99	98	97	98	98	98	99
Alcohol abuse treatment	-	-	50	53	61	68	70	80	97	97	97	87	99
Drug abuse treatment	-	-	37	43	52	61	66	74	96	96	94	86	98
Participants with employee contribution required for:													
Self coverage	26	27	27	33	36	36	43	44	47	51	42	35	38
Average monthly contribution	-	-	-	\$10.13	\$11.93	\$12.05	\$12.80	\$19.29	\$25.31	\$26.60	\$25.13	\$15.74	\$25.53
Family coverage	46	49	51	54	58	56	63	64	66	69	67	71	65
Average monthly contribution ⁵	-	-	-	\$32.51	\$35.93	\$38.33	\$41.40	\$60.07	\$72.10	\$96.97	\$109.34	\$71.89	\$117.59
Participants in life insurance plans	96	96	96	96	96	96	96	92	94	94	64	85	88
Participants with:													
Accidental death and dismemberment insurance	69	72	72	72	74	73	72	76	71	71	78	67	67
Survivor income benefits	-	-	-	-	-	13	10	8	7	6	1	1	1
Retiree protection available	-	64	64	66	64	62	59	49	42	44	19	55	45
Participants in long-term disability insurance plans	40	41	43	45	47	48	48	42	45	40	19	31	27
Participants in sickness and accident insurance plans	54	50	51	49	51	52	49	46	43	45	26	14	21
Retirement plans													
Participants in defined benefit pension plans ⁶	84	84	84	82	82	80	76	63	63	59	20	93	90
Participants with:													
Normal retirement prior to age 65	55	56	58	64	63	67	64	59	62	55	54	92	89
Early retirement available	98	98	97	97	97	97	98	98	97	98	95	90	88
Ad hoc pension increase in last 5 years	-	-	-	51	47	41	35	26	22	7	7	33	16
Terminal earnings formula	53	50	52	54	54	57	57	55	64	56	58	100	100
Benefit coordinated with Social Security	45	43	45	55	56	61	62	62	63	54	49	18	8
Participants in defined contribution plans	-	-	-	-	-	⁷ 53	⁷ 60	45	48	48	31	9	9
Participants in plans with tax-deferred savings arrangements	-	-	-	-	-	26	33	36	41	44	17	28	45
Other benefits													
Employees eligible for:													
Flexible benefits plans	-	-	-	-	-	-	2	5	9	10	1	5	5
Reimbursement accounts	-	-	-	-	-	-	5	12	23	36	8	5	31

¹ From 1979 to 1986, data were collected in private sector establishments with a minimum employment varying from 50 to 250 employees, depending upon industry. In addition, coverage in service industries was limited. Beginning in 1988, data were collected in all private sector establishments employing 100 workers or more in all industries.

² Includes private sector establishments with fewer than 100 workers.

³ In 1987, coverage excluded local governments employing fewer than 50 workers. In 1990, coverage included all State and local governments.

⁴ Data exclude college teachers.

⁵ Data for 1983 refer to the average monthly employee contribution for dependent coverage, excluding the employee. Beginning in 1984, data refer

to the average monthly employee contribution for family coverage, which includes the employee.

⁶ Prior to 1985, data on participation in defined benefit pension plans included a small percentage of workers participating in money purchase pension plans. Beginning in 1985, these workers were classified as participating in defined contribution plans.

⁷ Includes employees who participated in Payroll-based Employee Stock Ownership Plans. Beginning in 1987, these plans were no longer available.

NOTE: Dash indicates data were not collected in this year.

26. Specified compensation and wage rate changes from contract settlements, and wage rate changes under all agreements, private industry collective bargaining agreements covering 1,000 workers or more (in percent)

Measure	Annual average		Quarterly average							
	1991	1992	1992			1993				1994
			II	III	IV	I	II	III	IV		^{P}
Rate changes under settlements:										
Specified total compensation changes, settlements covering 5,000 workers or more:										
First year of contract	4.1	3.0	3.6	3.3	1.4	3.1	3.2	1.0	3.8	3.0
Annual average over life of contract	3.4	3.1	3.6	3.0	2.7	3.2	2.6	1.4	2.5	2.6
Specified wage changes, settlements covering 1,000 workers or more:										
First year of contract	3.6	2.7	2.8	2.9	1.8	2.5	2.5	1.1	2.8	3.2
Annual average over life of contract	3.2	3.0	3.0	3.1	2.6	2.7	2.5	1.7	2.0	2.5
Wage rate changes under all agreements:										
Average wage change ¹	3.6	3.1	1.0	1.0	.4	.5	.9	.8	.7	.4
Source:										
Current settlements	1.1	.8	.2	.3	.2	.1	.2	.1	.5	.1
Prior settlements	1.9	1.9	.7	.6	.2	.3	.7	.6	.2	.3
COLA provisions .....	.5	.4	.1	.1	.1	.1	.1	(²)	(²)	(²)

¹ Because of rounding, total may not equal sum of parts.

² Between -0.05 and 0.05 percent.

^P = preliminary.

27. Specified compensation and wage rate changes from contract settlements, and wage rate changes under all agreements, private industry collective bargaining agreements covering 1,000 workers or more during 4-quarter periods (in percent)

Measure	Average for four quarters ending--							
	1992			1993				1994
	II	III	IV	I	II	III	IV	^P
Rate changes under settlements:								
Specified total compensation changes, settlements covering 5,000 workers or more, all industries:								
First year of contract	3.6	3.5	3.0	3.0	2.9	2.1	3.0	3.0
Annual average over life of contract	3.2	3.2	3.1	3.1	2.9	2.4	2.4	2.3
Specified wage changes, settlements covering 1,000 workers or more:								
All industries:								
First year of contract	3.2	3.1	2.7	2.6	2.5	2.0	2.3	2.4
Contracts with COLA clauses	3.0	3.1	2.7	2.8	2.7	2.5	2.8	2.7
Contracts without COLA clauses	3.2	3.1	2.7	2.6	2.5	1.8	2.1	2.3
Contracts with either lump sums, COLA, or both	3.1	3.1	2.8	2.7	2.6	2.3	2.6	2.6
Contracts with neither lump sums nor COLA	3.2	3.1	2.6	2.6	2.5	1.7	2.0	2.1
Annual average over life of contract	3.1	3.1	3.0	2.9	2.7	2.3	2.1	2.1
Contracts with COLA clauses	2.6	2.6	2.5	2.6	2.5	2.1	1.4	1.0
Contracts without COLA clauses	3.2	3.2	3.1	3.0	2.8	2.4	2.5	2.5
Contracts with either lump sums, COLA, or both	2.8	3.0	2.9	2.8	2.7	2.1	1.9	1.8
Contracts with neither lump sums nor COLA	3.2	3.1	3.0	3.0	2.8	2.5	2.5	2.5
Manufacturing:								
First year of contract	3.1	3.0	2.6	2.9	2.8	2.5	2.7	2.5
Contracts with COLA clauses	2.7	2.2	1.6	2.4	2.4	2.6	2.9	2.7
Contracts without COLA clauses	3.7	3.6	3.4	3.3	3.0	2.5	2.3	1.9
Contracts with either lump sums, COLA, or both	3.0	2.7	1.9	2.4	2.3	2.3	2.7	2.4
Contracts with neither lump sums nor COLA	3.4	3.4	3.4	3.4	3.3	3.1	2.9	2.7
Annual average over life of contract	2.7	2.7	2.6	2.8	2.6	2.1	1.5	1.2
Contracts with COLA clauses	2.1	1.8	1.9	2.5	2.3	1.9	1.3	1.0
Contracts without COLA clauses	3.3	3.3	3.2	3.0	2.8	2.5	2.1	1.9
Contracts with either lump sums, COLA, or both	2.4	2.3	2.0	2.4	2.2	1.8	1.3	1.0
Contracts with neither lump sums nor COLA	3.1	3.1	3.2	3.2	3.0	2.9	2.5	2.3
Nonmanufacturing:								
First year of contract	3.2	3.1	2.7	2.6	2.5	1.7	2.1	2.3
Contracts with COLA clauses	3.8	3.8	3.6	3.1	3.0	2.5	1.8	1.9
Contracts without COLA clauses	3.2	3.0	2.6	2.4	2.4	1.6	2.1	2.3
Contracts with either lump sums, COLA, or both	3.3	3.2	3.2	2.8	2.7	2.3	2.4	2.8
Contracts with neither lump sums nor COLA	3.2	3.0	2.5	2.4	2.4	1.5	1.8	2.0
Annual average over life of contract	3.2	3.2	3.0	2.9	2.8	2.4	2.5	2.6
Contracts with COLA clauses	3.7	3.3	3.0	2.8	2.7	2.7	2.3	2.5
Contracts without COLA clauses	3.2	3.2	3.0	3.0	2.8	2.4	2.6	2.6
Contracts with either lump sums, COLA, or both	3.1	3.3	3.2	3.0	2.9	2.5	2.6	2.7
Contracts with neither lump sums nor COLA	3.3	3.1	3.0	2.9	2.7	2.4	2.5	2.5
Construction:								
First year of contract	2.3	2.0	2.0	1.9	1.8	2.0	2.1	2.4
Annual average over life of contract	2.7	2.5	2.4	2.5	2.4	2.4	2.6	2.7
Wage rate changes under all agreements:								
Average wage change ¹	3.4	3.2	3.1	3.0	2.9	2.6	3.0	2.9
Source:								
Current settlements .....	.9	.9	.8	.8	.7	.6	.9	.8
Prior settlements	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.8
COLA provisions .....	.4	.4	.4	.4	.4	.3	.2	.2

¹ Because of rounding, total may not equal sum of parts.

^P = preliminary.

Current Labor Statistics: Compensation & Industrial Relations

28. Specified changes in the cost of compensation and components annualized over the life of the contract in private industry collective bargaining settlements covering 5,000 workers or more, by quarter, and during 4-quarter periods (in percent)

Measure	1992			1993				1994
	II	III	IV	I	II	III	IV	I ^P
	Quarterly average							
All industries:								
Compensation	2.3	2.3	1.2	1.9	1.8	0.9	1.8	2.0
Cash payments	2.1	2.1	1.1	1.4	1.7	.8	1.4	1.9
Wages	2.1	2.0	1.3	1.6	1.7	.7	1.4	1.7
Benefits	2.7	2.8	1.4	2.7	1.8	1.1	2.4	2.2
Average for four quarters								
All industries:								
Compensation	2.2	2.3	2.1	2.0	1.9	1.4	1.6	1.6
Cash payments	2.2	2.1	1.9	1.8	1.7	1.2	1.3	1.3
Wages	2.0	2.0	1.9	1.9	1.8	1.3	1.3	1.3
Benefits	2.2	2.6	2.6	2.5	2.3	1.7	2.1	2.0
With contingent pay provisions:								
Compensation	1.8	2.1	2.1	2.1	2.0	1.4	1.5	1.4
Cash payments	1.8	2.1	2.0	1.9	1.7	1.2	1.2	1.2
Wages	1.9	2.0	2.0	2.0	1.9	1.4	1.4	1.3
Benefits	1.8	2.0	2.3	2.5	2.5	1.8	2.0	1.8
Without contingent pay provisions:								
Compensation	2.4	2.3	2.2	2.0	1.9	1.4	1.7	1.8
Cash payments	2.3	2.1	1.9	1.8	1.7	1.3	1.4	1.6
Wages	2.1	2.0	1.9	1.8	1.7	1.2	1.3	1.4
Benefits	2.4	2.9	2.7	2.5	2.3	1.6	2.1	2.2
Manufacturing:								
Compensation	1.8	2.0	2.1	2.1	1.8	1.1	1.2	1.1
Cash payments	1.8	1.8	1.5	1.6	1.3	1.0	.8	.7
Wages	1.8	1.6	1.7	2.0	1.7	1.2	1.1	.9
Benefits	2.0	2.5	3.4	3.3	2.7	1.4	1.6	1.5
Nonmanufacturing:								
Compensation	2.4	2.3	2.1	2.0	2.0	1.5	1.9	2.0
Cash payments	2.3	2.1	2.0	1.9	1.8	1.3	1.6	1.8
Wages	2.1	2.1	1.9	1.8	1.8	1.3	1.5	1.6
Benefits	2.3	2.6	2.5	2.4	2.2	1.8	2.4	2.4
Goods-producing:								
Compensation	2.0	1.8	1.9	1.9	1.9	1.6	1.4	1.4
Cash payments	1.9	1.7	1.5	1.5	1.6	1.4	1.1	1.2
Wages	1.9	1.6	1.6	1.8	1.8	1.5	1.2	1.2
Benefits	2.2	2.4	2.8	2.9	2.7	2.1	1.9	1.8
Service-producing:								
Compensation	2.3	2.4	2.2	2.1	2.0	1.2	1.8	1.8
Cash payments	2.3	2.3	2.1	1.9	1.8	1.1	1.5	1.6
Wages	2.1	2.2	2.0	1.9	1.8	1.0	1.5	1.5
Benefits	2.2	2.7	2.5	2.4	2.2	1.3	2.3	2.3

p = preliminary.

29. Specified compensation and wage rate changes from contract settlements, and wage rate changes under all agreements, State and local government collective bargaining agreements covering 1,000 workers or more (in percent)

Measure	Annual average		
	1991	1992	1993
Changes under settlements:			
Total compensation ¹ changes, ² settlements covering 5,000 workers or more:			
First year of contract	1.7	0.6	0.9
Annual average over life of contract	2.7	1.9	1.9
Wage changes, settlements covering 1,000 workers or more:			
First year of contract	2.2	1.1	1.1
Annual average over life of contract	2.7	2.1	2.1
Wage changes under all agreements:			
Average wage change ³	2.6	1.9	2.7
Source:			
Current settlements .....	.6	.8	1.5
Prior settlements	1.8	1.1	1.1
COLA provisions .....	.1	(⁴)	(⁴)

¹ Compensation includes wages, salaries, and employers' cost of employee benefits when contract is negotiated.
² Changes are the net result of increases, decreases, and zero change in

compensation or wages.
³ Because of rounding, total may not equal sum of parts.
⁴ Less than 0.05 percent.

30. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1993									1994			
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. ^P	Feb. ^P	Mar. ^P	Apr. ^P	
Number of stoppages:															
Beginning in period	35	35	5	2	4	4	3	3	3	0	1	2	3	5	
In effect during period	41	36	7	7	8	7	7	8	7	3	1	2	3	5	
Workers involved:															
Beginning in period (in thousands)	36.4	18.2	35.2	3.7	7.0	6.7	13.4	12.7	34.6	.0	2.5	41.1	16.8	102.5	
In effect during period (in thousands)	388.0	18.4	37.8	22.3	28.6	26.7	35.8	37.3	58.4	18.4	2.5	41.1	16.8	102.5	
Days idle:															
Number (in thousands)	398.9	398.1	393.2	408.6	464.6	530.3	505.8	510.5	505.6	240.0	12.5	46.6	34.6	1,532.8	
Percent of estimated working time ¹ .....	.01	.01	.01	.01	.01	.02	.02	.01	.01	.01	(²)	(²)	(²)	.02

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' measure of strike idleness," *Monthly Labor Re-*

view, October 1968, pp. 54-56.
² Less than 0.005 percent.
^P = preliminary.

31. 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		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS:																
All items	140.3	144.5	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	146.2	146.7	147.2	147.4	147.5	
All items (1967 = 100)	420.3	432.7	432.0	432.4	432.6	433.9	434.7	436.4	436.9	436.8	437.8	439.3	441.1	441.4	441.9	
Food and beverages	138.7	141.6	141.8	141.1	141.1	141.5	141.8	142.3	142.6	143.3	144.3	143.6	143.9	144.0	144.1	
Food	137.9	140.9	141.1	140.4	140.3	140.8	141.1	141.6	141.9	142.7	143.7	142.9	143.2	143.4	143.5	
Food at home	136.8	140.1	140.7	139.3	139.1	139.7	140.0	140.8	141.2	142.3	143.8	142.6	142.8	143.0	143.0	
Cereals and bakery products	151.5	156.6	156.3	156.7	157.2	157.5	157.7	158.1	157.9	158.9	160.3	161.3	160.4	162.5	162.3	
Meats, poultry, fish, and eggs	130.9	135.5	135.1	135.3	135.4	136.0	135.8	136.6	137.3	137.1	137.8	137.4	137.9	137.6	137.1	
Dairy products	128.5	129.4	128.0	129.8	130.2	130.5	129.6	129.5	129.5	130.2	131.6	131.8	131.8	131.8	132.0	
Fruits and vegetables	155.4	159.0	164.5	154.2	152.0	154.2	157.1	158.7	160.4	166.5	169.8	161.7	162.7	161.8	163.2	
Other foods at home	128.8	130.5	130.5	130.3	130.6	130.6	130.4	131.4	131.0	130.9	132.2	132.5	132.6	133.0	132.8	
Sugar and sweets	133.1	133.4	133.4	133.1	133.2	133.7	133.3	134.1	133.7	133.3	134.9	135.6	135.3	135.9	135.5	
Fats and oils	129.8	130.0	129.4	130.1	130.4	130.1	130.0	129.2	129.4	131.3	131.5	132.6	133.2	133.4		
Nonalcoholic beverages	114.3	114.6	115.0	114.6	114.4	114.1	113.8	115.4	114.8	111.6	116.0	116.0	115.5	115.6		
Other prepared foods	140.1	143.7	143.7	143.3	144.1	144.3	144.2	145.1	144.4	144.9	145.8	146.5	146.4	147.5	147.0	
Food away from home	140.7	143.2	142.9	143.2	143.4	143.6	143.8	144.0	144.2	144.3	144.5	144.6	144.8	145.1	145.3	
Alcoholic beverages	147.3	149.6	149.5	149.6	149.6	149.7	149.9	150.1	150.0	150.3	151.0	151.1	151.4	151.6	151.5	
Housing	137.5	141.2	140.5	141.5	141.9	142.3	142.3	142.2	142.0	142.3	142.9	143.7	144.1	143.9	144.1	
Shelter	151.2	155.7	154.9	155.7	156.3	156.8	156.6	156.8	156.7	157.1	158.1	159.1	159.8	159.6	159.6	
Renters' costs (12/82 = 100)	160.9	165.0	164.2	165.2	166.6	167.3	165.3	165.4	164.4	166.8	168.9	170.1	169.1	168.5		
Rent, residential	146.9	150.3	149.9	150.3	150.4	150.8	151.0	151.4	151.6	151.9	152.2	152.8	153.2	153.3		
Other renters' costs	184.8	190.3	188.4	191.1	197.3	198.0	189.1	188.7	183.8	183.3	191.6	198.4	201.9	197.3		
Homeowners' costs (12/82 = 100)	155.3	160.2	159.4	160.1	160.3	160.8	161.4	161.6	162.0	162.5	162.9	163.7	164.1	164.2		
Owners' equivalent rent (12/82 = 100)	155.5	160.5	159.7	160.4	160.6	161.1	161.6	161.9	162.3	162.8	163.2	164.0	164.4	164.8		
Household insurance (12/82 = 100)	142.2	146.9	145.5	146.6	147.4	148.0	148.7	148.9	149.2	149.2	149.4	150.0	150.1	150.8		
Maintenance and repairs	128.6	130.6	131.6	131.2	131.3	131.6	131.3	130.8	127.9	127.6	128.9	129.4	129.3	130.2		
Maintenance and repair services	133.1	135.0	135.4	136.0	136.2	136.5	137.4	136.4	130.2	130.8	131.3	131.2	131.8	133.3		
Maintenance and repair commodities	122.4	124.6	126.6	124.8	124.7	124.9	122.8	123.1	124.9	123.5	125.9	127.1	126.1	126.3		
Fuel and other utilities	117.8	121.3	120.5	122.9	123.2	123.3	123.9	122.4	121.2	121.7	121.6	122.4	122.4	121.6		
Fuels	108.1	111.2	110.3	114.1	114.2	114.1	114.8	112.1	110.1	110.7	110.6	111.1	111.1	109.8		
Fuel oil, coal, and bottled gas	90.7	90.3	91.3	90.4	89.1	87.8	87.9	89.1	89.4	88.3	88.9	93.6	92.5	90.2		
Gas (piped) and electricity	114.8	118.5	117.3	122.0	122.2	123.1	119.7	117.3	118.1	118.0	117.9	118.1	116.9	118.0		
Other utilities and public services	142.5	147.0	146.3	146.5	147.1	147.8	148.1	148.4	148.6	148.8	148.9	150.0	150.1	150.0		
Household furnishings and operations	118.0	119.3	119.1	119.1	118.8	119.2	119.6	120.0	120.3	120.3	120.5	120.4	120.6	120.6		
Housefurnishings	109.0	109.5	109.3	109.1	109.0	109.5	109.7	110.0	110.4	110.3	110.7	110.5	110.5	110.7		
Housekeeping supplies	129.6	130.7	131.3	131.3	129.7	129.2	130.7	131.8	131.9	131.9	131.5	131.7	132.3	131.5		
Housekeeping services	132.1	135.8	135.1	135.6	135.8	136.5	136.9	137.0	137.1	137.2	137.4	137.6	137.8	137.9		
Apparel and upkeep	131.9	133.7	135.0	131.9	129.4	131.9	134.6	136.1	136.2	136.2	132.4	132.4	136.1	136.4	135.6	
Apparel commodities	129.4	131.0	132.5	129.1	126.4	129.0	132.0	133.5	133.5	129.7	127.3	129.5	133.4	133.7	132.8	
Men's and boys' apparel	126.5	127.5	128.5	126.5	124.9	126.0	127.8	129.4	130.8	127.5	124.2	124.1	125.6	126.9		
Women's and girls' apparel	130.4	132.6	134.5	129.1	125.0	130.0	134.2	136.0	135.5	130.6	127.0	131.1	137.2	137.4		
Infants' and toddlers' apparel	129.3	127.1	127.7	128.1	126.7	128.4	126.5	126.3	127.5	127.1	125.6	125.5	125.8	128.0		
Footwear	125.0	125.9	127.8	125.6	123.9	123.5	126.2	127.3	127.4	125.8	125.9	127.0	128.0	128.5		
Other apparel commodities	142.6	145.6	146.3	145.2	143.8	144.4	147.3	149.0	146.6	140.5	142.5	146.4	152.9	149.0		
Apparel services	147.9	151.7	150.9	151.3	151.7	152.0	152.4	152.9	153.6	153.8	153.8	154.0	154.2	154.8		
Transportation	126.5	130.4	130.2	130.3	130.3	130.2	130.1	131.8	132.6	132.1	131.6	131.9	132.2	132.6	132.8	
Private transportation	124.6	127.5	127.5	127.6	127.4	127.3	127.1	129.0	129.5	128.6	128.2	128.5	128.6	129.2		
New vehicles	129.2	132.7	132.4	132.2	132.2	132.2	132.1	133.4	134.8	135.6	136.1	136.5	136.8	136.9		
New cars	128.4	131.5	131.3	131.0	130.9	130.8	130.6	131.9	133.4	134.2	134.7	135.0	135.3	135.4		
Used cars	123.2	133.9	131.5	134.3	136.1	137.5	138.7	139.8	140.7	139.3	136.8	134.1	133.6	135.3		
Motor fuel	99.0	98.0	99.7	99.8	98.1	97.0	96.1	99.7	98.4	94.8	92.6	93.6	93.3	94.8		
Gasoline	99.0	97.7	99.6	99.6	98.0	96.9	95.9	99.2	97.8	94.2	92.1	93.0	92.7	94.3		
Maintenance and repair	141.3	145.9	145.4	145.8	146.2	146.2	146.8	147.1	147.4	147.7	148.1	148.6	149.0	149.4		
Other private transportation	153.2	156.8	156.1	155.8	156.0	156.4	156.1	157.8	159.1	159.0	159.5	159.7	160.2	160.8		
Other private transportation commodities	104.8	103.4	103.5	102.9	102.9	102.7	103.0	102.8	102.7	103.3	103.5	103.4	103.5	103.4		
Other private transportation services	164.2	169.1	168.2	167.9	168.2	168.7	168.3	170.5	172.1	171.8	172.4	172.8	173.3	173.6		
Public transportation	151.4	167.0	165.5	164.5	167.7	168.1	168.4	168.2	173.0	176.5	175.3	175.9	178.5	176.5		
Medical care	190.1	201.4	200.5	201.1	202.2	202.9	203.3	204.4	204.9	205.2	206.4	207.7	208.3	209.2	209.7	
Medical care commodities	188.1	195.0	194.2	194.7	195.7	196.1	196.2	196.6	196.6	197.0	197.8	198.7	199.1	199.7		
Medical care services	190.5	202.9	202.0	202.6	203.8	204.5	205.0	206.2	206.8	207.1	208.4	209.8	210.4	211.4		
Professional services	175.8	184.7	184.4	184.8	185.4	185.9	186.3	186.8	187.1	187.4	188.3	189.4	190.3	191.4		
Hospital and related services	214.0	231.9	230.0	230.9	232.8	234.0	234.6	236.8	238.1	238.2	240.1	241.8	242.0	242.6		
Entertainment	142.3	145.8	145.0	145.5	145.3	145.8	146.6	147.3	147.7	147.8	148.5	149.1	149.6	149.7		
Entertainment commodities	131.3	133.4	133.0	133.2	133.1	133.3	133.6	134.3	134.3	134.4	134.7	134.5	135.2	135.7		
Entertainment services	155.9	160.8	159.6	160.4	160.2	160.9	162.1	162.9	163.7	163.9	165.0	166.4	166.6	166.5		
Other goods and services	183.3	192.9	193.2	193.1	193.7	193.4	193.1	193.4	193.8	194.2	195.1	195.2	195.5	196.4	197.1	
Tobacco																

31. 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		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
All items	140.3	144.5	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	146.2	146.7	147.2	147.4	147.5	
Commodities	129.1	131.5	132.0	131.4	130.9	131.1	131.3	132.3	132.5	132.0	132.0	132.2	132.8	133.1	133.4	
Food and beverages	138.7	141.6	141.8	141.1	141.1	141.5	141.8	142.3	142.6	143.3	144.3	143.6	143.9	144.0	144.1	
Commodities less food and beverages	123.2	125.3	126.0	125.3	124.5	124.7	124.9	126.1	126.3	125.1	124.5	125.1	126.0	126.4	126.8	
Nondurables less food and beverages	126.5	128.1	129.6	128.4	127.0	127.1	127.3	128.8	128.6	126.5	125.4	126.5	127.8	128.3	128.5	
Apparel commodities	129.4	131.0	132.5	129.1	126.4	129.0	132.0	133.5	133.5	129.7	127.3	129.5	133.4	133.7	132.8	
Nondurables less food, beverages, and apparel	127.9	129.6	131.1	131.0	130.2	129.1	127.8	129.3	129.0	127.7	127.3	127.8	127.9	128.5	129.3	
Durables	118.6	121.3	120.8	121.0	121.1	121.3	121.5	122.3	123.1	123.3	123.4	123.3	123.4	123.7	124.4	
Services	152.0	157.9	156.9	157.8	158.4	159.0	159.3	159.5	159.6	160.0	160.7	161.5	162.1	162.0	162.0	
Rent of shelter (12/82=100)	157.3	162.0	161.2	162.0	162.6	163.1	162.9	163.1	163.1	163.5	164.5	165.6	166.3	166.1	166.0	
Household services less rent of shelter (12/82=100)	130.2	134.2	133.3	135.7	136.0	136.4	137.0	135.6	134.5	134.9	134.9	135.3	135.5	135.0	135.7	
Transportation services	155.7	162.9	161.9	161.7	162.7	163.0	163.0	164.2	166.2	166.9	167.1	167.5	168.5	168.2	167.1	
Medical care services	190.5	202.9	202.0	202.6	203.8	204.5	205.0	206.2	206.8	207.1	208.4	209.8	210.4	211.4	212.0	
Other services	168.5	177.0	175.1	175.6	176.0	177.4	180.0	180.8	181.3	181.6	182.3	182.9	183.2	183.8	183.9	
Special indexes:																
All items less food	140.8	145.1	144.8	145.1	145.2	145.6	145.9	146.4	146.6	146.4	146.6	147.3	148.0	148.1	148.3	
All items less shelter	137.3	141.4	141.3	141.2	141.1	141.5	142.0	142.6	142.9	142.7	142.9	143.2	143.7	144.0	144.2	
All items less homeowners' costs (12/82=100)	141.9	146.0	145.8	145.9	145.9	146.3	146.5	147.2	147.3	147.2	147.5	148.0	148.6	148.7	148.9	
All items less medical care	137.5	141.2	141.0	141.1	141.1	141.6	141.8	142.3	142.5	142.5	142.8	143.2	143.8	143.9	144.0	
Commodities less food	124.2	126.3	126.9	126.3	125.5	125.7	125.9	127.1	127.3	126.1	125.6	126.2	127.0	127.4	127.8	
Nondurables less food	127.6	129.3	130.6	129.5	128.2	128.4	128.6	129.9	129.8	127.8	126.9	127.9	129.1	129.6	129.8	
Nondurables less food and apparel	128.9	130.7	132.0	131.9	131.2	130.3	129.2	130.5	130.2	129.1	128.8	129.3	129.4	130.0	130.6	
Nondurables	132.8	135.1	135.9	135.0	134.2	134.5	134.7	135.8	135.8	135.1	135.0	135.2	136.0	136.4	136.5	
Services less rent of shelter (12/82=100)	157.6	164.8	163.6	164.7	165.4	166.0	167.0	167.1	167.4	167.8	168.2	168.9	169.3	169.4	169.5	
Services less medical care	148.4	153.6	152.6	153.6	154.1	154.7	155.0	155.1	155.2	155.6	156.2	157.0	157.5	157.4	157.4	
Energy	103.0	104.2	104.4	106.5	105.8	105.2	105.2	105.4	103.7	102.4	101.3	102.0	101.9	102.0	102.9	
All items less energy	145.4	150.0	149.6	149.6	149.7	150.3	150.6	151.2	151.5	151.7	152.2	152.6	153.3	153.4	153.5	
All items less food and energy	147.3	152.2	151.7	151.8	152.0	152.6	152.9	153.5	153.9	153.9	154.3	155.0	155.8	155.9	156.0	
Commodities less food and energy	132.5	135.2	135.7	134.9	134.4	134.8	135.1	136.0	136.4	135.7	135.4	135.8	136.9	137.2	137.5	
Energy commodities	98.3	97.3	98.9	98.9	97.3	96.2	95.4	98.7	97.6	94.3	92.4	93.8	93.4	94.5	95.4	
Services less energy	155.9	161.9	161.0	161.5	162.2	162.8	163.1	163.6	163.9	164.3	165.1	166.0	166.6	166.6	166.6	
Purchasing power of the consumer dollar:																
1982-84=\$1.00	71.3	69.2	69.3	69.3	69.2	69.0	68.9	68.6	68.6	68.6	68.4	68.2	67.9	67.9	67.8	
1967=\$1.00	23.8	23.1	23.2	23.1	23.1	23.0	23.0	22.9	22.9	22.9	22.8	22.8	22.7	22.7	22.6	
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS:																
All items	138.2	142.1	141.9	142.0	142.1	142.4	142.6	143.3	143.4	143.3	143.6	144.0	144.4	144.7	144.9	
All items (1967=100)	411.5	423.1	422.6	423.1	423.2	424.2	424.9	426.7	427.1	426.8	427.7	428.8	430.2	430.9	431.7	
Food and beverages	138.3	141.2	141.4	140.8	140.8	141.2	141.5	142.0	142.2	142.9	143.8	143.2	143.4	143.6	143.7	
Food	137.5	140.5	140.7	140.1	140.1	140.5	140.8	141.3	141.6	142.2	143.3	142.5	142.8	143.0	143.1	
Food at home	136.4	139.6	140.1	138.9	138.8	139.4	139.7	140.4	140.7	141.7	143.2	142.0	142.3	142.4	142.4	
Cereals and bakery products	151.3	156.3	156.1	156.4	156.9	157.2	157.4	157.7	157.7	158.6	159.9	160.0	160.2	162.2	162.0	
Meats, poultry, fish, and eggs	130.8	135.4	135.0	135.3	135.5	135.9	135.8	136.5	137.2	136.9	137.7	137.2	137.8	137.4	137.0	
Dairy products	128.2	129.1	127.7	129.5	130.0	130.3	129.4	129.2	129.3	130.0	131.4	131.6	131.6	131.6	131.7	
Fruits and vegetables	154.8	158.2	163.7	153.8	151.4	153.7	156.9	158.5	159.6	165.4	168.8	161.0	161.7	160.9	162.3	
Other foods at home	128.8	130.4	130.5	130.2	130.5	130.6	130.3	131.3	131.0	130.8	132.2	132.4	132.5	132.9	132.7	
Sugar and sweets	132.8	133.1	133.1	132.9	133.0	133.5	133.1	133.8	133.5	133.1	134.9	135.6	135.2	135.8	135.4	
Fats and oils	129.7	129.9	129.3	130.0	130.4	130.1	130.0	129.9	129.2	129.3	131.3	131.5	132.5	133.2	133.4	
Nonalcoholic beverages	114.6	115.1	115.5	115.0	114.8	114.6	114.2	115.9	116.0	115.1	116.6	116.3	116.4	115.9	116.1	
Other prepared foods	140.0	143.5	143.5	143.2	143.9	144.1	144.0	144.8	144.2	144.7	145.6	146.1	146.1	147.3	146.7	
Food away from home	140.6	143.1	142.8	143.1	143.3	143.4	143.6	143.8	144.0	144.1	144.3	144.4	144.6	144.9	145.2	
Alcoholic beverages	147.0	149.3	149.2	149.4	149.3	149.4	149.6	149.8	149.7	150.0	150.5	150.6	150.9	151.0	150.9	
Housing	135.0	138.5	137.9	138.8	139.1	139.5	139.7	139.6	139.4	139.7	140.2	140.9	141.3	141.1	141.3	
Shelter	147.2	151.6	150.8	151.5	152.0	152.4	152.7	152.7	152.7	153.1	153.9	154.8	155.3	155.3	155.3	
Renters' costs (12/84=100)	141.3	144.7	144.0	144.7	145.8	146.2	145.1	145.3	144.8	144.9	146.4	147.8	148.5	148.0	147.7	
Rent, residential	146.5	150.0	149.5	150.0	150.1	150.4	150.7	151.1	151.3	151.6	151.9	152.5	152.8	153.0	153.0	
Other renters' costs	185.3	190.2	188.3	190.7	197.6	198.2	189.1	188.8	183.7	183.3	192.0	198.4	201.4	197.3	194.9	
Homeowners' costs (12/84=100)	141.5	146.1	145.3	145.9	146.1	146.6	147.1	147.4	147.7	148.2	148.6	149.2	149.6	149.8	150.0	
Owners' equivalent rent (12/84=100)	141.8	146.3	145.5	146.2	146.3	146.8	147.3	147.6	147.9	148.4	148.8	149.5	149.9	150.0	150.2	
Household insurance (12/84=100)	130.2	134.4	133.2	134.3	134.9	135.5	136.1	136.3	136.5	136.4	136.5	136.7	137.3	137.3	138.1	
Maintenance and repairs	129.9	130.9	131.6	131.2	131.7	132.1	131.3	131.1	128.6	127.7	129.6	129.4	129.4	130.0	130.9	
Maintenance and repair services	136.8	138.6	138.4	139.5	139.7	140.1	141.4	140.4	133.5	134.0	134.9	134.8	135.3	136.6	138.8	
Maintenance and repair commodities	120.4	120.7	122.3	120.3	121.2	121.6	118.4	119.1	121.4	119.0	121.8	121.7	121.0	120.9	120.6	
Fuel and other utilities	117.5	121.1	120.3	122.8	123.0	123.2	123.8	122.2	121.0	121.5	121.5	122.1	122.1	121.4	121.9	
Fuels	107.5	110.7	109.8	113.8	113.8	113.7	114.5	111.6	109.5	110.2	110.1	110.5	110.5	109.3	110.0	
Fuel oil, coal, and bottled gas	90.6	90.2	91.2	90.3	89.1	87.8	87.8	89.1	89.3	88.2	88.9	93.6	92.3	90.1	88.6	
Gas (piped) and electricity	114.3	118.0	116.8	121.6	121.8	121.8	122.7	119.2	116.7	117.7	117.5	117.4	117.5	116.4	117.4	
Other utilities and public services	143.1	147.7	146.9	147.2	147.8	148.5	148.8	14								

Current Labor Statistics: Price Data

31. 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		1993									1994				
	1992	1993	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
Apparel and upkeep	130.7	132.4	133.6	130.7	128.4	130.5	133.3	135.1	135.0	131.3	129.4	131.4	134.7	135.0	134.3	
Apparel commodities	128.3	129.8	131.1	128.1	125.6	127.8	130.7	132.6	132.5	128.5	126.5	128.6	132.1	132.4	131.6	
Men's and boys' apparel	125.6	126.8	127.6	125.8	124.0	125.2	127.2	128.7	130.1	127.0	124.1	124.0	124.9	126.0	126.5	
Women's and girls' apparel	128.9	130.4	132.3	127.0	123.2	127.5	131.3	134.4	133.9	128.4	125.1	129.5	135.2	135.0	132.7	
Infants' and toddlers' apparel	131.6	128.9	129.4	129.6	128.5	129.8	127.8	127.6	128.6	128.1	126.1	126.6	126.7	128.5	126.2	
Footwear	125.4	126.5	128.3	126.2	124.6	124.3	127.1	128.2	128.3	126.6	126.9	127.0	128.1	129.0	129.5	
Other apparel commodities	140.4	145.4	145.4	145.6	145.2	145.4	149.8	149.7	145.4	140.1	142.9	145.0	152.2	150.1	151.3	
Apparel services	147.6	151.2	150.5	150.8	151.2	151.4	151.9	152.4	153.2	153.4	153.4	153.5	153.7	154.2	154.5	
Transportation	125.8	129.4	129.2	129.5	129.4	129.4	129.2	131.0	131.6	130.8	130.2	130.4	130.5	131.2	131.8	
Private transportation	124.4	127.4	127.4	127.6	127.4	127.4	127.3	129.1	129.5	128.5	127.9	128.1	128.1	128.9	129.8	
New vehicles	129.6	133.3	132.8	132.8	132.7	132.8	132.9	134.1	135.4	136.2	136.6	137.1	137.4	137.6	138.0	
New cars	128.1	131.2	131.0	130.8	130.7	130.6	130.5	131.8	133.2	133.9	134.4	134.7	135.0	135.1	135.4	
Used cars	123.6	134.6	132.2	135.0	136.9	138.3	139.5	140.7	141.6	140.2	137.6	134.8	134.3	136.0	138.6	
Motor fuel	99.0	97.9	99.7	99.7	98.1	96.9	96.0	99.6	98.2	94.6	92.5	93.5	93.1	94.7	96.0	
Gasoline	99.0	97.6	99.7	99.7	97.9	96.8	95.8	99.1	97.7	94.0	92.0	93.0	92.6	94.3	95.6	
Maintenance and repair	141.8	146.5	146.1	146.5	146.9	146.9	147.4	147.8	148.0	148.3	148.8	149.3	149.7	150.1	150.5	
Other private transportation	149.9	152.9	152.2	151.9	152.1	152.3	152.1	153.7	154.9	154.9	155.3	155.5	155.7	156.0	156.6	
Other private transportation commodities	104.2	102.8	102.8	102.3	102.4	102.2	102.5	102.3	102.2	102.6	102.9	102.8	102.9	102.8	102.8	
Other private transportation services	160.9	165.0	164.2	164.0	164.2	164.6	164.2	166.2	167.8	167.6	168.2	168.4	168.7	169.0	169.8	
Public transportation	150.0	163.0	161.5	160.9	163.3	163.9	163.9	164.1	167.8	171.1	170.3	170.9	173.2	171.5	166.4	
Medical care	189.6	200.9	200.1	200.7	201.7	202.4	202.8	203.8	204.2	204.5	205.8	207.0	207.7	208.6	209.1	
Medical care commodities	186.5	193.2	192.5	193.0	193.8	194.3	194.4	194.8	194.7	195.1	195.9	196.8	197.2	197.8	198.2	
Medical care services	190.3	202.7	201.8	202.4	203.5	204.2	204.7	205.8	206.3	206.6	208.0	209.3	210.0	211.0	211.5	
Professional services	176.3	185.2	185.0	185.4	186.0	186.4	186.9	187.4	187.6	188.0	189.0	190.1	191.0	192.2	192.5	
Hospital and related services	211.5	229.2	227.3	228.2	230.2	231.2	231.8	233.9	235.0	235.1	237.2	238.9	239.1	239.7	240.5	
Entertainment	140.8	144.1	143.3	143.8	143.7	144.1	144.8	145.5	145.8	146.1	146.7	147.1	147.7	147.8	148.1	
Entertainment commodities	130.7	132.9	132.4	132.7	132.6	132.9	133.1	133.7	133.9	134.2	134.0	134.8	135.2	135.7	137.5	
Entertainment services	155.7	160.5	159.3	160.0	159.9	160.7	161.9	162.7	163.5	163.8	164.8	166.0	166.3	166.2	166.1	
Other goods and services	183.3	192.2	193.6	193.3	193.8	192.7	190.9	191.1	191.6	192.0	193.1	193.2	193.4	194.4	195.3	
Tobacco products	219.7	228.3	237.8	235.9	235.5	227.2	214.8	214.1	214.5	215.4	217.5	217.2	217.5	217.8	220.6	
Personal care	138.6	141.6	141.2	141.3	142.2	142.2	142.5	142.6	143.0	143.2	143.5	143.1	143.2	144.5	144.7	
Toilet goods and personal care appliances	137.2	139.6	139.4	139.6	140.6	140.3	140.2	140.3	140.7	141.0	141.0	140.5	140.3	142.2	142.4	
Personal care services	140.0	143.9	143.2	143.2	143.9	144.3	145.2	145.2	145.6	146.2	146.4	146.3	146.7	147.2	147.3	
Personal and educational expenses	194.3	206.9	204.3	204.9	205.6	208.0	211.5	212.5	213.0	213.3	214.1	214.7	215.0	216.3	216.6	
School books and supplies	190.6	199.2	197.5	198.0	198.2	201.3	201.1	201.8	201.9	202.3	205.1	205.8	205.8	205.8	205.9	
Personal and educational services	194.9	207.8	205.1	205.7	206.5	208.9	212.6	213.7	214.2	214.5	215.2	215.7	216.0	217.4	217.7	
All items	138.2	142.1	141.9	142.0	142.1	142.4	142.6	143.3	143.4	143.3	143.6	144.0	144.4	144.7	144.9	
Commodities	128.7	131.2	131.7	131.2	130.7	130.9	131.0	132.0	132.2	131.6	131.6	131.7	132.2	132.6	132.9	
Food and beverages	138.3	141.2	141.4	140.8	140.8	141.2	141.5	142.0	142.2	142.9	143.8	143.2	143.4	143.6	143.7	
Commodities less food and beverages	122.7	125.0	125.7	125.2	124.5	124.5	124.5	125.9	126.0	124.7	124.1	124.6	125.3	125.8	126.3	
Nondurables less food and beverages	126.2	127.7	129.4	128.3	126.9	126.7	126.5	128.3	127.9	125.7	124.7	125.7	126.9	127.5	127.9	
Apparel commodities	128.3	129.8	131.1	128.1	125.6	127.8	130.7	132.6	132.5	128.5	126.5	128.6	132.1	132.4	131.6	
Nondurables less food, beverages, and apparel	128.1	129.7	131.5	131.3	130.4	129.1	127.4	129.1	128.7	127.2	126.7	127.2	127.3	128.0	129.0	
Durables	116.8	120.1	119.5	119.9	120.1	120.4	120.7	121.6	122.3	122.3	122.2	121.9	121.9	122.4	123.1	
Services	150.0	155.5	154.5	155.5	156.0	156.5	156.9	157.1	157.2	157.6	158.2	159.0	159.4	159.4	159.6	
Rent of shelter (12/84 = 100)	141.6	145.8	145.0	145.7	146.2	146.6	146.6	146.9	147.3	148.1	148.9	149.5	149.5	149.4	149.4	
Household services less rent of shelter (12/84 = 100)	119.7	123.5	122.6	124.9	125.3	125.6	126.3	124.8	123.7	124.2	124.2	124.5	124.6	124.1	124.8	
Transportation services	154.3	160.0	159.1	159.0	159.6	160.0	159.9	161.2	162.8	163.3	163.6	164.0	164.6	164.6	164.3	
Medical care services	190.3	202.7	201.8	202.4	203.5	204.2	204.7	205.8	206.3	206.6	208.0	209.3	210.0	211.0	211.5	
Other services	166.1	174.1	172.3	172.9	173.3	174.7	176.8	177.6	178.2	178.5	179.2	179.9	180.2	180.8	181.0	
Special indexes:																
All items less food	138.2	142.3	142.0	142.4	142.4	142.7	142.9	143.6	143.7	143.4	143.5	144.1	144.7	144.9	145.2	
All items less shelter	135.9	139.7	139.7	139.7	139.6	139.9	140.2	140.9	141.1	140.8	141.0	141.2	141.7	141.9	142.3	
All items less homeowners' costs (12/84 = 100)	130.3	133.9	133.8	133.9	133.9	134.2	134.3	135.0	135.1	134.9	135.1	135.4	135.9	136.1	136.4	
All items less medical care	135.7	139.2	139.1	139.2	139.2	139.5	139.8	140.4	140.5	140.4	140.6	140.9	141.4	141.6	141.9	
Commodities less food	123.7	125.9	126.6	126.1	125.5	125.5	126.8	126.9	125.7	125.1	125.6	126.3	126.8	127.3		
Nondurables less food	127.4	128.9	130.4	129.4	128.1	128.0	127.8	129.4	129.1	127.1	126.2	127.2	128.3	128.8	129.2	
Nondurables less food and apparel	129.0	130.7	132.3	132.1	131.3	130.2	128.7	130.2	129.9	128.6	128.2	128.7	128.8	129.5	130.3	
Nondurables	132.5	134.7	135.7	134.8	134.1	134.2	134.3	135.4	135.3	134.5	134.6	134.7	135.4	135.8	136.1	
Services less rent of shelter (12/84 = 100)	141.0	147.0	146.0	147.1	147.6	148.1	148.9	148.9	149.0	149.5	149.8	150.4	150.7	150.8	151.0	
Services less medical care	146.5	151.4	150.5	151.4	151.9	152.4	152.8	152.9	152.9	153.4	153.9	154.6	155.0	155.0	155.1	
Energy	102.6	103.6	104.1	106.0	105.2	104.6	104.5	104.9	103.2	101.7	100.5	101.2	101.1	101.3	102.3	
All items less energy	143.2	147.5	147.2	147.2	147.3	147.8	148.0	148.7	149.1	149.1	149.6	149.9	150.5	150.7	150.9	
All items less food and energy	144.7	149.3	148.9	149.0	149.2	149.7	149.9	150.6	151.0	150.9	151.2	151.8	152.5	152.7	152.9	
Commodities less food and energy	131.2	134.3	134.7	134.2	133.7	134.0	134.2	135.1	135.5	134.7	134.4	134.7	135.6	135.9	136.4	
Energy commodities	98.5	97.5	99.2	99.2	97.5	96.4	95.5	98.9	97.7	94.3	92.4	93.8				

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

(1982-84 = 100, unless otherwise indicated)

Area ¹	Pricing schedule ²	All Urban Consumers						Urban Wage Earners							
		1993		1994				1993		1994					
		Apr.	May	Jan.	Feb.	Mar.	Apr.	May	Apr.	May	Jan.	Feb.	Mar.	Apr.	May
U.S. city average	M	144.0	144.2	146.2	146.7	147.2	147.4	147.5	141.6	141.9	143.6	144.0	144.4	144.7	144.9
Region and area size³															
Northeast urban	M	151.1	150.8	153.2	154.0	154.3	154.4	154.2	148.9	148.7	150.8	151.4	151.7	151.8	151.7
Size A - More than 1,200,000	M	151.7	151.2	153.7	154.6	155.1	155.0	154.7	148.5	148.0	150.2	150.9	151.4	151.4	151.1
Size B - 500,000 to 1,200,000	M	150.1	150.3	152.5	153.0	152.7	153.3	152.8	148.0	148.3	150.3	150.7	150.6	151.1	150.8
Size C - 50,000 to 500,000	M	149.2	149.2	151.3	151.9	152.2	152.6	152.7	150.9	151.0	152.7	153.2	153.4	153.9	154.2
North Central urban	M	139.4	139.8	141.5	142.1	142.6	142.9	143.3	136.6	137.2	138.5	139.0	139.4	139.8	140.2
Size A - More than 1,200,000	M	140.5	141.0	142.5	143.2	143.9	144.1	144.5	136.9	137.5	138.8	139.4	140.0	140.3	140.7
Size B - 360,000 to 1,200,000	M	137.7	137.8	141.1	141.3	141.8	142.2	142.0	134.6	134.7	137.4	137.6	137.9	138.5	138.4
Size C - 50,000 to 360,000	M	140.7	141.9	142.4	143.0	143.1	143.7	144.4	138.6	139.9	140.0	140.6	140.6	141.2	141.9
Size D - Nonmetropolitan (less than 50,000)	M	134.8	134.4	136.7	137.2	137.8	137.9	138.8	133.9	133.5	135.3	135.8	136.3	136.4	137.3
South urban	M	140.2	140.7	142.5	142.9	143.6	143.8	144.3	138.8	139.3	141.0	141.2	141.9	142.2	142.8
Size A - More than 1,200,000	M	140.8	141.1	142.9	143.4	144.4	144.4	144.7	138.8	139.4	141.0	141.3	142.3	142.4	142.8
Size B - 450,000 to 1,200,000	M	141.9	142.1	144.4	144.6	145.4	145.5	146.3	138.6	138.9	141.1	141.2	141.8	141.8	142.8
Size C - 50,000 to 450,000	M	139.3	140.0	141.0	141.6	142.0	142.9	143.1	139.3	140.1	140.8	141.3	141.6	142.6	142.8
Size D - Nonmetropolitan (less than 50,000)	M	137.7	138.7	140.8	140.7	141.3	141.3	142.3	137.8	138.8	141.1	141.0	141.4	141.4	142.5
West urban	M	145.7	146.0	148.1	148.3	149.0	148.9	148.8	143.2	143.5	145.3	145.4	145.9	145.9	146.0
Size A - More than 1,250,000	M	147.7	148.1	149.7	149.9	150.5	150.4	150.4	143.5	143.9	145.3	145.4	145.9	145.8	146.0
Size C - 50,000 to 330,000	M	144.2	143.6	147.8	148.3	148.7	148.6	147.8	142.4	141.8	145.4	146.0	146.3	146.3	145.7
Size classes:															
A (12/86=100)	M	130.9	131.0	132.7	133.3	133.9	133.9	133.9	130.0	130.2	131.7	132.1	132.7	132.7	132.9
B	M	143.0	143.2	145.8	146.1	146.5	146.8	147.0	140.6	140.9	143.2	143.4	143.8	144.1	144.4
C	M	142.3	142.8	144.3	144.9	145.2	145.8	146.0	141.8	142.4	143.6	144.1	144.3	144.9	145.2
D	M	138.7	139.1	141.2	141.5	142.0	142.1	143.0	138.3	138.6	140.6	140.8	141.2	141.4	142.3
Selected local areas															
Chicago, IL-Northwestern IN ...	M	144.7	145.7	146.5	146.8	147.6	147.9	147.6	140.3	141.4	142.0	142.3	143.0	143.3	143.1
Los Angeles-Long Beach, Anaheim, CA	M	149.9	150.1	152.2	152.2	152.5	152.0	151.4	144.9	145.1	146.8	146.9	147.0	146.6	146.2
New York, NY-Northeastern NJ	M	154.0	153.8	156.0	157.4	157.9	157.7	157.3	150.7	150.4	152.4	153.5	154.0	153.9	153.6
Philadelphia, PA-NJ	M	149.6	149.4	152.5	152.9	153.5	153.1	153.2	149.4	149.3	152.1	152.2	152.8	152.6	152.7
San Francisco-Oakland, CA	M	146.8	146.9	147.5	147.4	148.2	148.0	148.3	144.8	144.8	145.3	145.0	145.6	145.6	146.1
Baltimore, MD	1	-	142.8	143.8	-	145.0	-	145.8	-	142.1	142.7	-	144.2	-	144.9
Boston, MA	1	-	151.9	153.6	-	155.0	-	153.6	-	151.4	152.5	-	153.5	-	152.2
Cleveland, OH	1	-	139.6	142.4	-	143.3	-	143.7	-	132.7	135.1	-	135.7	-	136.1
Miami, FL	1	-	139.0	141.0	-	143.5	-	143.3	-	137.2	138.7	-	141.1	-	141.2
St. Louis, MO-IL	1	-	136.8	138.6	-	139.7	-	140.0	-	136.4	137.7	-	138.7	-	139.2
Washington, DC-MD-VA	1	-	149.2	150.9	-	151.5	-	151.4	-	147.0	148.3	-	148.9	-	149.2
Dallas-Ft. Worth, TX	2	137.0	-	-	139.2	-	140.3	-	136.3	-	-	138.1	-	139.3	-
Detroit, MI	2	138.7	-	-	141.7	-	142.6	-	134.6	-	-	137.0	-	137.9	-
Houston, TX	2	131.8	-	-	137.0	-	136.8	-	131.3	-	-	136.3	-	136.2	-
Pittsburgh, PA	2	139.6	-	-	142.6	-	143.9	-	133.6	-	-	136.3	-	137.4	-

¹ Area definitions are those established by the Office of Management and Budget in 1983, except for Boston-Lawrence-Salem, MA-NH, Area (excludes Monroe County); and Milwaukee, WI, Area (includes only the Milwaukee MSA). Definitions do not include revisions made since 1983. Excludes farms and the military.

² 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.

³ Regions are defined as the four Census regions.

- Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Because each local index is a small subset of the national index, it has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error than the national index. As a result, local area indexes show greater volatility than the national index, although their long-term trends are quite similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in escalator clauses.

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

(1982-84 = 100)

Series	1985	1986	1987	1988	1989	1990	1991	1992	1993
Consumer Price Index for All Urban Consumers:									
All items:									
Index	107.6	109.6	113.6	118.3	124.0	130.7	136.2	140.3	144.5
Percent change	3.6	1.9	3.6	4.1	4.8	5.4	4.2	3.0	3.0
Food and beverages:									
Index	105.6	109.1	113.5	118.2	124.9	132.1	136.8	138.7	141.6
Percent change	2.3	3.3	4.0	4.1	5.7	5.8	3.6	1.4	2.1
Housing:									
Index	107.7	110.9	114.2	118.5	123.0	128.5	133.6	137.5	141.2
Percent change	4.0	3.0	3.0	3.8	3.8	4.5	4.0	2.9	2.7
Apparel and upkeep:									
Index	105.0	105.9	110.6	115.4	118.6	124.1	128.7	131.9	133.7
Percent change	2.8	.9	4.4	4.3	2.8	4.6	3.7	2.5	1.4
Transportation:									
Index	106.4	102.3	105.4	108.7	114.1	120.5	123.8	126.5	130.4
Percent change	2.6	-3.9	3.0	3.1	5.0	5.6	2.7	2.2	3.1
Medical care:									
Index	113.5	122.0	130.1	138.6	149.3	162.8	177.0	190.1	201.4
Percent change	6.3	7.5	6.6	6.5	7.7	9.0	8.7	7.4	5.9
Entertainment:									
Index	107.9	111.6	115.3	120.3	126.5	132.4	138.4	142.3	145.8
Percent change	3.9	3.4	3.3	4.3	5.2	4.7	4.5	2.8	2.5
Other goods and services:									
Index	114.5	121.4	128.5	137.0	147.7	159.0	171.6	183.3	192.9
Percent change	6.1	6.0	5.8	6.6	7.8	7.7	7.9	6.8	5.2
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	106.9	108.6	112.5	117.0	122.6	129.0	134.3	138.2	142.1
Percent change	3.5	1.6	3.6	4.0	4.8	5.2	4.1	2.9	2.8

34. Producer Price Indexes, by stage of processing

(1982=100)

Grouping	Annual average		1993							1994				
	1992	1993	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Finished goods	123.2	124.7	125.5	125.3	124.2	123.8	124.6	124.5	124.1	124.5	124.8	125.0	125.0	125.3
Finished consumer goods	123.3	125.7	125.4	125.0	125.4	125.7	125.4	126.6	127.2	127.0	126.7	127.5	127.0	126.5
Finished consumer foods	123.3	125.7	125.4	125.0	125.4	125.7	125.4	126.6	127.2	127.0	126.7	127.5	127.0	126.5
Finished consumer goods excluding foods	120.8	121.7	123.4	123.0	120.9	120.5	121.2	120.3	119.4	119.9	120.5	120.5	120.7	121.3
Nondurable goods less food	117.3	117.6	120.1	119.5	116.6	116.8	116.5	115.0	113.7	114.0	114.9	114.8	115.1	115.7
Durable goods	125.7	128.0	127.7	127.9	127.9	126.0	129.1	129.7	129.7	130.5	130.4	130.6	130.4	130.9
Capital equipment	77.8	78.0	80.5	79.6	79.1	79.5	78.8	76.2	73.3	73.6	74.9	74.8	75.4	76.2
Intermediate materials, supplies, and components	114.7	116.2	116.7	116.6	116.6	116.8	116.5	116.4	116.0	116.2	116.6	116.8	116.8	117.3
Materials and components for manufacturing	110.7	112.7	111.1	114.0	114.3	113.7	113.6	114.7	116.8	116.8	117.3	117.5	117.4	116.7
Materials for food manufacturing	113.9	115.6	115.0	116.5	116.1	116.3	116.7	117.3	118.8	118.9	119.2	119.9	120.9	120.3
Materials for nondurable manufacturing	115.4	115.5	115.7	115.6	115.4	115.2	115.2	115.4	114.8	114.9	114.5	114.7	115.7	116.3
Materials for durable manufacturing	117.2	119.1	118.6	118.8	119.3	119.4	119.1	119.3	120.0	120.6	121.4	122.2	122.0	122.7
Components for manufacturing	122.0	123.0	123.0	123.0	123.1	123.1	123.2	123.3	123.3	123.6	123.6	123.7	124.0	124.0
Materials and components for construction	84.3	84.6	87.9	87.0	86.1	86.9	85.3	83.3	79.9	79.5	81.2	81.0	80.5	81.5
Processed fuels and lubricants	122.0	123.8	123.7	123.6	123.8	123.9	124.0	124.2	124.4	124.8	124.8	125.1	125.3	125.7
Containers	134.2	135.8	136.3	136.4	134.6	133.7	135.4	135.6	135.9	136.6	136.7	136.8	136.8	137.2
Supplies	122.7	125.0	124.7	125.2	125.5	125.4	125.5	125.7	126.1	126.4	126.5	126.5	126.5	126.6
Crude materials for further processing	100.4	102.4	104.2	101.5	100.6	101.0	102.8	102.2	101.0	103.2	100.9	104.8	104.4	103.3
Foodstuffs and feedstuffs	105.1	108.4	107.2	107.5	108.0	107.7	105.7	110.2	112.1	112.2	112.8	114.0	113.1	110.0
Crude nonfood materials	78.8	76.7	80.9	75.0	73.6	74.5	79.4	74.4	70.0	72.9	66.9	73.1	73.0	73.7
Special groupings:														
Finished goods, excluding foods	123.1	124.4	125.5	125.3	123.8	123.2	124.3	123.7	123.1	123.7	124.1	124.2	124.4	124.9
Finished energy goods	77.8	78.0	80.5	79.6	79.1	79.5	78.8	76.2	73.3	73.6	74.9	74.8	75.4	76.2
Finished goods less energy	131.1	132.9	133.2	133.2	132.0	131.4	132.6	133.1	133.4	133.9	133.9	134.2	134.0	134.2
Finished consumer goods less energy	131.8	133.5	134.0	133.9	132.2	131.8	132.7	133.3	133.8	134.1	134.0	134.3	134.1	134.1
Finished goods less food and energy	134.2	135.8	136.3	136.4	134.6	133.7	135.4	135.6	135.9	136.6	136.7	136.8	136.8	137.2
Finished consumer goods less food and energy	137.3	138.5	139.5	139.5	136.7	135.7	137.3	137.6	138.0	138.6	138.7	138.7	138.6	139.0
Consumer nondurable goods less food and energy	145.8	146.1	148.3	148.1	142.8	142.7	142.9	142.9	143.7	144.1	144.4	144.2	144.2	144.4
Intermediate materials less foods and feeds	114.9	116.4	117.0	116.7	116.7	117.0	116.7	116.5	116.0	116.2	116.6	116.8	116.8	117.3
Intermediate foods and feeds	110.7	112.7	111.1	114.0	114.3	113.7	113.6	114.7	116.8	116.8	117.3	117.5	117.4	116.7
Intermediate energy goods	84.3	84.6	87.9	87.0	86.1	86.9	85.3	83.3	79.9	79.5	81.2	81.0	80.5	81.5
Intermediate goods less energy	121.3	123.2	122.9	123.1	123.2	123.3	123.4	123.6	123.9	124.3	124.4	124.7	124.8	125.1
Intermediate materials less foods and energy	122.0	123.8	123.7	123.6	123.8	123.9	124.0	124.2	124.4	124.8	124.8	125.1	125.3	125.7
Crude energy materials	78.8	76.7	80.9	75.0	73.6	74.5	79.4	74.4	70.0	72.9	66.9	73.1	73.0	73.7
Crude materials less energy	110.7	116.3	115.8	116.3	115.9	115.7	114.5	118.0	119.9	121.2	122.5	123.9	123.3	120.6
Crude nonfood materials less energy	128.4	140.2	141.7	142.6	139.8	139.8	140.8	141.8	143.6	147.9	151.4	153.3	153.5	151.6

Current Labor Statistics: Price Data

35. Producer price indexes for the net output of major industry groups

(December 1984 = 100, unless otherwise indicated)

Industry	SIC	Annual average		1993							1994				
		1992	1993	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Total mining industries		76.9	76.4	80.5	75.2	74.2	75.2	78.3	74.8	72.7	75.8	70.1	76.0	75.1	74.0
Metal mining	10	76.6	69.7	68.7	69.8	71.4	70.5	66.9	66.5	69.5	70.5	72.5	73.7	73.6	74.6
Coal mining (12/85=100)	12	94.0	93.3	93.1	92.9	93.1	93.2	94.4	94.1	94.0	93.8	94.2	93.2	92.3	93.0
Oil and gas extraction (12/85=100)	13	76.5	76.2	82.0	74.6	73.0	74.5	78.8	74.0	70.9	75.1	67.0	75.4	74.2	72.5
Mining and quarrying of nonmetallic minerals, except fuels	14	117.5	118.8	118.6	118.7	118.7	118.9	119.6	119.1	119.2	119.8	120.2	120.2	120.9	120.6
Total manufacturing industries		117.4	119.1	119.5	119.3	118.6	118.4	119.4	119.3	118.8	119.3	119.8	119.9	120.1	120.4
Food and kindred products	20	116.9	118.7	118.9	119.1	119.1	119.0	119.0	119.4	119.8	120.0	120.6	120.9	121.0	120.6
Tobacco manufactures	21	230.2	218.0	242.4	240.8	178.5	178.5	178.7	178.7	187.4	187.6	187.8	187.7	187.7	187.7
Textile mill products	22	113.6	113.6	113.4	113.6	113.7	113.8	113.7	113.7	113.5	113.5	113.0	113.0	113.1	113.2
Apparel and other finished products made from fabrics and similar materials	23	118.0	119.2	119.1	119.4	119.4	119.3	119.3	119.4	119.3	119.5	119.7	119.8	119.5	119.7
Lumber and wood products, except furniture	24	129.7	148.3	147.1	145.7	146.3	148.2	149.0	151.3	153.5	156.6	155.3	155.8	153.6	152.6
Furniture and fixtures	25	122.9	125.4	125.4	125.5	125.7	125.8	126.6	126.7	127.2	127.6	128.2	128.4	128.3	129.7
Paper and allied products	26	121.2	120.2	120.5	120.0	119.9	119.7	120.1	119.9	120.0	119.9	120.1	120.2	120.2	120.9
Printing, publishing, and allied industries	27	140.8	145.6	145.0	145.3	145.7	145.9	146.5	146.5	146.8	148.4	148.5	148.5	148.7	148.9
Chemicals and allied products	28	125.8	127.2	127.2	127.2	126.9	127.1	127.1	127.3	126.7	126.9	126.8	126.8	127.4	127.7
Petroleum refining and related products	29	80.3	77.6	80.3	77.7	75.8	76.7	78.7	75.9	67.5	71.2	71.0	72.0	73.7	
Rubber and miscellaneous plastic products	30	114.2	115.4	115.4	115.4	115.4	115.7	115.8	115.7	115.9	115.7	115.8	115.7	115.8	116.1
Leather and leather products	31	127.0	129.0	129.3	128.9	129.8	129.0	129.0	129.1	129.3	130.1	129.3	129.6	129.9	129.9
Stone, clay, glass, and concrete products ..	32	112.8	115.4	115.3	115.5	115.9	116.1	116.1	116.5	116.6	116.9	117.2	118.0	118.4	119.0
Primary metal industries	33	111.7	111.4	111.2	111.7	112.0	111.9	111.8	111.8	112.4	112.7	113.6	114.2	114.2	115.1
Fabricated metal products, except machinery and transportation equipment	34	117.2	118.2	118.1	118.3	118.4	118.6	118.6	118.9	118.9	119.1	119.3	119.5	119.6	119.8
Machinery, except electrical	35	116.7	116.8	116.7	116.6	116.6	116.8	116.7	116.7	116.8	117.1	117.1	117.3	117.5	117.5
Electrical and electronic machinery, equipment, and supplies	36	110.8	112.0	111.9	111.9	112.0	112.1	112.2	112.3	112.4	112.5	112.9	112.8	113.0	112.9
Transportation equipment	37	123.0	126.3	126.1	126.3	126.2	124.1	128.1	128.3	128.5	129.4	129.3	129.3	129.3	130.1
Measuring and controlling instruments; photographic, medical, optical goods; watches, clocks	38	118.7	120.8	120.7	121.0	121.2	121.2	120.9	121.1	121.1	121.8	121.5	121.7	122.1	122.2
Miscellaneous manufacturing industries (12/85=100)	39	119.6	121.5	121.5	121.8	122.0	121.9	122.0	122.1	122.1	122.6	122.7	122.9	123.3	123.3
Service industries:															
Motor freight transportation and warehousing (06/93=100)	42	-	-	100.0	99.5	99.9	99.9	100.0	100.1	100.2	100.6	100.8	101.3	101.4	101.7
U.S. Postal Service (06/89=100)	43	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8
Water transportation (12/92=100)	44	-	99.7	99.7	100.2	99.0	99.0	99.9	99.6	99.1	98.4	98.7	99.1	99.2	99.4
Transportation by air (12/92=100)	45	-	105.6	104.5	105.2	106.0	106.3	108.0	108.6	108.2	109.2	107.9	108.5	108.1	108.3
Pipelines, except natural gas (12/86=100) ..	46	96.4	96.6	96.5	96.5	96.5	96.5	96.7	96.7	97.1	100.8	99.7	100.6	101.0	100.9

- Data not available.

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

(1982=100)

Index	1985	1986	1987	1988	1989	1990	1991	1992	1993
Finished goods:									
Total	104.7	103.2	105.4	108.0	113.6	119.2	121.7	123.2	124.7
Foods	104.6	107.3	109.5	112.6	118.7	124.4	124.1	123.3	125.7
Energy	87.6	63.0	61.8	59.8	65.7	75.0	78.1	77.8	78.0
Other	108.1	110.6	113.3	117.0	122.1	126.6	131.1	134.2	135.8
Intermediate materials, supplies, and components:									
Total	102.7	99.1	101.5	107.1	112.0	114.5	114.4	114.7	116.2
Foods	97.3	96.2	99.2	109.5	113.8	113.3	111.1	110.7	112.7
Energy	92.6	72.6	73.0	70.9	76.1	85.5	85.1	84.3	84.6
Other	105.2	104.9	107.8	115.2	120.2	120.9	121.4	122.0	123.8
Crude materials for further processing:									
Total	95.8	87.7	93.7	96.0	103.1	108.9	101.2	100.4	102.4
Foods	94.8	93.2	96.2	106.1	111.2	113.1	105.5	105.1	108.4
Energy	93.3	71.8	75.0	67.7	75.9	85.9	80.4	78.8	76.7
Other	104.9	103.1	115.7	133.0	137.9	136.3	128.2	128.4	140.2

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

(1990 = 100, unless otherwise indicated)

Category	SITC Rev. 3	1993								1994			
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
Food and live animals	0	97.8	101.9	102.1	102.2	102.9	105.5	107.8	110.7	107.4	108.5	106.5	
Meat and meat preparations	01	111.6	110.6	110.4	106.9	105.0	107.3	107.1	106.7	106.3	110.1	111.2	
Cereals and cereal preparations	04	90.9	99.5	99.5	96.0	99.4	106.3	111.2	117.7	112.3	112.0	105.9	
Vegetables, fruit, and nuts, prepared fresh or dry	05	103.0	109.9	108.2	118.0	119.9	116.0	114.3	113.8	111.2	112.2	110.0	
Crude materials, inedible, except fuels	2	99.6	100.6	99.5	98.0	95.9	96.1	98.7	101.1	103.4	104.8	105.7	
Hides, skins, and furskins, raw	21	79.2	78.1	80.2	82.9	83.5	84.8	86.0	85.2	86.7	91.3	93.8	
Oilseeds and oleaginous fruits	22	97.9	112.0	114.1	108.8	101.3	104.1	112.0	115.4	112.3	112.4	109.9	
Crude rubber (including synthetic and reclaimed)	23	99.2	97.3	97.3	97.6	96.6	94.9	93.6	92.4	92.8	92.9	93.4	
Cork and wood	24	161.4	157.5	151.6	148.7	146.8	144.9	146.8	151.3	153.2	153.0	153.7	
Pulp and waste paper	25	70.2	69.3	65.2	66.7	65.1	65.0	67.3	68.3	71.5	76.2	80.6	
Textile fibers and their waste	26	83.5	82.1	81.2	81.1	81.2	80.8	83.0	87.0	97.2	98.3	100.0	
Crude fertilizers and crude minerals	27	95.0	94.9	93.7	97.2	96.2	96.0	97.3	97.0	95.8	97.4	99.0	
Metalliferous ores and metal scrap	28	83.9	85.1	86.6	83.9	83.3	84.3	85.2	88.3	89.7	90.6	90.9	
Mineral fuels, lubricants, and related products	3	88.0	86.5	86.3	85.6	86.3	84.6	81.8	82.0	85.5	83.8	84.2	
Coal, coke, and briquettes	32	93.9	93.9	94.0	93.9	94.1	93.9	94.0	94.0	94.2	95.2	94.2	
Petroleum, petroleum products, and related materials	33	80.7	78.6	78.3	76.8	77.9	75.3	70.4	71.1	76.6	73.1	74.8	
Animal and vegetable oils, fats, and waxes	4	98.4	100.0	103.4	100.9	98.7	100.3	105.6	110.0	109.3	110.0	109.3	
Chemicals and related products, n.e.s.	5	96.1	95.5	95.4	95.3	95.2	95.1	95.4	95.8	96.0	96.4	97.0	
Medicinal and pharmaceutical products	54	107.0	-	108.2	107.4	-	-	108.2	108.7	108.9	108.8	107.9	
Essential oils; polishing and cleaning preparations	55	103.6	103.5	103.8	104.3	104.7	104.8	104.9	105.0	105.3	106.5	107.0	
Plastics in primary forms (12/92=100)	57	102.2	102.0	101.6	101.4	100.6	99.8	100.5	100.9	101.2	101.7	103.4	
Plastics in nonprimary forms (12/92=100)	58	96.8	96.6	96.7	97.6	97.2	97.7	97.5	97.5	98.0	98.3	99.3	
Chemical materials and products, n.e.s.	59	105.7	105.8	105.8	105.8	105.4	105.5	105.7	107.4	107.4	108.1	108.3	
Manufactured goods classified chiefly by materials	6	100.7	100.8	101.3	101.3	101.0	100.9	100.8	101.7	102.8	103.0	103.6	
Rubber manufactures, n.e.s.	62	108.5	108.8	108.8	108.9	109.1	109.1	108.7	109.9	109.4	109.2	109.3	
Paper, paperboard, and articles of paper, pulp, and paperboard	64	93.9	93.3	92.1	92.9	93.3	93.4	93.1	93.0	93.5	93.7	94.2	
Nonmetallic mineral manufactures, n.e.s.	66	105.4	105.4	107.3	106.7	106.9	107.0	105.8	106.3	107.0	106.9	106.8	
Nonferrous metals	68	81.3	82.5	85.1	83.2	80.1	78.5	79.0	81.7	86.5	87.8	89.6	
Machinery and transport equipment	7	104.5	104.3	104.2	104.2	104.5	104.5	104.4	104.4	104.2	104.4	104.2	
Power generating machinery and equipment	71	110.7	111.0	111.1	111.1	111.2	112.1	111.8	112.2	112.6	112.6	112.4	
Machinery specialized for particular industries	72	108.0	108.1	108.2	108.6	108.8	109.1	109.2	109.2	108.9	109.2	109.7	
General industrial machines and parts, n.e.s., and machine parts	74	108.3	108.5	108.6	109.0	109.3	109.6	109.5	109.8	110.0	109.9	110.1	
Computer equipment and office machines	75	87.7	86.9	86.6	85.9	85.5	84.9	84.6	83.5	82.9	82.6	82.3	
Telecommunications and sound recording and reproducing apparatus and equipment	76	109.4	109.0	108.1	108.7	108.8	108.5	108.6	108.4	107.5	107.4	107.2	
Electrical machinery and equipment	77	103.5	103.3	103.3	102.8	103.7	103.7	103.5	103.5	103.6	103.6	103.1	
Road vehicles	78	105.2	105.1	105.0	105.2	105.6	105.4	105.5	105.8	105.6	106.2	106.0	
Professional, scientific, and controlling instruments and apparatus	87	110.1	109.9	109.8	110.9	110.6	111.0	110.8	111.8	112.0	111.4	111.5	

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

(1990 = 100, unless otherwise indicated)

Category	SITC Rev.3	1993						1994			
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Food and live animals	0	100.0	101.3	102.3	103.7	102.1	102.1	102.5	101.7	103.1	104.0
Meat and meat preparations	01	100.3	102.3	97.9	97.9	96.0	94.0	92.9	93.8	96.5	97.4
Fish and crustaceans, mollusks, and other aquatic invertebrates	03	106.9	107.8	109.1	113.2	114.0	114.1	114.7	115.8	116.6	118.5
Cereals and cereal preparations	04	101.8	100.7	98.5	98.3	97.8	99.8	100.0	99.5	99.5	100.4
Vegetables and fruit, prepared fresh or dried	05	103.9	104.9	106.5	105.9	103.7	101.7	104.2	98.6	100.2	98.5
Sugars, sugar preparations, and honey	06	96.8	96.5	96.5	96.5	97.5	96.4	96.7	96.8	96.9	97.2
Coffee, tea, cocoa, spices, and manufactures thereof	07	84.7	92.1	98.2	102.4	97.3	101.6	100.0	101.2	103.1	108.1
Beverages and tobacco	1	111.7	111.5	111.8	112.8	112.7	112.7	111.8	111.6	112.2	113.1
Beverages	11	112.5	112.1	112.0	112.5	112.4	112.4	112.4	111.6	112.1	112.3
Crude materials, inedible, except fuels	2	95.5	95.9	96.9	96.9	98.7	102.3	103.6	104.9	105.3	104.0
Crude rubber (including synthetic and reclaimed)	23	101.3	98.8	99.1	96.6	97.2	98.0	99.1	100.8	103.4	108.7
Cork and wood	24	130.6	134.8	141.9	148.0	156.1	170.2	175.1	161.2	166.9	156.6
Pulp and waste paper	25	63.7	61.8	60.4	59.3	58.8	58.4	59.7	60.3	61.6	63.8
Crude fertilizers	27	.0	84.0	83.0	.0	.0	84.0	82.9	82.3	81.2	82.5
Metaliferous ores and metal scrap	28	87.9	87.8	87.1	84.3	83.7	83.2	83.0	87.8	90.2	90.8
Crude animal and vegetable materials, n.e.s.	29	108.0	109.5	109.2	107.0	110.2	115.4	114.8	144.4	120.7	118.5
Mineral fuels, lubricants, and related products	3	75.2	74.0	73.5	74.4	70.7	63.8	62.5	65.6	64.4	67.0
Petroleum, petroleum products, and related materials	33	74.3	73.1	72.3	73.4	69.7	61.8	60.6	63.9	62.7	65.6
Gas, natural and manufactured	34	90.4	86.4	91.7	89.5	85.2	94.1	92.2	91.6	90.7	87.3
Electrical energy	35	82.3	83.1	87.5	86.4	84.1	85.8	86.2	88.2	89.3	86.4
Animal and vegetable oils, fats, and waxes	4	116.5	118.4	117.3	116.4	115.1	120.0	127.8	124.4	123.3	125.5
Chemicals and related products, n.e.s.	5	102.5	101.9	102.1	102.5	102.1	101.3	101.0	101.1	101.4	102.3
Inorganic chemicals	52	100.3	99.5	100.5	101.4	100.8	100.2	100.0	99.3	99.6	99.3
Dyeing, tanning, and coloring materials	53	100.3	99.6	100.0	101.4	101.1	99.9	100.6	103.4	101.0	100.9
Medicinal and pharmaceutical products	54	116.6	115.3	115.7	117.6	117.4	116.6	116.7	117.7	117.4	118.3
Essential oils; polishing and cleaning preparations	55	109.2	108.7	108.7	110.0	110.1	109.9	108.6	108.2	107.9	107.7
Fertilizers	56	102.2	103.0	102.4	102.5	101.9	100.5	101.0	100.7	102.9	102.1
Plastics in primary forms (12/92=100)	57	99.9	100.0	99.7	99.9	99.8	99.7	101.3	100.8	100.9	100.9
Plastics in nonprimary forms (12/92=100)	58	98.7	98.5	98.7	99.6	98.7	97.5	96.4	95.8	95.3	99.2
Chemical materials and products, n.e.s.	59	106.2	105.1	103.4	102.3	102.1	101.7	101.3	101.3	102.7	102.2
Manufactured goods classified chiefly by material	6	99.3	99.3	98.7	98.2	97.8	97.8	98.2	98.7	99.3	100.2
Rubber manufactures, n.e.s.	62	103.9	103.1	103.1	103.4	103.4	103.2	103.0	102.2	101.6	102.6
Paper, paperboard, and articles of paper pulp, paper, or paperboard	64	95.8	94.6	95.4	94.8	94.0	94.2	93.5	92.9	94.0	93.5
Nonmetallic mineral manufactures, n.e.s.	66	107.7	107.9	107.8	108.6	108.5	107.9	107.4	107.8	107.8	108.3
Nonferrous metals	68	77.0	77.8	75.9	73.4	71.8	72.3	76.5	78.8	80.3	84.2
Manufactures of metals, n.e.s.	69	104.8	104.4	104.3	103.6	103.3	103.9	103.9	104.0	103.8	104.5
Machinery and transport equipment	7	105.3	105.4	105.5	106.3	106.3	106.2	106.4	106.2	106.4	106.9
Machinery specialized for particular industries	72	107.1	106.7	107.1	108.2	108.4	107.3	107.6	107.7	108.3	108.8
General industrial machinery and equipment, n.e.s., and machine parts	74	107.1	106.1	107.0	108.0	108.3	107.8	108.2	107.8	108.4	108.7
Computer equipment and office machines	75	90.7	90.5	90.6	90.1	89.2	89.5	89.1	88.7	88.2	87.8
Telecommunications and sound recording and reproducing apparatus and equipment	76	98.8	98.7	99.0	98.6	98.2	98.2	97.9	97.6	97.4	97.4
Electrical machinery and equipment	77	105.2	106.4	105.9	106.3	105.7	105.4	105.1	104.7	105.5	105.8
Road vehicles	78	108.8	108.7	109.0	110.5	111.3	111.4	111.8	111.7	111.9	113.1
Footwear	85	101.0	100.3	100.4	100.8	100.4	100.1	99.9	99.7	99.6	100.0
Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	88	107.1	107.2	107.9	109.1	109.2	108.7	108.6	108.3	108.5	109.2

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

(1990 = 100 unless otherwise indicated)

Category	1993						1994			
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
ALL COMMODITIES	101.6	101.6	101.5	101.4	101.6	101.9	102.6	102.6	102.8	102.9
Foods, feeds, and beverages	102.2	102.6	102.1	101.8	104.4	107.5	110.5	107.4	108.4	106.4
Agricultural foods, feeds, and beverages	103.5	103.6	102.9	102.9	105.8	109.1	112.2	108.9	109.5	106.7
Nonagricultural (fish, beverages) food products	88.0	91.4	93.4	90.1	90.1	91.0	92.6	90.9	96.1	102.2
Industrial supplies and materials	96.0	96.0	95.6	95.0	94.9	95.1	96.1	97.5	97.8	98.7
Agricultural industrial supplies and materials	92.5	93.4	93.3	92.2	92.8	94.4	95.8	101.0	102.3	102.7
Fuels and lubricants	88.9	89.0	88.5	88.9	87.8	85.8	85.9	88.7	87.0	87.4
Nonagricultural supplies and materials, excluding fuel and building materials	92.8	92.8	92.5	91.9	91.9	92.3	93.1	93.9	94.5	95.5
Selected building materials	148.8	146.2	144.9	143.9	142.9	143.7	147.7	149.0	148.5	149.8
Capital goods	104.6	104.5	104.5	104.7	104.8	104.7	104.6	104.5	104.4	104.3
Electric and electrical generating equipment	104.3	104.5	104.7	104.9	105.2	105.4	105.5	104.8	104.9	105.2
Nonelectrical machinery	102.9	102.7	102.6	102.8	102.8	102.6	102.4	102.3	102.1	102.0
Automotive vehicles, parts, and engines	105.3	105.2	105.5	105.8	105.6	105.7	106.1	105.9	106.4	106.3
Consumer goods, excluding automotive	107.6	107.6	107.6	107.8	107.8	107.6	108.0	108.1	107.8	108.0
Nondurables, manufactured	109.6	109.6	110.0	110.3	110.2	109.5	110.0	110.2	110.0	109.9
Durables, manufactured	105.3	105.4	105.1	105.2	105.3	105.6	105.9	105.8	105.4	106.0
Nonmanufactured consumer goods	101.1	101.3	100.5	100.5	100.8	100.7	100.8	100.8	100.2	100.2
Agricultural commodities	101.0	101.3	100.7	100.5	102.9	105.9	108.6	107.1	107.8	105.7
Nonagricultural commodities	101.8	101.8	101.7	101.7	101.6	101.6	102.0	102.2	102.3	102.6

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

(1990 = 100)

Category	1993						1994			
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
ALL COMMODITIES	99.9	99.9	99.9	100.4	99.9	98.9	99.0	99.3	99.4	100.2
Foods, feeds, and beverages	102.2	103.8	104.6	105.8	104.6	104.8	105.3	104.7	105.7	106.8
Agricultural foods, feeds, and beverages	99.1	101.1	101.8	102.1	100.3	100.5	101.1	99.9	101.0	102.0
Nonagricultural (fish, beverages) food products	109.9	110.4	111.5	114.9	115.5	115.6	115.9	116.6	117.3	118.9
Industrial supplies and materials	88.3	87.7	87.4	87.6	85.9	83.0	82.8	84.2	84.2	85.7
Fuels and lubricants	76.2	75.0	74.6	75.5	71.8	65.1	63.8	66.8	65.7	68.1
Petroleum and petroleum products	74.0	72.8	72.0	73.0	69.3	61.7	60.4	63.7	62.5	65.3
Paper and paper base stocks	85.7	84.6	84.7	84.0	83.2	83.3	83.4	83.0	84.1	84.5
Materials associated with nondurable supplies and materials	101.8	101.6	101.4	101.2	100.9	100.2	100.1	100.7	101.4	102.7
Selected building materials	119.6	121.1	122.6	125.8	127.9	134.6	135.2	129.2	133.0	129.8
Unfinished metals associated with durable goods	86.8	87.4	86.1	84.6	84.0	84.2	86.7	88.3	89.4	91.0
Nonmetals associated with durable goods	99.1	98.3	98.3	98.6	98.0	97.5	97.2	97.1	96.7	96.7
Capital goods	103.8	103.9	104.0	104.4	104.1	103.8	103.9	103.7	103.9	104.1
Electric and electrical generating equipment	104.8	104.5	104.9	105.5	105.1	104.9	104.7	104.4	105.1	105.4
Nonelectrical machinery	103.1	103.4	103.4	103.8	103.4	103.1	103.0	102.8	102.9	103.1
Transportation equipment, excluding motor vehicles and spacecraft (12/92 = 100)	102.5	102.4	101.7	102.6	102.7	102.2	104.1	104.2	104.6	104.3
Automotive vehicles, parts and engines	107.5	107.5	107.8	109.0	109.7	109.7	110.1	110.0	110.1	111.1
Consumer goods, excluding automobiles	105.2	105.0	105.3	105.5	105.4	105.3	105.2	105.4	105.4	105.6
Nondurables, manufactured	105.1	104.7	105.1	105.4	105.1	104.8	104.8	104.7	104.8	105.1
Durables, manufactured	105.0	105.1	105.1	105.4	105.3	105.2	105.2	105.1	105.4	105.5
Nonmanufactured consumer goods	106.8	107.5	107.6	107.3	108.4	109.6	109.4	114.9	110.7	110.2

Current Labor Statistics: Price and Productivity Data

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

(1990 = 100 unless otherwise indicated)

Category	1992				1993				1994
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
Air freight (inbound)	108.0	104.7	107.3	102.1	100.1	106.4	106.6	106.1	105.9
Air freight (outbound)	-	-	100.0	98.9	97.3	96.6	95.6	96.4	96.5
Air passenger fares (U.S. carriers)	109.0	115.0	118.3	108.1	109.8	117.2	119.0	111.4	113.1
Air passenger fares (foreign carriers)	107.9	114.5	120.5	106.3	108.0	115.7	117.0	107.2	108.1
Ocean liner freight (inbound)	99.8	104.1	104.7	105.3	104.0	103.5	103.3	102.1	103.4

- Data not available.

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

(1982 = 100)

Item	Quarterly Indexes										
	1991		1992				1993				1994
	III	IV	I	II	III	IV	I	II	III	IV	I
Business:											
Output per hour of all persons	111.8	112.8	114.1	114.8	115.8	116.8	116.2	116.2	117.0	119.0	119.3
Compensation per hour	148.2	150.1	152.2	153.6	155.7	157.3	158.4	159.4	160.7	161.7	163.8
Real compensation per hour	104.6	105.1	105.9	106.0	106.6	106.8	106.8	106.7	107.0	106.9	107.7
Unit labor costs	132.6	133.1	133.4	133.9	134.5	134.7	136.3	137.2	137.4	135.9	137.3
Unit nonlabor payments	144.9	145.7	148.5	149.9	147.4	152.7	152.2	153.2	154.1	158.2	157.0
Implicit price deflator	136.6	137.2	138.3	139.1	138.7	140.6	141.6	142.5	142.8	143.2	143.8
Nonfarm business:											
Output per hour of all persons	110.4	111.3	112.3	113.1	113.9	115.0	114.3	114.2	115.2	116.9	117.3
Compensation per hour	147.1	148.8	150.9	152.5	154.5	156.0	157.0	157.7	158.9	159.9	162.0
Real compensation per hour	103.8	104.2	104.9	105.2	105.8	106.0	105.8	105.5	105.8	105.7	106.5
Unit labor costs	133.2	133.7	134.3	134.9	135.6	135.7	137.3	138.1	137.9	136.8	138.1
Unit nonlabor payments	146.3	147.7	149.8	151.5	148.8	154.5	153.9	155.0	156.5	159.6	158.2
Implicit price deflator	137.5	138.2	139.3	140.2	139.8	141.8	142.7	143.5	143.9	144.1	144.6
Nonfinancial corporations:											
Output per hour of all employees	114.8	116.5	117.3	118.6	120.1	121.3	119.9	121.2	122.1	123.8	123.8
Compensation per hour	144.6	146.4	147.9	149.4	151.3	152.6	153.2	154.2	155.2	156.0	157.5
Real compensation per hour	102.0	102.5	102.8	103.1	103.6	103.6	103.3	103.2	103.4	103.2	103.6
Total unit costs	124.9	124.5	124.7	124.3	124.7	123.7	125.4	125.0	125.0	123.9	125.3
Unit labor costs	125.9	125.7	126.1	126.0	126.0	125.8	127.8	127.3	127.2	126.1	127.2
Unit nonlabor costs	122.5	121.8	121.1	120.0	121.3	118.3	119.6	119.2	119.4	118.3	120.3
Unit profits	150.4	157.2	164.1	175.5	172.4	195.3	182.8	193.9	193.7	212.6	202.6
Unit nonlabor payments	127.8	128.4	129.2	130.4	130.9	132.8	131.5	133.2	133.4	136.0	135.8
Implicit price deflator	126.5	126.6	127.1	127.5	127.6	128.1	129.0	129.3	129.2	129.3	130.1
Manufacturing:											
Output per hour of all persons	125.4	126.2	127.2	128.6	129.1	130.9	132.2	133.8	134.6	137.2	139.5
Compensation per hour	142.5	144.9	145.5	146.7	147.6	149.2	148.1	149.6	150.5	151.9	153.8
Real compensation per hour	100.6	101.4	101.2	101.2	101.0	101.3	99.9	100.1	100.2	100.4	101.1
Unit labor costs	113.6	114.8	114.4	114.1	114.3	114.0	112.1	111.8	111.8	110.7	110.2

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

(1982 = 100)

Item	1960	1970	1973	1980	1985	1986	1987	1988	1989	1990
Private business:										
Productivity:										
Output per hour of all persons	65.1	87.0	94.8	99.2	107.3	109.8	111.1	113.6	113.2	112.8
Output per unit of capital services	128.5	122.2	125.1	109.3	107.2	106.5	108.0	110.9	110.5	108.4
Multifactor productivity	80.2	96.2	103.0	102.1	107.3	108.8	110.1	112.8	112.4	111.4
Output	52.1	75.8	88.0	101.0	118.0	121.6	126.7	133.5	136.3	136.6
Inputs:										
Hours of all persons	80.0	87.2	92.8	101.9	109.9	110.7	114.1	117.5	120.4	121.0
Capital services	40.5	62.1	70.4	92.5	110.1	114.2	117.4	120.4	123.3	126.0
Combined units of labor and capital input	65.0	78.8	85.5	99.0	110.0	111.8	115.1	118.4	121.3	122.6
Capital per hour of all persons	50.6	71.2	75.8	90.7	100.1	103.1	102.9	102.4	102.5	104.1
Private nonfarm business:										
Productivity:										
Output per hour of all persons	69.8	89.1	96.6	99.9	106.7	108.9	110.0	112.7	112.1	111.5
Output per unit of capital services	135.1	126.6	128.9	110.5	106.5	105.7	107.0	110.0	109.3	107.0
Multifactor productivity	84.8	98.5	104.9	102.8	106.6	107.9	109.1	111.9	111.3	110.1
Output	51.9	76.2	88.6	101.7	118.3	121.8	127.0	134.3	137.0	137.2
Inputs:										
Hours of all persons	74.4	85.5	91.7	101.8	110.9	111.8	115.5	119.1	122.2	123.1
Capital services	38.4	60.2	68.7	92.0	111.0	115.2	118.7	122.0	125.4	128.3
Combined units of labor and capital input	61.2	77.4	84.5	98.9	110.9	112.8	116.4	120.0	123.1	124.6
Capital per hour of all persons	51.6	70.4	75.0	90.4	100.1	103.0	102.7	102.4	102.6	104.2
Manufacturing:										
Productivity:										
Output per hour of all persons	58.4	77.2	89.4	96.6	114.8	120.0	126.4	132.1	133.3	136.6
Output per unit of capital services	136.6	128.0	143.4	113.4	117.2	118.9	124.9	132.9	132.8	131.3
Multifactor productivity	72.6	87.5	100.5	100.5	115.4	119.7	126.0	132.4	133.2	135.1
Output	55.0	82.3	100.9	106.2	122.8	126.6	134.3	144.6	146.4	147.0
Inputs:										
Hours of all persons	94.2	106.5	112.9	109.9	107.0	105.4	106.2	109.4	109.8	107.6
Capital services	40.3	64.3	70.4	93.6	104.8	106.5	107.5	108.8	110.3	112.0
Combined units of labor and capital inputs	75.8	94.1	100.5	105.7	106.4	105.7	106.6	109.2	109.9	108.8
Capital per hour of all persons	42.8	60.3	62.3	85.2	98.0	101.0	101.2	99.4	100.4	104.1

NOTE: Productivity and output in this table have not been revised for consistency with the December 1991 comprehensive revisions to the National Income and Product Accounts.

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

(1982 = 100)

Item	1960	1970	1973	1982	1984	1986	1987	1988	1989	1990	1991	1992	1993
Business:													
Output per hour of all persons	65.6	87.0	95.1	100.0	104.8	108.5	109.6	110.7	109.9	110.7	111.8	115.3	117.1
Compensation per hour	21.1	36.7	45.1	100.0	108.3	118.9	123.1	128.5	133.0	140.6	147.4	154.7	160.0
Real compensation per hour	68.8	91.3	98.1	100.0	100.6	104.7	104.6	104.8	103.5	103.8	104.5	106.4	106.9
Unit labor costs	32.2	42.2	47.5	100.0	103.4	109.5	112.3	116.0	121.0	127.1	131.9	134.1	136.7
Unit nonlabor payments	33.6	42.7	52.1	100.0	116.5	122.0	125.5	130.6	136.6	139.8	144.7	149.6	154.5
Implicit price deflator	32.6	42.4	49.0	100.0	107.7	113.6	116.6	120.8	126.1	131.2	136.1	139.2	142.5
Nonfarm business:													
Output per hour of all persons	69.9	88.5	96.4	100.0	104.7	107.7	108.6	109.6	108.6	109.1	110.3	113.6	115.2
Compensation per hour	22.2	37.0	45.4	100.0	108.3	118.4	122.5	127.7	132.0	139.2	146.2	153.5	158.4
Real compensation per hour	72.4	92.0	98.7	100.0	100.6	104.3	104.1	104.2	102.7	102.8	103.6	105.6	105.8
Unit labor costs	31.8	41.8	47.1	100.0	103.4	110.0	112.8	116.5	121.5	127.6	132.6	135.1	137.5
Unit nonlabor payments	33.3	43.0	49.6	100.0	116.5	123.2	126.6	131.8	137.1	140.6	146.2	151.2	156.3
Implicit price deflator	32.3	42.2	47.9	100.0	107.6	114.2	117.2	121.4	126.5	131.8	137.0	140.3	143.6
Nonfinancial corporations:													
Output per hour of all employees	75.3	90.3	95.0	100.0	105.4	109.3	111.2	113.3	111.5	112.7	114.7	119.3	121.7
Compensation per hour	23.6	38.4	46.6	100.0	107.6	117.2	120.9	125.9	130.2	137.1	143.8	150.3	154.6
Real compensation per hour	77.0	95.4	101.2	100.0	99.9	103.2	102.7	102.7	101.3	101.2	101.9	103.3	103.3
Total unit costs	29.5	40.5	46.5	100.0	101.1	105.9	107.0	109.8	115.7	120.1	124.4	124.3	124.8
Unit labor costs	31.4	42.5	49.0	100.0	102.0	107.2	108.8	111.1	116.8	121.7	125.4	126.0	127.1
Unit nonlabor costs	24.8	35.5	40.2	100.0	98.8	102.4	102.5	106.4	112.9	116.3	121.9	120.2	119.1
Unit profits	75.1	69.5	87.9	100.0	168.4	150.0	172.1	183.5	168.5	167.5	154.9	177.0	195.9
Unit nonlabor payments	34.2	41.9	49.2	100.0	111.9	111.4	115.6	120.9	123.3	125.9	128.1	130.8	133.6
Implicit price deflator	32.3	42.3	49.1	100.0	105.3	108.6	111.0	114.3	119.0	123.1	126.3	127.6	129.2
Manufacturing:													
Output per hour of all persons	-	-	-	100.0	103.5	109.5	116.6	119.2	119.9	122.1	124.5	129.1	134.5
Compensation per hour	-	-	-	100.0	106.0	115.8	118.4	123.1	127.9	134.7	141.9	147.4	150.1
Real compensation per hour	-	-	-	100.0	98.4	102.0	100.6	100.4	99.5	99.5	100.6	101.4	100.2
Unit labor costs	-	-	-	100.0	102.4	105.8	101.6	103.2	106.7	110.4	114.0	114.2	111.6
Unit nonlabor payments	-	-	-	100.0	122.3	127.4	134.5	147.4	153.3	153.7	154.4	-	-
Implicit price deflator	-	-	-	100.0	107.4	111.2	109.8	114.3	118.4	121.2	124.1	-	-

- Data not available.

Current Labor Statistics: Productivity Data

45. Annual indexes of output per hour for selected industries

(1987 = 100)

Industry	SIC	1973	1979	1984	1985	1986	1987	1988	1989	1990	1991	1992
Iron mining, usable ore	1011	50.9	51.0	70.2	76.2	79.4	100.0	103.6	99.5	90.1	86.9	85.8
Copper mining, recoverable metal	1021	42.4	48.5	76.1	93.6	110.0	100.0	109.7	107.8	104.5	103.0	119.4
Coal mining	12	69.2	54.6	83.5	85.2	92.5	100.0	110.7	116.6	118.6	122.2	134.1
Crude petroleum and natural gas	1311	174.1	110.6	82.0	83.4	90.9	100.0	100.8	97.7	96.9	98.0	102.5
Nonmetallic minerals, except fuels	14	85.3	90.1	92.2	93.9	94.5	100.0	102.2	102.0	108.3	103.4	110.9
Meatpacking plants	2011	66.9	79.0	96.7	101.1	99.2	100.0	100.6	91.5	91.1	94.6	97.3
Sausages and other prepared meats	2013	67.9	93.1	97.3	96.3	96.2	100.0	105.7	99.2	93.2	91.0	-
Poultry dressing and processing	2015	56.9	78.1	96.1	98.2	93.9	100.0	95.3	100.1	106.1	112.5	-
Cheese, natural and processed	2022	56.6	79.8	98.9	94.7	101.1	100.0	106.4	104.3	101.1	98.9	-
Fluid milk	2026	53.4	69.7	89.4	92.2	96.4	100.0	104.0	106.8	108.0	110.8	112.5
Canned fruits and vegetables	2033	69.2	74.9	85.7	91.0	98.3	100.0	98.3	91.9	94.3	98.2	-
Frozen fruits and vegetables	2037	80.5	86.8	100.1	96.2	101.9	100.0	97.9	98.2	94.7	98.1	-
Flour and other grain mill products	2041	63.2	76.3	88.4	93.6	95.4	100.0	103.2	102.8	108.5	107.3	-
Cereal breakfast foods	2043	68.7	76.2	93.7	97.6	98.9	100.0	98.6	96.0	102.0	105.3	-
Rice milling	2044	62.0	73.4	70.2	77.1	83.8	100.0	83.8	98.7	106.9	101.1	-
Wet corn milling	2046	24.1	44.7	81.2	84.5	92.8	100.0	95.4	98.7	100.1	96.8	-
Prepared feeds for animals and fowls	2047,48	54.7	67.5	88.2	95.6	93.3	100.0	101.6	100.4	103.6	103.2	-
Bakery products	2051,52	81.4	82.8	93.9	95.5	101.1	100.0	92.7	92.4	93.8	90.5	89.9
Raw and refined cane sugar	2061,62	86.7	94.4	85.1	96.0	95.2	100.0	98.7	95.9	95.9	102.7	101.9
Beet sugar	2063	74.3	77.8	79.9	73.4	80.9	100.0	95.3	87.9	91.0	93.3	102.2
Malt beverages	2082	41.8	62.3	80.2	76.8	90.9	100.0	99.5	99.4	106.0	103.8	105.1
Bottled and canned soft drinks	2086	49.2	64.4	81.6	85.1	91.3	100.0	109.7	119.4	126.6	135.1	143.5
Fresh or frozen fish and seafood	2092	95.0	97.8	91.2	89.5	92.9	100.0	100.2	91.3	87.6	84.8	-
Cigarettes, chewing and smoking tobacco	2111,31	76.8	88.6	90.3	92.9	95.2	100.0	106.8	107.3	112.7	119.2	123.9
Cigars	2121	61.6	69.7	98.9	91.4	94.9	100.0	106.2	108.5	106.1	121.8	-
Cotton and synthetic broadwoven fabrics	2211,21	57.6	75.8	90.7	94.1	101.2	100.0	98.2	101.9	106.1	114.0	120.8
Hosiery	2251,52	64.5	93.3	102.8	101.3	102.8	100.0	107.4	108.2	105.7	111.4	117.6
Yarn spinning mills	2281	54.8	66.9	84.0	87.5	91.9	100.0	98.5	103.5	107.1	106.9	114.8
Men's and boys' suits and coats	2311	78.6	90.4	91.6	100.5	101.5	100.0	103.6	105.0	105.2	95.2	107.3
Sawmills and planing mills, general	2421	68.3	72.4	88.6	92.3	102.1	100.0	102.3	100.1	100.3	102.9	110.5
Millwork	2431	106.0	95.5	98.8	95.5	100.5	100.0	98.7	97.8	98.3	96.2	96.2
Wood kitchen cabinets	2434	80.7	89.2	90.2	85.2	83.0	100.0	98.3	91.4	94.3	92.5	-
Hardwood veneer and plywood	2435	60.7	73.8	78.4	81.7	81.7	100.0	101.7	101.9	95.7	98.4	-
Softwood veneer and plywood	2436	62.6	63.2	87.9	87.3	89.5	100.0	100.1	102.7	108.4	114.6	117.5
Wood containers	244	-	75.6	104.5	101.0	99.9	100.0	103.6	109.6	113.2	115.0	-
Wood household furniture	2511,17	92.3	90.2	93.9	93.1	99.9	100.0	101.1	99.5	98.3	99.8	99.2
Upholstered household furniture	2512	72.2	83.1	90.6	98.7	100.6	100.0	99.8	101.0	98.5	103.4	108.2
Metal household furniture	2514	75.9	72.6	97.3	99.4	102.9	100.0	100.6	99.8	103.7	107.4	116.0
Mattresses and bedsprings	2515	75.3	87.5	88.4	85.3	89.7	100.0	104.5	112.0	114.7	122.1	126.6
Wood office furniture	2521	80.3	113.9	98.8	99.1	96.0	100.0	94.7	94.2	95.8	99.0	-
Office furniture, except wood	2522	74.5	79.5	99.8	98.1	101.5	100.0	95.7	99.0	95.5	92.7	-
Pulp, paper, and paperboard mills	2611,21,31	66.3	76.3	87.6	89.1	96.9	100.0	101.8	102.5	103.2	105.2	112.9
Corrugated and solid fiber boxes	2653	69.9	86.6	96.5	99.3	102.6	100.0	99.6	97.7	100.3	100.0	101.1
Folding paperboard boxes	2657	84.6	95.1	95.5	93.5	96.3	100.0	100.1	101.7	105.2	104.4	104.6
Paper and plastic bags	2673,74	82.7	86.0	94.1	95.9	101.0	100.0	97.7	94.1	92.4	89.6	-
Alkalies and chlorine	2812	49.4	52.2	73.0	75.1	101.6	100.0	101.6	93.4	90.7	82.6	-
Inorganic pigments	2816	76.3	69.9	84.4	87.0	90.7	100.0	101.7	106.2	101.1	95.3	-
Industrial inorganic chemicals, not elsewhere classified	2819 pt.	87.3	101.5	88.6	87.4	88.9	100.0	92.7	85.9	86.5	81.3	-
Synthetic fibers	2823,24	50.5	72.9	79.7	86.2	92.7	100.0	104.6	102.3	99.1	101.9	108.3
Soaps and detergents	2841	87.2	90.5	89.1	91.0	92.6	100.0	102.7	109.9	129.7	129.8	-
Cosmetics and other toiletries	2844	87.9	94.7	86.5	88.9	96.4	100.0	104.3	101.4	100.3	102.5	-
Paints and allied products	2851	64.6	82.4	95.1	98.2	99.3	100.0	103.2	106.6	111.1	110.8	113.8
Industrial organic chemicals, not elsewhere classified	2869	68.8	86.4	86.7	85.7	90.7	100.0	107.8	105.5	98.0	91.8	90.4
Nitrogenous fertilizers	2873	58.5	70.0	96.7	95.2	85.0	100.0	101.6	102.1	107.7	107.4	-
Phosphatic fertilizers	2874	69.7	74.1	94.4	87.7	80.3	100.0	92.2	85.3	105.4	113.1	-
Fertilizers, mixing only	2875	82.6	105.0	97.2	100.6	93.8	100.0	102.6	110.8	108.7	109.3	-
Agricultural chemicals, not elsewhere classified	2879	72.8	87.4	96.9	91.2	91.7	100.0	108.7	107.8	105.0	113.5	-
Petroleum refining	2911	81.2	82.3	78.4	84.3	94.6	100.0	105.9	110.2	109.9	107.4	111.6
Tires and inner tubes	3011	55.0	62.0	87.1	88.1	92.2	100.0	104.3	106.4	108.3	109.8	116.7
Rubber and plastics hose and belting	3052	83.1	85.0	105.3	101.4	102.9	100.0	107.1	96.5	101.4	93.1	-
Miscellaneous plastic products, not elsewhere classified	308	72.6	73.4	86.1	88.0	89.0	100.0	98.3	97.2	100.1	100.8	100.5
Footwear	314	91.9	93.6	98.7	100.3	102.2	100.0	102.3	101.1	92.6	92.8	93.6
Glass containers	3221	75.3	83.4	97.3	93.3	98.4	100.0	101.1	104.8	112.6	114.9	120.7
Cement, hydraulic	3241	71.6	68.8	89.9	92.1	97.2	100.0	103.2	110.0	112.3	106.4	118.2
Clay construction products	3251,53,59	75.5	76.3	92.2	94.1	95.5	100.0	104.1	96.6	100.5	94.9	101.2
Clay refractories	3255	75.4	88.8	92.9	91.9	99.3	100.0	101.3	97.3	102.1	96.2	92.6
Concrete products	3271,72	89.2	89.3	96.0	97.3	102.5	100.0	103.0	106.7	105.8	107.5	109.9
Ready-mixed concrete	3273	99.0	95.6	92.0	93.2	95.9	100.0	100.3	101.0	99.7	96.1	97.9
Steel	331	70.1	70.2	86.1	91.4	93.3	100.0	110.3	107.2	110.4	106.3	116.2
Gray and ductile iron foundries	3321	87.9	90.1	98.6	96.1	98.7	100.0	107.6	103.5	103.7	99.0	104.5
Steel foundries	3324,25	106.1	104.7	102.8	99.5	104.3	100.0	95.9	96.4	95.8	93.3	100.3
Primary copper	3331	32.8	41.1	57.6	73.8	88.7	100.0	103.7	96.8	86.3	84.7	84.7
Primary aluminum	3334	74.5	74.7	100.8	97.8	102.5	100.0	102.3	104.8	106.5	110.6	107.7
Copper rolling and drawing	3351	68.7	72.3	83.9	85.5	92.4	100.0	100.5	94.7	94.3	96.7	103.4
Aluminum rolling and drawing	3353,54,55	75.3	80.4	92.7	92.6	99.4	100.0	99.1	96.8	94.4	92.6	-

See footnotes at end of table.

45. Continued—Annual indexes of output per hour for selected industries

(1987 = 100)

Industry	SIC	1973	1979	1984	1985	1986	1987	1988	1989	1990	1991	1992
Metal cans	3411	63.9	81.2	105.9	102.4	97.4	100.0	107.0	108.5	118.3	124.3	135.8
Hand and edge tools, not elsewhere classified	3423	105.5	107.9	94.0	95.3	95.0	100.0	101.5	102.0	96.4	95.1	-
Heating equipment, except electric	3433	78.0	87.9	93.5	92.9	95.9	100.0	112.5	103.0	110.7	115.3	-
Fabricated structural metal	3441	95.5	86.3	91.1	99.6	99.5	100.0	98.8	94.5	97.2	99.5	-
Metal doors, sash, and trim	3442	88.8	89.5	99.1	102.5	100.3	100.0	102.3	102.2	98.3	96.0	-
Bolts, nuts, rivets, and washers	3452	72.5	77.3	84.3	88.2	91.4	100.0	96.6	93.1	93.2	95.2	-
Automotive stampings	3465	74.5	80.9	100.5	94.5	95.7	100.0	104.5	104.7	100.8	104.2	-
Metal stampings, not elsewhere classified	3469	95.3	97.1	90.7	85.5	90.7	100.0	99.9	97.8	95.2	96.5	-
Valves and pipe fittings	3491,92,94	92.9	94.8	94.7	94.4	94.0	100.0	101.9	101.3	102.1	102.1	-
Fabricated pipe and fittings	3498	147.8	121.0	131.4	121.0	121.9	100.0	99.3	101.7	106.5	113.3	-
Internal combustion engines, not elsewhere classified	3519	82.5	89.0	90.6	93.4	98.9	100.0	105.1	111.1	106.4	99.1	106.2
Farm machinery and equipment	3523	95.6	98.2	104.6	98.6	95.7	100.0	110.4	120.7	126.6	119.4	127.1
Lawn and garden equipment	3524	66.2	83.5	80.0	82.1	92.7	100.0	97.5	94.7	96.0	96.1	-
Construction machinery	3531	85.8	91.6	95.0	96.7	102.7	100.0	107.5	111.1	114.5	99.8	-
Mining machinery	3532	99.2	87.2	90.3	93.0	95.6	100.0	102.0	108.8	100.6	92.5	101.1
Oil and gas field machinery	3533	104.9	100.1	94.4	91.8	94.7	100.0	99.5	104.7	107.6	109.2	-
Metal-cutting machine tools	3541	93.4	91.2	83.8	87.2	89.0	100.0	94.1	100.5	102.0	99.0	94.8
Metal-forming machine tools	3542	108.1	94.1	89.4	92.3	92.8	100.0	116.0	112.4	102.6	95.0	107.7
Machine tool accessories	3545	104.9	100.1	94.4	91.8	94.7	100.0	99.5	104.7	107.6	109.2	-
Pumps and pumping equipment	3561,94	78.0	83.9	88.0	88.4	90.7	100.0	106.0	102.4	104.4	103.1	-
Ball and roller bearings	3562	101.2	104.0	92.6	90.2	93.6	100.0	101.7	96.7	90.7	88.0	98.1
Air and gas compressors	3563	86.9	86.3	89.6	91.7	94.8	100.0	104.4	106.2	109.0	111.7	-
Refrigeration and heating equipment	3585	97.2	95.7	100.0	98.2	96.3	100.0	103.4	106.1	106.0	103.1	-
Carburetors, pistons, rings, and valves	3592	101.3	79.6	92.8	95.9	93.5	100.0	109.9	119.7	113.5	114.9	-
Transformers, except electronic	3612	93.6	104.8	94.6	95.8	97.6	100.0	102.8	104.8	112.2	116.4	125.1
Switchgear and switchboard apparatus	3613	89.1	90.2	93.8	96.5	96.3	100.0	110.0	110.1	111.9	109.0	-
Motors and generators	3621	89.3	88.1	94.4	95.9	96.9	100.0	103.9	103.4	102.6	105.3	104.6
Household cooking equipment	3631	60.0	77.0	87.6	87.2	98.4	100.0	102.2	108.0	103.9	107.1	121.7
Household refrigerators and freezers	3632	73.2	86.0	97.2	104.0	101.2	100.0	102.7	107.1	107.6	112.5	117.5
Household laundry equipment	3633	68.8	84.2	92.2	92.9	97.0	100.0	106.6	100.8	103.8	111.4	132.3
Household appliances, not elsewhere classified	3639	64.8	78.1	85.5	86.8	90.2	100.0	100.7	98.5	91.2	81.6	78.7
Electric lamps	3641	63.5	74.1	91.9	88.7	91.0	100.0	105.6	113.7	119.1	128.7	145.9
Lighting fixtures and equipment	3645,46,47,48	83.9	84.6	91.8	96.4	102.7	100.0	98.1	95.9	94.4	92.4	93.0
Household audio and video equipment	3651	31.0	41.8	85.9	91.8	103.9	100.0	110.9	123.2	134.4	141.8	162.6
Motor vehicles and equipment	371	67.9	77.5	90.9	95.0	94.7	100.0	102.9	102.6	102.0	96.3	104.1
Aircraft	3721	82.2	103.0	83.5	92.4	92.4	100.0	103.0	106.7	106.2	124.5	125.2
Instruments to measure electricity	3825	68.4	75.5	100.6	98.3	92.0	100.0	106.5	109.3	108.0	111.6	-
Photographic equipment and supplies	3861	68.8	91.9	93.0	90.3	97.1	100.0	106.3	113.7	109.5	110.6	-
Railroad transportation, revenue traffic	4011	46.7	50.7	73.9	78.4	86.1	100.0	109.7	116.5	122.4	132.7	140.2
Bus carriers, class 1	4111,13,14 pts.	116.8	108.3	100.1	96.1	95.6	100.0	107.9	104.6	-	-	-
Trucking, except local	4213	69.5	83.9	97.3	93.8	96.8	100.0	105.2	109.4	-	-	-
Air transportation	4512,13,22 pts.	58.6	77.6	90.4	93.6	94.5	100.0	96.5	93.1	89.6	90.9	94.1
Petroleum pipelines	4612,13	92.5	96.1	99.4	99.9	102.0	100.0	104.8	103.2	102.6	99.1	98.3
Telephone communications	481	43.3	64.5	86.0	90.4	97.2	100.0	105.3	110.5	110.7	116.2	122.0
Electric utilities	491,493 pt.	88.0	95.0	94.0	93.0	95.3	100.0	104.9	107.7	110.1	113.4	114.3
Gas utilities	492,493 pt.	145.1	143.6	116.1	114.1	102.9	100.0	105.4	103.4	94.7	93.8	94.8
Scrap and waste materials	5093	-	80.7	89.1	93.4	97.7	100.0	98.2	90.7	106.4	115.5	-
Hardware stores	5251	84.7	98.6	97.0	96.0	101.7	100.0	108.8	115.4	110.5	102.4	109.9
Department stores	5311	62.2	74.8	91.1	93.1	97.7	100.0	99.5	97.3	95.0	98.9	103.2
Variety stores	5331	141.1	119.8	141.7	129.1	106.6	100.0	97.2	113.4	131.8	130.0	117.8
Grocery stores	5411	108.4	106.3	107.4	105.3	103.6	100.0	98.6	95.9	94.6	93.9	94.1
Retail bakeries	546	125.0	111.7	94.9	86.9	93.2	100.0	94.2	87.3	84.9	90.0	82.5
New and used car dealers	5511	85.1	86.3	99.5	99.8	101.6	100.0	102.6	103.8	107.1	105.5	106.2
Auto and home supply stores	5531	71.0	81.2	91.2	95.0	94.6	100.0	106.5	108.9	114.2	114.6	114.0
Gasoline service stations	5541	59.4	74.0	87.1	93.8	102.0	100.0	102.4	104.0	101.1	102.1	106.6
Men's and boys' clothing stores	5611	77.5	81.3	93.7	98.2	100.6	100.0	102.4	102.3	101.5	102.0	104.0
Women's clothing stores	5621	59.5	73.3	98.1	99.9	107.3	100.0	99.4	102.9	106.5	110.3	119.9
Family clothing stores	5651	76.3	75.7	106.4	103.2	103.4	100.0	101.1	103.1	101.4	102.3	112.5
Shoe stores	5661	81.1	91.1	90.8	97.8	105.6	100.0	102.6	107.3	106.3	105.5	109.2
Furniture and homefurnishings stores	571	81.6	89.0	97.3	94.3	101.1	100.0	99.5	101.7	103.9	103.6	112.3
Household appliance stores	5722	59.1	72.2	86.9	94.6	106.3	100.0	102.0	108.2	111.2	118.0	139.9
Radio, television, and computer stores	573	48.6	56.0	79.7	89.1	93.9	100.0	120.9	123.1	131.4	144.0	153.2
Eating and drinking places	581	110.4	106.3	98.9	96.2	99.2	100.0	103.0	102.9	104.6	106.1	104.6
Drug and proprietary stores	5912	92.2	98.6	104.8	101.4	101.0	100.0	102.8	104.2	106.6	109.6	108.0
Liquor stores	5921	94.1	90.0	93.2	101.6	93.7	100.0	100.1	104.7	110.6	112.3	126.6
Commercial banks	602	81.2	84.1	89.6	94.3	96.1	100.0	103.5	102.1	108.5	112.3	117.3
Hotels and motels	7011	102.9	109.8	101.6	101.1	98.9	100.0	95.8	91.4	90.6	91.3	97.8
Laundry, cleaning, and garment services	721	114.9	113.8	107.4	103.2	100.7	100.0	97.1	98.6	99.0	96.6	97.1
Beauty shops	7231	88.1	89.4	98.4	96.1	96.9	100.0	93.4	96.0	91.4	87.6	90.5
Automotive repair shops	753	109.7	105.3	91.8	99.4	96.2	100.0	105.6	107.8	106.4	99.9	103.2

- Data not available.

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

Country	Annual average		1992		1993				1994
	1992	1993	III	IV	I	II	III	IV	I
United States ¹	7.4	6.8	7.5	7.3	7.0	7.0	6.7	6.5	6.6
Canada	11.3	11.2	11.5	11.5	11.0	11.4	11.4	11.1	11.0
Australia	10.8	10.9	10.9	11.2	11.0	10.9	10.9	10.9	10.4
Japan	2.2	2.5	2.2	2.3	2.3	2.4	2.6	2.8	2.8
France	10.4	11.8	10.4	10.6	11.3	11.7	12.1	12.3	12.3
Germany	4.6	5.7	4.6	4.9	5.3	5.6	5.9	6.2	-
Italy ²	7.3	10.1	7.0	8.4	9.3	10.8	10.6	-	-
Sweden ³	4.7	8.1	5.0	5.2	7.2	8.0	9.1	8.2	8.2
United Kingdom	10.0	10.4	10.2	10.5	10.6	10.4	10.5	10.1	9.9

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 Quarterly rates are for the first month of the quarter. Break in series beginning in 1993.

³ Break in series beginning in 1993. Data for 1993 onward are not seasonally adjusted.

- Data not available.

NOTE: Quarterly figures for France, Germany, and the United Kingdom 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.

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

(Numbers in thousands)

Employment status and country	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Civilian labor forcé										
United States	113,544	115,461	117,834	119,865	121,669	123,869	124,787	125,303	126,982	128,040
Canada	12,316	12,532	12,746	13,011	13,275	13,503	13,681	13,757	13,797	13,946
Australia	7,135	7,300	7,588	7,758	7,974	8,237	8,459	8,534	8,627	8,692
Japan	58,480	58,820	59,410	60,050	60,860	61,920	63,050	64,280	65,040	65,470
France	23,560	23,620	23,760	23,890	23,980	24,170	24,300	24,480	24,540	24,620
Germany	27,800	28,020	28,240	28,390	28,610	28,840	29,410	29,780	30,050	29,940
Italy	21,670	21,800	22,290	22,350	22,660	22,530	22,670	22,940	22,910	22,570
Netherlands	6,200	6,250	6,380	6,500	6,530	6,640	6,770	6,840	6,970	7,070
Sweden	4,385	4,418	4,443	4,480	4,540	4,599	4,642	4,626	4,534	4,385
United Kingdom	27,010	27,210	27,380	27,720	28,150	28,420	28,540	28,400	28,230	28,150
Participation rate¹										
United States	64.4	64.8	65.3	65.6	65.9	66.5	66.4	66.0	66.3	66.2
Canada	64.8	65.3	65.7	66.2	66.7	67.0	67.0	66.3	65.5	65.2
Australia	61.5	61.6	62.8	63.0	63.3	64.2	64.7	64.3	64.0	63.6
Japan	62.7	62.3	62.1	61.9	61.9	62.2	62.6	63.2	63.4	63.3
France	57.2	56.9	56.9	56.7	56.4	56.1	55.6	55.6	55.7	55.5
Germany	54.4	54.7	54.9	55.0	55.1	55.2	55.0	55.7	55.4	54.7
Italy	47.3	47.2	47.8	47.6	47.4	47.3	47.2	48.6	48.5	48.8
Netherlands	55.7	55.5	56.0	56.3	56.1	56.5	56.8	57.5	57.9	58.6
Sweden	66.6	66.9	67.0	67.1	67.6	68.0	68.1	67.5	66.0	63.8
United Kingdom	62.1	62.2	62.2	62.6	63.4	63.8	63.9	63.4	62.8	62.6
Employed										
United States	105,005	107,150	109,597	112,440	114,968	117,342	117,914	116,877	117,598	119,306
Canada	10,932	11,221	11,531	11,861	12,245	12,486	12,572	12,340	12,240	12,383
Australia	6,494	6,697	6,974	7,129	7,398	7,728	7,872	7,713	7,694	7,744
Japan	56,870	57,260	57,740	58,320	59,310	60,500	61,710	62,920	63,620	63,810
France	21,200	21,150	21,240	21,320	21,520	21,850	22,100	22,130	21,990	21,710
Germany	25,830	26,010	26,380	26,590	26,800	27,200	27,950	28,500	28,670	28,220
Italy	20,390	20,490	20,610	20,590	20,870	20,770	21,080	21,360	21,230	20,280
Netherlands	5,490	5,650	5,740	5,850	5,920	6,070	6,260	6,380	6,470	6,450
Sweden	4,249	4,293	4,326	4,396	4,467	4,538	4,572	4,504	4,320	4,028
United Kingdom	23,830	24,150	24,300	24,860	25,730	26,350	26,580	25,910	25,410	25,220
Employment-population ratio²										
United States	59.5	60.1	60.7	61.5	62.3	63.0	62.7	61.6	61.4	61.6
Canada	57.5	58.5	59.4	60.4	61.6	62.0	61.5	59.5	58.1	57.9
Australia	56.0	56.5	57.7	57.9	58.7	60.2	60.2	58.1	57.1	57.7
Japan	61.0	60.6	60.4	60.1	60.4	60.8	61.3	61.8	62.0	61.7
France	51.5	51.0	50.8	50.6	50.6	50.7	50.5	50.2	49.9	49.0
Germany	50.5	50.7	51.3	51.5	51.6	52.0	52.2	53.3	52.9	51.5
Italy	44.5	44.4	44.2	43.8	43.7	43.6	43.9	45.3	44.9	43.9
Netherlands	49.3	50.1	50.3	50.7	50.8	51.7	52.5	53.4	53.8	53.4
Sweden	64.5	65.0	65.2	65.8	66.5	67.1	67.0	65.7	62.9	58.6
United Kingdom	54.8	55.2	55.2	56.2	57.9	59.1	59.5	57.8	56.5	56.1
Unemployed										
United States	8,539	8,312	8,237	7,425	6,701	6,528	6,874	8,426	9,384	8,734
Canada	1,384	1,311	1,215	1,150	1,031	1,018	1,109	1,417	1,556	1,562
Australia	641	603	613	629	576	509	587	821	933	948
Japan	1,610	1,560	1,670	1,730	1,550	1,420	1,340	1,360	1,420	1,660
France	2,360	2,470	2,520	2,570	2,460	2,320	2,200	2,350	2,550	2,910
Germany	1,970	2,010	1,860	1,800	1,810	1,640	1,460	1,280	1,380	1,720
Italy	1,280	1,310	1,680	1,760	1,790	1,760	1,590	1,580	1,680	2,290
Netherlands	710	600	640	650	610	570	510	490	500	620
Sweden	136	125	117	84	73	61	70	122	214	357
United Kingdom	3,180	3,060	3,080	2,860	2,420	2,070	1,960	2,490	2,820	2,930
Unemployment rate										
United States	7.5	7.2	7.0	6.2	5.5	5.3	5.5	6.7	7.4	6.8
Canada	11.2	10.5	9.5	8.8	7.8	7.5	8.1	10.3	11.3	11.2
Australia	9.0	8.3	8.1	8.1	7.2	6.2	6.9	9.6	10.8	10.9
Japan	2.8	2.6	2.8	2.9	2.5	2.3	2.1	2.1	2.2	2.5
France	10.0	10.5	10.6	10.8	10.3	9.6	9.1	9.6	10.4	11.8
Germany	7.1	7.2	6.6	6.3	6.3	5.7	5.0	4.3	4.6	5.7
Italy	5.9	6.0	7.5	7.9	7.9	7.8	7.0	6.9	7.3	10.1
Netherlands	11.5	9.6	10.0	10.0	9.3	8.6	7.5	7.1	7.2	8.8
Sweden	3.1	2.8	2.6	1.9	1.6	1.3	1.5	2.6	4.7	8.1
United Kingdom	11.8	11.2	11.2	10.3	8.6	7.3	6.9	8.8	10.0	10.4

¹ Labor force as a percent of the working-age population.
² Employment as a percent of the working-age population.

NOTE: See "Notes on the data" for information on breaks in series for Italy and Sweden.

Current Labor Statistics: International Comparisons Data

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

(1982 = 100)

Item and country	1960	1970	1973	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Output per hour														
United States	-	-	-	100.0	102.2	103.5	106.8	109.6	116.7	119.3	120.0	122.2	124.5	129.9
Canada	51.6	76.9	91.9	100.0	107.3	116.3	119.8	117.9	119.0	119.5	119.0	120.6	121.4	126.4
Japan	18.6	52.0	66.1	100.0	101.9	106.1	112.0	110.3	119.5	126.5	135.2	144.5	150.7	143.2
Belgium	24.2	44.3	57.8	100.0	110.9	115.8	117.2	118.2	120.1	125.2	131.2	133.9	136.9	142.7
Denmark	32.4	57.2	72.7	100.0	104.9	104.3	105.0	98.9	98.4	102.1	105.6	107.5	108.9	110.4
France	31.2	59.6	69.9	100.0	102.5	104.2	108.2	110.0	112.1	119.7	125.6	127.2	127.0	130.7
Germany	38.6	67.1	78.4	100.0	105.5	109.2	113.4	114.1	112.3	116.4	120.2	125.5	129.2	129.8
Italy	29.1	54.6	65.2	100.0	105.2	115.7	122.3	123.7	127.2	130.5	135.1	141.1	145.8	151.2
Netherlands	26.5	52.9	67.3	100.0	106.6	115.0	118.7	120.1	120.7	124.4	128.5	130.1	131.3	132.3
Norway	47.8	74.5	86.4	100.0	105.2	112.6	116.0	114.6	120.4	119.7	125.9	129.1	130.1	132.4
Sweden	36.2	69.0	81.1	100.0	106.9	112.0	113.2	115.2	117.6	119.0	122.8	124.9	126.5	135.5
United Kingdom	49.7	71.3	84.6	100.0	107.7	113.2	117.4	122.1	128.8	135.7	142.2	146.3	151.9	159.4
Output														
United States	-	-	-	100.0	103.2	111.3	114.0	115.2	123.5	130.0	131.2	130.6	127.8	131.8
Canada	44.1	78.5	100.0	100.0	106.5	120.2	127.0	127.9	134.1	140.9	141.2	134.0	125.1	125.7
Japan	15.1	55.1	71.8	100.0	104.3	113.2	121.2	117.9	126.5	138.2	149.3	160.6	170.0	159.6
Belgium	37.8	70.9	86.9	100.0	105.6	108.4	109.6	108.9	109.0	114.6	121.9	126.4	125.9	126.3
Denmark	45.4	75.7	88.5	100.0	106.7	111.7	115.3	115.3	110.6	112.3	113.6	115.0	114.0	114.6
France	35.1	72.7	87.0	100.0	99.9	98.7	99.1	99.1	98.9	104.6	110.3	112.4	110.2	110.8
Germany	51.0	87.0	96.4	100.0	101.5	104.6	108.4	110.1	108.1	111.5	115.4	121.7	126.0	124.1
Italy	28.0	58.4	70.7	100.0	100.8	105.4	108.9	111.5	116.3	125.0	129.7	132.3	131.5	130.9
Netherlands	42.7	80.3	91.2	100.0	101.9	107.9	111.1	113.8	115.4	119.7	125.2	129.3	129.4	128.8
Norway	56.0	88.4	101.3	100.0	99.3	105.0	108.8	108.8	110.8	105.5	103.8	104.5	102.3	104.2
Sweden	51.8	91.1	98.7	100.0	105.8	113.6	115.7	117.1	120.0	123.7	125.1	124.3	117.4	116.5
United Kingdom	82.9	110.5	121.9	100.0	102.1	105.9	108.9	110.3	115.5	123.6	129.1	128.9	122.0	121.0
Total hours														
United States	94.0	106.5	112.6	100.0	101.0	107.5	106.7	105.1	105.9	109.0	109.3	106.9	102.6	101.5
Canada	85.5	102.1	108.8	100.0	99.2	103.3	106.0	108.5	112.7	117.9	118.6	111.1	103.1	99.4
Japan	81.2	105.9	108.6	100.0	102.4	106.6	108.2	106.9	105.8	109.3	110.4	111.2	112.8	111.5
Belgium	156.2	159.9	150.3	100.0	95.2	93.6	93.5	92.2	90.7	91.5	93.0	94.4	92.0	88.5
Denmark	140.0	132.3	121.8	100.0	101.7	107.1	109.8	116.6	112.4	110.0	107.6	106.9	104.7	103.8
France	112.6	122.0	124.5	100.0	97.4	94.7	91.6	90.0	88.3	87.4	87.8	88.4	86.8	84.7
Germany	131.9	129.7	122.9	100.0	96.2	95.8	95.6	96.5	96.2	95.8	95.9	97.0	97.5	95.6
Italy	96.2	107.0	108.3	100.0	95.8	91.1	89.0	90.1	91.4	95.8	96.0	93.7	90.2	86.6
Netherlands	160.9	152.0	135.6	100.0	95.6	93.8	93.6	94.8	95.6	96.2	97.4	99.4	98.5	97.4
Norway	117.3	118.6	117.3	100.0	94.3	93.2	93.8	94.9	92.1	88.1	82.5	80.9	78.6	78.7
Sweden	143.3	131.9	121.8	100.0	99.0	101.4	102.2	101.7	102.1	103.9	101.8	99.5	92.8	85.9
United Kingdom	166.6	154.9	144.1	100.0	94.8	93.6	92.7	90.3	89.7	91.0	90.8	88.1	80.3	75.9
Compensation per hour														
United States	-	-	-	100.0	102.7	105.9	111.2	115.8	118.4	123.0	127.9	134.7	141.9	148.2
Canada	16.4	28.7	35.9	100.0	106.1	111.1	116.8	121.3	125.0	130.5	137.4	146.9	155.8	162.2
Japan	6.6	25.0	40.7	100.0	102.7	105.8	110.1	115.8	118.6	120.6	128.2	138.3	146.3	153.0
Belgium	9.1	23.2	35.5	100.0	106.0	114.8	122.0	127.0	130.0	132.7	139.6	147.8	157.2	164.6
Denmark	7.7	22.3	34.5	100.0	106.9	113.0	120.6	123.1	134.6	139.4	147.3	155.1	161.9	166.3
France	7.5	18.1	25.9	100.0	110.3	119.7	129.7	135.1	140.2	145.5	153.3	159.3	166.1	171.7
Germany	13.5	34.5	48.2	100.0	105.0	110.0	116.3	121.2	126.9	131.8	138.2	148.0	157.8	167.3
Italy	3.9	11.6	17.7	100.0	117.0	134.3	150.9	157.1	166.0	173.1	191.1	213.3	236.1	252.2
Netherlands	8.9	27.8	43.4	100.0	104.5	106.6	111.5	115.4	118.8	119.5	120.1	123.3	129.7	136.7
Norway	9.9	24.6	35.3	100.0	110.3	120.9	132.2	145.0	165.6	175.7	183.4	193.7	202.8	208.4
Sweden	9.3	24.4	34.3	100.0	110.2	119.6	131.8	142.4	151.9	161.8	179.0	197.5	215.1	222.3
United Kingdom	7.0	14.5	22.1	100.0	107.5	116.2	127.5	135.5	148.1	155.6	178.5	187.5	208.5	226.0
Unit labor costs: National currency basis														
United States	-	-	-	100.0	100.4	102.4	104.2	105.7	101.5	103.2	106.6	110.3	114.0	114.0
Canada	31.9	37.3	39.1	100.0	98.9	95.5	97.6	102.9	105.0	109.2	115.4	121.8	128.4	128.3
Japan	35.3	48.0	61.6	100.0	100.8	99.7	98.4	104.9	99.2	95.4	94.8	95.7	97.1	106.9
Belgium	37.7	52.2	61.3	100.0	95.6	91.1	104.1	107.5	108.2	106.0	106.5	110.4	114.9	115.3
Denmark	23.8	39.0	47.4	100.0	101.9	108.3	114.9	124.5	136.8	136.5	139.5	144.2	148.7	150.6
France	24.0	30.4	37.1	100.0	107.6	114.9	119.9	122.8	125.1	121.6	122.0	125.3	130.7	131.4
Germany	34.9	51.4	61.6	100.0	99.5	100.8	102.6	106.3	113.0	113.3	114.9	117.9	122.1	128.8
Italy	13.5	21.3	27.1	100.0	111.2	116.1	123.4	127.1	130.5	132.6	141.4	151.2	161.9	166.8
Netherlands	33.4	52.7	64.5	100.0	98.1	92.7	93.9	96.1	98.4	96.0	93.5	94.7	98.8	103.3
Norway	20.6	33.0	40.9	100.0	104.8	107.4	114.0	126.5	137.6	146.7	145.6	150.0	155.8	157.4
Sweden	25.7	35.3	42.3	100.0	103.1	106.8	116.4	123.7	129.2	136.0	145.7	158.1	170.1	164.1
United Kingdom	14.1	20.3	26.1	100.0	99.9	102.6	108.6	110.9	115.0	114.7	125.5	128.2	137.2	141.8
Unit labor costs: U.S. dollar basis														
United States	-	-	-	100.0	100.4	102.4	104.2	105.7	101.5	103.2	106.6	110.3	114.0	114.0
Canada	40.6	44.1	48.2	100.0	99.0	91.0	88.2	91.4	97.8	109.5	120.3	128.9	138.3	131.1
Japan	24.4	33.4	56.6	100.0	105.7	104.6	102.7	155.2	170.8	185.3	171.1	164.4	179.7	210.0
Belgium	34.6	48.2	72.3	100.0	85.6	78.6	80.3	110.2	132.6	131.9	123.7	151.2	153.8	164.2
Denmark	28.8	43.4	65.7	100.0	92.9	87.3	90.4	128.3	166.7	169.0	159.0	194.4	193.8	208.2
France	32.2	36.2	55.0	100.0	92.9	86.5	87.8	116.7	136.9	134.2	125.8	151.3	152.3	163.3
Germany	20.3	34.2	56.4	100.0	94.6	86.0	84.6	118.9	152.6	156.5	148.3	177.1	178.5	200.3
Italy	29.5	46.0	63.1	100.0	99.1	89.5	87.5	115.4	136.3	137.9	139.5	170.8	176.6	183.3
Netherlands	23.7	38.9	62.0	100.0	91.8	77.2	75.6	104.8	129.8	129.8	117.7	138.9	141.0	157.0
Norway	18.7	29.8	46.0	100.0	92.7	85.0	85.7	110.4	131.8	145.2	136.0	154.9	155.0	163.5
Sweden	31.3	42.8	61.0	100.0	84.4	81.1	85.0	109.0	127.9	139.2	141.9	167.7	176.6	176.9
United Kingdom	22.7	27.9	36.6	100.0	86.6	78.5	80.6	93.1	107.9	116.8	117.6	130.8	138.7	143.3

- Data not available.

49. Occupational injury and illness incidence rates by industry,¹ United States

Industry and type of case ²	Incidence rates per 100 full-time workers ³							
	1984	1985	1986	1987	1988	1989 ¹	1990	1991
PRIVATE SECTOR⁴								
Total cases	8.0	7.9	7.9	8.3	8.6	8.6	8.8	8.4
Lost workday cases	3.7	3.6	3.6	3.8	4.0	4.0	4.1	3.9
Lost workdays	63.4	64.9	65.8	69.9	76.1	78.7	84.0	86.5
Agriculture, forestry, and fishing¹								
Total cases	12.0	11.4	11.2	11.2	10.9	10.9	11.6	10.8
Lost workday cases	6.1	5.7	5.6	5.7	5.6	5.7	5.9	5.4
Lost workdays	90.7	91.3	93.6	94.1	101.8	100.9	112.2	108.3
Mining								
Total cases	9.7	8.4	7.4	8.5	8.8	8.5	8.3	7.4
Lost workday cases	5.3	4.8	4.1	4.9	5.1	4.8	5.0	4.5
Lost workdays	160.2	145.3	125.9	144.0	152.1	137.2	119.5	129.6
Construction								
Total cases	15.5	15.2	15.2	14.7	14.6	14.3	14.2	13.0
Lost workday cases	6.9	6.8	6.9	6.8	6.8	6.8	6.7	6.1
Lost workdays	128.1	128.9	134.5	135.8	142.2	143.3	147.9	148.1
General building contractors:								
Total cases	15.4	15.2	14.9	14.2	14.0	13.9	13.4	12.0
Lost workday cases	6.9	6.8	6.6	6.5	6.4	6.5	6.4	5.5
Lost workdays	121.3	120.4	122.7	134.0	132.2	137.3	137.6	132.0
Heavy construction, except building:								
Total cases	14.9	14.5	14.7	14.5	15.1	13.8	13.8	12.8
Lost workday cases	6.4	6.3	6.3	6.4	7.0	6.5	6.3	6.0
Lost workdays	131.7	127.3	132.9	139.1	162.3	147.1	144.6	160.1
Special trade contractors:								
Total cases	15.8	15.4	15.6	15.0	14.7	14.6	14.7	13.5
Lost workday cases	7.1	7.0	7.2	7.1	7.0	6.9	6.9	6.3
Lost workdays	130.1	133.3	140.4	135.7	141.1	144.9	153.1	151.3
Manufacturing								
Total cases	10.6	10.4	10.6	11.9	13.1	13.1	13.2	12.7
Lost workday cases	4.7	4.6	4.7	5.3	5.7	5.8	5.8	5.6
Lost workdays	77.9	80.2	85.2	95.5	107.4	113.0	120.7	121.5
Durable goods:								
Total cases	11.1	10.9	11.0	12.5	14.2	14.1	14.2	13.6
Lost workday cases	4.8	4.7	4.8	5.4	5.9	6.0	6.0	5.7
Lost workdays	79.9	82.0	87.1	96.8	111.1	116.5	123.3	122.9
Lumber and wood products:								
Total cases	19.6	18.5	18.9	18.9	19.5	18.4	18.1	16.8
Lost workday cases	9.9	9.3	9.7	9.6	10.0	9.4	8.8	8.3
Lost workdays	172.0	171.4	177.2	176.5	189.1	177.5	172.5	172.0
Furniture and fixtures:								
Total cases	15.3	15.0	15.2	15.4	16.6	16.1	16.9	15.9
Lost workday cases	6.4	6.3	6.3	6.7	7.3	7.2	7.8	7.2
Lost workdays	101.5	100.4	103.0	103.6	115.7	124.9	139.2	131.2
Stone, clay, and glass products:								
Total cases	13.6	13.9	13.6	14.9	16.0	15.5	15.4	14.8
Lost workday cases	6.6	6.7	6.5	7.1	7.5	7.4	7.3	6.8
Lost workdays	120.8	127.8	126.0	135.8	141.0	149.8	160.5	156.0
Primary metal industries:								
Total cases	13.3	12.6	13.6	17.0	19.4	18.7	19.0	17.7
Lost workday cases	6.1	5.7	6.1	7.4	8.2	8.1	8.1	7.4
Lost workdays	115.3	113.8	125.5	145.8	161.3	168.3	180.2	169.1
Fabricated metal products:								
Total cases	16.1	16.3	16.0	17.0	18.8	18.5	18.7	17.4
Lost workday cases	6.7	6.9	6.8	7.2	8.0	7.9	7.9	7.1
Lost workdays	104.9	110.1	115.5	121.9	138.8	147.6	155.7	146.6
Industrial machinery and equipment:								
Total cases	10.7	10.8	10.7	11.3	12.1	12.1	12.0	11.2
Lost workday cases	4.1	4.2	4.2	4.4	4.7	4.8	4.7	4.4
Lost workdays	65.8	69.3	72.0	72.7	82.8	86.8	88.9	86.6
Electronic and other electrical equipment:								
Total cases	6.8	6.4	6.4	7.2	8.0	9.1	9.1	8.6
Lost workday cases	2.8	2.7	2.7	3.1	3.3	3.9	3.8	3.7
Lost workdays	45.0	45.7	49.8	55.9	64.6	77.5	79.4	83.0
Transportation equipment:								
Total cases	9.3	9.0	9.6	13.5	17.7	17.7	17.8	18.3
Lost workday cases	4.2	3.9	4.1	5.7	6.6	6.8	6.9	7.0
Lost workdays	68.8	71.6	79.1	105.7	134.2	138.6	153.7	166.1
Instruments and related products:								
Total cases	5.4	5.2	5.3	5.8	6.1	5.6	5.9	6.0
Lost workday cases	2.2	2.2	2.3	2.4	2.6	2.5	2.7	2.7
Lost workdays	37.5	37.9	42.2	43.9	51.5	55.4	57.8	64.4
Miscellaneous manufacturing industries:								
Total cases	10.5	9.7	10.2	10.7	11.3	11.1	11.3	11.3
Lost workday cases	4.3	4.2	4.3	4.6	5.1	5.1	5.1	5.1
Lost workdays	70.2	73.2	70.9	81.5	91.0	97.6	113.1	104.0
Nondurable goods:								
Total cases	9.8	9.6	10.0	11.1	11.4	11.6	11.7	11.5

See footnotes at end of table.

49. Continued— Occupational injury and illness incidence rates by industry,¹ United States

Industry and type of case ²	Incidence rates per 100 full-time workers ³							
	1984	1985	1986	1987	1988	1989 ¹	1990	1991
Lost workday cases	4.4	4.4	4.6	5.1	5.4	5.5	5.6	5.5
Lost workdays	74.9	77.6	82.3	93.5	101.7	107.8	116.9	119.7
Food and kindred products:								
Total cases	16.7	16.7	16.5	17.7	18.5	18.5	20.0	19.5
Lost workday cases	8.1	8.1	8.0	8.6	9.2	9.3	9.9	9.9
Lost workdays	131.6	138.0	137.8	153.7	169.7	174.7	202.6	207.2
Tobacco products:								
Total cases	7.7	7.3	6.7	8.6	9.3	8.7	7.7	6.4
Lost workday cases	3.2	3.0	2.5	2.5	2.9	3.4	3.2	2.8
Lost workdays	51.7	51.7	45.6	46.4	53.0	64.2	62.3	52.0
Textile mill products:								
Total cases	8.0	7.5	7.8	9.0	9.6	10.3	9.6	10.0
Lost workday cases	3.0	3.0	3.1	3.6	4.0	4.2	4.0	4.4
Lost workdays	54.0	57.4	59.3	65.9	78.8	81.4	85.1	88.3
Apparel and other textile products:								
Total cases	6.7	6.7	6.7	7.4	8.1	8.6	8.8	9.2
Lost workday cases	2.5	2.6	2.7	3.1	3.5	3.8	3.9	4.2
Lost workdays	40.9	44.1	49.4	59.5	68.2	80.5	92.1	99.9
Paper and allied products:								
Total cases	10.4	10.2	10.5	12.8	13.1	12.7	12.1	11.2
Lost workday cases	4.7	4.7	4.7	5.8	5.9	5.8	5.5	5.0
Lost workdays	93.8	94.6	99.5	122.3	124.3	132.9	124.8	122.7
Printing and publishing:								
Total cases	6.5	6.3	6.5	6.7	6.6	6.9	6.9	6.7
Lost workday cases	2.9	2.9	2.9	3.1	3.2	3.3	3.3	3.2
Lost workdays	46.0	49.2	50.8	55.1	59.8	63.8	69.8	74.5
Chemicals and allied products:								
Total cases	5.3	5.1	6.3	7.0	7.0	7.0	6.5	6.4
Lost workday cases	2.4	2.3	2.7	3.1	3.3	3.2	3.1	3.1
Lost workdays	40.8	38.8	49.4	58.8	59.0	63.4	61.6	62.4
Petroleum and coal products:								
Total cases	5.1	5.1	7.1	7.3	7.0	6.6	6.6	6.2
Lost workday cases	2.4	2.4	3.2	3.1	3.2	3.3	3.1	2.9
Lost workdays	53.5	49.9	67.5	65.9	68.4	68.1	77.3	68.2
Rubber and miscellaneous plastics products:								
Total cases	13.6	13.4	14.0	15.9	16.3	16.2	16.2	15.1
Lost workday cases	6.4	6.3	6.6	7.6	8.1	8.0	7.8	7.2
Lost workdays	104.3	107.4	118.2	130.8	142.9	147.2	151.3	150.9
Leather and leather products:								
Total cases	10.5	10.3	10.5	12.4	11.4	13.6	12.1	12.5
Lost workday cases	4.7	4.6	4.8	5.8	5.6	6.5	5.9	5.9
Lost workdays	94.4	88.3	83.4	114.5	128.2	130.4	152.3	140.8
Transportation and public utilities								
Total cases	8.8	8.6	8.2	8.4	8.9	9.2	9.6	9.3
Lost workday cases	5.2	5.0	4.8	4.9	5.1	5.3	5.5	5.4
Lost workdays	105.1	107.1	102.1	108.1	118.6	121.5	134.1	140.0
Wholesale and retail trade								
Total cases	7.4	7.4	7.7	7.7	7.8	8.0	7.9	7.6
Lost workday cases	3.3	3.2	3.3	3.4	3.5	3.6	3.5	3.4
Lost workdays	50.5	50.7	54.0	56.1	60.9	63.5	65.6	72.0
Wholesale trade:								
Total cases	7.2	7.2	7.2	7.4	7.6	7.7	7.4	7.2
Lost workday cases	3.5	3.5	3.6	3.7	3.8	4.0	3.7	3.7
Lost workdays	55.5	59.8	62.5	64.0	69.2	71.9	71.5	79.2
Retail trade:								
Total cases	7.5	7.5	7.8	7.8	7.9	8.1	8.1	7.7
Lost workday cases	3.2	3.1	3.2	3.3	3.4	3.4	3.4	3.3
Lost workdays	48.4	47.0	50.5	52.9	57.6	60.0	63.2	69.1
Finance, insurance, and real estate								
Total cases	1.9	2.0	2.0	2.0	2.0	2.0	2.4	2.4
Lost workday cases .....	.9	.9	.9	.9	.9	.9	1.1	1.1
Lost workdays	13.6	15.4	17.1	14.3	17.2	17.6	27.3	24.1
Services								
Total cases	5.2	5.4	5.3	5.5	5.4	5.5	6.0	6.2
Lost workday cases	2.5	2.6	2.5	2.7	2.6	2.7	2.8	2.8
Lost workdays	41.1	45.4	43.0	45.8	47.7	51.2	56.4	60.0

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 1982-88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

² Total cases include fatalities.

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 calendar year.

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

⁴ Excludes farms with fewer than 11 employees since 1976.

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Employment Cost Indexes	July 26	2nd quarter					1; 21-24
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Productivity and costs:							
Nonfarm business and manufacturing			August 9	2nd quarter			2; 42-45
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