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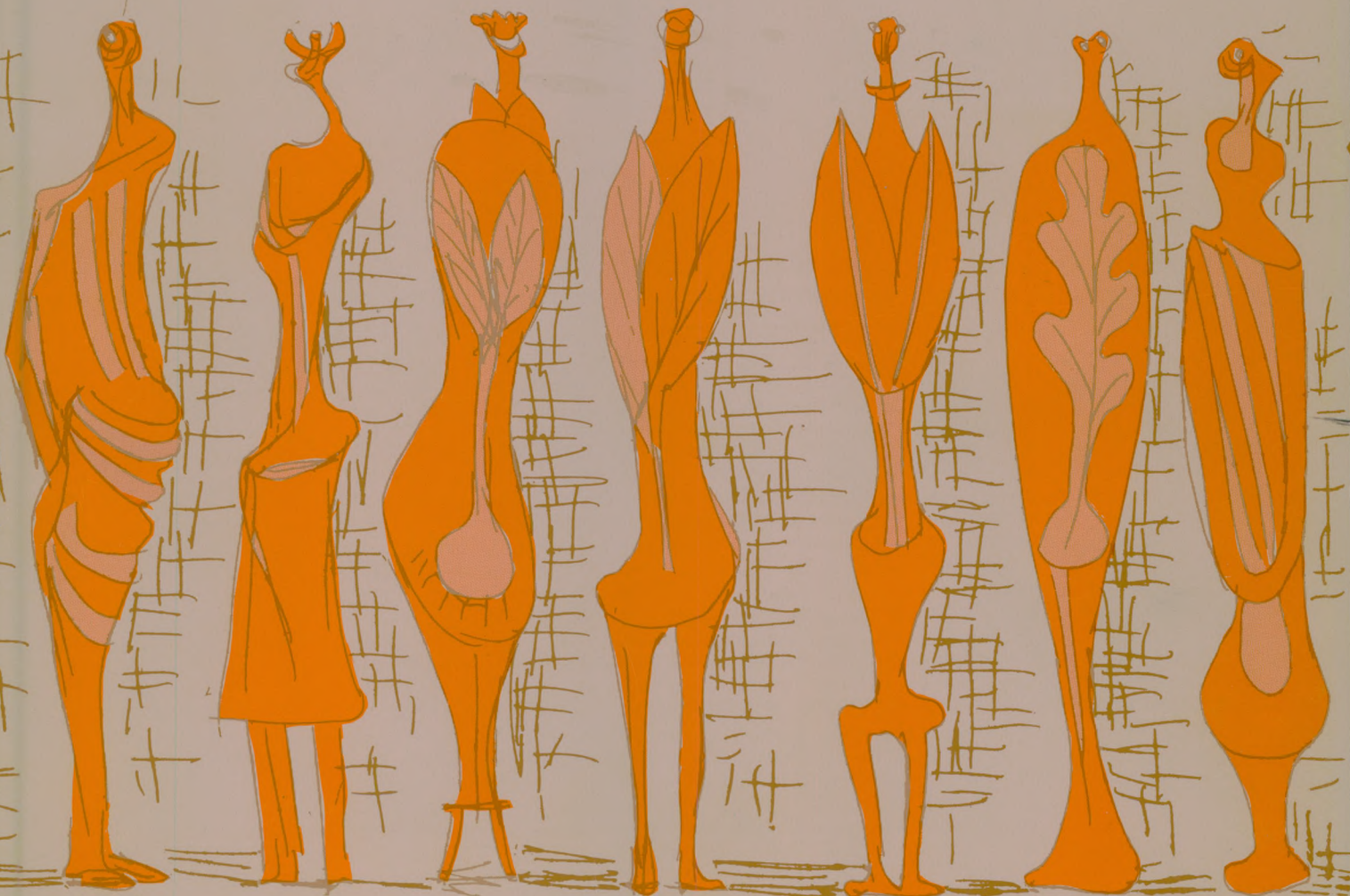
# REVIEW

U.S. Department of Labor

Bureau of Labor Statistics

*Articles on:*

Foreign wages and jobs  
Improving unemployment  
and productivity data  
Productivity in retail stores  
Health insurance







U.S. Department of Labor  
Robert B. Reich, Secretary

Bureau of Labor Statistics  
Katharine G. Abraham, Commissioner

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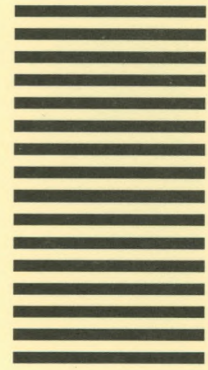
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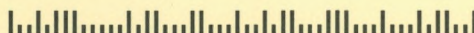
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# REVIEW

October 1995

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### The October Review

Fully 85 percent of economists polled by the National Association of Business Economists expect international trade to continue to increase at double the growth rate of world gross domestic product. *Blue Chip Economic Indicators* reports that both imports and exports are growing at double digit rates. And the World Economic Forum again rated the United States the most competitive of the world's economies. The articles in our international focus section report on labor market trends that influence these developments.

Janet Kmitch, Pedro Laboy, and Sarah Van Damme disentangle the impacts of wages, salaries, benefits, bonuses, and other costs on the key competitive variable of hourly compensation for factory workers. In 24 foreign countries, 1994 compensation costs averaged 88 percent of those in the United States, equaling the high set in 1992. Of course, analysts often focus on smaller groups of countries, or even individual nations, to compare trends. For example, while the newly industrializing economies of Asia have employment costs averaging about a third of those in U.S. manufacturing, their over-the-year growth rate was in double digits. In contrast, U.S. costs rose 2.2 percent, while in Japan, where currency fluctuations had a massive impact, costs rose 3.6 percent in yen and 12.7 percent in dollars.

Another factor affecting competitiveness and living standards is the institutional setting of the labor force. While the *Review* has featured several articles on part-time and temporary jobs in the American labor market, we have only recently had the opportunity to extend such analyses to other economies. Susan Houseman and Machiko Osawa's article describes the part-time, temporary, "arubaito," dispatched, and other non-regular work arrangements adopted increasingly in Japan to reduce labor cost and buffer fluctuations in demand. One provocative finding is that part-time

workers may not necessarily work fewer hours than full-timers. In 1990, about a fifth of workers classified as part time worked as many hours as regular employees. However, they often did not receive the lifetime job commitment and seniority-based promotions offered full-timers.

In the section on data improvement, John E. Bregger and Steven E. Haugen outline the range of improved unemployment measures made possible by the recent redesign of the Current Population Survey. In their article, Edwin Dean, Michael Harper, and Phyllis Flohr Otto explain, among other things, how annually-weighted output measures eliminate a source of statistical bias in quarterly measures of productivity.

Other features include an analysis of productivity in specialty retail stores, a description of the variety of health plans offered by employers, a summary of developments in industrial relations and recent cases in labor law, and a review of *Labor Economics and Industrial Relations: Markets and Institutions*.

### Industry productivity updates

Measures of output per hour for more than 170 selected industries have been updated to 1992, 1993 or 1994, depending upon the particular industry. Industry labor productivity statistics for 1988-91 have been revised with the incorporation of data from the 1992 economic censuses. The updated series are available from the Bureau of Labor Statistics at (202) 606-5618 for data printouts, (202) 606-7789 for data diskettes, or on the Internet (World Wide Web) at [stats.bls.gov/blshome.html](http://stats.bls.gov/blshome.html)

### Labor costs and foreign trade

According to the economists surveyed by the *Blue Chip Economic Indicators*, the fastest growing markets for American exports are Korea, Hong Kong, and Brazil. The biggest growth in imports to the United States are expected to come from Mexico, China, and Malaysia. In

the minds of some observers, the fact that these economies have relatively low wage rates raises the question of maintaining a competitive trade position. According to Stephen Golub, a professor at Swarthmore College and Visiting Scholar at the Federal Reserve Bank of San Francisco, these concerns may be overblown.

In Professor Golub's analysis, the factor that tends to offset low relative pay in newly industrializing countries (NIC's) is low productivity relative to the United States. For example, although wages in Korea and Malaysia rose more rapidly from 1970 to 1990 than pay in the United States, workers there still received only 35 percent and 15 percent of what American workers were paid, even after allowing for currency appreciation. In Mexico, pay actually rose more slowly than in the United States, leading to a decline in Mexico's relative compensation. At the same time, productivity was rising faster in Korea and Mexico than in the United States, while Malaysian productivity rose somewhat more slowly.

The critical measure, in Golub's words, is "labor cost per unit of output—the ratio of wages to productivity—relative to the United States." In the cases outlined above, the resulting movements in unit labor costs yielded increasing ratios for both Malaysia and Korea, and a declining ratio for Mexico. More significantly, in all three countries, unit costs, relative to the United States, ranged from about three-quarters to roughly one. Golub concludes, "low wages are a symptom of low productivity, not an independent source of international competitiveness."

### Give us feedback!

The reader survey attached to this issue is our primary source of input from you about the editorial calendar for the coming year. Please complete the questionnaire and return it to us.

### The November Review

Next month, we update our work force projections to the year 2005.



## International comparisons of manufacturing compensation

*Japan and many Western European economies had higher manufacturing hourly compensation costs than the United States in 1994; the trade-weighted average for 24 foreign economies was 88 percent of the U.S. level*

Janet Kmitch,  
Pedro Laboy,  
and  
Sarah Van Damme

In 1994, hourly compensation costs for manufacturing production workers in Japan rose to a new high of 125 percent of the U.S. average. Costs in most of the 14 European countries for which 1994 data are available also rose relative to the United States, reaching a trade-weighted average of 115 percent of U.S. costs, about the same relative level as in 1991 but below the 1992 peak of 123 percent. Relative compensation costs in the Asian newly industrializing economies (NIE's) of Hong Kong, Korea, Singapore, and Taiwan rose to a new high of 34 percent of U.S. costs, while those in Canada declined to 92 percent. Costs in Mexico remained unchanged, at 15 percent of the U.S. level.

For the 24 foreign economies for which 1994 data are available, trade-weighted average costs increased to 88 percent of U.S. costs, 2 percentage points above the 1993 level, and matching the previous high in 1992.<sup>1</sup>

This article presents comparative data on manufacturing hourly compensation costs through 1994 for the United States and 24 foreign economies, as well as the most recent statistics for 4 additional countries for which 1994 data are not yet available. Table 1 presents hourly compensation costs for selected years for each of the 29 economies and for selected trade-weighted economic groups<sup>2</sup> indexed to the U.S. level. Table 2 shows average annual percent changes for selected countries and economic groups, and table 3 contains data on the structure of compensation. (Measures for the "foreign economies" are computed both including and excluding Mexico and

Israel because the rapid rates of inflation in those two countries in earlier years distort the trade-weighted average percent changes measured in national currencies.) Chart 1 shows the trend in hourly compensation in U.S. dollars over the period 1975–94 for selected countries and economic groups, and chart 2 shows the structure of compensation in 1994 for selected countries.

### Compensation cost measures

The Bureau of Labor Statistics has developed comparative measures of hourly compensation costs to provide a basis for assessing international differences in employer labor costs. Comparisons based on the more readily available average earnings statistics published by many countries may be very misleading. National definitions of average earnings differ considerably; average earnings do not include all items of labor compensation; and the omitted items of compensation frequently represent a large and growing portion of total compensation.

Total compensation costs are defined as (1) all payments made directly to the worker—pay for time worked (basic time and piece rates plus overtime premiums, shift differentials, other premiums and bonuses paid each pay period, and cost-of-living adjustments), pay for time not worked (such as for vacations and holidays), seasonal or irregular bonuses and other special payments, selected social allowances, and the cost of payments in kind—before payroll deductions of any kind, and (2) employer expenditures for

Janet Kmitch, Pedro Laboy, and Sarah Van Damme are economists in the Division of Foreign Labor Statistics, Bureau of Labor Statistics.



### A note on the measures

The hourly compensation measures discussed in this article are based on statistics available to BLS as of April 18, 1995. They are prepared specifically for international comparisons of employer labor costs in manufacturing. The methods used, as well as the results, differ somewhat from those for other BLS series on U.S. compensation costs.

*Labor cost measures.* The compensation measures are computed in national currency units and are converted to U.S. dollars at prevailing commercial market currency exchange rates. These exchange rates are appropriate measures for comparing levels of employer labor costs, but they do not indicate relative living standards of workers or the purchasing power of their incomes. Prices of goods and services vary greatly among countries, and commercial market exchange rates do not reliably indicate relative differences in prices.

*Data limitations.* Because hourly compensation is partly estimated, these statistics should not be considered precise measures of comparative compensation costs. The comparative level figures in this article are averages for all manufacturing industries, and thus are not necessarily representative of all component industries. In the United States and some countries, such as Japan, differentials in hourly compensation costs vary widely by industry. Other countries, such as Germany and Sweden, have narrow differentials.

legally required insurance programs and contractual and private benefit plans (such as retirement plans, health insurance, unemployment insurance, and family allowances). In addition, for some countries (such as France and Sweden), compensation is adjusted for other taxes on payrolls or employment even if they do not finance programs that directly benefit workers, because such taxes are regarded as labor costs.<sup>3</sup>

Changes in relative compensation cost levels over time are affected by differences in underlying wage and benefit trends. They also are affected by frequent, and sometimes sharp, changes in relative currency exchange values.

### Hourly compensation costs, 1994

U.S. hourly compensation costs for manufacturing production workers increased 2.2 percent between 1993 and 1994, the smallest annual increase since 1987. The average increase in the 24 foreign economies for which 1994 data are available was 4.9 percent before adjustment for exchange rate changes. Only Canada, Australia, New Zealand, and Switzerland had smaller national currency-based increases than

the United States. At the upper end, Mexico and the Asian NIE's averaged increases of over 10 percent. The trade-weighted average increase for the European economies was 3.7 percent.

The trade-weighted exchange rate for the 24 foreign economies was almost unchanged in 1994, rising only 0.4 percent relative to the U.S. dollar. While the average trade-weighted exchange rate was little changed, there were substantial exchange rate changes for individual economies. Australia, Japan, New Zealand, Finland, and Switzerland had currency appreciations against the U.S. dollar of over 7 percent. Canada, Mexico, Israel, and Spain had currency depreciations of around 5 percent or more. The trade-weighted average increase for the European economies was 1.7 percent.

After adjustment for exchange rate changes, hourly compensation costs in U.S. dollars rose 5.3 percent in 1994 in the 24 economies. Two countries—Canada and Spain—had declines in U.S. dollar-based hourly compensation costs, and three others—Mexico, Italy, and Portugal—had smaller increases than the U.S. increase of 2.2 percent. In each case, this resulted primarily from exchange rate depreciations relative to the U.S. dollar. At the upper end, Japanese compensation costs measured in U.S. dollars rose 13 percent, with the yen appreciating nearly 9 percent, and costs in the Asian NIE's rose an average 12 percent, nearly all accounted for by national currency-based increases. European hourly compensation costs rose an average 5.4 percent, measured in U.S. dollars.

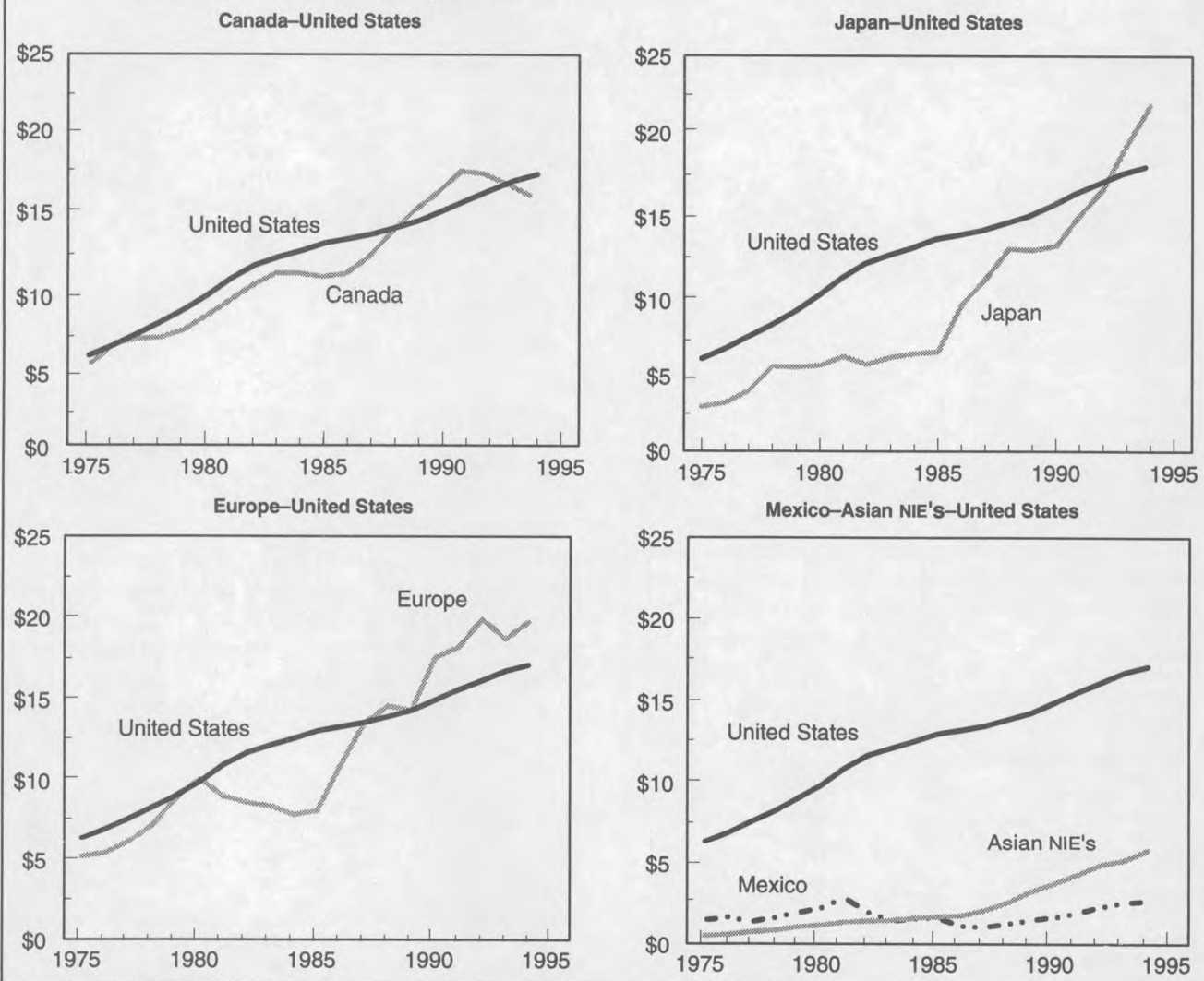
On a relative basis, Germany<sup>4</sup> had the highest hourly compensation costs, reaching a new peak of 160 percent of the U.S. cost level of \$17.10. Switzerland had the second highest costs at 145 percent of the U.S. level, followed by Belgium at 134 percent, Austria at 127 percent, and Japan at 125 percent. Five other European countries—Denmark, Finland, the Netherlands, Norway, and Sweden—also had higher hourly compensation costs than the United States. France matched the U.S. level, and three European countries—Italy, Portugal, and the United Kingdom—had lower costs. The trade-weighted average for the 14 European countries for which 1994 data are available was 115 percent of the U.S. level, up 3 percentage points over 1993, but 8 percentage points below the peak relative level of 123 percent reached in 1992. Costs in all non-European economies except Japan were below the U.S. level, ranging from 15 percent in Mexico to 80 percent in Australia.

### Long-term trends

In the United States, hourly compensation costs for manufacturing production workers increased an average 5.5 percent per year between 1975 and 1994. These costs grew by 9.2 percent annually between 1975 and 1980; by 5.7 percent be-



**Chart 1. Hourly compensation costs in U.S. dollars for production workers in manufacturing, selected countries and economic groups, 1975-94**



tween 1980 and 1985; by 2.8 percent between 1985 and 1990; and by an average of 3.5 percent between 1990 and 1994. In most of the foreign economies studied, compensation cost increases also have abated since 1985 when measured in national currency terms. However, changes in relative exchange rates have substantially altered the underlying pattern in some periods.

In terms of trade-weighted averages for the 14 European economies for which 1994 data are available, hourly compensation costs measured in U.S. dollars rose 14-1/2 percent per year in the 1975-80 period, fell 4 percent per year from 1980 to 1985, rose about 16-1/2 percent per year in the 1985-90 period, and rose 2-1/2 percent per year between 1990 and 1994. The decline over the 1980-85 period reflected the dollar's appreciation, which resulted in a decline in the trade-

weighted value of the European currencies of 11-1/2 percent per year. The sharp increase for Europe in the 1985-90 period reflected the subsequent depreciation of the U.S. dollar, which resulted in an increase in the trade-weighted value of the European currencies of 10-1/2 percent per year. The U.S. dollar rose about 2 percent per year over the full 1990-94 period against the European currencies, largely because the average European currency value had fallen about 10-1/2 percent in 1993. However, the Japanese yen, which, like the European currencies, had risen 10-1/2 percent per year between 1985 and 1990, continued to appreciate at an average of 9 percent per year between 1990 and 1994.

In 1975, the trade-weighted average cost level in the 14 European economies was 81 percent of U.S. compensation costs; it rose to 102 percent in 1980, but began falling in 1981,



**Table 1. Indexes of hourly compensation costs for production workers in manufacturing, selected countries and economic groups, selected years, 1975-94**

[United States = 100]

Country or area	1975	1980	1985	1989	1990	1991	1992	1993	1994
United States .....	100	100	100	100	100	100	100	100	100
Canada .....	94	88	84	103	106	110	105	98	92
Mexico .....	23	22	12	10	11	12	14	15	15
Australia .....	88	86	63	87	88	87	81	75	80
Hong Kong .....	12	15	13	19	21	23	24	26	28
Israel .....	35	38	31	54	57	56	56	53	53
Japan .....	47	56	49	88	86	94	101	114	125
Korea .....	5	10	9	22	25	30	32	33	37
New Zealand .....	50	54	34	54	56	54	49	48	52
Singapore .....	13	15	19	22	25	28	31	31	37
Sri Lanka .....	4	2	2	2	2	3	2	3	-
Taiwan .....	6	10	12	25	26	28	32	31	32
Austria .....	71	90	58	99	119	116	126	122	127
Belgium .....	101	133	69	108	129	127	138	128	134
Denmark .....	99	110	62	101	120	117	124	114	120
Finland .....	72	83	63	118	141	136	123	99	110
France .....	71	91	58	88	102	98	105	97	100
Germany <sup>1</sup> .....	00	125	74	124	147	146	157	154	160
Greece .....	27	38	28	38	45	44	46	41	-
Ireland .....	48	60	46	67	79	78	83	73	-
Italy .....	73	83	59	101	119	119	121	96	95
Luxembourg .....	100	121	59	94	110	107	116	110	-
Netherlands .....	103	122	67	105	123	117	126	119	122
Norway .....	106	117	80	128	144	139	143	121	122
Portugal .....	25	21	12	21	25	27	32	27	27
Spain .....	40	60	36	62	76	78	83	69	67
Sweden .....	113	127	74	122	140	142	152	106	110
Switzerland .....	96	112	74	117	140	139	144	135	145
United Kingdom .....	53	77	48	74	85	88	89	76	80
Trade-weighted measures:									
24 foreign economies <sup>2</sup> ..	60	67	52	77	83	86	88	86	88
less Mexico, Israel ....	65	72	57	85	91	94	97	94	96
OECD <sup>3</sup> .....	76	85	66	97	105	108	110	107	109
Europe .....	82	103	62	101	118	118	124	112	115
European Union .....	80	101	61	98	116	115	122	111	114
Asian NIE's .....	8	12	13	23	25	28	30	31	34

<sup>1</sup> The former West Germany.<sup>2</sup> Twenty-nine countries or areas, less the United States, and four countries for which 1994 data are not available.<sup>3</sup> Organization for Economic Cooperation and Development. Excludes Mexico, which joined the organization in 1994.

NOTE: Dash indicates data not available.

reaching its lowest point—62 percent—in 1984–85. In 1987, European compensation costs matched the U.S. level, and in 1992 they peaked at 123 percent of U.S. costs, before declining to 115 percent in 1994.

Japanese hourly compensation costs were less than 50 percent of U.S. costs in 1975, rose to 66 percent of the U.S. level by 1978, fell to one-half or less of U.S. costs in 1982–85, and have risen relative to the United States in most years since—from 70 percent of U.S. costs in 1986 to 125 percent in 1994. Japan surpassed the average European compensation cost level in 1993, and in 1994, only four European countries had higher hourly compensation costs.

Compensation costs in the Asian NIE's were only 5 to 12 percent of U.S. costs in 1975—about the relative level of Japanese costs in the early 1960's. Asian NIE's relative com-

penetration costs then rose gradually, reaching 20 percent of the U.S. level by the end of the 1980's—about the relative level of Japanese costs by the end of the 1960's. The trade-weighted average cost level for the Asian NIE's reached 30 percent of the U.S. level in 1992 and 34 percent in 1994. In contrast, the Mexican compensation cost level was 23 percent of the U.S. level in 1975, peaked at about a quarter of U.S. costs in 1981, and subsequently fell to only 8 percent by 1986, before rising to 15 percent of U.S. costs in 1993–94.

### Compensation structure

The structure of compensation costs differs among the economies covered in this article. In part, this reflects differences in the fringe benefits available to workers, such as the amount



of paid leave and provisions for health insurance. However, it also reflects differences in the financing of social benefits. The costs of social benefits are included in employer compensation costs only if they are financed from taxes on payrolls or employment; they are not included if they are financed from general revenues, as are the British national health system and family allowances in Germany.

*Pay for time worked.* In 1994, pay for time worked accounted for between 80 and 85 percent of total compensation costs in Denmark and New Zealand and for between 70 and 75 percent in the United States, Canada, Australia, Ireland, Norway, and the United Kingdom. However, pay for time worked was only about 60 percent of total compensation costs in Japan and 50 to 60 percent in many European countries, including France, Germany, and Italy.

The very high ratios in Denmark and New Zealand largely reflect very low employer social insurance expenditures. The ratios for Canada, Australia, Ireland, Norway, and the United Kingdom result from a combination of relatively low ratios for both other direct pay and social insurance expenditures. The ratio for the United States largely reflects a low ratio for other direct pay.

*Other direct pay.* Other direct pay, which consists primarily of vacation and holiday pay and seasonal bonuses, accounted for nearly 30 percent of total compensation in Japan, where

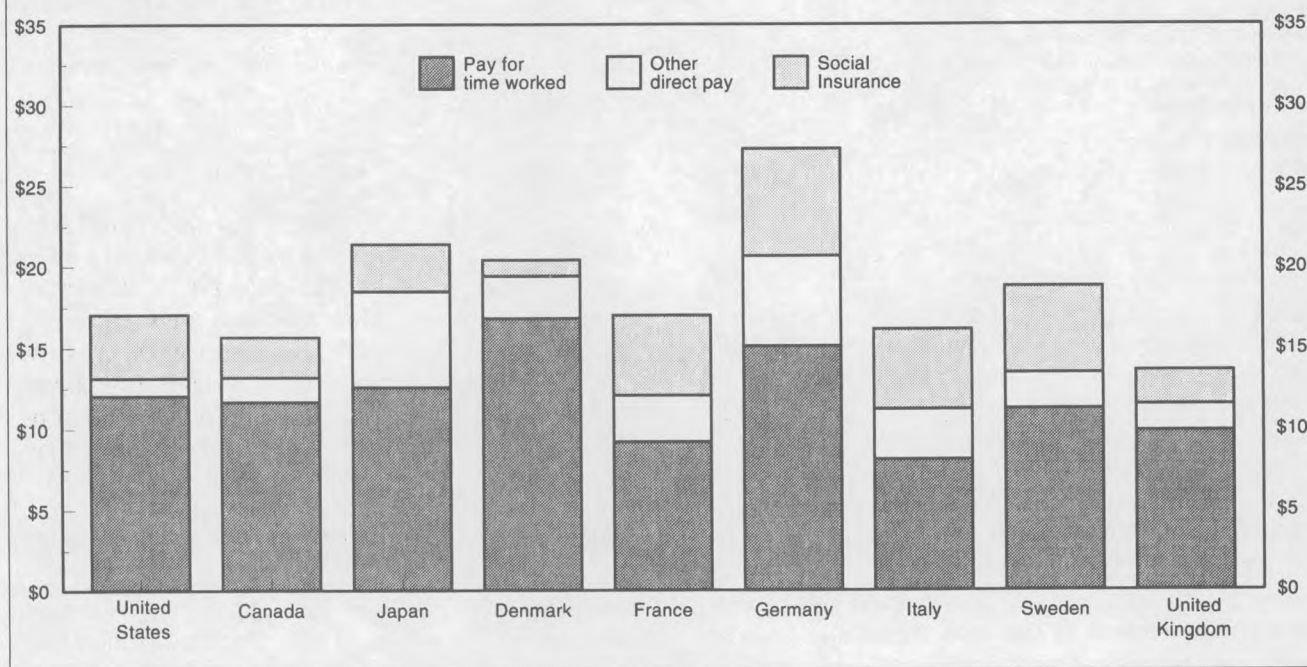
### Recent exchange rate movements

As of September 1995, the currencies of most of the economies studied had appreciated from their 1994 average levels relative to the U.S. dollar. The major exception was the Mexican peso, which had fallen to 55 percent of its 1994 value. The average trade-weighted exchange rate for the other 23 economies was up 4 percent.

The trade-weighted exchange rate for Europe was up 8 percent. Individual European exchange rate increases were 20 percent for Finland; 10 to 15 percent for Austria, Belgium, Denmark, France, Germany, the Netherlands, Norway, and Switzerland; about 6 to 9 percent for Portugal, Spain and Sweden; and 2 percent for the United Kingdom. The only European currency exchange rate to remain almost unchanged was the Italian lira.

The average value of the Canadian dollar was up 1 percent. The Japanese yen was less than 2 percent higher than its 1994 average value as of September. However, the yen had been over 20 percent higher in April, May, and June. Among the other Pacific rim economies, the New Zealand dollar was up 11 percent relative to the U.S. dollar in August, the Singapore dollar was up 8 percent, the Korean won was up 5 percent, the Australian dollar was up 3 percent, the Hong Kong dollar was unchanged, and the Taiwanese dollar was down 4 percent.

**Chart 2. Hourly compensation costs in U.S. dollars for production workers in manufacturing, by cost component, nine countries, 1994**





**Table 2. Annual percent changes in hourly compensation costs in U.S. dollars, hourly compensation costs in national currency, and exchange rates (U.S. dollars per national currency unit), selected countries and economic groups, selected periods, 1975-94**

Country or area	1975-94	1975-80	1980-85	1985-90	1990-94	1991	1992	1993	1994
<b>Hourly compensation costs in U.S. dollars</b>									
United States .....	5.3	9.2	5.7	2.8	3.5	4.5	3.7	3.6	2.2
Canada .....	5.2	7.8	4.8	7.7	-.2	8.0	-.8	-3.7	-4.0
Mexico .....	3.1	8.5	-6.4	.6	12.3	17.7	18.7	11.8	2.0
Japan .....	10.9	13.0	2.8	15.1	13.7	14.5	11.1	16.8	12.7
France .....	7.2	14.6	-3.4	15.2	2.8	.2	10.7	-3.9	5.0
Germany <sup>1</sup> .....	8.0	14.2	-4.9	18.0	5.6	3.3	12.0	1.1	6.3
Italy .....	6.8	11.8	-1.3	18.4	-2.3	4.8	5.4	-18.4	1.0
Spain .....	8.3	18.4	-4.6	19.4	.3	7.7	9.6	-14.0	-.4
Sweden .....	5.2	11.7	-5.0	16.7	-2.6	5.8	11.0	-28.0	6.3
United Kingdom .....	7.6	17.5	-3.7	15.2	1.7	8.3	4.9	-11.6	6.7
<b>Trade-weighted measures:<sup>2</sup></b>									
24 foreign economies <sup>3</sup> .....	8.1	12.5	1.0	12.8	6.4	10.1	8.3	2.4	5.3
less Mexico, Israel .....	8.6	13.0	1.8	14.1	5.8	9.4	7.3	1.5	5.7
OECD <sup>4</sup> .....	7.5	11.7	.7	13.2	4.6	8.1	6.1	.5	4.4
Europe .....	7.3	14.6	-4.1	16.7	2.6	3.9	9.1	-6.9	5.4
Asian NIE's .....	13.9	18.9	7.0	18.5	11.5	15.7	13.3	5.6	11.9
<b>Hourly compensation costs in national currency</b>									
United States .....	5.3	9.2	5.7	2.8	3.5	4.5	3.7	3.6	2.2
Canada .....	6.9	10.8	8.1	4.3	3.8	6.0	4.6	2.8	1.7
Mexico .....	38.5	23.2	51.6	62.4	17.6	26.0	21.5	12.9	10.4
Japan .....	4.9	7.0	4.0	4.2	4.2	6.4	4.6	2.3	3.6
France .....	8.7	14.3	12.3	4.2	3.3	3.9	3.8	2.9	2.7
Germany <sup>1</sup> .....	5.6	7.5	4.7	4.7	5.7	6.1	5.4	7.2	4.1
Italy .....	12.0	18.0	15.9	7.9	5.2	8.6	4.6	4.3	3.4
Spain .....	13.2	23.8	13.4	7.9	7.3	9.8	7.9	7.1	4.6
Sweden .....	8.7	12.2	9.5	8.3	4.0	8.1	6.9	-3.7	5.2
United Kingdom .....	9.7	16.4	8.3	8.1	5.7	9.3	4.9	4.0	4.6
<b>Trade-weighted measures:<sup>2</sup></b>									
24 foreign economies <sup>3</sup> .....	11.0	13.6	14.0	11.9	6.7	9.7	7.4	5.0	4.9
less Mexico, Israel .....	8.0	11.9	7.9	6.3	5.5	7.9	5.8	4.1	4.3
OECD <sup>4</sup> .....	6.8	10.4	7.2	5.0	4.3	6.3	4.7	3.2	3.0
Europe .....	7.9	12.2	8.4	5.7	4.9	6.6	4.9	4.3	3.7
Asian NIE's .....	14.0	19.6	11.6	13.0	11.4	15.6	11.4	8.2	10.7
<b>Exchange rates</b>									
United States .....	-	-	-	-	-	-	-	-	-
Canada .....	-1.5	-2.7	-3.1	3.2	-3.9	1.8	-5.2	-6.3	-5.6
Mexico .....	-25.5	-11.5	-38.3	-38.0	-4.5	-6.8	-2.5	-7	-7.7
Japan .....	5.8	5.6	-1.1	10.5	9.1	7.7	6.2	14.1	8.7
France .....	-1.4	.3	-14.0	10.5	-.4	-3.5	6.7	-6.6	2.2
Germany <sup>1</sup> .....	2.2	6.2	-9.2	12.7	-.1	-2.6	6.3	-5.6	2.0
Italy .....	-4.6	-5.3	-14.8	9.8	-7.1	-3.5	.7	-21.7	-2.4
Spain .....	-4.4	-4.3	-15.9	10.8	-6.6	-1.9	1.6	-19.7	-4.8
Sweden .....	-3.2	-.4	-13.2	7.8	-6.4	-2.1	3.9	-25.3	1.0
United Kingdom .....	-1.9	.9	-11.0	6.6	-3.7	-.9	-.1	-15.0	2.0
<b>Trade-weighted measures:<sup>2</sup></b>									
24 foreign economies <sup>3</sup> .....	-1.9	-.5	-9.4	2.9	-.2	.5	.9	-2.4	.4
less Mexico, Israel .....	.6	1.1	-5.6	7.4	.3	1.4	1.4	-2.5	1.3
OECD <sup>4</sup> .....	.7	1.3	-6.0	7.9	.3	1.7	1.3	-2.6	1.4
Europe .....	-.5	2.2	-11.5	10.5	-2.1	-2.5	3.9	-10.7	1.7
Asian NIE's .....	.0	-.5	-4.2	4.9	.2	.3	1.9	-2.3	1.1

<sup>1</sup> Former West Germany.

<sup>2</sup> Trade-weighted percent changes computed as the trade-weighted average of the rates of change for the individual countries or areas.

<sup>3</sup> Twenty-nine countries or areas, less the United States, and four countries for which 1994 data are not available.

<sup>4</sup> Organization for Economic Cooperation and Development. Excludes Mexico, which joined the organization in 1994.

NOTE: Dash indicates data are not available. Rates of change are based on the compound rate method.



**Table 3. Pay for time worked, other direct pay, total direct pay, and social insurance expenditures as a percent of hourly compensation costs for production workers in manufacturing, 29 countries or areas, 1994**

Country or area	Pay for time worked	Other direct pay	Total direct pay	Social insurance expenditures
United States .....	70.5	6.3	76.9	23.1
Canada .....	74.5	9.6	84.1	15.9
Mexico .....	—	—	88.7	11.3
Australia .....	73.5	9.9	83.5	16.5
Hong Kong .....	—	—	96.8	3.2
Israel .....	—	—	82.5	17.5
Japan .....	58.8	27.6	86.4	13.6
Korea .....	—	—	85.2	14.8
New Zealand .....	81.6	12.4	94.0	6.0
Singapore .....	65.3	18.2	83.6	16.4
Sri Lanka <sup>1</sup> .....	67.6	18.1	85.7	14.3
Taiwan .....	—	—	92.6	7.4
Austria .....	49.8	23.3	73.1	26.9
Belgium .....	52.3	20.3	72.6	27.4
Denmark .....	82.4	12.7	95.1	4.9
Finland .....	56.1	17.9	74.0	26.0
France .....	54.2	16.6	70.8	29.2
Germany <sup>2</sup> .....	55.3	20.5	75.8	24.2
Greece <sup>3</sup> .....	61.7	18.5	80.2	19.8
Ireland <sup>1</sup> .....	74.3	10.0	84.3	15.7
Italy .....	50.3	19.1	69.4	30.6
Luxembourg <sup>4</sup> .....	70.2	15.6	85.8	14.2
Netherlands .....	57.0	19.7	76.7	23.3
Norway .....	71.5	11.7	83.1	16.9
Portugal .....	—	—	76.2	23.8
Spain .....	—	—	74.6	25.4
Sweden .....	59.8	11.7	71.5	28.5
Switzerland .....	65.2	18.2	83.4	16.6
United Kingdom ..	72.7	11.8	84.5	15.5

<sup>1</sup> Data relate to 1993.

<sup>2</sup> Former West Germany.

<sup>3</sup> Data relate to 1992.

<sup>4</sup> Data relate to 1991.

NOTE: Dash indicates data are not available.

workers receive the equivalent of about 3 months of regular wages in bonuses. It accounted for about 15 to 20 percent in many European countries, where workers receive minimum vacation entitlements of 4 to 6 weeks, as well as vacation or yearend bonuses of 1 to 2 months' wages. However, in the United Kingdom, Ireland, and most Scandinavian countries, where workers do not receive seasonal bonuses, other direct pay accounted for only a little more than 10 percent of total compensation costs. In the United States, where irregular bonuses also account for only a small fraction of total compensation and workers generally have shorter vacation entitle-

ments, other direct pay was about 6 percent of compensation.

*Social insurance expenditures.* Expenditures by employers on social insurance and other labor taxes accounted for about 30 percent of compensation costs in Italy and France in 1994, and for over 25 percent in Austria, Belgium, Finland, Spain, and Sweden.

In Denmark, universal old-age pensions, medical benefits, and family allowances are entirely financed and other benefits are partly financed out of general revenues, so that employer social insurance expenditures accounted for only 5 percent of compensation costs. In New Zealand, old-age pensions, sickness and maternity benefits, unemployment benefits, and family allowances are financed out of general revenues, with the result that employer social insurance expenditures accounted for only 6 percent of compensation costs. In Canada, Australia, Japan, Ireland, and the United Kingdom, where several social insurance benefits also are financed from general government revenues, employers' payments for such benefits accounted for 11 to 17 percent of total compensation costs. In Mexico and in all of the Asian NIE's, social insurance expenditures accounted for at most 15 percent of total compensation costs. In the United States, they were 23 percent. □

## Footnotes

<sup>1</sup> These comparisons are based on 1994 annual average market exchange rates; therefore, they do not take account of subsequent changes in relative exchange rates.

<sup>2</sup> The trade weights used to compute the average compensation cost measures for the selected economic groups are the sum of U.S. imports of manufactured products for consumption (customs value) and U.S. exports of domestic manufactured products (f.a.s. value) in 1992 for each country or area and each economic group. A description of the trade weights and trade-weighted measures was published in *International Comparisons of Hourly Compensation Costs for Production Workers, 1994*, Report 893 (Bureau of Labor Statistics, June 1995).

<sup>3</sup> The BLS definition of hourly compensation costs is not the same as the International Labor Office (ILO) definition of total labor costs. BLS compensation costs do not include all items of labor costs. The costs of recruitment, employee training, and plant facilities and services—such as cafeterias and medical clinics—are not included because data are not available for the United States and most other countries. The labor costs not included account for no more than 4 percent of total labor costs in any country for which the data are available.

<sup>4</sup> Data for Germany relate to the former West Germany. Average monthly earnings for production workers in manufacturing in the former East Germany were 63.5 percent of earnings in the former West Germany in July 1994. Data are not yet available on other compensation costs.



## Part-time and temporary employment in Japan

*The need for less costly labor and protection against fluctuations in labor demand has helped push up part-time and temporary employment in Japan*

Susan Houseman  
and  
Machiko Osawa

**P**art-time workers represent a large and growing share of employment in Japan. Part-time employment increased more than 80 percent between 1982 and 1992, accounting for slightly more than 16 percent of paid employment in 1992 (up from 11 percent a decade earlier), according to data from Japan's Bureau of Statistics.

Temporary workers also represent a large share of employment. Temporary workers hired directly by companies on short-term contract accounted for more than 11 percent of paid employment in recent years, according to Bureau of Statistics figures. Temporary help agencies, which are subject to considerable regulation, were prohibited prior to 1985. Although the number of temporary help, or dispatched, workers has grown rapidly since 1985, they still account for under 1 percent of paid employment.

This article discusses recent trends in part-time and temporary employment and the characteristics of these "nonregular" workers and their employers. It also looks at the role of the Japanese industrial relations system, public policies, and other factors in the development of part-time and temporary employment.

### Data definitions and sources

The terms part-time and temporary employment are defined somewhat differently in Japan and the United States. Moreover, the definitions often differ by survey in Japan. Therefore, a brief discussion of the concepts of part-time and

temporary employment used in selected Japanese surveys is necessary.

A number of periodic and special surveys contain information about part-time, temporary, dispatched, and other types of nonregular workers in Japan. The definitions of part-time and temporary workers used in surveys cited in this article are summarized in exhibit 1.

Most of the data used in this article are from the Employment Status Survey conducted by the Bureau of Statistics. This periodic, household survey provides detailed information about part-time, temporary, and other forms of nonregular employment. The survey has been conducted at 5-year intervals in recent years; the latest survey was in 1992.

In the Bureau of Statistics Employment Status Survey and the Ministry of Labor Survey on the Status of Part-Time Workers, a part-time worker is defined as an employee whose position is classified as part time by the employer; a part-time employee does not necessarily work fewer hours than a full-time employee. In 1990, 20.6 percent of workers classified as part time by their employer worked as many hours as did regular, full-time workers.<sup>1</sup> The set of personnel practices that applies to these workers distinguishes them as part time. For example, in large- and medium-sized Japanese companies, regular full-time workers typically are given commitments of lifetime employment and the wages and promotions of these workers are determined to a large degree by seniority. Practices of lifetime employment and *nenko* (seniority-based)

Susan Houseman is a senior economist at the W.E. Upjohn Institute for Employment Research in Kalamazoo, MI. Machiko Osawa is professor of economics at Asia University in Tokyo.



## Exhibit 1. Summary of data definitions in selected Japanese surveys

Survey	Part-time workers	Temporary and day workers	Dispatched workers	Comments
Bureau of Statistics, Employment Status Survey (household survey conducted every 5 years)	classified as part time in workplace; separate category for arubaito, defined as student or other person with a side job, reported	<i>temporary</i> : employed on a contract lasting more than 1 month but less than 1 year; <i>day</i> : employed on a contract of less than 1 month's duration	workers hired from a dispatching (temporary help) agency	data on part-time workers reported since 1982.
Bureau of Statistics, Labor Force Survey (monthly household survey)	separate category not reported; may construct category defined as work less than 35 hours per week	<i>temporary</i> : employed on a contract lasting more than 1 month but less than 1 year; <i>day</i> : employed on a contract of less than 1 month's duration	separate category not reported; counted as temporary worker if employment contract less than 1 year	.....
Ministry of Labor, Survey of Employment Trend (biannual establishment survey)	work fewer hours per day or days per week than regular workers	<i>temporary</i> : employed on a contract lasting at least 1 month but less than 1 year; <i>day</i> : not covered by survey	separate category not reported; counted as temporary worker if employment contract less than 1 year	survey excludes workers on contract for less than 1 month, establishments with fewer than five regular employees, the agricultural sector, and some components of the services sector. Data on part-time workers reported since 1978.
Ministry of Labor, Survey on the Diversification of Employment (one-time survey of establishments and workers)	work fewer hours per day or days per week than regular workers	<i>temporary/day</i> : hired on a temporary basis but whose hours are the same as regular workers	workers hired from dispatching (temporary help) agency	survey sampled establishments with 30 or more regular workers in seven major sectors.
Ministry of Labor, Monthly Labor Survey (monthly establishment survey)	work fewer hours per day or days per week than regular workers	not reported	not reported	data on part-time workers reported since 1990.
Ministry of Labor, Survey on the Status of Part-Time Workers (one-time survey of establishments and workers)	part time: (1) work fewer hours per day or days per week than regular workers, or (2) classified as part time in workplace; arubaito: student workers	not reported	not reported	survey sampled establishments with 5 or more regular workers in nine major sectors.

wages and promotions rarely apply to part-time workers.

The Employment Status Survey and the Survey on the Status of Part-Time Workers provide data on both part-time and arubaito jobs. An arubaito job is a "side" job taken by someone who is in school or who has regular employment elsewhere, while part-time jobs are held by those who do not have other employment and who are not classified by their employers as full time. Arubaito jobs typically are held by students; part-

time jobs generally are held by married women. In practice, part-time and arubaito jobs are quite similar and the terms often are used interchangeably.

Several surveys conducted by the Ministry of Labor (the Survey of Employment Trend, the Survey on the Diversification of Employment, and the Monthly Labor Survey) classify workers as part time if they work fewer hours per day or days per week than do regular workers. These surveys do not



**Table 1. Nonregular workers in Japan as a percent of total paid employment, 1982-92**

Year	Part time and arubaito			Temporary and day			Other	
	Total	Part time	Arubaito	Total	Temporary	Day laborers	Total	Dispatched
1982 .....	11.0	—	—	11.5	7.9	3.7	4.8	—
1987 .....	14.2	10.1	4.1	12.0	8.9	3.1	4.2	.2
1992 .....	16.1	11.3	4.8	11.2	8.4	2.8	3.9	.3

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, day, and dispatched workers, see exhibit 1. Dash indicates data are not available.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku, various issues (Bureau of Statistics, Management and Coordination Agency, Employment Status Survey).

distinguish between part-time workers and arubaito. In the Bureau of Statistics Labor Force Survey, a monthly household survey, individuals are asked their actual weekly work hours. It is thus possible to tabulate the number of workers who work fewer than 35 hours per week. However, such a tabulation would miss many part-time workers who work long hours but are nonetheless classified as part time in their workplace, and it may include workers temporarily on short-time who are classified as regular workers in their place of employment.<sup>2</sup>

Japanese data on part-time employment are available since 1978 in the Ministry of Labor Survey of Employment Trend; since 1982 in the Bureau of Statistics Employment Status Survey; and since 1990 in the Ministry of Labor Monthly Labor Survey. One can construct a longer time series from the Bureau of Statistics Labor Force Survey by selecting an hours-per-week cutoff to define part-time employment.

Temporary workers in Japanese statistics refer to employees hired for a limited duration. The Bureau of Statistics Employment Status Survey distinguishes between temporary and day workers. A temporary worker is someone employed on a contract lasting more than 1 month, but less than 1 year; a day worker is someone employed on a contract of less than 1 month's duration. In the Employment Status Survey, temporary and day workers are hired directly by a company. Dispatched workers are those on temporary contract, hired from a temporary help agency. In other government statistics, a separate category for dispatched workers is not reported—workers are counted as temporary employees if the duration of their labor contracts is for less than 1 year with the company or the temporary agency.

In addition to data on part-time and temporary employment, some surveys provide information about other forms of nonregular employment: shukko workers (individuals who have been transferred to a subsidiary of the parent company); registered or on-call workers (individuals registered with a company as being available for work); and contract workers (individuals hired by special arrangement from another company). These nonregular employees represent a relatively small share of the work force and are not covered in this article.

## Overview of nonregular employment

Despite differences in definitions, data from various sources depict similar trends in part-time and temporary employment. The percentage of Japanese employees who are part time has increased dramatically over the last decade, while the percentage of temporary workers has remained fairly constant. According to the Bureau of Statistics Employment Status Survey, the rate of part-time and arubaito employment increased from 11.0 percent of total paid employment in 1982 to 16.1 percent in 1992. This rise may be attributed to an increase both in part-time workers and in arubaito.

More than 11 percent of paid employees have been temporary workers since 1982. Temporary help agencies were prohibited in 1947 because Japanese officials believed that, before World War II, they had exploited workers. These agencies were legalized in 1985, but subjected to considerable regulation. As a result, the share of temporary help, or dispatched, workers in paid employment is fairly small—0.3 percent in 1992—although it is rapidly growing. (See table 1.)

Overall, nonregular workers in Japan are disproportionately female. According to the Bureau of Statistics Employment Status Survey, about half of arubaito are women, while more than 90 percent of part-time workers are women. (See table 2.) About two-thirds of temporary and day workers and 70 percent of dispatched workers are women. Male and female arubaito tend to be young and most are students. Male temporary workers tend to be either young and in school or in a first job, or old and presumably in semiretirement. Female part-time and temporary workers tend to be older; many are women who return to the labor force when their children reach school age.

According to the Employment Status Survey, in the decade from 1982 to 1992, the incidence of part-time employment rose dramatically as a percent of employment in virtually all sectors. (See table 3.) Apart from agriculture, where more than 30 percent of paid employment is part time,<sup>3</sup> the rate of part-time employment is particularly high in wholesale and retail trade (28.1 percent in 1992), services (16.5 percent in 1992), and manufacturing (14.3 percent in 1992). Although



the share of temporary employment has remained relatively stable over the last decade in the aggregate economy, the rate has increased modestly in some sectors, including transportation and communications and services. The highest rates of temporary employment are in agriculture, fisheries, and construction, which is not surprising given the seasonal nature of work in these industries. As with part-time employment, temporary employment is important in the trade, services, and manufacturing sectors.

Because employment data by firm size are not available from the Bureau of Statistics Employment Status Survey, we use data from the Ministry of Labor Survey of Employment Trend. Results from this survey of 15,000 randomly chosen establishments are published annually. Data on part-time workers have been collected since 1988 in this survey and refer to those working fewer hours per day or fewer days per week than regular workers. As with the surveys conducted by Japan's Bureau of Statistics, the Survey of Employment Trend defines temporary workers as those on a contract of employment for a specified duration of at least 1 month but less than 1 year. If the duration of their contracts is less than 1 year, dispatched workers are counted as temporary workers.

The scope of the survey is limited in several important

respects. Workers with contracts lasting less than 1 month are not covered; as a result, the survey excludes day workers. The survey also excludes establishments with fewer than five regular employees. Finally, the survey excludes the agriculture sector and some components of the service sector (household services, education, and government operations in foreign countries). Because of differences in the definition of part-time and temporary employment and differences in the sectoral coverage of the two surveys, the share of part-time and temporary employment reported in the Ministry of Labor Survey of Employment Trend is considerably less than that reported in the Bureau of Statistics Employment Status Survey.<sup>4</sup>

The Survey of Employment Trend shows that the use of part-time and temporary employment is common, regardless of firm size, particularly in trade and services. (See table 4.) In the aggregate economy, the incidence of part-time employment is greater in small firms than in large ones, while the incidence of temporary employment is quite similar across firm size. The correlation between the rate of part-time or temporary employment and firm size varies considerably across industries, however. For example, the rate of part-time employment and the rate of temporary employment decline substantially with firm size in manufacturing, while the rates of part-time employment and temporary employment generally increase with firm size in the wholesale and retail trade sector.

**Table 2. Distribution of nonregular workers in Japan by age and gender, 1992**

[In percent]

Age and gender	Part time	Arubaito	Temporary and day	Dispatched
<b>Both sexes</b>				
All ages .....	100.0	100.0	100.0	100.0
15-19 .....	.7	21.3	7.5	1.8
20-29 .....	8.1	43.6	19.9	45.4
30-39 .....	20.3	9.2	14.7	25.8
40-49 .....	37.8	9.3	23.8	14.1
50-59 .....	22.7	6.4	18.4	6.1
60 and older .....	10.5	10.2	15.7	6.1
<b>Men</b>				
All ages .....	5.5	51.0	33.7	30.1
15-19 .....	.2	10.8	3.8	.6
20-29 .....	.6	24.6	9.2	11.7
30-39 .....	.3	3.1	2.8	5.5
40-49 .....	.4	2.5	3.6	3.7
50-59 .....	.8	2.4	4.9	3.1
60 and older .....	3.2	7.6	9.5	4.9
<b>Women</b>				
All ages .....	94.5	49.0	66.3	69.9
15-19 .....	.5	10.4	3.7	1.2
20-29 .....	7.5	19.0	10.8	33.7
30-39 .....	20.0	6.1	11.9	20.2
40-49 .....	37.4	6.8	20.2	10.4
50-59 .....	21.8	4.1	13.6	3.1
60 and older .....	7.3	2.5	6.2	1.2

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, day, and dispatched workers, see exhibit 1.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku (Bureau of Statistics, Employment Status Survey).

## Determinants of nonregular employment

A combination of supply-side and demand-side factors and public policies explains the high incidence of part-time and temporary employment in Japan. As in the United States, part-time and temporary workers in Japan are disproportionately women. Because Japanese women typically have greater household and childcare responsibilities than men have, they often seek shorter hours or temporary assignments to balance demands on their time. The typical Japanese full-time, regular employee traditionally has worked substantially longer hours than his or her counterpart in other industrialized countries, although Japan's hours of work have recently begun to fall.<sup>5</sup> Even though a sizable minority of regular part-time employees work the same number of hours as do regular full-time employees, most work shorter hours.

In addition, regular, full-time employees in large companies often are expected to accept transfers involving geographic relocation. Thus, certain aspects of Japanese industrial relations likely provide strong incentives for women to seek flexible forms of employment.

Public policies in Japan provide further incentives in the form of tax breaks for married women to work in part-time or temporary jobs. Secondary household earners who make less than 1.3 million yen annually (about \$13,000) do not have to



pay income tax. In addition, they retain their "dependent" status and are eligible for some health insurance coverage under their spouse's plan and are entitled to receive some pension from the government. Moreover, the household head receives a dependent deduction from his taxable income and typically receives a family allowance from his employer. In 1989, family allowance payments averaged 14,000 yen per month (about \$140) in large firms and 6,300 yen per month (about \$63) in small firms.

Thus, certain aspects of Japanese industrial relations and tax law provide incentives for many women to seek part-time and temporary rather than regular positions. Business surveys

have provided some insights into the reasons Japanese companies hire nonregular workers. In the Survey on the Diversification of Employment, conducted by the Ministry of Labor in 1988, company officials were asked if they expected to increase the number of nonregular workers within 3 years of the survey and, if so, why.

Reduction in cost was the most frequent reason cited for hiring more part-time workers and the second most frequent reason cited for hiring more temporary and day workers and dispatched workers. (See table 5.) The need to hire workers temporarily also was an important factor in companies' decisions to increase hiring in each of these categories of employment, and, perhaps not surprisingly, was the most frequent reason given for increasing the hiring of temporary and day workers. Only for dispatched workers was the inability to find regular workers among the five most important reasons cited for increasing the hiring of nonregular workers. By law, dispatched workers must possess special skills that companies have difficulty finding among regular workers.

In sum, two principal reasons why Japanese companies say they hire nonregular workers is to lower labor costs and to hire workers on a temporary basis. With respect to the latter, a company may wish to hire part-time and temporary workers who can be dismissed more easily than regular workers to provide a buffer against fluctuations in demand.

*Labor costs.* Labor costs associated with part-time and temporary workers may be less than those of regular workers for several reasons. Under the *nenko* system, wages and promotions are determined to a large degree by individuals' tenure with the company. Although the wages of nonregular workers and regular workers may not differ substantially for those with little or no tenure, wages for nonregular workers, who are not covered by the *nenko* system, do not increase with tenure, or at least do not increase at the same rate, as they do for regular workers. As a result, over time, a company may reduce labor costs by hiring part-time and temporary workers if the wage savings from hiring nonregular workers more than compensate for any higher productivity that regular workers may achieve.<sup>6</sup> Part-time and temporary workers also generally receive fewer company-provided fringe benefits.

In addition, Japanese employers are not subject to unemployment insurance, pension, and health insurance payroll taxes on many part-time and temporary workers. The unemployment insurance premium in Japan is 1.15 percent of wages, excluding bonuses. Japanese employers pay 0.75 percent for unemployment insurance and employees pay 0.40 percent. Before 1989, employers were not required to pay unemployment insurance taxes on part-time workers. Under current law, employers must pay unemployment insurance taxes for part-time workers who work more than 20 but fewer than 30 hours per week, who are expected to work at least 1

**Table 3. Incidence of part-time and arubaito and temporary and day employment in Japan, by sector, 1982-92**

[In percent]			
Sector	1982	1987	1992
<b>Total:</b>			
Part time and arubaito .....	11.0	14.2	16.1
Temporary and day .....	11.5	12.0	11.2
<b>Agriculture:</b>			
Part time and arubaito .....	16.3	23.7	30.3
Temporary and day .....	36.2	36.5	36.6
<b>Fisheries:</b>			
Part time and arubaito .....	6.9	9.7	12.1
Temporary and day .....	15.4	16.8	16.1
<b>Construction:</b>			
Part time and arubaito .....	5.8	6.9	7.5
Temporary and day .....	21.1	17.8	13.7
<b>Manufacturing:</b>			
Part time and arubaito .....	11.4	14.4	14.3
Temporary and day .....	9.9	9.9	8.3
<b>Trade:</b>			
Part time and arubaito .....	19.4	25.2	28.1
Temporary and day .....	13.9	15.6	14.6
<b>Finance, insurance:</b>			
Part time and arubaito .....	3.9	5.6	7.4
Temporary and day .....	3.7	4.7	4.7
<b>Transportation, communications:</b>			
Part time and arubaito .....	3.4	5.4	8.2
Temporary and day .....	4.3	5.6	6.3
<b>Utilities:</b>			
Part time and arubaito .....	2.3	2.5	2.8
Temporary and day .....	4.3	4.5	3.8
<b>Services:</b>			
Part time and arubaito .....	11.1	13.7	16.5
Temporary and day .....	11.6	12.6	12.8
<b>Public administration:</b>			
Part time and arubaito .....	3.4	3.5	4.6
Temporary and day .....	6.7	6.6	7.3

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time, arubaito, temporary, and day workers, see exhibit 1.

SOURCE: Sōmuchō Tōkeikyoku, Shūgyōkōzō Kihonchōsa hōkoku (Bureau of Statistics, Employment Status Survey), various issues.



**Table 4. Part-time and temporary employment in Japan, by sector and firm size, 1993**

[In percent]

Industry	Total	Number of employees				
		1,000 and more	300-999	100-299	30-99	5-29
<b>Part-time employment</b>						
All industries .....	11.5	9.5	8.5	12.0	13.6	13.0
Manufacturing .....	10.4	2.9	7.2	10.5	14.9	17.3
Transportation, public utilities, and communications .....	5.0	2.3	5.3	3.0	6.2	4.2
Trade .....	20.0	30.7	14.0	20.0	22.1	15.9
Finance, insurance, and real estate .....	5.3	7.6	1.8	5.2	10.2	10.4
Services .....	12.6	12.2	6.7	13.9	13.8	15.2
<b>Temporary employment</b>						
All industries .....	5.7	5.4	5.8	4.4	5.6	5.7
Manufacturing .....	4.0	3.0	3.7	3.5	3.3	6.4
Transportation, public utilities, and communications .....	4.7	2.8	1.8	2.3	5.2	4.2
Trade .....	6.9	12.9	10.6	4.1	8.8	1.3
Finance, insurance, and real estate .....	4.1	2.8	2.6	5.3	5.9	9.0
Services .....	7.2	8.1	4.7	6.7	6.2	6.9

NOTE: Self-employed and family workers are excluded from the tabulations. For definitions of part-time and temporary employment, see exhibit 1.

SOURCE: Rōdōshō, Kōyō Dōkō Chōsa hōkoku (Ministry of Labor, Survey of Employment Trend).

year, and who earn more than 900,000 yen per year (about \$9,000), although the rate is less than that assessed for full-time workers. For all part-time employees who work 30 or more hours per week, employers must pay the unemployment insurance tax rate applicable to full-time workers.

The payment for the public pension in Japan is 14.5 percent of wages, subject to a ceiling.<sup>7</sup> As in the United States, half of the tax is paid by the employer and half by the employee. However, employers are not obligated to make these payments on part-time workers whose weekly work hours are less than three-fourths of those of regular workers.

A similar exclusion occurs for health insurance. Since 1961, everyone in Japan has been enrolled in some form of health insurance, and paid employees generally are enrolled in company-provided health insurance plans. Employers and employees pay taxes on both wages and bonuses to finance health insurance. The tax on wages is 0.41 percent for employers and employees; the tax on bonuses is 0.3 percent for employers and 0.5 percent for employees.<sup>8</sup> However, employers are not required to cover part-time workers who work less than three-fourths of the weekly hours of regular workers.

Employers are required to pay social security and health insurance taxes for temporary workers except for those who are day workers; those who are engaged in seasonal work; and, those who are hired in an establishment operating temporarily (the labor contract must not exceed 6 months).

Employers also are required to pay unemployment insurance for all who work more than three-quarters of the weekly work hours of regular workers, regardless of employment status. If dispatched workers are covered by social insurance schemes, the applicable taxes are paid by the temporary help agency and

not by the company contracting for their services.

Data on the coverage of nonregular workers under various social insurance schemes were collected in the Ministry of Labor 1988 Survey on the Diversification of Employment. Although data on nonregular workers were not collected in this survey, data on workers who had been transferred to a subsidiary company were collected. The coverage of these so-called shukko workers is likely to be similar to that of regular workers. According to survey figures, 90 percent of shukko workers were covered by unemployment insurance, while only 37 percent of part-time workers, 63 percent of temporary workers, and 62 percent of dispatched workers were covered. Similarly, 93 percent of shukko workers, but just 37 percent of part-time workers, 59 percent of temporary workers, and 56 percent of dispatched workers received health insurance through their employer. Coverage under the government's mandatory pension scheme also was relatively low for nonregular workers: 36 percent of part-time workers, 54 percent of temporary workers, and 55 percent of dispatched workers were covered by the pension scheme, compared with 92 percent of shukko workers.

*Nonregular workers as a buffer.* In addition to saving wage, fringe benefit, and payroll tax costs, companies may hire part-time and temporary workers to increase employment flexibility. Medium-sized and large Japanese companies typically offer implicit guarantees of lifetime employment to regular workers. Moreover, Japanese courts have given these core workers fairly strong protection against layoff.<sup>9</sup> Company personnel policies and court rulings have



not given part-time workers the same degree of protection that full-time, regular workers have received. Except in rare circumstances, companies may easily terminate temporary and dispatched workers by not renewing their contracts.

Although it is widely believed that part-time workers help buffer regular workers during recessions, the lack of time series data makes formal analysis of this issue difficult. Annual data on part-time employment from the Survey of Employment Trend have been published since 1978. These data show that, at the aggregate and sectoral levels, part-time employment was quite cyclically sensitive, falling relative to trend during the recessions of the early and mid-1980's and the early 1990's. This pattern supports the view that part-time workers have helped buffer regular workers during recessions.

Data from the Bureau of Statistics Labor Force Survey provide more direct evidence on the use of temporary workers as a buffer in Japanese manufacturing. The Labor Force Survey breaks down employment for regular and temporary workers; temporary workers are defined as those employed on a definite contract for at least 1 month but less than 1 year.

Temporary employment declined sharply in response to the large drop in output during the recession in the mid-1970's and increased sharply during the subsequent recovery. In response to the decline in output during the most recent recession, temporary employment again fell sharply. In contrast, regular employment displayed little fluctuation throughout the period. (See chart 1.) Econometric analysis presented in the

appendix shows that the implied responsiveness of temporary employment to changes in production is significantly greater than that of regular employment.<sup>10</sup>

*Growth in part-time employment.* As evident in table 3, the rate of part-time employment has increased significantly in recent years across a broad spectrum of industries. Somewhat surprisingly, because the vast majority of part-time workers are female, there has been little increase in the female labor force participation rate to fuel the growth in the rate of part-time employment. The Japanese female labor force participation rate has remained relatively constant since 1970, falling somewhat during the deep recession of the mid-1970's and rising slightly since 1976. The female labor force participation rate in Japan in 1991 (50.7 percent) was barely higher than the rate in 1970 (49.8 percent).<sup>11</sup>

Although the supply of potential part-time workers has increased only modestly in recent years, several economic developments have provided incentives to Japanese companies to increase their use of part-time workers. Many Japanese companies were hurt by their inability to shed excess workers during the severe recession in the mid-1970's, and in subsequent years moved to increase their use of part-time workers, who could be more easily dismissed.

The sharp appreciation of the yen has provided Japanese employers with additional incentives to hire part-time workers. In 1970, the yen traded at 360 yen per dollar; in 1994, it traded at less than 100 yen per dollar. Between 1985 and 1986 alone, the yen appreciated by about one-third against the dollar, moving from 238.5 yen per dollar to 168.5 yen per dollar. This sharp appreciation sparked a recession in Japan, and placed considerable pressure on employers, particularly those in manufacturing, to lower labor costs.

The aging of the Japanese work force also has put pressure on Japanese employers to lower labor costs. Under the *nenko* system, workers' pay and promotion depend greatly on their tenure. As the Japanese population has aged and economic growth has slowed, Japanese companies have become saddled with large numbers of well-paid, middle-aged and older workers. The problem of an aging work force will not be alleviated soon. The number of people in their twenties is expected to decline dramatically after 1995.

Many Japanese analysts believe that recent cyclical volatility, the appreciation of the yen, and the aging of the Japanese work force have strained Japanese industrial relations practices of lifetime employment and of *nenko* wages and promotions. One way companies have sought to increase labor flexibility and reduce labor costs, short of dismantling these traditional industrial relations practices, has been to hire more part-time workers, who are more easily dismissed during downturns, whose pay is not tied to seniority, and who generally are not eligible for promotion.<sup>12</sup>

**Table 5. Principal reasons for increasing nonregular employment among Japanese businesses expecting to hire more nonregular workers**

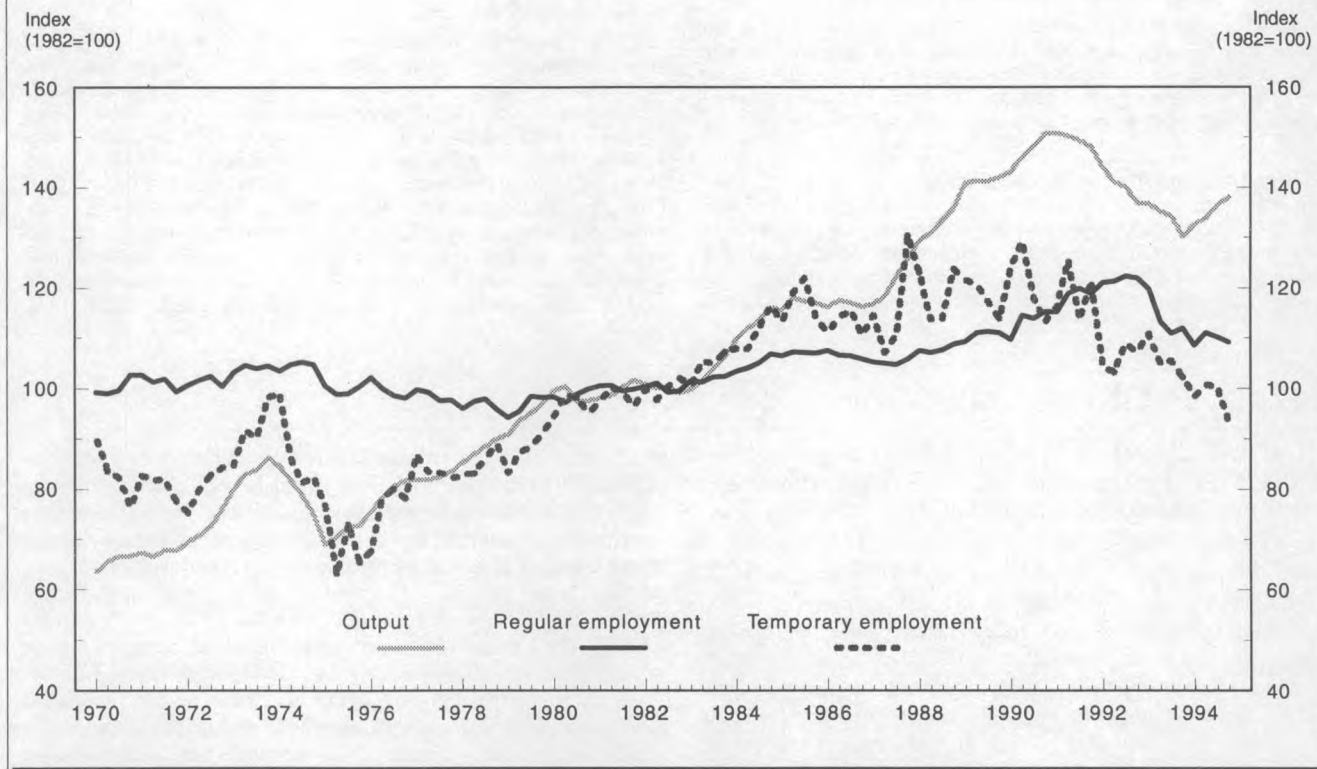
Reasons	Percent reporting factor as important
<b>Part-time workers:</b>	
Reduction in cost .....	40.2
Increase in business .....	32.5
Simple task .....	32.4
Can respond to diversified work pattern .....	19.3
Need workers temporarily .....	17.4
<b>Temporary and day laborers:</b>	
Need workers temporarily .....	32.6
Reduction in cost .....	32.1
Increase in business .....	23.4
Simple task .....	23.3
Can respond to diversified work pattern .....	14.8
<b>Dispatched workers:</b>	
Workers with needed skills can work immediately .....	34.1
Reduction in cost .....	33.4
Need workers temporarily .....	24.8
Increase in business .....	21.0
Cannot hire regular workers .....	19.2

NOTE: Data are percent of businesses responding that the reason was important in decision to hire nonregular employees. For definitions of part time, temporary, day and dispatch workers, see exhibit 1.

SOURCE: Rōdōshō, *Shūgyō Keitai no Tayōka ni kansuru Jittai Chōsa hōkoku*, 1988 (Ministry of Labor, Survey Results on the Diversification of Employment).



**Chart 1. Output, regular employment, and temporary employment in Japanese manufacturing, 1970-94**



IN SUM, part-time and temporary workers account for a large and integral component of the Japanese work force. Because part-time and temporary positions allow workers to avoid committing to long hours and company transfers, these forms of employment have been attractive, particularly to women. At the same time, because these types of workers are not covered by industrial relations practices of *nenko* wages and promotion and lifetime employment, Japanese firms have long had an incentive to hire some part-time and temporary workers to reduce labor costs and increase employment flexibility. Government policies providing tax exemptions for part-time and temporary workers also are responsible for the large share of nonregular employees in the Japanese economy. The spectacular growth in part-time employment may partly reflect the need for further labor flexibility in Japanese companies due to recent cyclical volatility, the appreciation of the yen, and the aging of the Japanese work force. □

## Footnotes

<sup>1</sup> "Report on the Status of Part-Time Workers," Japanese Ministry of Labor, 1990.

<sup>2</sup> No information on usual hours worked is collected in the Bureau of Statistics Labor Force Survey. Therefore, this monthly survey cannot be

used to tabulate the number of workers who usually work fewer than 35 hours per week—the definition of part-time employment used in U.S. Government statistics. Adjustment to the U.S. concept of usually working fewer than 35 hours can be made based on Japan's Bureau of Statistics Special Survey of the Labor Force taken each February. However, such adjusted data would still miss many Japanese workers who usually work 35 hours per week or more, but are classified as part time by their companies.

<sup>3</sup> Although a high percentage of paid employees in agriculture work part time, fewer than 10 percent of those working in agriculture are paid employees. The rest are counted as self-employed or family workers in official statistics.

<sup>4</sup> Although the rates of part-time and temporary employment differ across the two surveys, data from the surveys depict similar trends in part-time and temporary employment.

<sup>5</sup> Comparisons of working time in Japan, the United States, and Germany may be found in Takatoshi Ito, *The Japanese Economy* (Cambridge, MA, MIT Press, 1992), pp. 228–31. See *Japan Labor Bulletin*, Jan. 1, 1995, for a discussion of declining working time in Japan.

<sup>6</sup> We used microdata on married female workers to examine differences in the earnings of part-time, temporary, and full-time workers. This analysis showed that part-time and temporary workers earn significantly less than do full-time workers, even after controlling for differences in individual and job characteristics. Details are available from the authors.

<sup>7</sup> There are two types of pensions in Japan: the national pension (*kokumin nenkin*) and a company-based pension (*kosei nenkin*). The former provides a set amount of pension to everyone (about 50,000 yen, or \$500, a month). The latter varies with an individual's contribution to the plan. All companies must pay taxes on qualified employees for the *kokumin nenkin* portion of the pension. For the *kosei nenkin* portion of the pension, Japan has a "pay or play" system of coverage in which companies contribute to a mandatory government program



or establish their own pension that must be at least as generous as the government pension. For a description of the Japanese pension system, see Noriyasu Watanabe, John Turner, and David Rajnes, "Pay or Play' Pensions in Japan," *Contingencies*, November/December 1994, pp. 63-65.

<sup>8</sup> Taxable wages are limited to 980,000 yen, or about \$9,800, a month.

<sup>9</sup> For discussions of legal restrictions on dismissal, see Yasuhiko Matsuda, "Job Security in Japan," in Kazutoshi Koshiro, ed., *Employment Security and Labor Market Flexibility: An International Perspective* (Detroit, MI, Wayne State University Press, 1992), pp. 183-95; and Johannes Schregle, "Dismissal Protection in Japan," *International Labour Review*, 1993, pp. 507-20.

<sup>10</sup> Using data from the Bureau of Statistics Labor Force Survey, we also examined the relationship between movements in the employment of those working fewer than 35 hours per week and movements in output. As in the United States, the movement of part-time employment defined in this way is strongly countercyclical, increasing during downturns and falling during upturns. This pattern is probably observed because many workers who have

regular employment status are placed on short hours during recessions and are counted as part-time workers under this definition.

<sup>11</sup> The figures on female labor force participation rates in Japan are from the Japanese Bureau of Statistics, Labor Force Survey. In the United States, female labor force participation rose steadily, from 43.3 percent in 1970 to 57.4 percent in 1991.

<sup>12</sup> For a discussion of these issues, see Alice C. L. Lam, *Women and Japanese Management: Discrimination and Reform* (London, Routledge, 1992); Machiko Osawa, "Keizai Henka to Joshi Rodo," [*Economic Change and Women Workers: A U.S.-Japan Comparison*] (Tokyo, Nihon Keizai Hyoronsha, 1993); Atsushi Seike, "Recent Employment Situation and Long-Term Structural Change," *Japan Labor Bulletin*, Jan. 1, 1994, pp. 5-8; and Hiroki Sato, "Employment Adjustment of Middle-Aged and Older White-Collar Workers," *Japan Labor Bulletin*, Feb. 1, 1994, pp. 5-8. We include further discussion and presentation of evidence on the causes of the growth in part-time employment in Japan in our report, *Part-Time and Temporary Employment in Japan: A Comparison with the United States*, prepared for the U.S. Department of Labor, Bureau of International Labor Affairs, 1994.

## APPENDIX: Estimates of elasticities

To more formally examine the adjustment of regular and temporary employment to fluctuations in manufacturing output, we estimated the following finite distributed lag model:

$$\ln E_t = \alpha + \sum_{i=0}^4 \beta_i \ln P_{t-i} + \theta_1 t + \theta_2 t^2 + \epsilon_t$$

where  $E$  is employment of either regular or temporary workers,  $P$  is production,  $t$  and  $t^2$  are time trend terms, and  $\epsilon$  is the error term. Because the employment series were quite noisy, we aggregated the monthly data to quarterly. In the model, changes in production may affect employment with a lag of up to four quarters and because the model is estimated in logarithms, the  $\beta$ 's represent estimates of the elasticity of employment with respect to changes in output. The sum of  $\beta_0$  and  $\beta_1$ , for example, is the one-quarter employment-output elasticity estimate. The sum of  $\beta_0$  to  $\beta_4$  is the four-quarter elasticity estimate. All data were seasonally adjusted and equations were corrected for first-order autocorrelation.

Table A-1 presents current-quarter, one-quarter, and four-quarter

employment elasticity estimates for regular and temporary workers. Elasticity estimates are also given for male regular and temporary workers and female regular and temporary workers. The point estimates show that the adjustment of temporary employment to demand changes is much greater than that of regular employment, even out to four quarters. For example, the estimated current-quarter employment elasticity for regular workers is 0.060, while that for temporary workers is 0.710. The estimated four-quarter employment elasticity for regular workers is only 0.349, while that for temporary workers is 1.396.

To determine the statistical significance of these differences, we estimated constrained and unconstrained versions of the model for regular and temporary workers using seemingly unrelated regression techniques. This approach enabled us to construct chi-squared statistics for hypothesis testing. Although the standard errors of the point estimates are often large, the differences between the employment elasticity estimates for regular and temporary workers are significant at the 5-percent level for all time horizons. Estimates of the adjustment of male regular and temporary employment and of female regular and temporary employment produce qualitatively similar results.

**Table A-1. Employment adjustment of regular versus temporary workers in Japan: estimated employment-output elasticities, manufacturing, 1970-94**

Type of worker	Current quarter		One quarter		Four quarters	
	Elasticity	Standard Error	Elasticity	Standard Error	Elasticity	Standard Error
Regular .....	.060	(.095)	1.145	(.102)	1.349	(.095)
Temporary .....	.710	(.320)	1.837	(.332)	1.396	(.261)
Male, regular .....	.013	(.102)	1.071	(.107)	1.250	(.089)
Male, temporary .....	-.000	(.692)	2.648	(.700)	2.003	(.263)
Female, regular .....	1.200	(.162)	1.249	(.176)	1.558	(.177)
Female, temporary .....	.949	(.273)	1.567	(.293)	1.223	(.278)

<sup>1</sup>Elasticity estimates for regular and temporary workers are significantly different at the .05 level.

NOTE: Standard errors are reported in parentheses.



# BLS introduces new range of alternative unemployment measures

*Some of the original BLS unemployment indicators, U-1 through U-7, have been retained as part of the new range, U-1 through U-6; several new measures make use of data heretofore unavailable from the CPS*

John E. Bregger  
and  
Steven E. Haugen

**I**n 1994, the Current Population Survey (CPS) introduced a totally revamped questionnaire and modernized data collection system. The principal aim of this redesign was to obtain more accurate and reliable information on the labor force activities of the population. For the most part, the basic concepts and definitions used in the measurement of employment and unemployment remained intact. Some labor market measures, however, were fundamentally altered, either because of definitional changes or because of improved measurement of existing concepts. At the same time, several new data series were created from additional information collected in the new survey.<sup>1</sup>

The redesign of the survey and associated changes in the measurement of certain labor market concepts required changes in the publication of some CPS data. In particular, publication of the range of unemployment measures based on varying definitions of unemployment and the labor force, better known as the alternative unemployment indicators, U-1 through U-7, was temporarily suspended, pending research into the effects of the new survey on these measures and into the possibility of modifying the range by using newly collected data.

This article provides a brief history of the old range of alternative measures, U-1 through U-7, and reviews the impact of the redesigned CPS on the pre-1994 series. Its principal purpose is to introduce a new set of measures. The revised set includes several of the former measures, but some important new ones are presented that take advantage of fresh data collected in the redesigned survey.

### Why a range of measures?

The measurement of unemployment was not markedly changed in the redesigned CPS.<sup>2</sup> Indeed, since the inception of the survey in 1940, only relatively minor changes have been made to the official definition of unemployment, despite numerous outside reviews and ongoing assessments by academicians, business and labor organizations, and various advocacy groups.<sup>3</sup> The official measure has withstood the test of time largely because of its objectivity. As measured via the CPS, the employment status of individuals is determined solely by their work-related and job-search activities during a specific reference week. In essence, persons who did any work at all during the reference week are counted as employed, while those who did no work, but who searched for a job (sometime in the 4 weeks prior to the survey) and were currently available to take one had it been offered, are classified as unemployed. Those who met neither test are "not in the labor force."

The inherent objectivity of the official measure also explains, in part, why it and other such statistics are occasionally subject to criticism. Without question, the consequences of unemployment are more serious for some workers than for others, and some users would like to have a more narrowly targeted measure. At the other end of the spectrum, there are those who feel that the official statistics *understate* the full dimensions of the unemployment problem.<sup>4</sup> This view holds that any measure of joblessness should reflect not only those officially classified as unemployed, but also all persons who want to work, even if they are not actually looking for

John E. Bregger recently retired from his position of Assistant Commissioner for Current Employment Analysis, and Steven E. Haugen is an economist in the Division of Labor Force Statistics, Bureau of Labor Statistics.



jobs on a current basis. Some go even further, arguing for the inclusion of *underemployed* individuals—those who are working, but who have had their hours cut back or who have had to settle for less work than they wanted (a 1-day job, for example) or for a job that failed to make use of all their skills.

More fundamentally, because unemployment statistics are used for different purposes, the official concept and measurement may not perfectly suit the needs or interests of all people. Most analysts monitor unemployment because of its role as a cyclical indicator, a measure to be used to gauge current economic conditions and provide some insight into future economic performance. In this role, the measurement of unemployment represents the degree to which available labor resources are not being utilized in the economy. But even though there is broad support for the official statistics when used in this capacity,<sup>5</sup> different interpretations of what is meant by “available labor resources” and “efficient utilization” remain, so some users find the need for a variety of measures.

As an example of these perceived limitations, some look upon unemployment data as measures of economic hardship—that is, as counts of the number of persons who are suffering because their most basic economic needs are not being met. It turns out that unemployment statistics in and of themselves are not particularly useful for this purpose, in large part because, ideally, the measurement of economic hardship requires information on income, and hardship is usually perceived as a family rather than an individual condition.<sup>6</sup> This complexity notwithstanding, some users tend to associate specific types of joblessness with given levels of hardship and therefore focus their attention on either selected worker groups, on the one hand, or a broader array of groups, on the other.

### U-1 through U-7

The recognition of the diversity in the uses of unemployment data led Julius Shiskin, former Commissioner of the Bureau of Labor Statistics, to formulate and introduce the range of labor market measures U-1 through U-7 (similar to the Federal Reserve series of money supply measures) in 1976. Pointing out that “no single way of measuring unemployment can satisfy all analytical or ideological interests,”<sup>7</sup> Shiskin designed a range of unemployment indicators to accommodate many different needs for the data. Most of the measures presented were simply existing data series that captured different characteristics of unemployment, but two were constructed through the combination of several series. Shiskin made it quite clear that neither he nor the Bureau was embracing any of the value judgments inherent in the selection of alternative measures, but rather that the meas-

ures were being presented simply as a variety of unemployment indicators that recognized varying views on who should be classified as unemployed.

Shiskin’s measures are presented in exhibit 1, using 1993 annual averages. The measures are ranked from the most restrictive (U-1), which excludes many persons who would be classified as unemployed in the official measure (U-5), to the broadest definition (U-7), which adds certain groups to the official estimate. Each measure is expressed as a percentage—that is, the proportion—of an associated labor force. In all of the measures except U-1 and U-2, each percentage is constructed as an unemployment rate. U-1 and U-2 are not unemployment rates per se, but represent specific types of joblessness as a share of the entire labor force.

The first four measures were predicated on the assumption that selected subsets of persons officially classified as unemployed experience more hardship (loss of income) than

### Exhibit 1. Range of unemployment measures based on varying definitions of unemployment and the labor force (the Shiskin group)

[1993 annual averages]

Measure	Percent
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force .....	2.4
U-2 Job losers, as a percent of the civilian labor force ....	3.7
U-3 Unemployed persons aged 25 and older, as a percent of the civilian labor force aged 25 and older (the unemployment rate for persons 25 years and older) .....	5.6
U-4 Unemployed persons seeking full-time jobs, as a percent of the full-time labor force (the unemployment rate for full-time workers) .....	6.5
U-5 Total unemployed persons, as a percent of the civilian labor force (the official unemployment rate) .....	6.8
U-6 Total persons seeking full-time jobs, plus one-half of persons seeking part-time jobs, plus one-half of persons employed part time for economic reasons, as a percent of the civilian labor force less one-half of the part-time labor force .....	9.3
U-7 Total persons seeking full-time jobs, plus one-half of persons seeking part-time jobs, plus one-half of persons employed part time for economic reasons, plus discouraged workers, as a percent of the civilian labor force plus discouraged workers less one-half of the part-time labor force .....	10.2



others and should therefore warrant more attention. The first measure, U-1, was based on the duration of unemployment: the number of persons unemployed 15 weeks or longer as a percent of the civilian labor force. Its inclusion rested on the premise that unemployment should be counted only if it lasted long enough to cause severe financial loss and that any income lost from shorter spells could be readily made up from savings, unemployment insurance, or other sources. The selection of the 15-week threshold was in keeping with the informal identification of 15 weeks and longer as "long-term unemployment."

Shiskin's second indicator, U-2, was the number of unemployed job losers, as a percent of the civilian labor force. He assumed that an involuntary (and likely unexpected) job loss entails a larger loss of income than does unemployment that occurs for other reasons, such as a job search initiated because a person has quit his or her current job to look for a better one or because the person recently has entered (or reentered) the job market.

The third measure, U-3, originally comprised unemployed heads of households and was expressed as a percentage of all heads of households in the labor force—that is, the unemployment rate for household heads. The selection of this measure was based on the belief that unemployment affecting the principal earner in a family was a serious matter and potentially a source of substantial hardship for the entire family, while a job loss among other workers might be associated with less dire consequences. Shortly after the initial formulation of the range of measures U-1 through U-7, however, publication of data on heads of households—mostly identified in the survey as the male in the household—was discontinued. In 1978, U-3 was redefined as the unemployment rate for persons aged 25 and older, eliminating the gender bias in the original measure and still restricting, for all practical purposes, the universe to those persons most likely to be supporting households.

Alternative indicator U-4 was the number of unemployed persons seeking full-time jobs, as a percent of the full-time labor force. This measure was included because it was felt that full-time workers were more likely to be primary earners than were those who worked part time. Hence, the consequences of unemployment for full-time workers who became unemployed could be viewed as more adverse than for part-timers.

The official unemployment rate was U-5. This measure was recognized as an objective assessment of the underutilization of labor resources, in that it included *all* persons 16 years and older who were not working, but were available for work and actively seeking employment, taken as a percent of the labor force (the employed plus the unemployed). Thus, unlike U-1 through U-4, U-5 excludes no one for any personal or economic reason.

Beginning in 1983 and extending through 1993, U-5 was

expanded into two measures, with the introduction of the resident Armed Forces (those stationed in the United States) into some of the official labor force estimates. The expansion came about as a result of a recommendation from the National Commission on Employment and Unemployment Statistics that the resident Armed Forces be included in national labor force statistics, "because similarities between civilian and military employment outweigh their differences."<sup>8</sup> This resulted in official rates U-5a, which in 1983 included some 1.7 million members of the Armed Forces as employed and thus in the labor force base (the denominator of the measure), and U-5b, the civilian worker rate. Typically, U-5a was one-tenth of a percentage point lower than U-5b. It soon became apparent that the press and public were unimpressed, and even confused, by the distinctions between the two measures; many people thought that members of the military were suddenly being counted as unemployed, for instance. Ultimately, publication of the measures incorporating the resident Armed Forces was dropped elsewhere, but U-5a continued to be presented in the monthly news release, *The Employment Situation*, along with the other measures, until the entire series was suspended at the end of 1993.

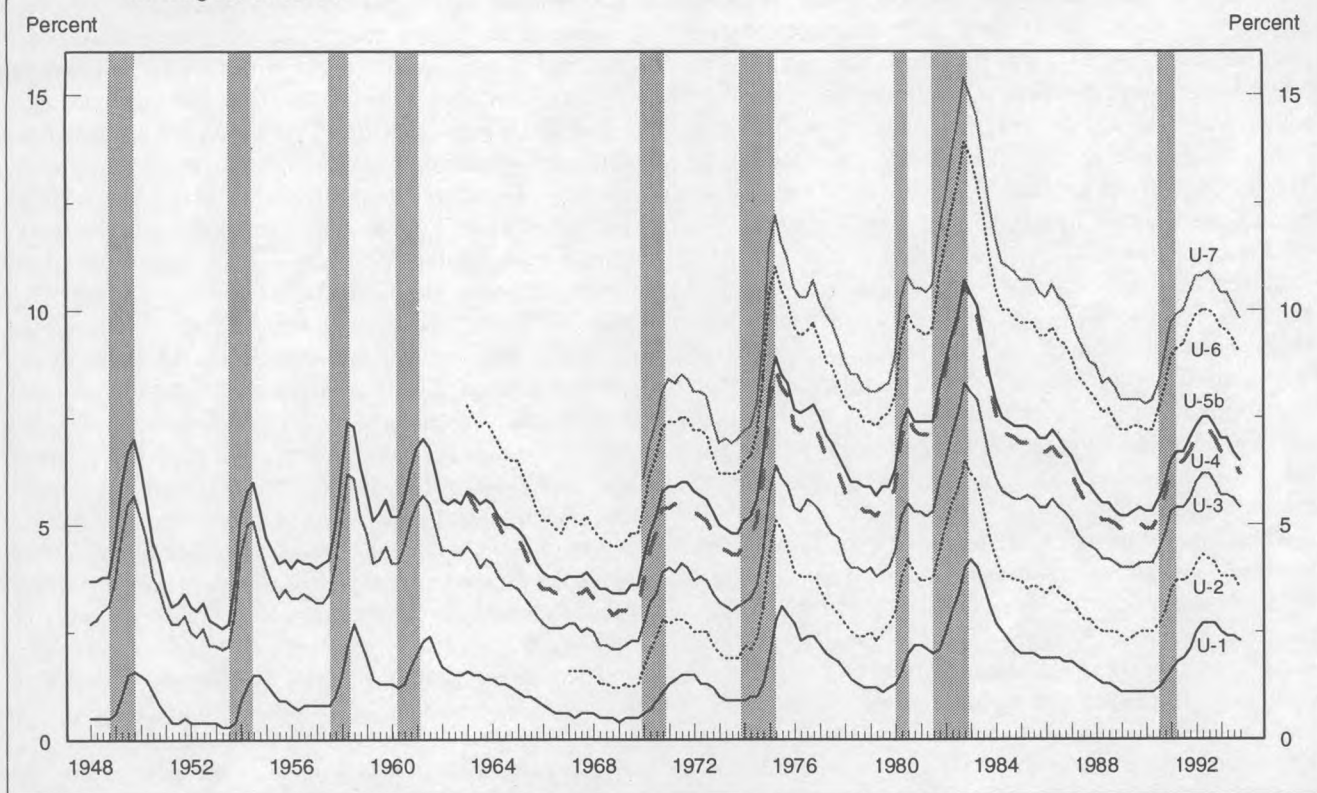
The last two measures in the list of alternative unemployment indicators excluded a portion of certain groups counted as unemployed in the preceding measures, but added a greater number of persons from the other employment status categories. Hence, these measures included a larger segment of the population among the unemployed than the official figure did, thereby producing higher "unemployment" rates.

**A**lternative measure U-6 added involuntary part-time workers to the unemployed and also introduced the notion of weighting workers. U-6 defined the unemployed as all persons seeking full-time jobs, plus one-half of all persons seeking part-time jobs, plus one-half of all persons at work part time involuntarily. Underlying this measure was the argument that those persons who had to settle for a part-time job or whose full-time schedules had been cut back to part time should be considered unemployed. (The proportion one-half was chosen because part-timers work, on average, about half as long per week as full-timers.) Also, persons who were looking for part-time work were given half weight among the unemployed, as those voluntarily working part time put in about half as many hours as full-time workers. In order to express this measure in a way that was conceptually similar to the unemployment rate, the denominator of U-6 was defined as the civilian labor force less one-half of the part-time labor force. This construction also put the measure on essentially a full-time equivalent basis.

The last of Shiskin's measures, U-7, built on U-6 by adding the number of discouraged workers to both the numera-



**Chart 1. Alternative unemployment indications, U-1 through U-7, seasonally adjusted quarterly averages, 1948-93**



tor and denominator.<sup>9</sup> Shiskin assumed that people classified as discouraged workers—those who wanted work, but who were not currently looking because they believed that their search would be futile<sup>10</sup>—very much resembled the unemployed and therefore should be counted as such. (Because these persons were not looking for work at the time of the survey, they were officially classified as not in the labor force.) Over the years, the possibility of counting this group as unemployed has been broached; indeed, an important minority of the last presidentially appointed commission to examine the concepts of employment and unemployment supported the notion of including a redefined measure of discouragement in the count of the unemployed.<sup>11</sup>

Note that, whereas U-6 and U-7 had a certain additivity with U-5, this was not the case for U-5 with respect to U-1 through U-4. The “lower four” measures were totally independent, not only of one another, but also of the official measure. This may have created some confusion, but it served to emphasize the variability in the uses of these measures.

### U-1 through U-7 prior to the redesign

The Bureau began regular publication of data on the range of alternative unemployment measures U-1 through U-7 in

*The Employment Situation* in January 1977. Since then, the most popular of the measures among both researchers and the media, other than the official unemployment rate (U-5), has been U-7, the highest numerically.<sup>12</sup>

The Bureau generally did not use the range U-1 through U-7 in its analyses, nor has there been much in the way of published research using it outside the Bureau. Aside from the fact that the proper focus is on the official statistics, it is important to note that there is little “value added” analytically in tracking the alternative measures over time. While it is true that each indicator provides a different point estimate of “unemployment,” all seven measures have essentially moved in lockstep across the business cycle. (See chart 1.)

Many of the individual labor force measures reflected in the range U-1 through U-7 have, however, been routinely examined in *The Employment Situation* and have frequently been the subject of more indepth study. Also, several of the component series contained in the range have evidenced meaningful long-term trends—such as the upward trend in the incidence of involuntary part-time employment—but these developments typically have been analyzed quite effectively outside the U-1 through U-7 framework.

Several other countries have introduced their own ranges of alternative unemployment indicators. Canada, for example,



**Exhibit 2. Range of alternative measures of unemployment and other forms of labor resource underutilization**

[1994 annual averages]

Measure	Percent
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force .....	2.2
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force .....	2.9
U-3 Total unemployed persons, as a percent of the civilian labor force (the official unemployment rate) .....	6.1
U-4 Total unemployed persons plus discouraged workers, as a percent of the civilian labor force plus discouraged workers .....	6.5
U-5 Total unemployed persons, plus discouraged workers, plus all other "marginally attached" workers, as a percent of the civilian labor force plus all "marginally attached" workers .....	7.4
U-6 Total unemployed persons, plus all "marginally attached" workers, plus all persons employed part time for economic reasons, as a percent of the civilian labor force plus all "marginally attached" workers .....	10.9

publishes a range that is roughly comparable to the United States', while Mexico has developed perhaps the broadest range of indicators, with several measures linking employment status with levels of compensation.<sup>13</sup> The Bureau has compiled data that have facilitated international comparisons of the range of indicators U-1 through U-7 across nine foreign countries.<sup>14</sup>

**Impact of the redesign on the measures**

The 1994 redesign had an impact on the data derived from the CPS, and hence the series used in the range U-1 through U-7, in two ways: first, a number of changes made to the questionnaire and overall survey methodology affected the measurement of employment, unemployment, and persons not in the labor force; and second, several definitional changes were introduced. (The appendix gives a more complete discussion of the effects of the redesign on the indicators.)

As regards measurement, the most significant change occurred in estimating the number of persons classified as employed part time for economic reasons. The figure was

sharply lower under the redesigned survey, as respondents were explicitly asked about their desire and availability for full-time work. In the past, this information was inferred indirectly from other survey questions.

The most substantive definitional change concerned persons classified as discouraged workers. Considerable tightening of the requirements for discouraged worker status reduced the number of persons so classified by about half. Estimates of the duration of unemployment, the number of job losers, and the number of unemployed persons seeking full-time jobs also were affected to varying degrees by the questionnaire and other changes in the redesigned CPS.

The redesigned CPS provides new, as well as more detailed, information on the employment status of individuals, particularly persons classified as not in the labor force. First, more extensive questions on the reasons people do not enter the labor market permit a greater understanding of the factors that limit labor market participation for some individuals. In addition, all respondents in the survey classified as not in the labor force are now queried about their desire and availability for work; in the past, these questions were asked of just a quarter of the monthly sample. As a result, estimates of the number of discouraged workers are now made on a monthly, rather than quarterly, basis (although seasonally adjusted data are not yet available).

**The new set: U-1 through U-6**

After evaluating the impact of the redesigned CPS on the original range of alternative unemployment measures and assessing how newly collected data could be used to construct fresh measures that might be more relevant for today's data users, the Bureau has developed a modified range of alternative indicators. Annual averages for 1994 for the new range, entitled "alternative measures of unemployment and other forms of labor resource underutilization," are presented in exhibit 2. The change in the title suggests a slightly different emphasis and interpretation of the measures. Rather than implying a range of unemployment definitions, these indicators focus on different types of joblessness or incorporate different measures of labor resource underutilization.

Several of Shiskin's original measures have been retained. U-1 and U-2 are conceptually and definitionally identical to the first two measures in the original range, although the aforementioned survey changes have led to small "breaks in series." Other things being equal, U-1, the percent of the labor force unemployed 15 weeks or longer, is slightly higher under the redesigned survey than in the past, while U-2, the percent of the labor force that is unemployed because persons lost their last jobs or were in temporary jobs that ended, is slightly lower. These concepts are still relevant today, and it seemed reasonable to retain

the measures, particularly because there have been recent shifts in the unemployment picture in terms of the duration of and reasons for unemployment.<sup>15</sup>

The official unemployment rate is now U-3. The original indicators U-3 and U-4 are no longer included in the new range of alternative measures, in part because one reflected a personal (U-3, persons 25 years and older) rather than an economic characteristic, and more importantly, because both brought in the notion of reduced labor force bases.<sup>16</sup>

The new indicators U-4 through U-6 are markedly different from their counterparts in the original range of alternative unemployment measures. U-4 is the number of unemployed persons plus persons classified as discouraged workers, taken as a percent of the labor force plus discouraged workers. In order to be classified as discouraged in the redesigned survey, persons must explicitly want and be available for work and have searched for work in the prior year, even though they are not currently looking for a job because they feel their search would be in vain. The inclusion of U-4 coincides with the views of those who support a definition of unemployment that incorporates labor market discouragement.

U-5 adds other "marginally attached" workers to U-4, with the denominator being the civilian labor force plus all "marginally attached" workers.<sup>17</sup> This measure, using data not available prior to 1994, adds to the unemployed *all* persons who want and are available for a job and have recently searched for work, regardless of their reason for not currently looking. Hence, it includes those who are not currently looking for work for reasons such as child-care or transportation problems. While these persons may not be as closely attached to the labor market as are discouraged workers, they do represent potential labor resources, in the sense that they have recent job search activity and are currently interested in reentering the job market under certain conditions.

The highest alternative indicator, U-6, represents the number of unemployed persons, plus all "marginally attached" workers, plus *all* persons working part time for economic reasons, as a percent of a labor force augmented to include "marginally attached" workers. This is the most comprehensive of the new range of alternative measures, effectively treating workers who are visibly underemployed and all persons who are "marginally attached" to the labor force equally with the unemployed. Hence, U-6 provides

the largest conceptual break with the official measure of unemployment; it is expected to be useful to those who want a single measure to represent a general view of the degree to which existing and potential labor resources are not being utilized.

As described earlier, the highest two of Shiskin's measures were calculated on essentially a full-time equivalent basis, in which full-time workers and persons seeking full-time jobs were treated as whole persons and persons working part time for economic reasons and those seeking part-time jobs, as well as the part-time labor force, were given half weights. This weighting was discontinued in the new U-6, principally in the interest of simplicity. Persons using the original higher level measures were confused by the weighting and, indeed, often rejected those measures in favor of unweighted estimates. For certain purposes, however, weighting has benefits, and certain individuals may wish to continue using some form of the old U-6 and U-7 measures.<sup>18</sup>

THE BLS ALTERNATIVE UNEMPLOYMENT MEASURES have had some degree of popularity ever since their introduction, both in the United States and in other countries that use them (or variations thereof). As mentioned earlier, however, where there is interest, it has tended to be fairly narrow. That is, people who use the measures appear to limit their use to a contrast between the official measure of unemployment (in the current scheme, U-3) and the highest available measure (U-6). One does not hear much about any of the other alternative measures, either below the official unemployment rate or above it, until the top is reached. It is for this reason, in addition to the others mentioned earlier, that the new set of alternative measures is more circumscribed below the official unemployment rate. At the upper end, one additional measure is featured, and it comes about solely because of the introduction in 1994 of additional information on persons not in the labor force into monthly data collection in the CPS.

The Bureau of Labor Statistics believes that the range U-1 through U-6 represents a useful, though by no means fully comprehensive, set of alternative measures of unemployment and labor market underutilization. Users will want to examine this set and perhaps create some sets of their own. Indeed, the Bureau encourages such efforts. In the meantime, the new alternative measures will be published in *The Employment Situation* beginning early in 1996.<sup>19</sup> □

## Footnotes

<sup>1</sup> For information on the redesigned cps, 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. 13-37.

<sup>2</sup> Definitionally, it was not changed at all, except for the elimination of a small group of persons, namely, those who volunteered the information that

they were waiting to start a new job within 30 days, most of whom undoubtedly meet the jobseeking tests in any case. There were, however, changes in the wording of nearly all the questions—particularly as regards persons on lay-off—that affected the underlying data in limited ways. See Cohany, Polivka, and Rothgeb, "Revisions in the Current Population Survey."

<sup>3</sup> For a summary of the development of employment and unemployment



statistics in the United States, and a review of those statistics, see John E. Bregger, "Establishment of a new Employment Statistics Review Commission," *Monthly Labor Review*, March 1977, pp. 14–20; and Steven E. Haugen and John E. Bregger, "Employment and unemployment," in Douglas Greenwald, ed., *McGraw-Hill Encyclopedia of Economics*, 1994, pp. 345–53.

<sup>4</sup> See, for example, "Understating Unemployment," *Washington Journalism Review*, November 1992, pp. 35–36.

<sup>5</sup> See *Measuring Employment and Unemployment* (President's Committee to Appraise Employment and Unemployment Statistics, 1962); and *Counting the Labor Force* (National Commission on Employment and Unemployment Statistics, Labor Day 1979).

<sup>6</sup> There is widespread agreement that persons with incomes below the official poverty threshold, who are generally defined as "poor," experience hardship. The hardship endured by those living in families is often gauged by looking at family income and relating it to the poverty threshold for a family of a given size, where the threshold has been adjusted for the assumption that family resources are shared. In the case of unrelated individuals, individual-level income figures and their associated poverty thresholds must be used. Estimates of the number of persons and families with poverty-level incomes are produced by the Census Bureau and published in their annual Series P-60 and P-70 reports. In addition, the Bureau of Labor Statistics estimates the number of poor persons with work experience. See, for example, *A Profile of the Working Poor, 1993*, Report 896 (Bureau of Labor Statistics, July 1995).

<sup>7</sup> Julius Shiskin, "Employment and unemployment: the doughnut or the hole?" *Monthly Labor Review*, February 1976, pp. 3–10; quote on p. 4.

<sup>8</sup> *Counting the Labor Force*, p. 49. The Bureau began to phase out publication of the labor force series that included the resident Armed Forces in June 1991, coincidentally with the military buildup associated with the Persian Gulf conflict, because of limitations in the availability and reliability of the data.

<sup>9</sup> Note that data on discouragement were published only on a quarterly basis over the 1967–93 period. The series was therefore placed last in the sequence, in order to have only one quarterly measure; otherwise, in all likelihood, U-6 would have been unemployment plus discouragement, and U-7 would have introduced involuntary part-time workers.

<sup>10</sup> As will be discussed later, the definition of discouraged workers was changed in the redesigned cps introduced in January 1994. For further information, see the appendix.

<sup>11</sup> *Counting the Labor Force*, p. 56.

<sup>12</sup> Some analysts modified U-7 by adding all involuntary part-time workers to the unemployed and discouraged worker totals, an approach that, in 1993, added roughly 4 million workers to the numerator of U-7 and raised the rate by about 2-1/2 percentage points.

<sup>13</sup> For a description of Canada's alternative measures of unemployment, see Mary Sue Devereaux, "Alternative measures of unemployment," *Perspectives on Labour and Income*, Winter 1992, pp. 35–43. For information on the range of labor underutilization rates for Mexico, see Susan Fleck and Constance Sorrentino, "Employment and unemployment in Mexico's labor force," *Monthly Labor Review*, November 1994, pp. 3–31.

<sup>14</sup> Constance Sorrentino, "International unemployment indicators, 1983–93," *Monthly Labor Review*, August 1995, pp. 31–50.

<sup>15</sup> The share of the unemployed who have been jobless for extended periods of time has remained intractably high in recent years, and there also have been shifts in the number and composition of job losers. For a discussion of these developments, see "Recent Job Losers Less Likely to Expect Recall," *Issues in Labor Statistics*, Summary 92–8, July 1992; and "Long-term Unemployment Remains High During Recovery," *Issues in Labor Statistics*, Summary 95–11, September 1995.

<sup>16</sup> The original indicators U-3 and U-4, the unemployment rates for persons aged 25 and older and for persons seeking full-time jobs, respectively, were dropped from the range of alternative indicators because they focused more on the personal characteristics of unemployed workers than on a specific type of unemployment or underemployment or on types of individuals. Moreover, a troubling, inconsistent feature of the original range was that the upward progression in the size of the numerator (the number of unemployed workers, variously defined) was accompanied in measures U-3 and U-4 by a diminution in the size of the denominator (the labor force). The new range, U-1 through U-6, is more consistent in this area, in that the same base (the civilian labor force) is used in measures U-1 through U-3, and the base is then augmented in U-4 through U-6 as the labor resource characteristics under consideration are broadened. It should be noted that, although the original U-3 and U-4 series are not included in the new range, they are regularly published in *The Employment Situation*.

<sup>17</sup> "Marginally attached" workers are persons who want a job, are explicitly available for work, and have looked for work sometime in the prior year, but are not currently looking. This subcategory of persons classified as not in the labor force includes discouraged workers (persons who have given a job-market-related reason for not currently looking for work), as well as those persons who have given other reasons for not looking.

<sup>18</sup> The Bureau can produce a version of the original U-6 on a weighted basis for interested users.

<sup>19</sup> As currently envisioned, alternative indicators U-1 through U-3 will be published on both an unadjusted and a seasonally adjusted basis, while indicators U-4 through U-6 will be available on an unadjusted basis only, until sufficient data have been collected to produce a reliable seasonally adjusted series for discouraged and other "marginally attached" workers.

## APPENDIX: Impact of the cps redesign on the original indicators, U-1 through U-7

A totally redesigned Current Population Survey (cps) was implemented in January 1994, the first major modification to the survey since 1967. Although the alterations to labor force concepts were in general quite limited (the major exception being the substantial redefinition of discouraged workers), the introduction of a redesigned questionnaire and modernized survey methodology had a marked effect on many labor force measures. Altogether, these changes led to a number of incomparabilities in various series between 1994 and earlier years. The impact of the changes on the original range of alternative indicators, U-1 through U-7, varied significantly and is summarized in what follows.<sup>1</sup>

*Effects on indicator U-1, the number of persons unemployed 15 weeks or longer, as a percent of the civilian labor force.* Both the numerator and denominator of U-1 were affected by the redesign of the cps. The duration of unemployment generally rose under the

new survey methodology. This effect is likely related to provisions that allow more flexibility in reporting the duration of unemployment—respondents can now report duration in either weeks, months, or years, versus only weeks under the old questionnaire—and to the introduction of dependent interviewing in the measurement of unemployment duration in the redesigned survey.<sup>2</sup> The denominator in U-1, the civilian labor force, was also somewhat higher in the redesigned survey than under the old cps, due to increases in overall levels of unemployment and employment. The net impact on U-1, other things remaining equal, is a slightly higher percentage of the labor force that falls under the category of long-term unemployed.

*Effects on indicator U-2, the number of job losers, as a percent of the civilian labor force.* The number of unemployed persons classified as job losers—including persons on layoff who expect recall,

as well as the newly identified category of persons whose temporary jobs have ended—was somewhat higher under the old survey questionnaire and methodology than with the redesigned survey. Research to date has not reached any definitive conclusions as to the cause of this decline, but it seems to be related to the combined effects of various changes in wording in the new questionnaire. The net result, which includes the slightly higher labor force level mentioned above, is a lower proportion of individuals falling under U-2 in the redesigned cps than under the pre-1994 survey.

*Effects on indicator U-3, the number of unemployed persons aged 25 and older, as a percent of the civilian labor force aged 25 and older (the unemployment rate for persons aged 25 and older).* The number of unemployed adults was slightly lower under the old survey than with the redesigned cps, but the adult labor force expanded by about the same proportion; as a result, the overall impact of the redesigned survey on the unemployment rate for persons aged 25 and older was minimal.

*Effects on indicator U-4, the number of persons seeking full-time jobs, as a percent of the full-time labor force (the unemployment rate for full-time workers).* The number of unemployed persons seeking full-time work was affected only slightly in the redesigned cps, consistent with the small positive effect on overall unemployment. However, the full-time labor force was more significantly affected.

Prior to the redesign, employed persons reported as working full time (35 or more hours) during the reference week were automatically classified as full-time workers and were not asked questions about the number of hours they usually logged. In addition, all persons working part time for economic reasons were considered part of the full-time labor force. In the redesigned cps, all workers are asked about their usual hours directly, prior to being asked questions on the number of hours they actually worked. Thus, usual hours, rather than actual hours, now form the basis for delineating full- or part-time status. This change, combined with numerous other changes in the questionnaire, is associated with a slight decrease in measured full-time employment in the redesigned survey (and thus in the full-time labor force), compared with the old survey. The small increase in unemployed persons seeking full-time jobs, taken in conjunction with the slightly lower full-time labor force, yields a jobless rate for full-time workers (U-4) that is slightly higher in the redesigned survey than under the old cps.

*Effects on indicator U-5, the number of unemployed persons, as a percent of the civilian labor force (the official unemployment rate).* The numerator of U-5, the overall number of unemployed persons, as officially defined, showed a modest increase in the redesigned cps. At the same time, the denominator, as indicated above, also rose only slightly. The net result is that, other things remaining equal, the official unemployment rate is only marginally higher—an estimated 0.2 percentage point—under the redesigned cps than under the survey prior to 1994.<sup>3</sup>

*Effects on indicator U-6, the number of persons seeking full-time jobs, plus one-half the number of persons seeking part-time jobs, plus one-half the number of persons employed part time for economic reasons, as a percent of the civilian labor force less one-half of the part-time labor force.* Alternative indicator U-6 was mark-

edly affected by changes in the measurement of persons working part time even though they would have preferred full-time employment. Such persons are defined as those who want and are available for full-time work, but who have had to settle for part-time employment because their hours were cut back or because they could not find full-time jobs (the main two reasons). Prior to the redesign, information on a person's desire and availability for full-time work was inferred from his or her responses to a question on reasons for working less than 35 hours a week. Under the redesigned survey, persons who usually work part time are asked explicitly about their desire and availability for full-time work. This change in methodology led to substantial reductions in the number of persons classified as working part time for economic reasons. (The group is about 20 percent smaller than in the past.) Principally for this reason, the calculated rate for U-6 would be somewhat higher under the old cps than under the new survey.

*Effects on indicator U-7, the number of persons seeking full-time jobs, plus one-half the number of persons seeking part-time jobs, plus one-half the number of persons employed part time for economic reasons, plus the number of discouraged workers, as a percent of the civilian labor force plus the number of discouraged workers less one-half the part-time labor force.* The most marked definitional change in the redesigned cps dealt with persons classified as discouraged workers. In the old survey, persons out of the labor force who indicated a desire for work and a job-market-related reason for not currently looking for work were classified as discouraged workers, provided that no reasons to the contrary were also offered. This definition had been criticized in the 1979 presidential commission review as being too subjective.<sup>4</sup> In the revised cps, discouraged workers were redefined as persons who indicate *explicitly* in the survey that they want and are available for a job, *have looked for work in the past year*, and have given a job-market-related reason for not currently looking for work. Among such reasons are the belief that no work was available, the belief that searching for work would be unsuccessful, the belief that one lacks the requisite skills or education, and the belief that one would face discrimination at some point in the job search. The definitional change dramatically reduced the number of discouraged workers measured in the redesigned survey. (The group is about 50 percent smaller.) This, plus the aforementioned reduction in the number of persons working part time for economic reasons, led to a rate for U-7 that would be markedly higher in the old survey than under the new one.

## Footnotes to the appendix

<sup>1</sup> While it is difficult to make precise comparisons, enough is now known about the impact of the redesigned cps on the various labor force series used in the original range of unemployment indicators, that qualitative comparisons can be made with a high level of confidence. (See Anne E. Polivka and Stephen M. Miller, "The cps After the Redesign: Refocusing the Economic Lens," in National Bureau of Economic Research, conference volume, forthcoming.)

<sup>2</sup> Under dependent interviewing, the duration of unemployment is automatically updated by 4 or 5 weeks if a person who is in the survey in one month is found to be unemployed in the next.

<sup>3</sup> Polivka and Miller, "The cps After the Redesign."

<sup>4</sup> *Counting the Labor Force* (National Commission on Employment and Unemployment Statistics, Labor Day 1979), pp. 44-49.



## Improvements to the quarterly productivity measures

*The use of annually-weighted output measures for productivity calculations will eliminate a source of bias and reduce revisions*

Edwin Dean,  
Michael Harper,  
and  
Phyllis Flohr Otto

Economists in research and public policy have given considerable attention to identifying the sources of long-term productivity growth and the relationship between productivity and wages. Productivity statistics also play an important role in short-run analysis of trends in prices and in the competitiveness of a Nation's exports.

This article discusses methodological improvements to the quarterly productivity series published by the Bureau of Labor Statistics that will improve the accuracy and usefulness of the data and reduce the size of revisions in the future.

Since 1976, BLS has issued eight press releases a year presenting annual and quarterly measures of productivity, hourly compensation, and unit labor costs for business, nonfarm business, manufacturing (durable, nondurable, and total), and nonfinancial corporate sectors in the United States.

- The primary data source for output and compensation has been the national income and product accounts produced by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce;
- quarterly data on manufacturing output are based on the industrial production indexes published by the Federal Reserve System Board of Governors;
- data on employment and average weekly hours are derived primarily from the Current Employment Statistics and Current Population Survey programs of BLS; and

- establishment data are adjusted from an "hours paid" basis to an "hours worked" basis using the BLS Hours at Work Survey.

The national income and product accounts include aggregate measures of gross domestic product (GDP) in current and constant prices. Several components of constant-dollar GDP are subtracted from total constant-dollar GDP to derive the measure of business sector output used by BLS to compute its productivity series. The components subtracted are: the product of general government, private households, and non-profit institutions; the rental value of owner-occupied dwellings; and the statistical discrepancy. Nonfarm business output further excludes farm output.

BLS measures of manufacturing output (and its durable and nondurable components) are based on annual measures of constant-dollar gross product originating in manufacturing, published by BEA. Quarterly rates of change in manufacturing are computed using the industrial production indexes.

The BLS measure of the output of nonfinancial corporations is precisely the measure of constant-dollar GDP of nonfinancial corporate business, published by BEA.

### Uses of productivity measures

Aggregate measures of output per hour worked have risen over the long term for several reasons. Among the most important sources of labor productivity change are the incorporation of

Edwin Dean is Associate Commissioner for Productivity and Technology, Bureau of Labor Statistics. Michael Harper is chief of the Division of Productivity Research, and Phyllis Flohr Otto is an economist in the Office of Productivity and Technology.



technological improvements in production processes, increases in capital per worker, improvements in workers' skills, improvements in the efficiency of production, and increases in the proportion of output in "more productive" industries, such as electronic and other electric equipment. Over the long-term, these productivity gains have led to steady increases in buying power and, as a consequence, average living standards.

In the shorter run, productivity measures mirror the business cycle: productivity grows more slowly, or falls, during a recession and rises rapidly during a recovery. While this pattern complicates the interpretation of productivity statistics, its predictability makes quarterly productivity measures useful in explaining the relationships between short-term changes in output, employment, and average weekly hours.

### Regular revisions in measures

BLS revises productivity measures when source data on output or hours are revised to incorporate more information. Estimates of hours are regularly revised when the BLS Current Employment Statistics are updated, when their seasonal factors are revised, and when information becomes available about the ratio of hours worked to hours paid. Revisions to hours, including changes to seasonal factors, are usually confined to the most recent 5 years, although historical revisions occasionally occur.

BEA revises output on a regular schedule as additional information becomes available. Recent quarters are revised regularly to reflect more complete data on inventory changes, corporate profits and tax returns. BEA makes historical revisions about every 5 years after analyzing the quinquennial censuses. The industrial production index also is regularly revised, affecting the quarterly manufacturing productivity series published by BLS.

Two other sources of output revisions have little to do with the availability of new information. The first has been regular changes in the base year—BEA has changed the base year once every 5 years—to compute "constant dollar" output measures. Changes in the base year have been a significant source of historical revisions to productivity measures. The second has been the exclusion of one particular component of GDP (statistical discrepancy) from the BLS definitions for business and nonfarm business output. This has led to revisions in quarterly productivity that are different and frequently larger than published revisions to GDP.

### Summary of changes

In late 1995 or early 1996, BLS will switch to annually-weighted output indexes for computations underlying its

*Productivity and Costs* news releases. This change will parallel plans by BEA to replace its constant-dollar series as the featured measure of real GDP with an annually-weighted index by the end of 1995. Also, BLS will no longer exclude the statistical discrepancy from its output measures. These changes are more fully explained in this article; in addition, the new data for the business and nonfarm business sectors are presented and compared with existing data.

### Improved output indexes

BEA computes the present fixed-weighted measure of constant-dollar GDP by dividing current-dollar output data for detailed types of goods and services by corresponding price indexes. Price indexes are time series that measure price change relative to specific year. The resulting detailed measures of constant-dollar output are added to produce an aggregate measure. The constant-dollar aggregates effectively weight items based on their prices in the base year. The base year for computing constant-dollar output measures, currently 1987, has generally been moved forward every 5 years.

Aggregates of "constant dollars" are a reasonably good measure of output if the prices of various goods are fairly stable relative to one another. However, when relative prices change, constant dollars tend to place too much weight on goods or services for which relative prices have fallen and too little emphasis on items for which relative prices have risen. This is because constant-dollar aggregates effectively weight items based on their prices in the base year. The growth rate of a constant-dollar aggregate depends on which base year is used to compute it; as a result, the growth rate is subject to revision when the base year is changed. These revisions can be systematic because consumers and investors tend to buy more of those goods and services that have become relatively cheaper.

Computers have continued to be a major source of bias in the featured fixed-weighted measures. Although the prices of most goods have risen moderately, the prices of computers, adjusted for quality change, have fallen dramatically. In 1995, computer prices are much lower than in 1987, and in 1987 they were much lower than in the 1970's. Rapid growth in production of computers during the 1990's has been given too much weight in total output growth in aggregates based on constant 1987 dollars. Therefore, growth of GDP and of business and nonfarm business output have been overstated since 1987. Similarly, growth of these aggregates has been understated in earlier years. The problem is more acute for measures of manufacturing output because computers are made in that sector.

The bias in computer prices is a special case of a more general problem in constructing economic indexes: How to construct an aggregate quantity (or price) measure of two or



more components when their relative prices (or quantities) are changing. Much has been written in the economics literature about how to address this "index number problem."

While a unique formula does not exist to handle all sets of data perfectly, a family of formulas and techniques has been shown to approximate the precise solution very closely. Any of these techniques avoids the most important sources of systematic bias embodied in the constant-dollar method.

The improved techniques involve the use of Fisher Ideal or Tornqvist index number formulas, which are examples of "superlative" index number formulas, to compute aggregate output between pairs of years. To compute time series, "chain indexes" or similar techniques are used to combine aggregate growth rates between pairs of years to create index numbers for longer time periods. BLS research, and that of other experts, show that the different improved techniques generally yield empirical results that are similar.

These improved aggregation techniques were developed in numerous scholarly books and articles. Years ago, Irving Fisher<sup>1</sup> of Yale University, and, more recently, Erwin Diewert<sup>2</sup> of the University of British Columbia and his co-authors, studied the criteria that a superlative index number should meet. Dale Jorgenson and Zvi Griliches<sup>3</sup> of Harvard University pioneered the use of these techniques in measuring productivity. Other scholars have further developed the theory of index numbers and the techniques of applying index numbers to specific economic problems, including the application of superlative index numbers to the measurement of trends in productivity.<sup>4</sup> The properties of alternative index number formulas are discussed in a technical note by Brian Sliker of the Bureau of Labor Statistics.<sup>5</sup>

In 1983, BLS became the first Government statistical agency to use these techniques to develop an aggregate U.S. performance measure when it introduced measures of multifactor productivity.<sup>6</sup> These measures divided output by an index of "combined inputs" of labor and capital. Annually chained Tornqvist indexes were used to combine *inputs* of capital and labor, and subcategories of capital. In 1993, BLS began using Tornqvist indexes to combine subclasses of labor inputs in its work estimating the effects of labor composition change on aggregate productivity.<sup>7</sup>

Since 1987, BLS has developed multifactor productivity measures for 19 two-digit manufacturing industries and for selected three- and four-digit industries that use Tornqvist indexes for combining *outputs* and *inputs*. This summer, BLS began using Tornqvist indexes to aggregate outputs for its 180 labor productivity measures for selected industries.<sup>8</sup>

### Annually weighted output indexes

BEA examined the use of annually-weighted indexes in the calculation of national income and product account data in a series of articles in the *Survey of Current Business* begin-

ning in 1989.<sup>9</sup> Since 1993, BEA has regularly published its quarterly measure of GDP based on the "chain-type annually-weighted" indexes as alternative indexes. As one of the conclusions emerging from BEA's "Mid-Decade Review," BEA recently announced its planned replacement of the fixed-weighted index as its featured measure with a chain-type index.<sup>10</sup>

BEA and BLS have designed specifications for output measures that are suitable for various BLS publications about major sector productivity. In July 1994, BLS published *annual* multifactor productivity measures that used chain-type annually-weighted indexes of *output* produced by BEA. Since December 1994, BEA has been preparing *quarterly* measures of output for business and nonfarm business for BLS in a time frame nearly suitable for use in quarterly *Productivity and Cost* news releases published by BLS.

BLS soon will be using annually-weighted indexes of output in all of its quarterly and annual measures of output per hour and unit labor costs. BEA will compute quarterly data for business and nonfarm business for BLS using the same conventions it uses to compute quarterly GDP in its chain-type annually-weighted indexes. Starting with its chain-type measure of real GDP, BEA will remove those GDP components that BLS excludes from its definitions of the business and nonfarm business sectors.

An annually-weighted index for nonfinancial corporate output is not yet available. BEA is considering the best way to construct this series. It is possible that BLS will temporarily discontinue its nonfinancial corporate productivity series pending completion of this work. When and if this improved series is available, BLS will use it for measuring productivity and costs.

BLS currently uses two data sources for its output series on manufacturing and durable and nondurable manufacturing. The source of the annual series is the 1987 constant-dollar national income and product account manufacturing data, based on a value-added (strictly, gross product originating) concept. This source provides manufacturing data from 1977 to the most recent year for which the data are available. As noted earlier, quarterly data on manufacturing output are based on the industrial production indexes published by the Federal Reserve Board. The industrial production data also are used to extend the manufacturing series forward from the most recent year for which the national income and product account data are available; this means, in practice, that the production data provide the annual output data for approximately the most recent 2 years.

When BLS switches to annually-weighted national income and product account data for the business and nonfarm business sectors, changes also will be made in the manufacturing output data. The new series will be prepared using a superlative index number method. BLS is studying several

sources of manufacturing data that use such a method; most of these sources are described in a recent article in the *Monthly Labor Review*.<sup>11</sup> The use of annually-weighted output measures, in place of constant-dollar measures, is particularly important in manufacturing, where computers are produced. When this change is made, it may prove possible to provide data for years before 1977. The quarterly output movements and the extensions of the data forward from the most recent annual data will continue to be based on the industrial production indexes.

### Statistical discrepancy

As mentioned earlier, BEA provides the data for GDP and its components that BLS uses to compute productivity. Working with *nominal*, or expenditures, data, the "statistical discrepancy" and other items are subtracted from nominal GDP to arrive at business sector output. Subtraction of the statistical discrepancy has had the effect of placing the BLS measures of output on the "income side" of the GDP estimates rather than the "product side." In *nominal terms*, the product side adds up values of goods and services, while the income side adds up the disposition of the income generated by production in the form of wages, salaries, supplements, profits, net interest, and business taxes. In theory, the nominal income and product sides are equal; in practice they differ because they are measured, in large part, from different sources. Finally, the nominal data are converted to constant-dollar data, with a deflated number for statistical discrepancy forming the difference between product side and income side constant-dollar business sector output.

The difference between product side and income side business sector output has been negligible over the long run. However, this difference has been significant over shorter time spans.

When BLS changes its output data from constant-dollar output to an annually weighted index for the business and nonfarm business sectors, it also will no longer remove the statistical discrepancy. This decision is based on conceptual and practical considerations.

The concept of productivity is to compare the outputs of production with the inputs used to create them. These outputs are the goods and services that are directly measured on the product side. The costs associated with the inputs are measured on the income side. Up until now, an income side output measure has been used because it is *statistically more closely related* to labor costs. However, the product side output measure is *conceptually more closely related* to what the economy produces.

Also, BLS has determined that the income side definition has led to larger revisions of BLS productivity measures between the "preliminary" and "revised" press releases than would a product side definition. This is because BEA's source

data on the income side are incomplete at the time the GDP statistics are first issued each quarter. BLS has, in effect, used a product side measure of output growth in its first press release of each quarter, and then an income side definition at the time of the second press release.

### Effects of the changes

Table 1 presents comparisons of productivity trends calculated with the new methods with the trends as they have been published. Measures are compared for the business and nonfarm business sectors. Measures for these two sectors that use the new methods are not yet available for the period 1947 to 1958. Data for these years may be available from BEA in the near future.

Table 1 shows that revisions to output growth rates for the periods before 1990 will be upward. Growth rates for business and nonfarm business will be revised downward for the period 1990 to 1994.

In table 2, compound annual rates of growth of the currently published BLS output measure (a) is compared with rates of growth of the improved measure (b). The published measure is based on constant 1987 dollars and the income side of national income and product accounts. The improved measure is based on an annually chained Fisher Ideal Index and the product side. Columns (c) and (e) make the corresponding comparison for productivity growth. Column (d) shows the growth rate of a measure of productivity based on constant 1987 dollars and on the product side of the product accounts. This allows the computation of column (f), which illustrates how much the measures would be affected if BLS were to shift from the income side of the product accounts to

**Table 1. Output per hour, business and nonfarm business sectors. Compound average annual rates of growth, in percent**

Year	Annually-weighted output	Base-year weighted output
<b>Business sector</b>		
1959-94 .....	2.0	1.8
1960-73 .....	3.4	2.9
1973-79 .....	1.2	.7
1979-90 .....	1.1	1.0
1990-94 .....	1.3	1.9
<b>Nonfarm business sector</b>		
1959-94 .....	1.8	1.5
1960-73 .....	3.0	2.5
1973-79 .....	1.0	.6
1979-90 .....	.9	.8
1990-94 .....	1.2	1.8



**Table 2. The effects of improved measurement techniques on output and productivity**  
**Nonfarm business sector, compound average annual rates of change, in percent**

Year	Output		Productivity			Difference (d) - (c)	Difference (e) - (c)
	Base-year weighted income side	Annually weighted product side (improved measure)	Base-year weighted income side	Base-year weighted product side	Annually weighted product side (improved measure)		
	(a)	(b)	(c)	(d)	(e)		
<b>Trends:</b>							
1960-94 .....	3.1	3.4	1.5	1.5	1.8	0.0	0.3
1960-73 .....	4.2	4.7	2.5	2.6	3.0	.1	.5
1973-79 .....	2.5	2.9	.6	.7	1.0	.1	.4
1979-90 .....	2.4	2.6	.8	.7	.9	-.1	.1
1990-94 .....	2.7	2.1	1.8	1.6	1.2	-.2	-.6
<b>Single years:</b>							
1990-91 .....	-1.0	-1.3	1.5	1.3	1.2	-.2	-.3
1991-92 .....	2.4	2.3	2.7	2.8	2.6	.1	-.1
1992-93 .....	4.1	3.2	1.3	1.2	.5	-.1	-.8
1993-94 .....	5.3	4.1	1.9	1.3	.7	-.6	-1.2
<b>Recent quarters:</b>							
1993, 2nd quarter .....	4.7	2.3	.4	-1.2	-1.9	-1.6	-2.3
1993, 3rd quarter .....	4.9	2.8	2.9	1.9	.8	-1.0	-2.1
1993, 4th quarter .....	7.9	5.7	4.2	3.3	2.1	-.9	-2.1
1994, 1st quarter .....	5.2	3.5	1.7	.2	.1	-1.5	-1.6
1994, 2nd quarter .....	3.2	4.5	-1.4	-.5	-.3	.9	1.1
1994, 3rd quarter .....	4.3	4.2	2.7	3.0	2.5	.3	-.2
1994, 4th quarter .....	7.7	4.8	4.3	2.7	1.4	-1.6	-2.9
1995, 1st quarter .....	4.5	2.2	2.5	1.3	.2	-1.2	-2.3
1995, 2nd quarter .....	2.3	.5	4.8	3.8	2.9	-1.0	-1.9
<b>Cyclical movements:</b>							
1973, 4th quarter to 1975, 1st quarter .....	-5.6	-4.7	-1.5	-.5	-.6	.9	.9
1975, 1st quarter to 1980, 1st quarter .....	4.4	4.9	1.1	1.2	1.6	.1	.5
1980, 1st quarter to 1980, 3rd quarter .....	-6.1	-6.2	-1.6	-2.8	-1.7	-1.2	-.1
1980, 3rd quarter to 1981, 3rd quarter .....	3.8	4.3	2.0	1.9	2.4	-.1	.4
1981, 3rd quarter to 1982, 4th quarter .....	-2.5	-3.4	.4	-.3	-.6	-.6	-.9
1982, 4th quarter to 1990, 3rd quarter .....	3.8	4.1	1.0	1.1	1.2	.1	.2
1990, 3rd quarter to 1991, 1st quarter .....	-2.7	-3.9	1.4	.2	.2	-1.2	-1.2
1991, 1st quarter to 1995, 2nd quarter .....	3.8	2.9	2.2	2.0	1.4	-.3	-.8

the product side. Finally, column (g) shows the total effect of switching from the current measures to the improved measures.

The data in table 2 are grouped to permit various types of comparisons. Over the entire period 1960 to 1994, the improvements increased measured productivity growth by 0.3 percent a year (column g). However, the increase is larger before 1979, and the productivity estimates for the 1990's decrease by 0.6 percent a year. Each year since 1990 is

revised downward. It is important to note that similar revisions to the growth rates of the 1990's would occur if BLS were to switch to 1992 constant dollars from 1987 constant dollars. The improved measures have the advantage that future revisions due to the change of base year will be eliminated.

The effects of the improvements on quarterly data are larger, with some quarterly growth rates revised downward between 2 percent and 3 percent, while that of one quarter is

**Table 3. Output per hour, output, and unit labor costs in the U.S. business and nonfarm business sectors, 1959-94, based on annually weighted indexes**

[1982=100]						
Year	Business sector			Nonfarm business sector		
	Output per hour	Output	Unit labor costs	Output per hour	Output	Unit labor costs
1959 .....	59.0	46.9	34.3	63.3	46.6	33.6
1960 .....	59.9	47.7	35.2	63.8	47.3	34.8
1961 .....	62.2	48.7	35.3	65.9	48.3	34.8
1962 .....	65.2	51.9	35.2	69.0	51.6	34.6
1963 .....	67.7	54.2	35.2	71.4	54.0	34.6
1964 .....	71.0	57.7	35.3	74.6	57.7	34.7
1965 .....	73.6	61.7	35.4	76.8	61.7	34.8
1966 .....	76.7	65.8	36.3	79.5	66.0	35.6
1967 .....	78.4	67.1	37.5	81.0	67.2	37.0
1968 .....	81.1	70.3	39.2	83.7	70.7	38.6
1969 .....	81.6	72.5	41.8	83.8	72.8	41.2
1970 .....	82.9	72.3	44.3	84.8	72.6	43.6
1971 .....	86.4	75.0	45.2	88.1	75.2	44.7
1972 .....	89.2	79.9	46.6	91.1	80.3	46.1
1973 .....	92.1	85.4	49.0	94.0	86.1	48.3
1974 .....	90.6	84.2	54.7	92.4	84.8	54.0
1975 .....	93.3	83.1	58.4	94.6	83.1	58.0
1976 .....	96.7	88.4	61.5	97.9	88.8	60.9
1977 .....	98.7	93.7	65.2	99.6	94.0	64.6
1978 .....	99.4	99.0	70.4	100.6	99.7	69.7
1979 .....	99.0	101.7	77.6	99.7	102.3	76.9
1980 .....	98.7	100.5	86.1	99.5	101.2	85.4
1981 .....	100.7	103.2	92.3	100.9	103.4	92.2
1982 .....	100.0	100.0	100.0	100.0	100.0	100.0
1983 .....	102.8	104.6	101.0	103.4	105.4	100.6
1984 .....	105.6	113.4	102.6	105.6	113.9	102.6
1985 .....	107.0	117.4	105.8	106.3	117.6	106.1
1986 .....	109.7	121.2	108.3	108.9	121.5	108.7
1987 .....	110.1	125.3	111.8	109.1	125.6	112.3
1988 .....	111.1	130.5	115.6	110.1	131.1	116.0
1989 .....	111.2	133.9	119.6	110.0	134.4	120.0
1990 .....	112.2	135.1	125.4	110.6	135.4	125.9
1991 .....	113.3	133.4	130.1	111.9	133.6	130.7
1992 .....	116.6	136.9	132.9	114.8	136.8	133.9
1993 .....	117.1	140.8	136.7	115.3	141.1	137.3
1994 .....	118.2	146.8	139.2	116.1	146.9	140.0

revised upward by about 1 percent. It is important to note that much of this quarterly volatility comes from the switch from income to product side data (column f). The switch to the product side has negligible effects on longer term growth rates. Because the improved measures are on the product side, BLS expects that future revisions to its preliminary estimates of quarterly business and nonfarm business productivity will be smaller.

While these two sources of revisions will be reduced, it should be noted that some data will continue to be revised as additional information about recent years becomes available. Data also will be occasionally revised as measurement procedures are adjusted.

The bottom panel of table 2 presents comparisons over periods defined by business cycle peaks and troughs. In each pair of rows, the first row represents a peak to trough comparison, while the second row examines trough to peak.

Empirical comparisons of the new annually-weighted "sectoral output" measures with constant-dollar gross product originating and other manufacturing series were discussed in more detail earlier this year.<sup>12</sup>

Table 3 presents new "annually-weighted" indexes of productivity, output, and unit labor costs for business and nonfarm business. □

## Footnotes

<sup>1</sup> Irving Fisher, *The Making of Index Numbers* (Boston, Houghton Mifflin, 1921).

<sup>2</sup> W. Erwin Diewert, "Exact and Superlative Index Numbers," *Journal of Econometrics*, May 1976, pp. 115-145.

<sup>3</sup> Dale W. Jorgenson and Zvi Griliches, "The Explanation of Productivity Change," *Review of Economic Studies*, July 1967, pp. 249-283.

<sup>4</sup> Important contributions include François Divisia, *L'Indice Monétaire et la Théorie de la Monnaie* (Paris, Société Anonyme du Recueil Sirey, 1926); L. Törnqvist, "The Bank of Finland's Consumption Price Index," *Bank of Finland Monthly Bulletin*, 1936, pp. 1-8; Charles R. Hulten, "Divisia Index Numbers," *Econometrica*, 1973, pp. 1017-25; W. Erwin Diewert, "Functional Forms for Profit and Transformation Functions," *Journal of Economic Theory*, 1973, pp. 284-316; Douglas W. Caves, Laurits R. Christensen and W. Erwin Diewert, "The Economic Theory of Index Numbers and the Measurement of Input, Output, and Productivity," *Econometrica*, November 1982, pp. 1393-1414; and Jack E. Triplett, "Economic Theory and BEA's Alternative Quantity and Price Indexes," *Survey of Current Business*, April 1992, pp. 49-52.

<sup>5</sup> Brian K. Sliker, "Technical Note on Index Number Formulas" (Bureau of Labor Statistics, Office of Productivity and Technology), October 1995. This note is available from the Office (202) 606-5606.

<sup>6</sup> These measures were first published in *Trends in Multifactor Productivity, 1948-81*, Bulletin 2178 (Bureau of Labor Statistics, 1983). The aggregate framework used in this work is similar to that originally proposed by Robert M. Solow, "Technical Change and the Aggregate Production Function," *Review of Economics and Statistics*, August 1957, pp. 312-20.

<sup>7</sup> See *Labor Composition and U.S. Productivity Growth, 1948-90*, Bulletin 2426 (Bureau of Labor Statistics, 1993).

<sup>8</sup> See Kent Kunze, Mary Jablonski, and Virginia Klarquist, "BLS modernizes industry labor productivity program," *Monthly Labor Review*, July 1995.

<sup>9</sup> These articles by Allan H. Young, appear in the *Survey of Current Business*: "Alternative Measures of Real GNP," April 1989, pp. 27-37; "Alternative Measures of Change in Real Output and Prices," April 1992, pp. 32-48; and "Alternative Measures of Change in Real Output and Prices, Quarterly Estimates for 1959-92," March 1993, pp. 31-41.

<sup>10</sup> BEA's plans were explained in "Mid-Decade Strategic Review of BEA's Economic Accounts: Maintaining and Improving Their Performance," *Survey of Current Business*, February 1995, pp. 36-66; and its update published in, *Survey of Current Business*, April 1995, pp. 48-56.

<sup>11</sup> William Gullickson, "Measurement of productivity growth in U.S. manufacturing," *Monthly Labor Review*, July 1995, pp. 13-28.

<sup>12</sup> Gullickson, "Measurement of productivity growth."



## Productivity in retail miscellaneous shopping goods stores

*Productivity is expected to increase as more stores computerize their retail operations; also, the industry's change toward more chain-owned stores has helped boost productivity because of chain stores' significant advantages over their independent rivals*

Ziaul Z. Ahmed  
and  
Patricia S. Wilder

Productivity growth in the miscellaneous shopping goods stores industry is moderate, compared with other retail industries, as reported by the Bureau of Labor Statistics. Among 22 retail industries, 15 had higher productivity rates and 7 had lower rates between 1977 and 1992. As measured by output per hour of all workers, productivity rose at an average annual rate of 1.7 percent between 1977 and 1992. Output grew at 4.5 percent annually and hours of all persons rose by 2.8 percent.<sup>1</sup> (See table 1.)

The industry recorded its largest productivity gain of 8.4 percent in 1978. Output grew 15.3 percent and hours of all persons rose 6.3 percent that year. The sharpest decline in productivity—2.0 percent—occurred in 1979; output and hours grew 0.9 and 2.9 percent. Output rose 7.0 percent in 1992 as productivity rose 5.5 percent and hours of all persons rose 1.4 percent. Also in 1992, output and productivity attained their peak levels, while hours reached a high for the period in 1989. (See table 2.)

### Industry structure

The miscellaneous shopping goods stores industry comprises a variety of retail stores.<sup>2</sup> (See table 3.) Nine sub-industries include stores that sell sporting goods; books; stationery; jewelry; hobby

supplies, toys, and games; camera and photographic supplies; gifts, novelties and souvenirs; luggage and leather goods; and sewing equipment, needlework supplies, and piece goods. In 1992, 56 percent of the industry's retail sales and employment were accounted for in sporting goods stores and bicycle shops, book stores, and jewelry stores.

The miscellaneous shopping goods stores industry is characterized by small, single-unit, specialty shops, each retailing a narrow line of full-priced, high-quality merchandise. Customers pay more for a wider array of services and for a complete line of goods.<sup>3</sup> Employees are trained on the job to present a personal style that fits each store's image. These specialty shops build a regular clientele by knowing their customers' names, tastes, and interests.<sup>4</sup>

Miscellaneous shopping goods stores have relatively few employees. In 1977, the industry comprised 164,635 establishments with an average work force of about five employees in each store. By 1992, the number of establishments rose to 311,182 with an average of six employees in a store.

Most retail miscellaneous shopping goods stores are not affiliated with chains. However, the number of stores associated with chains and their proportion in the industry increased during the 15-year study period. In 1977, 10 per-

Ziaul Z. Ahmed and Patricia S. Wilder are economists in the Office of Productivity and Technology, Bureau of Labor Statistics.



cent of miscellaneous shopping goods stores were affiliated with chains and accounted for 32 percent of sales, compared with 27 percent of the number of stores and 51 percent of sales in 1992.

Generally, stores associated with chains tend to have higher sales per store than independent stores. In 1992, average independent miscellaneous shopping goods store had annual sales of \$353,371 per establishment, while the average chain affiliate had sales of \$959,928 per establishment.

For some components of the industry, the trend toward affiliating with chains has been faster. For example, stores associated with chains in the sporting goods stores industry represented only 4 percent of the number of stores and 20 percent of sales in 1977. By 1992, these ratios had risen to 15 percent and 39 percent. Book stores went through a revolution, changing from independent stores to chain affiliates during the period studied. The proportion of stores associated with chains rose from 16 percent in 1977 to 40 percent in 1992, while their share of sales increased from 40 percent to 61 percent. Among jewelry stores, chain affiliates represented 12 percent of the number of stores and 34 percent of sales in 1977. By 1992, chains had captured 31 percent of the number of stores and 44 percent of sales.

**Factors affecting productivity**

The change in industry structure toward more chain-owned stores has helped boost productivity because of the significant advantages chain stores have over their independent rivals. Chains can better afford modern technology in retail operations because they have access to more capital, lower merchandise costs due to centralized purchasing, better employee training programs and employee benefits, and sufficient size to afford expensive media advertising. Chains also are in a stronger financial position to secure shopping mall locations that are better than those of independents.<sup>5</sup>

Another important trend in the miscellaneous shopping goods stores industry is the growth of "super stores" or

warehouse stores. This is particularly the case in book stores, sporting goods and bicycle stores, sewing and needle work stores, and toy and game stores. These stores are growing as a response to changing buying habits, better technology, and intensified competition. The super stores are very large and offer selections of all brands in narrowly focused categories. This saves consumers' shopping time. The stores are highly

**Table 1. Annual percent changes in productivity, output, and hours of all persons in the miscellaneous shopping goods stores industry, 1977-92**

Years	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
1977-78 .....	8.4	6.5	15.3	6.3	8.2
1978-79 .....	-2.0	-4.1	.9	2.9	5.1
1979-80 .....	-1.1	-2.3	-3	.9	2.1
1980-81 .....	-1.7	-1.3	2.9	4.6	4.2
1981-82 .....	2.4	.9	1.8	-5	.9
1982-83 .....	-1.1	-2	3.3	4.4	3.5
1983-84 .....	5.1	5.4	10.2	4.9	4.5
1984-85 .....	1.7	.6	2.6	.9	2.0
1985-86 .....	3.0	1.8	7.3	4.1	5.3
1986-87 .....	3.1	3.6	9.1	5.8	5.3
1987-88 .....	-1.5	-2.1	6.0	7.6	8.3
1988-89 .....	3.4	2.9	5.5	2.0	2.5
1989-90 .....	.2	.0	-3	-5	-3
1990-91 .....	.8	-1	-1.9	-2.7	-1.8
1991-92 .....	5.5	6.5	7.	1.4	.6
1977-92 .....	1.7	1.2	4.5	2.8	3.3

**Table 2. Output per hour of all persons and related indexes in the miscellaneous shopping goods stores industry, 1977-92**

[1987=100]

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
1977 .....	84.2	90.1	60.3	71.6	66.9
1978 .....	91.3	96.0	69.5	76.1	72.4
1979 .....	89.5	92.1	70.1	78.3	76.1
1980 .....	88.5	90.0	69.9	79.0	77.7
1981 .....	87.0	88.8	71.9	82.6	81.0
1982 .....	89.1	89.6	73.2	82.2	81.7
1983 .....	88.1	89.4	75.6	85.8	84.6
1984 .....	92.6	94.2	83.3	90.0	88.4
1985 .....	94.2	94.8	85.5	90.8	90.2
1986 .....	97.0	96.5	91.7	94.5	95.0
1987 .....	100.0	100.0	100.0	100.0	100.0
1988 .....	98.5	97.9	106.0	107.6	108.3
1989 .....	101.8	100.7	111.8	109.8	111.0
1990 .....	102.0	100.7	111.5	109.3	110.7
1991 .....	102.8	100.6	109.4	106.4	108.7
1992 .....	108.5	107.1	117.1	107.9	109.3



**Table 3. Relative importance of industries, miscellaneous shopping goods stores, 1987**

SIC code	Industry	Establishments with payroll		Four-digit industry as a percent of three-digit industry	
		Sales (in thousands)	Paid employees	Sales	Paid employees
594	Miscellaneous shopping goods stores .....	\$49,459,912	706,363	100	100
5941	Sporting goods stores and bicycle shops .....	10,077,322	120,714	20	17
5942	Book stores .....	5,115,507	72,334	10	10
5943	Stationery stores .....	1,813,533	26,898	4	4
5944	Jewelry stores .....	11,994,271	162,795	24	23
5945	Hobby, toy, and game shops .....	7,031,359	75,932	14	11
5946	Camera and photographic supply stores .....	2,294,000	21,425	5	3
5947	Gift, novelty, and souvenir shops .....	7,459,217	150,730	15	21
5948	Luggage and leather goods stores .....	839,091	11,033	2	2
5949	Sewing, needlework, and piece goods stores .....	2,835,612	64,502	6	9

organized, have huge sales volumes, and operate with computerized systems. They generally use point-of-sale systems that keep track of inventory and help manage store operations. Superstores tend to focus on presenting products in a more organized fashion with improved graphics and signs, helping consumers find items quickly and learn more about the products. This reduces time in sales assistance, boosting cost efficiency and keeping prices lower than that charged by competitors.<sup>6</sup>

The major technological change in the miscellaneous shopping goods stores industry has been the widespread and increasing use of computers for retail operations. In large independent and chain stores, computers are used for inventory control, including electronic cash registers (point of sale terminals), and electronic scanning devices. Information coded on merchandise is fed into the computers using these scanning devices. This results in accurate inventory records and reduces employee time to monitor shelf stocks. Computerized cash registers also balance the cash register accurately, reduce audit expense, and speed up credit authorization. Computers are used to perform recordkeeping and administrative functions that were once performed manually. By using computerized information provided on sales activity, store managers can schedule staff hours more efficiently.<sup>7</sup>

Independent retailers in the miscellaneous shopping goods stores industry have not computerized their retail operations as fully as have the larger stores. These systems are costly and are not always suited for the smaller retailers. However, most small retailers have replaced mechanical cash registers with electronic cash registers, which has saved labor time in accounting and inventory control.

Labor time also has been reduced as retailers rely more on other means of merchandise delivery instead of their own delivery trucks. Manufacturers also are offering prepackaged and prepriced merchandise. The retailer dictates the price to

the distribution center and the supplier prints it as part of the packaging, thus eliminating in-store marking and most display work.

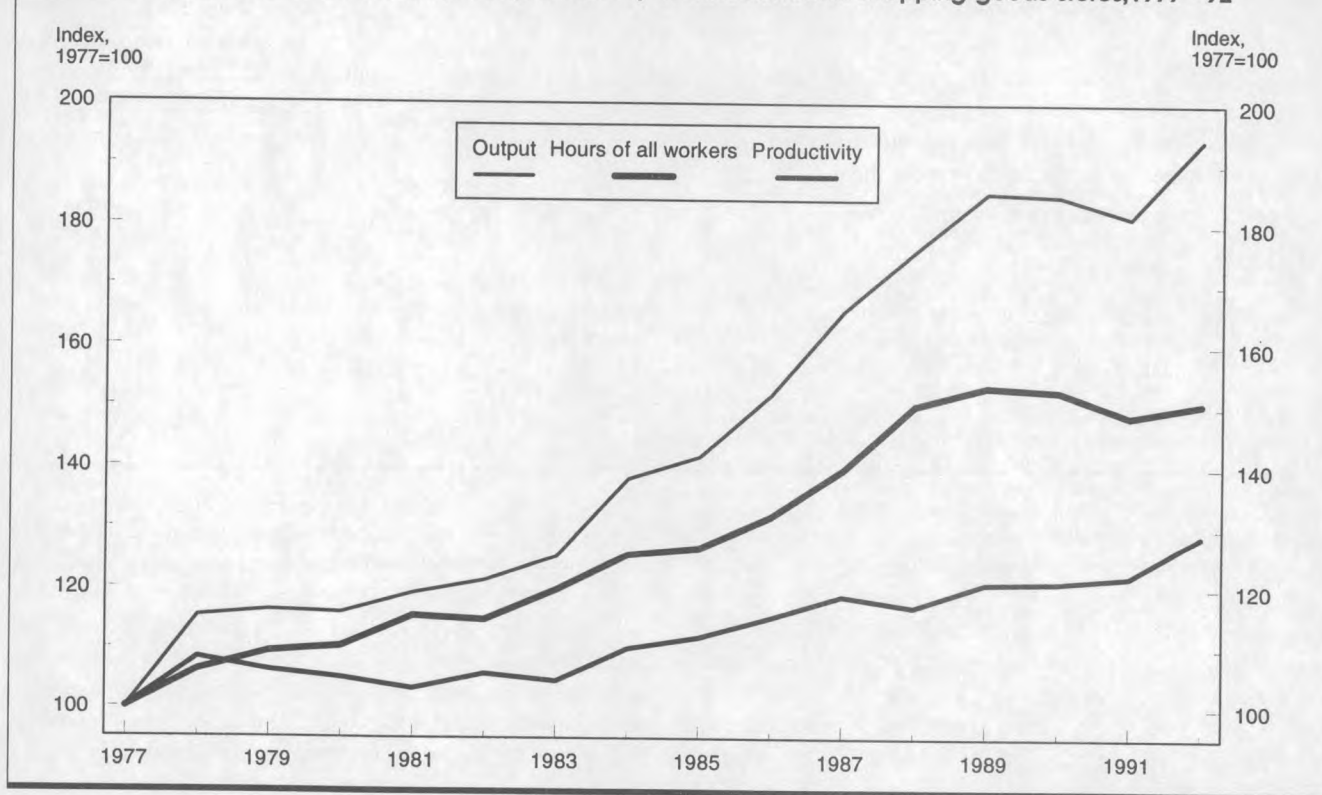
Use of computers to analyze sales data has increased recently. Computers promote use of electronic data interchange to capture sales and reorder data at point of sale. Use of universal bar codes also is increasing. Bar code format describes characters that can replace messages contained in typewritten shipping documents. Bar codes ease tracking of parcels in the delivery process, resulting in fewer distribution errors, better scheduling of trucks and warehouse space, and smoother reordering. More recent bar codes include several hundred characters in a square inch of space.<sup>8</sup>

Automated markdown is another labor saving device that is being introduced and integrated gradually in the retail market. Scanned markdown applications can save 50 percent of the time of manual ticketing.<sup>9</sup>

Location—accessibility and exposure to shopper traffic—is a prime determinant of how well a store's capacity and labor force are used. The rapid expansion in the number of malls and shopping centers in suburban locations contributed to productivity growth. Between 1972 and 1984, the number of shopping centers nearly doubled, increasing by 93 percent. Shopping centers offer greater sales exposure for a retailer than any other type of location.<sup>10</sup>

## Employment

The number of workers in shopping goods stores increased from a little more than 624,000 in 1977 to more than 1.0 million in 1992, a 63-percent rise, or 3.3 percent a year on average. Hours of all persons increased at an average annual rate of 2.8 percent. Employment increased faster than hours because of a steady decline in average weekly hours. This is particularly true of nonsupervisory workers, whose average

**Chart 1. Output, hours of all workers, and productivity in miscellaneous shopping goods stores, 1977—92**

weekly hours declined from 31.9 in 1977 to 28.1 in 1992. The decrease in average weekly hours reflects an increase in part-time salespersons, often of school age, who work weekends and evenings.

Data are available for four categories of workers in the miscellaneous shopping goods stores industry: nonsupervisory workers, supervisory workers, partners and proprietors, and unpaid family workers. Nonsupervisory workers constitute the largest group, which includes salespersons, cashiers, stock workers, and nonsupervisory office workers. Nonsupervisory workers were 68 percent of the industry's work force in 1977 and 69 percent in 1992.

The number of supervisory workers—office supervisors, store managers, and assistant managers—increased from 70,500 in 1977 to 146,400 in 1992. Self-employed and unpaid family workers accounted for 21 percent of the industry's work force in 1977 and 16 percent in 1992.

Miscellaneous shopping goods stores employ a significantly higher proportion of women workers than other retail industries. Women in this industry accounted for 64 percent of all paid employees in 1992, higher than their proportion of 53 percent in total retail trade and 47 percent in all private nonfarm establishments in the same year. Women represented only 33 percent of all employees in manufacturing. In addition to school-age women, young mothers take part-time em-

ployment at retail businesses as work schedules in retail operations can be tailored to better meet their needs.<sup>11</sup>

Average hourly earnings for nonsupervisory workers in the industry were 49 percent below average hourly earnings of all private nonfarm employees in 1992 and 62 percent below the average for all manufacturing. Low average hourly earnings is a major factor contributing to the high employee turnover rate in the industry. Some studies show that retail employee turnover is as high as 60 percent. The high turnover rate among nonsupervisory workers hinders productivity gains in the industry because new employees must undergo training and are not as productive during this period.<sup>12</sup>

## Outlook

Productivity in the retail miscellaneous shopping goods store industry is expected to increase as more stores computerize their retail operations. The industry will benefit from the continuing diffusion of electronic data processing equipment. The availability of more affordable personal computers has brought computer technology within reach of many more small store owners. Point-of-sale technology may become more widely used in the small specialty stores; increased use of bar code and scanning devices will save labor time in inventory control. Computerized reordering and markdown



will replace manual systems and reduce labor time.<sup>13</sup>

In addition, electronic shopping will become a more important part of retailing as new technology becomes more widespread. Electronic marketing has made it possible for consumers to shop from their living rooms and to compare prices and order merchandise for immediate delivery.<sup>14</sup>

Chains are expected to continue to grow through mergers

and acquisitions. The size of many of these specialty stores also will likely increase, approaching the scale of a "super store" or warehouse store. The super stores are likely to grow rapidly as consumers' shopping habits change.<sup>15</sup> Some retailers of books, sporting goods, and toys and games already have opened such super stores, and the trend will probably continue. □

## Footnotes

<sup>1</sup> All average annual rates of change pertaining to the industry and mentioned in the text or in tables are based on the compound interest method of computation. The indexes for productivity and related variables are updated and published annually in the BLS publication, *Productivity Measures for Selected Industries and Government Services*.

<sup>2</sup> The retail miscellaneous shopping goods stores industry is designated by the U.S. Office of Management and Budget as sic 594 in the 1987 *Standard Industrial Classification Manual*. The industry consists of the following four-digit industries (because the industries are descriptive, the sic definitions are not given for each of the industries):

- 5941 - sporting goods stores and bicycle shops
- 5942 - book stores
- 5943 - stationery stores
- 5944 - jewelry stores
- 5945 - hobby, toy, and game shops
- 5946 - camera and photographic supply stores
- 5947 - gift, novelty, and souvenir shops
- 5948 - luggage and leather goods stores
- 5949 - sewing, needlework, and piece goods stores

<sup>3</sup> Barry Bluestone, Patricia Hannah, Sarah Kuhn, and Laura Moore, *The*

*Retail Revolution* (Boston, MA, Auburn House Publishing Co., 1981), p. 27-28

<sup>4</sup> *Ibid.*, pp. 27-28.

<sup>5</sup> *1989 U.S. Industrial Outlook* (Department of Commerce, 1989), p. 43-2.

<sup>6</sup> *Washington Business*, "See How Big The Stores Are," Dec. 13, 1993.

<sup>7</sup> Bluestone, and others, *The Retail Revolution*, pp. 112-17.

<sup>8</sup> *1992 U. S. Industrial Outlook* (U.S. Department of Commerce, 1992), p. 39-2.

<sup>9</sup> Gary Robins, "Automated Markdown," *Stores*, March 1993, p. 28.

<sup>10</sup> Brian Friedman, "Productivity trend in department stores, 1967-86," *Monthly Labor Review*, March 1988, pp. 17-20.

<sup>11</sup> Joan Bergman, "Who is Selling the Merchandise in Your Store," *Stores*, January 1984, p. 28.

<sup>12</sup> Brian Friedman, "Apparel stores display above-average productivity," *Monthly Labor Review*, October 1984, pp. 37-42.

<sup>13</sup> Gary Robins, "Technology Matters," *Stores*, November 1988, p. 20.

<sup>14</sup> *The Washington Post*, "A New Era of Retailing," Dec. 6, 1993, p. D5.

<sup>15</sup> *The Washington Business*, "See How Big the Stores Are," Dec. 13, 1993.



## Employer-sponsored health insurance: what's offered; what's chosen?

*Newly available BLS data reveal that one-third of employees who were offered health care plans in 1992-93 had a variety of plan types from which to choose*

Michael Bucci  
and  
Robert Grant

**I**ncreasingly more employees can choose from a variety of health care plans, thanks to the growing prevalence of preferred provider organizations (PPO's) and health maintenance organizations (HMO's) offered by employers during the past 15 years. New data from the Bureau of Labor Statistics show that two-fifths of full-time workers in private industry were offered a choice of health plans. More than one-half of full-time private establishment employees were offered a PPO or HMO plan, and nearly one-third of those who were offered health insurance could choose from more than one type of plan.

During 1992-93, 58 percent of private establishments offered their full-time employees at least one health plan. (See table 1.) Nearly 90 percent of those establishments offering a health plan offered only one plan, and less than 2 percent offered more than four plans. However, approximately one-third of private establishment employees that were offered health care could choose from more than one type of plan. These employees selected traditional fee-for-service plans more often than PPO's and HMO's for nearly every combination of plan types offered.

Since its inception in 1979, the Employee Benefits Survey<sup>1</sup> has provided data on the percentage of workers who receive employer-provided health insurance through different types of funding arrangements. During this period, the percentage of employees covered by alternative health care "delivery systems" such as HMO's and PPO's has grown significantly. (HMO's offer prepaid care from a select group of providers; PPO's allow employees to choose their provider, but

offer financial incentives when designated doctors and hospitals are chosen.) As a result, the share of health care participants covered by fee-for-service plans has declined.

In the past, the Employee Benefits Survey presented data on the percentage of employees participating in each type of health care plan. However, no attempt was made to distinguish between the type of plan chosen when more than one type was offered to the employee. This article combines health choice data for employees of medium and large private establishments in 1993 with previously released data for employees of small private establishments in 1992 to produce, for the first time, data on private establishment health plans chosen by employees.<sup>2</sup>

### Theories of choice

When presented with a choice of health insurance plan types, employees must determine which plan best suits their needs. To understand how this process evolves, it is helpful to first examine the theory of demand for insurance and the ways in which individuals make choices.

Irving Pfeffer finds that the individual need for insurance is determined by both personal expectations and uncertainties.<sup>3</sup> In determining whether to purchase insurance, individuals assess their current situation and decide on their expected needs for coverage. In making this decision, the individual must also allow for the potential occurrence of uncertainties.

In theory, the economic well-being of the individual who purchases insurance is increased.

Michael Bucci and Robert Grant were economists in the Division of Occupational Pay and Employee Benefit Levels, Bureau of Labor Statistics.



The individual takes the opportunity to forecast expected and unexpected outcomes and, by purchasing insurance, increases the likelihood that these outcomes will be favorable.

S.E. Berki and Marie Ashcraft expand on Pfeffer's hypothesis of the demand for insurance to explain other factors that affect the choice among health plans.<sup>4</sup> According to the authors, enrollees first identify the types of medical services that they expect to utilize. They then single out the plan that best addresses these areas of perceived future need. Berki and Ashcraft classify this as risk perception. Second, enrollees account for their perceived financial vulnerability by selecting a health care plan that best addresses their anticipated financial loss due to illness. The combination of these two factors then leads the individual to look for particular features in a health care plan.

In addition to the explanations of demand for insurance, other factors are at work when choosing a health plan. Most existing models of health choice assume that the individual making the choice operates in a rational manner. First, an individual determines his or her needs. Then, information is gathered on all available options that might meet these needs. All options are considered and ranked according to their ability to fulfill the individual's stated needs. Finally, the option that best meets these needs is selected.

H.A. Simon argues that individuals do not always practice all the steps outlined in the rational decisionmaking model.<sup>5</sup> Instead, they "satisfice." In satisficing, the first step is again to determine one's needs. However, the individual does not gather complete information on all available options. Instead, the first few options that appear or the first that look appealing, following a cursory review, are selected by the individual for further study. The benefits provided by these options are then compared with the individual's needs. The first option that appears to be satisfactory is then chosen.

### Factors influencing the choice

Regardless of the method used, there are many factors that influence the decision to enroll in a particular type of health plan. Many of these have been cited in studies of the health choice decision. Chief among these are immediacy of need, personal characteristics of the enrollee, and plan insurance and delivery characteristics.

*Types of plans available.* The growth of HMO and PPO enrollment has been one result of efforts to contain health care costs. Critics of fee-for-service plans contend that such plans provide little incentive to limit costs because of their practice of reimbursing enrollees for all usual, customary, and reasonable charges, regardless of who provides these services.<sup>6</sup> Critics also maintain that fee-for-service plans do not always take steps to

**Table 1. Number of health care plans offered to full-time employees, private establishments, 1992-93**

Number of health care plans	Plans offered—	
	By establishment (percent)	To employee (percent)
<b>All private establishments</b>		
Total .....	100	100
0 .....	42	12
1 .....	50	47
2 .....	6	18
3 .....	1	8
4 .....	1	6
5 .....	( <sup>1</sup> )	3
6 .....	( <sup>1</sup> )	3
More than 6 .....	( <sup>1</sup> )	3
<b>Medium and large private establishments</b>		
Total .....	100	100
0 .....	20	4
1 .....	38	30
2 .....	23	26
3 .....	9	12
4 .....	6	9
5 .....	2	6
6 .....	1	6
More than 6 .....	1	7
<b>Small private establishments</b>		
Total .....	100	100
0 .....	43	20
1 .....	51	62
2 .....	5	12
3 .....	1	3
4 .....	( <sup>1</sup> )	3
5 .....	( <sup>1</sup> )	( <sup>1</sup> )
6 .....	( <sup>1</sup> )	( <sup>1</sup> )
More than 6 .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

ensure that there is a verifiable need for the care that is provided. In recent years, fee-for-service plans have taken steps to combat these criticisms by instituting numerous cost containment measures, such as preadmission certification and utilization review. Both HMO's and PPO's take steps to curb costs by emphasizing preventive medicine and by providing price reductions for care received from designated providers.<sup>7</sup>

HMO's provide comprehensive medical services to members on a prepaid basis. Typically, HMO's provide full coverage for inpatient care such as room and board, surgery, and medical consultations. Outpatient care, such as doctor's office visits and prescription drugs, may be subject to a copayment. The majority of HMO's require enrollees to receive all services from a panel of physicians and hospitals.

PPO's are another, more recent, alternative to fee-for-service plans and HMO's. PPO's contract with employer groups to provide coverage at discounted rates. Enrollees may then choose to receive care from either panel providers or nonpanel providers. In either case, providers are reimbursed on a fee-for-service basis. If panel hospitals or providers are used, however, enrollees are rewarded through lower required payments for services.

*Theories of factors.* David Mechanic states that the immediacy of the individual's need for health insurance can have a significant effect on the type of plan chosen.<sup>8</sup> Specifically, if an individual expects to incur a certain type of expense, that individual will seek out a plan that provides the most generous coverage in that particular area.<sup>9</sup> In short, the immediacy of the need can affect the amount of time and effort

that individuals allot towards their choice of health plan.

Additionally, persons who are dissatisfied with their present plan will have a more immediate incentive to seek out a different type of plan. Features that are said to lead to high satisfaction include low plan premiums, good physician-patient relationships, low maximum out-of-pocket expenses, limited administrative requirements, and preventive care coverage.<sup>10</sup> HMO's are known for offering the three latter items. Fee-for-service plans offer enrollees more freedom in securing a good doctor-patient relationship. PPO's can provide lower plan premiums and out-of-pocket expenses than fee-for-service plans. If individuals are dissatisfied with any of these features in their present plan, they may look for a new plan that better addresses their needs, provided that the employer offers a choice among plans.

The personal characteristics of the employee may also influence the employee's health care decision. Age, type of family, perceived health status, and financial status may affect an employee's risk perception and financial vulnerability. For instance, a young, single employee who does not expect to require medical care in the future may be willing to pick a plan solely on the basis of its low monthly premium cost. Conversely, an employee who is expecting to become pregnant within the coming year may disregard monthly premium costs and instead look for a plan that provides prenatal and well baby care. HMO's, which emphasize preventive care and typically provide unlimited hospitalization care, might have a greater appeal to this employee. Finally, an employee's decision to enroll in a particular health plan may be influenced by the employment status of his or her spouse. If a married employee is offered only one plan and the plan requires employee contributions, the employee may opt to enroll as a dependent in his spouse's plan if his spouse's employer pays the entire family health care premium.<sup>11</sup>

Personal attitudes and beliefs may also influence the employee's health plan choice. Some employees may prefer the traditional fee-for-service plans, while others might be more willing to accept alternative health care plans, such as HMO's and PPO's.

The final determinants that influence the type of health plan chosen are plan insurance and delivery characteristics.<sup>12</sup> Insurance characteristics include such features as the types of medical services covered, the monthly premium cost of the plan, and cost-sharing aspects of the plan (such as the deductible, coinsurance, and maximum benefit payments). These features are among the more obvious items that may be studied as an individual makes an initial assessment of a plan's relative worth. For example, if an employee is presented with a choice of two health care plans — an HMO and a PPO — the employee may choose solely on the basis of the difference in the monthly premiums of the two plans.

A plan's delivery characteristics are slightly less obvious.

**Table 2. Health care plans offered to full-time employees by type of plan and contributory status, private establishments, 1992-93**

[In percent]

Plan and contributor	Plan offered—	
	By establishment	To employee
<b>All health plans</b>		
Employee coverage		
Wholly employer financed .....	51	52
Partly employer financed .....	53	66
Family coverage		
Wholly employer financed .....	26	31
Partly employer financed .....	77	84
<b>Fee-for-service</b>		
Employee coverage		
Wholly employer financed .....	50	51
Partly employer financed .....	52	58
Family coverage		
Wholly employer financed .....	28	32
Partly employer financed .....	75	76
<b>Preferred provider organizations</b>		
Employee coverage		
Wholly employer financed .....	52	43
Partly employer financed .....	49	63
Family coverage		
Wholly employer financed .....	19	22
Partly employer financed .....	81	83
<b>Health maintenance organizations</b>		
Employee coverage		
Wholly employer financed .....	38	35
Partly employer financed .....	66	75
Family coverage		
Wholly employer financed .....	21	20
Partly employer financed .....	83	88

NOTE: The percentages add to greater than 100 because one establishment could offer both a wholly employer-financed and a partly employer-financed plan, and therefore be included in both categories. The same holds true for employees.



As such, they are more open to the individual decisionmaker's perception and attitudes. Delivery characteristics can be categorized by: access to care, continuity of care, comprehensiveness of coverage, and clinical quality.<sup>13</sup> Because these factors are less apparent, it is helpful to look at them in detail.

In Berki and Ashcraft's view, access to health care is made up of three separate components: spatial, psychosocial, and temporal access. Spatial access refers to the relative distance between the site where medical care is provided and the individual's home or workplace. Psychosocial access refers to the ease of communication between patient and provider. This can be affected by a perceived difference or similarity in social standing. Temporal access can be described as the length of time that the patient must wait between the initial attempt to obtain care and the time when that service is ultimately delivered.

In assessing the health care choice made by employees, these three issues of access can provide quite different results depending on the type of plan chosen. Additionally, the importance attached to these variables can vary quite markedly depending on the individual employee. For some, the location of the health care facility may be of utmost importance. Others may wish to see a doctor as soon as possible. Access to care, then, can be a powerful determinant of the employee's health choice.

Continuity of care may also be important. The decision to join a particular health plan can be heavily influenced by an employee's desire to continue an existing doctor-patient relationship. To many employees, this relationship is the most important feature of the health care arrangement.<sup>14</sup> An employee may be willing to spend more money (in the form of a higher premium) to maintain a long-standing relationship. To maintain freedom of choice among providers, some individuals may opt not to join an HMO or PPO. If, however, an employee has little history of illness and has not developed a relationship with a particular doctor, the employee may be more willing to choose a plan on reasons of cost alone.

Another delivery characteristic is comprehensiveness of coverage. This refers to the ability to receive all types of care at one site. For instance, a group/staff model HMO<sup>15</sup> may provide all outpatient services under one roof, something that might not be available with a traditional fee-for-service arrangement. This convenience may have a strong appeal to some potential enrollees.

Finally, clinical quality of care is another delivery characteristic. Clinical quality pertains to the perceived or actual necessity and effectiveness of the medical services provided. This may, in large part, be based on past experiences with a health care provider. If past experiences with one type of delivery system have resulted in satisfaction with the effectiveness of care, an employee may seek out this type of plan.

**Table 3. Health care plans offered to full-time employees by type of plan, private establishments, 1992-93**

Type of plan	Plan offered—	
	By establishment	To employee
[In percent]		
<b>All private establishments</b>		
Total .....	100	100
With health care .....	58	88
Fee-for-service .....	45	60
Preferred provider organization .....	9	26
Health maintenance organization .....	9	32
Without health care .....	42	12
<b>Medium and large private establishments</b>		
Total .....	100	100
With health care .....	80	96
Fee-for-service .....	52	62
Preferred provider organization .....	25	38
Health maintenance organization .....	30	49
Without health care .....	20	4
<b>Small private establishments</b>		
Total .....	100	100
With health care .....	57	80
Fee-for-service .....	44	58
Preferred provider organization .....	9	16
Health maintenance organization .....	8	18
Without health care .....	43	20

NOTE: The percentages add to greater than 100 because one establishment could offer more than one type of health plan, and therefore be included in more than one category. The same holds true for employees.

Of course, a relatively healthy individual with no previous medical care history may have no basis for assessing quality of care in different fee arrangements. This person may attach little weight to this variable or may rely on the opinions of coworkers.

The presence of managed care—the process of ensuring that the services provided are medically necessary and delivered in a proper setting—may also affect the enrollee's attitude towards the clinical quality of care received. Because the major focus of managed care programs is to ensure that all care provided is necessary and prudent, HMO's and PPO's (which have instituted managed care programs to a greater extent than fee-for-service plans<sup>16</sup>) may attract more employees for whom clinical quality of care is important. On the other hand, some potential enrollees may view managed care procedures as intrusive and time-consuming.

**Table 4. Health plan combinations offered to full-time employees, private establishments, 1992-93**

[In percent]

Type of plan	Plan offered—	
	By establishment	To employee
<b>All private establishments</b>		
Total .....	100	100
Fee-for-service only .....	72	47
Preferred provider organization (PPO) only .....	13	15
Health maintenance organization (HMO) only .....	8	8
Fee-for-service and PPO .....	1	2
Fee-for-service and HMO .....	4	15
PPO and HMO .....	2	9
Fee-for-service, PPO, and HMO .....	1	5
<b>Medium and large private establishments</b>		
Total .....	100	100
Fee-for-service only .....	44	32
Preferred provider organization (PPO) only .....	18	15
Health maintenance organization (HMO) only .....	8	6
Fee-for-service and PPO .....	2	2
Fee-for-service and HMO .....	17	22
PPO and HMO .....	9	14
Fee-for-service, PPO, and HMO .....	3	9
<b>Small private establishments</b>		
Total .....	100	100
Fee-for-service only .....	74	62
Preferred provider organization (PPO) only .....	12	14
Health maintenance organization (HMO) only .....	8	11
Fee-for-service and PPO .....	1	1
Fee-for-service and HMO .....	3	7
PPO and HMO .....	2	3
Fee-for-service, PPO, and HMO .....	( <sup>1</sup> )	1

<sup>1</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

## Plan offerings

Nearly nine-tenths of full-time employees in private establishments were offered at least one health care plan by their employer, but only three-fifths of private establishments offered at least one health plan. This discrepancy results from the fact that larger establishments were more likely to offer health care than smaller establishments. Similarly, larger establishments also offered more types of health plans. Only one-tenth of private establishments offered more than one type of plan, but nearly one-third of private establishment

employees were offered more than one type of plan.

Approximately one-half of the private establishments in the survey paid the full cost of employee coverage for at least one health plan. (See table 2.) Barely more than one-quarter of private establishments paid for at least one family plan in full. Private establishments were more likely to pay for the entire cost of a fee-for-service plan or PPO than an HMO.

Fee-for-service plans were the most common type of health plan offered by private establishments, with slightly fewer than one-half offering such plans. (See table 3.) PPO's and HMO's were offered by an approximately equal number of establishments, with one-tenth offering each. More than nine-tenths of establishments offering health care offered only one type of plan, with a fee-for-service plan being the most common plan type offered by itself. (See table 4.) Seventy-two percent of establishments offered only fee-for-service type plans, 13 percent offered only PPO's, and 8 percent offered HMO's. When establishments offered more than one type of plan, the most common combination was a fee-for-service plan in conjunction with an HMO, offered by 4 percent of establishments.

As noted earlier, larger establishments were more likely to offer health care to their employees, and were more likely to offer a greater variety of choices. For example, 58 percent of the establishments offering health care employed 88 percent of employees, and only 12 percent of employees were not offered at least one health care plan. In addition, even though less than 2 percent of establishments offered four or more health plan choices, 15 percent of employees could select from four or more health plans.

Approximately seven-tenths of the employees who were offered health care plans by their employer had only one type of plan available, with the rest having a choice of at least two types of plans. The most common options open to employees were a fee-for-service only, a PPO only, and a fee-for-service and an HMO. Approximately 5 percent of employees could choose from all three types of plans.

## Employee choice

Regardless of the combination offered, when a fee-for-service plan was offered it was the most common choice. When fee-for-service plans were offered along with HMO's, approximately 60 percent of full-time employees chose a fee-for-service plan. When the combination included fee-for-service plans and PPO's, employee choices were evenly divided. Employees were also nearly equally split between PPO's and HMO's when such a choice was given. When all three types were offered, fee-for-service plans were chosen by 40 percent, while HMO's and PPO's were each selected by 30 percent of employees. These data did not vary by establishment size. (See table 5.)



**Table 5.** Percent of participants enrolled in health care plans, by combination of plans offered, private establishments, 1992-93

Combination offered	Type of plan			
	Total	Fee-for-service	Preferred provider organization (PPO)	Health maintenance organization (HMO)
<b>All private establishments</b>				
Total with a choice .....	100	40	24	36
Fee-for-service and PPO .....	100	51	49	—
Fee-for-service and HMO .....	100	62	—	38
PPO and HMO .....	100	—	55	45
Fee-for service, PPO, and HMO .....	100	40	30	30
<b>Medium and large private establishments</b>				
Total with a choice .....	100	38	25	37
Fee-for-service and PPO .....	100	52	48	—
Fee-for-service and HMO .....	100	61	—	39
PPO and HMO .....	100	—	56	44
Fee-for-service, PPO, and HMO .....	100	40	30	30
<b>Small private establishments</b>				
Total with a choice .....	100	47	20	33
Fee-for-service and PPO .....	100	51	49	—
Fee-for-service and HMO .....	100	65	—	35
PPO and HMO .....	100	—	52	48
Fee-for-service, PPO, and HMO .....	100	36	35	29

NOTE: These data are limited to full-time employees.

As the following tabulation shows, 14 percent of employees were in establishments offering a health plan, but elected no coverage. Among several possibilities for this situation, some reasons are that employees may be covered on a spouse's health plan, may not be able to afford the premiums, or may be ineligible due to a service requirement.

Type of plan	Percent choosing
Total .....	100
No plan .....	14
Fee-for-service .....	51
PPO .....	19
HMO .....	16

These new data indicate that despite the availability of choices among health care plans, employees frequently choose traditional fee-for-service arrangements. Also apparent is that larger establishments are more likely than smaller ones to offer choices of health care plans and alternative health care arrangements. Thus, while the percent of establishments offering choices and alternatives is small, such features are available to a sizable proportion of employees. □

## Footnotes

<sup>1</sup> The Employee Benefits Survey has provided information on the incidence and provisions of employer-provided benefit plans since 1979. The survey includes details on paid leave, employer-sponsored insurance, and retirement. Three different sectors of the economy are studied. Medium and large private establishments (100 or more employees) are studied in odd years. State and local governments and small private establishments (1-99 employees) are studied in even years. Data in this article are from the 1992-93 surveys of private establishments; preliminary work on this subject has been published in "Health Insurance: Employer Offerings and Employee Choice in Small Private Establishments," *Compensation and Working Conditions* (Bureau of Labor Statistics, August 1994), p. 1, and "Health Insurance: BLS Reports on Employer Offerings and Employee Choice in State and Local Governments, 1992" (Summary 94-7).

<sup>2</sup> The data used in this analysis are limited to full-time employees.

<sup>3</sup> Pfeffer, Irving, *Insurance and Economic Theory* (Homewood, IL, Richard D. Irwin Inc., 1956) p. 113.

<sup>4</sup> S.E. Berki, and Marie Ashcraft, "HMO Enrollment: Who Joins What and Why: A Review of the Literature," *Milbank Memorial Fund Quarterly/Health and Society*, vol. 58, no. 4, 1980, pp. 588-632.

<sup>5</sup> H.A. Simon, *Administrative Behavior* (New York, N.Y., Free Press, 1976).

<sup>6</sup> *Fundamentals of Employee Benefit Programs*, 4th ed. (Washington, D.C., Employee Benefits Research Institute, 1990) p. 209.

<sup>7</sup> The following discussion of HMO's and PPO's is taken largely from Thomas P. Burke and Rita S. Jain, "Trends in employer-provided health care benefits," *Monthly Labor Review*, February 1991, pp. 24-30.

<sup>8</sup> David Mechanic, "Consumer Choice Among Health Insurance Options," *Health Affairs*, Spring 1988, p. 139.

<sup>9</sup> While an immediate need for a certain type of care may influence the employee's choice of health plans, it should be noted that many plans impose both eligibility requirements and exclusions for pre-existing conditions on employees. For example, in 1993, 52 percent of full-time employees in medium and large private establishments had to fulfill a certain length of service before being eligible for health insurance coverage. In addition, 57 percent of full-time participants in plans other than HMO's were required to be enrolled in a plan for a certain length of time before coverage would be granted for a medical condition that existed prior to initial enrollment in the plan.

<sup>10</sup> Robert Puelz, "A Selection Model for Employees Confronted With Health Insurance Alternatives," *Benefits Quarterly*, Second Quarter 1991, p. 19.

<sup>11</sup> The Employee Benefits Survey tabulates health plan "participants," that is, individuals who are actually covered by their employer's plan. Employees who decline coverage, because they are covered by their spouses' health care plan or for other reasons, are not considered health plan participants.

<sup>12</sup> Berki and Ashcraft, p. 591 (diagram).

<sup>13</sup> The discussion of delivery characteristics draws significantly from Berki and Ashcraft's "HMO Enrollment:" pp. 596-603.

<sup>14</sup> In a study of the health choice made by new employees of a university, employees were asked to rank choice criteria. The belief that the doctor's primary concern was your health was ranked as "very important" by 72 percent of the respondents; 65 percent said that feeling that your doctor's concern for your health outweighed a concern for limiting costs was "very important." The only item rated as more important was the ability to get an appointment quickly. See David Mechanic, Therese Eitel, and Diane Davis, "Choosing Among Health Insurance Options: A Study of New Employees," *Inquiry*, Spring 1990, p. 17.

<sup>15</sup> There are two primary types of HMO's: group/staff models and individual practice associations. Group/staff HMO's provide services at a central facility. Individual practice associations are made up of individual providers who operate from their own offices.

<sup>16</sup> Both HMO's and PPO's have inherent managed care features. Data from

the Employee Benefits Survey give testament to this. For example, in 1993 two-fifths of medium and large establishment employees enrolled in fee-for-service plans were required to seek a second surgical opinion, while

nearly all HMO enrollees were required to do so. See *Employee Benefits in Medium and Large Private Establishments, 1993*, Bulletin 2456 (Bureau of Labor Statistics, November 1994.)

## APPENDIX: Determining the choice in health plans

Three groups of data were extracted from the Employee Benefits Survey's database for this article: the percent of establishments offering health plans,<sup>1</sup> the percent of employees offered health plans, and the percent of employees participating in health plans.

Data on the types of health plans chosen by employees are routinely collected and published by the Bureau. However, for this study, the options available to the employee had to be determined in addition to their final choice. This was accomplished by placing establishments into groups depending on the types of plans offered to the occupations within that establishment (fee-for-service only, fee-for-service plus HMO, and so forth), then determining the number of employees in the establishment (to determine the number of employees offered that combination), and finally determining what plans the employees actually chose.

Several assumptions were made concerning the data. First, it was assumed that all plans offered by an establishment were offered to all employees in that establishment. However, it may be true that certain occupations or groups of workers are not offered certain plans, and therefore workers in those groups should not be counted as being offered these plans. For example, an establishment may offer two separate plans, an HMO for salaried employees only and a fee-for-service plan for hourly employees only. Under the assumption on counting workers in certain occupations, both the salaried and hourly employees would be shown as being offered a choice between a fee-for-service plan and an HMO.

To determine the effect of this assumption, the data were studied in two different ways. First, all occupations were assumed to have

been offered a plan if at least one employee in the establishment was in the plan. The data were then tabulated using this assumption. A second test assumed that any occupation that had no participants in a given plan was not offered that plan. The results of these two tests were nearly identical, which show that making this assumption did not significantly alter the data.

The second assumption involved imputed plan participation and provisions. When an establishment is unable to provide a reliable estimate of the number of employees who participate in a health plan, the survey must estimate the number of employees participating in the plan(s) offered by the establishment. Each of these participant values is imputed by randomly selecting a plan of the same type from a similar establishment. The participant rate from this randomly selected plan is then used to approximate the number of participants for the plan that is missing a participation value.<sup>2</sup> Similarly, when an establishment is unable to provide detailed plan provision information, provision data from similar plans are used.

This assumption also presented potential problems. Although participation data are drawn from similar establishments, it is possible that the behavior exhibited by employees of one establishment may not be mirrored by employees in another comparable establishment. As a result, the data were again examined using two different hypotheses. The dataset containing both imputed and non-imputed participation data was compared with the dataset with nonimputed data only. As with the previous test, both datasets provided similar findings.<sup>3</sup> Thus, findings shown in this article include both imputed and unimputed data.

### Footnotes to the appendix

<sup>1</sup> Estimates from the Employee Benefits Survey are calculated from data on the benefits characteristics of employees in selected occupations, not the benefit characteristics of establishments. Data are collected after randomly selecting occupations within each surveyed establishment. The availability of a certain benefit is then determined by whether or not the benefit is offered to the employees in these particular occupations. It is possible that the occupations that are selected may not have certain types of benefits offered to them while other, nonselected, occupations may be offered such benefits. It is also possible that a plan may be offered, but no employees participate in it. When the latter situation occurs, the Employee Benefits Survey would not register the existence of this plan. The prob-

ability selection of occupations across a nationwide sample limits the effect of such an occurrence. For more information, see Appendix A: Technical Note in *Employee Benefits in Medium and Large Private Establishments, 1993*, Bulletin 2456 (Bureau of Labor Statistics, November 1994).

<sup>2</sup> For more information, see the appendices in *Employee Benefits in Small Private Establishments, 1992* (Bureau of Labor Statistics, May 1994) and *Employee Benefits in Medium and Large Private Establishments, 1993*.

<sup>3</sup> This may be expected because the imputed data are created from the nonimputed data.



### Early retirement incentives at Electric Boat

Some 6,400 welders, electricians, shipyard clerks, machinists, painters, pipefitters, drivers, and carpenters represented by member unions of the Metal Trades Council at the Electric Boat company's shipyard in Groton, CT, will be working under a new 3-year agreement that provides incentives for employees to retire early as the company downsizes. Given the cutbacks in defense spending, the unions said the early retirement incentives were important because their members were "faced with the certainty of 4,500 layoffs in the next two and a half years."

During a 2-month window in 1995, employees retiring at age 55 or older with 10 or more years of service will be credited with 5 additional years of service in the calculation of pension benefits, which were increased to \$32 (was \$29) a month for each year of credited service. They also will receive 2 years of free health care coverage.

The contract calls for an immediate \$1,000 signing bonus; wage increases of 2 percent each in January of 1996 and 1997, and 2.5 percent in January 1998; and a \$500 bonus in July 1996. Other changes increase maximum accident and sickness benefits from \$260 to \$300 per week over the term of the agreement; introduce a managed health care program; and enhance dental benefits. The unions also beat back management's proposals to consolidate job classifications, cut vacation and sick leave, take back 2 paid holidays, and eliminate health insurance coverage for employees who are on workers' compensation or sickness and accident leave.

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

### Six-year pact at New York hotels

With a strike threat hanging over their heads, the Hotel Association of New York City and the New York City Hotel and Motel Trades Council, bargaining for nine local unions, negotiated a 6-year agreement covering some 22,000 workers at 79 hotels in New York City. After union members authorized a walkout, the parties extended their expired agreement for 4 days, giving them enough time to reach a settlement. The major sticking points in negotiations centered on the Hotel Association's proposals to change the bargaining unit status of concessionaires' employees—workers employed by independent businesses operating within a hotel—and to convert some full-time bargaining unit positions to part-time status.

Under terms of the settlement, the Hotel Association agreed to language that makes concessionaires "joint employers" with the hotels and makes employees of future concessionaires part of the bargaining unit. The unions also turned down employer proposals that would have affected job security, including one to eliminate a successor clause that requires a new owner of any hotel covered under the agreement to adopt the labor contract, and another to combine various job classifications.

The hotels, however, gained some concessions from the union, including a longer term agreement than the 3-year pact the unions sought. Other language changes gave management more flexibility in scheduling, including the right to lay off or change the work schedules of workers after a 5-day notice (was 7 days), and to give a day off instead of double time for work on holidays.

Other rule changes require extending the contract of member hotels undergoing renovations by the amount of time it takes to complete the renovations, so as to prevent the hotels from circumventing union jurisdiction; stipulate that management must give newly

recalled employees a 3-day notice before laying them off again; and limit layoffs to three per month per employee, or give recalled employees time and one-half for all work after the third layoff during the month. The parties also agreed to study several issues not resolved in negotiations, including elimination of roll-call for banquet waiters, tip-related issues for "front service" employees, establishment of a multiemployer credit union, and development of a prescription drug plan.

Terms call for general wage increases of 4 percent in the first year, followed by annual raises of \$18 a week for nontipped employees and \$9 a week for tipped employees. In addition, the agreement increases hotel payments to employees providing services for tour groups—by 25 cents per bag (to \$1.37 per bag) for bellhops, by 10 cents per person (to 67.5 cents per person) for doormen, and by 1 percent (to 15 percent) for waiters and captains working banquets at larger hotels. According to a union spokesperson, bargaining unit employees currently earn about \$450 a week.

The pact introduces several benefit changes. It reduces the age requirement to qualify for normal pension benefits, from 65 to 55 years, for employees with at least 25 years of service; increases the minimum monthly pension benefit from \$600 to \$750; and boosts maximum life insurance benefits from \$3,000 to \$10,000 and maximum disability insurance benefits from \$170 to \$300 a week over the term contract.

### New Jersey public employee settlements

Some 8,400 State employees represented by 15 locals of the American Federation of State, County and Municipal Employees (AFSCME) will be working under a 4-year agreement that freezes salaries for the first 2 years of the contract, and maintains full State



funding of health care benefits for employees participating in managed care plans. The AFSCME unit consists of non-professional workers in State hospitals, nursing homes, day training facilities for the developmentally disabled, and other institutions. Governor Christine Todd Whitman stated, "I am pleased that we have been able to come to terms with the union and that the collective bargaining system has produced a fair settlement—fair to the workers and to the taxpaying public."

The most contentious issue in negotiations centered on employee cost sharing for workers participating in traditional indemnity health care plans. In an attempt to curtail escalating health care costs, the State insisted that these employees assume a portion of their plan's costs. No workers had contributed towards health care costs in the past 20 years.

Under terms of the settlement, indemnity plan participants must pay between \$240 and \$600 per year depending on their salary, beginning in 1996. Plan participants earning less than \$35,000 per year must contribute \$20 per month, but not more than 1 percent of their base salary; those earning \$35,000 to \$40,000 annually must pay up to 1.5 percent of their base salary; and those earning more than \$40,000 must pay the difference between the traditional plan's cost and the average cost of approved health maintenance organization (HMO) and preferred provider organization (PPO) plans. The accord also requires retirees enrolled under indemnity plans to contribute towards plan costs beginning in 1997. The contract continues fully paid health care for active employees and retirees enrolled in a State-approved HMO or the New Jersey Plus PPO.

Concerned about the State's proposal to privatize many government functions, union negotiators won inclusion of contract language providing assistance to employees facing layoff as a result of privatization. Provisions es-

tablished preferential hiring lists with private employers who take over State government operations, instituted hiring freezes to create openings for laid-off employees or those targeted for layoff, continued State-paid health care coverage for a limited transition period, and provided training for laid-off employees to enable them to qualify for job openings. The State also agreed to make a "good faith" effort to maintain certain bargaining unit jobs when it privatizes work.

Although the contract does not provide base salary increases during the first 2 years, employees will continue to receive annual step increases for each additional year of service, which typically have yielded raises of between 2 and 4 percent. In addition, employees will receive a lump-sum payment of \$250 on April 1, 1997, and salary increases of \$750 on July 1, 1997, \$250 on January 1, 1998, \$750 on July 1, 1998, and \$350 on January 1, 1999. At the expiration of the prior pact, employees, on average, reportedly earned \$25,500 per year.

New Jersey also reached agreement with the negotiating committee representing carpenters, electricians, mechanics, plumbers, motor vehicle inspectors, and security personnel—some 5,600 members of Local 195 of the International Federation of Professional and Technical Engineers and about 600 members of Local 518 of the Service Employees International Union. Terms of the pact were virtually identical to those in the AFSCME contract.

### Continental pact reached after 18 months

With the assistance of a Federal mediator, Continental Airlines and the Independent Association of Continental Pilots (IACP) reached a 2-year agreement—the first in 12 years—for some 3,800 pilots in the Houston-based air carrier's system. C. D. McLean, Conti-

mental senior vice president of operations stated, "(T)his is the mutually beneficial agreement we've been working toward since negotiations began more than a year ago." Mark Benton, secretary-treasurer of the union said that the wage changes called for in the contract are a "fairly substantial increase for the pilots . . . we'll no longer be the bottom-feeders in the industry."

In July 1993, IACP won an election conducted by the National Mediation Board (NMB)—the Federal agency charged with administering labor law in the industry—to represent pilots working at Continental, the now-defunct Continental Lite, Continental Express, and Air Micronesia. The pilots had been without representation since 1983, when former CEO Frank Lorenzo declared the airline bankrupt and terminated all labor contracts, including one with the pilots' former representative, the Air Line Pilots Association.

Negotiations for a first agreement between Continental and the IACP began in August 1993. In the fall of 1994, the union requested NMB assistance after direct negotiations yielded little progress. Continental originally sought a 6-year pact calling for a 38-percent general wage increase over the contract term, a ratification bonus averaging \$1,750 for captains, improvements in the profit-sharing plan, and numerous work rule changes. The union proposed a 2-year deal with wage increases totaling 28 percent over the term.

The new settlement calls for a combination of wage increases and lump-sum payments designed to bring pilots' salaries closer in line with industry standards. It provides general wage increases of 13.5 percent retroactive to July 1, 1995, and 5 percent on June 30, 1997. The pact also includes a longevity "snap-back" of 2.5 percent on January 1, 1996, restoring pilots to full service credit on the wage scale. Due to financial difficulties, the carrier froze annual longevity increases in 1990, and has only partially restored longevity pay



since then. With the snap-back, pilots collectively will receive about \$20 million upon ratification and \$10 million on April 1, 1996—with the actual distribution among individual pilots yet to be determined. Continental's pilots currently average approximately \$82,000 a year, about 55 percent of the average at other major carriers.

Pilots now will be included under the airline's "on-time" bonus program, begun during the period in which Continental was negotiating with the IACP. The program provides payments of \$65 per employee in any month that the carrier is among the top five airlines in on-time performance. Continental initiated the bonus program in hopes of luring back high-paying business travelers after years of consistently ranking last in on-time performance among all major carriers.

In March and April 1995, Continental earned the number 1 ranking for on-time performance for the first time in its history. The performance record was ended when pilots conducted an unofficial slowdown by flying "by the book"—strictly following all flight rules but not conducting operations as expeditiously as possible. The pilots collectively are owed about \$500,000 in bonuses as a result of past on-time record performance.

The new agreement was touted as the last existing hurdle for the airline's return to profitability. Prior to the pact, Continental forecast its first profit—about \$45 million—after 9 years and

two bankruptcy filings. The carrier lost \$613 million in 1994.

The turnaround is attributed to a number of cost-cutting moves that included:

- Terminating the carrier's floundering Continental Lite branch, a low-cost, no-frills discount operation that produced losses upwards of \$110 million in 1994;
- Drawing back from markets with fierce competition, most notably from a Denver market dominated by United Airlines and from the eastern United States, where USAir has a strong presence;
- Grounding 41 planes and slashing load capacity by 9 percent;
- Eliminating some 4,200 jobs during the first 6 months of 1995;
- Boosting liquidity by renegotiating plane leases and debt;
- Deferring delivery of new planes; and
- Cutting annual maintenance costs from \$777 million in 1992 to \$475 million in 1994.

The airline also initiated a number of service improvements, including an overhaul of its reservation system to ensure that 90 percent of calls are answered within 20 seconds.

### Union activities

The AFL-CIO Executive Council elected Thomas R. Donahue as president of the federation to serve out the remainder of

the term of Lane Kirkland, who retired effective August 1. Barbara Easterling was elected to fill the secretary-treasurer's position vacated by Donahue. This sets the stage in October for the first contested elections for top positions at the AFL-CIO since it was founded in 1955. The Donahue slate will be facing stiff competition from a ticket headed by John J. Sweeney of the Service Employees International Union.

In another development, the presidents of the Nation's three largest industrial unions—the United Automobile Workers (UAW), the United Steelworkers of America (USA), and the International Association of Machinists (IAM)—signed a "unity declaration" that commits the labor organizations to merge by 2001, subject to approval by their members. The unification would take place gradually in stages, beginning with the coordination of membership services, such as legislation-related activities, organizing, collective bargaining, legal activities, communication, education, and training. While labor analysts feel that the merger can strengthen the unions' bargaining and financial clout, they also agree that the unions face numerous problems in completing the unification.

The merger would create a behemoth—the largest union in the AFL-CIO—with nearly 2 million members in the United States and Canada. The UAW currently has a membership of about 771,000; the USA, 615,000; and the IAM, 474,000. □



### Deadline for WARN suits

Employees who claim that they were given inadequate notice of a plant closing or mass layoff may sue for money damages under the Worker Adjustment and Retraining Notification Act (WARN), a Federal law passed in 1988.<sup>1</sup> But the Act provides no limitations on when an action enforcing it must be brought. Since the passage of the Act, the Courts of Appeals have split on the issue of its limitation period. Some have ruled that the time limit should be borrowed from State law; others have looked to an analogous Federal law, the National Labor Relations Act,<sup>2</sup> for an applicable period of limitation.

In a recent decision in two consolidated cases, a unanimous U.S. Supreme Court ruled that judges should follow the practice of looking to State law for the limitation period on actions intended to enforce WARN. (*Crown Cork & Seal Co., Inc. v. United Steelworkers; North Star Steel Co. v. Thomas*).<sup>3</sup>

The Court declined to impose the 6-months time limit governing unfair labor practice charges under the NLRA as a uniform deadline for WARN suits.

Borrowing limitation periods from analogous State law is "longstanding" and "settled" practice, said Justice David Souter, who delivered the opinion. Although the Supreme Court has recognized the use of limitation periods from Federal law as an exception to this general rule, the exception is a narrow one. The Court declines to follow a State limitation period, declared Souter, only when the Federal policies at stake or practicalities of litigation dictate using a rule from another Federal law.

Souter described this case as falling "squarely inside the rule, not the exception." None of the time limits under

the potentially applicable State laws (from 2 to 6 years) would interfere with WARN's purpose or operation, he said.

The consolidated cases are the first to reach the Supreme Court under the 1988 Act. The ruling makes it easier for workers to file lawsuits claiming that they were not given adequate notice of plant closings or layoffs.

### Backpay, damages can be taxed

The U.S. Supreme Court has ruled that backpay and liquidated damages recovered under the Age Discrimination in Employment Act (ADEA) may not be excluded from income under the Internal Revenue Code (*Commissioner v. Schleier*).<sup>4</sup> The ruling reversed a lower court decision that damages recovered under the ADEA are received on account of personal injury and therefore do not count as income for Federal tax liability.

Erich Schleier, a former United Airlines pilot forced to retire at age 60, received \$72,800 in backpay and an equal sum in liquidated damages as part of a June 1986 class action settlement with United. Schleier claimed that he could exclude both sums from his gross income under Section 104(a)(2) of the Internal Revenue Code because they represented "damages received . . . on account of personal injury or sickness."<sup>5</sup> The U.S. Tax Court and the Fifth Circuit Court of Appeals agreed with Schleier. The Internal Revenue Service appealed to the Supreme Court.

Justice John Paul Stevens delivered the opinion of the High Court that a taxpayer must meet two independent requirements in order to exclude a recovery under Section 104(a)(2) of the code. The taxpayer must show, first, that his or her underlying cause of action is "based upon tort or tort type rights," and second, that he or she received the damages "on account of personal injuries or sickness." Schleier failed to meet either requirement.

Writing for a divided court, Stevens said that Schleier's damages were not tortlike, because they addressed only injuries of an economic character—loss of wages. Furthermore, even if Schleier had established that his injuries were tortlike, he would still have needed to demonstrate that the amounts he was awarded were received on account of *personal* injury or sickness in order for them to be excluded from the tax code. Satisfying the tortlikeness test is a necessary condition for excluding recovery under the ADEA from income, noted Judge Stevens, but it is not a sufficient condition. Both tests must be satisfied.

Justice Sandra Day O'Connor was joined by Justices Souter and Clarence Thomas in dissenting from the opinion in *Schleier*. Age discrimination does inflict personal injury, declared O'Connor: "The injuries from discrimination that the ADEA redresses—like the harm to reputation and loss of business caused by a dignitary tort like defamation . . . may not always manifest themselves in physical symptoms, but they are no less personal . . . and thus no less worthy of excludability under Section 104(a)(2)."

### Furloughs unconstitutional

Does a public employer violate the constitutional prohibition against impairing contracts when it mandates unpaid furloughs for employees covered by a collective bargaining agreement? The answer to this question is yes, according to the Massachusetts Supreme Judicial Court's recent ruling that a 1991 furlough of State employees was an unconstitutional interference with collective bargaining agreements. (*Massachusetts Community College Council v. Commonwealth*).<sup>6</sup>

The furlough program applied to all State employees who earned \$20,000 or more a year, except judges. Under the plan, employees had to take between 2 and 15 days of unpaid leave, depending on their salaries. Employees had two other options: work without pay and

"The Law at Work" is prepared by Constance B. DiCesare of the Office of Publications and Special Studies, Bureau of Labor Statistics, and is largely based on information from secondary sources.



receive bonus vacation days the following year, or work without pay and receive a lump-sum payment upon leaving State employment. Several unions representing State workers challenged the furlough plan, winning a series of arbitration awards that were upheld by a lower Massachusetts court last year. The Commonwealth then appealed to the State Supreme Judicial Court.

Implementation of the furlough plan substantially impaired the rights of the affected employees, in violation of the "contracts clause" of the United States Constitution, wrote Justice Herbert P. Wilkins in his decision. No circumstances existed that would have justified such an impairment.

Justice Wilkins' analysis noted that the "contracts clause" should not be read as literally prohibiting every impairment of a contractual obligation. The relevant question is whether the impairment is substantial. In holding that the impairment in this case was indeed substantial, Justice Wilkins referred to the reasoning in a line of cases dealing with mandatory State furloughs or delayed compensation plans. Although these opinions differed on some points, they agreed that a unilateral reduction in contractually established, State employee salary obligations amounted to substantial impairment.

Wilkins concluded that an impairment of a State's contractual obligations could be constitutional if the State could show that "the impairment was both reasonable and necessary to serve an important State purpose." But in the Massachusetts furlough case, said Wilkins, this was not so.

## Religious discrimination

Allowing spontaneous prayers and isolated references to Christian belief does not place an undue hardship on the conduct of a public employer's business,

the U.S. Court of Appeals for the Eighth Circuit has ruled. The decision, which reversed a lower court ruling, revived a government supervisor's claim that religious discrimination played a part in his firing.

The case, *Brown v. Polk County, Iowa*,<sup>7</sup> arose in mid-1990, when the county administrator reprimanded Isaiah Brown, director of the information services department, for participating in activities at work that could be construed as promoting a religious organization. The reprimand directed Brown to cease using county resources in any way that could be perceived as supporting a religious activity or organization. Subsequently, the administrator told Brown to remove from his office all items having a religious connotation. Later that year, the administrator reprimanded Brown for a "lack of judgment" concerning financial constraints in the county's budget. Two weeks after that, Brown was asked to resign; when he refused, he was fired. Brown sued, alleging that the county had violated his constitutional guarantees of free exercise of religion, free speech, and equal protection.<sup>8</sup>

The district court found for the county, and a divided panel of the appeals court affirmed the decision. The same appeals court then granted a rehearing, *en banc*.<sup>9</sup> Circuit Judge Morris Sheppard Arnold delivered the opinion of the court that religious activities had played a part in the decision to fire Isaiah Brown. Even though Brown did not explicitly ask that his religious activities be accommodated, they were still protected under Title VII, declared Judge Arnold. But because the county did not attempt to accommodate them, it had to show that allowing Brown's religious activities would not have been possible without the government suffering "undue hardship."

Judge Arnold said the county claimed that allowing spontaneous prayers and

isolated references to Christian doctrine would be an undue hardship on the conduct of government business because of its potential effect on other employees in the work unit. The county asserted that this might give rise to a perception that Brown would favor persons having religious beliefs similar to his own in making personnel decisions.

The appeals court rejected this reasoning, characterizing the fear of favoritism and possible polarization of the staff over religion as not sufficiently "real" to satisfy the standard of undue hardship. With respect to Brown's constitutional claims, the court conceded that the county had a right to ensure that its workplace be free from religious activity that "harasses or intimidates" employees. But, said Judge Arnold, any interference with religious activity must be narrowly tailored to achieve the government's objective. To direct Mr. Brown, as Polk County did, to cease activities that merely *could be considered* proselytizing demonstrated a hostility to religion forbidden by the Constitution.

## Footnotes

<sup>1</sup> The Worker Adjustment and Retraining Notification Act (WARN), 102 Stat. 890, 29 U.S.C. § 2101 *et seq.*, obliges covered employers to give employees or their union 60 days' notice of a plant closing or mass layoff.

<sup>2</sup> The National Labor Relations Act (NLRA), 49 Stat. 449, 29 U.S.C. § 160 (b).

<sup>3</sup> 32 F. 3d 53.

<sup>4</sup> 26 F. 3d 1119.

<sup>5</sup> 26 U.S.C. § 104 (1988 ed. and Supp. V).

<sup>6</sup> 649 N.E. 2d 708 (Mass. 1995).

<sup>7</sup> 37 F. 3d 404 (8th. Cir. 1994).

<sup>8</sup> Brown, an African American, sued under 42 U.S.C. § 1983, alleging that the first reprimand and the order to remove religious items from his office violated his constitutional guarantees of free exercise of religion, free speech, and equal protection. He also alleged, under 42 U.S.C. § 2000e-2(a)(1) (Title VII of the Civil Rights Act of 1964) and the Iowa civil rights statute, that he was fired because of his race and his religion.

<sup>9</sup> In the United States, the Circuit Courts of Appeal usually sit in panels of judges. When they expand the bench to a larger number, they are said to be sitting *en banc*.



### Collecting their thoughts

*Labor Economics and Industrial Relations: Markets and Institutions.* Clark Kerr and Paul D. Staudohar, eds. Cambridge, MA, Harvard University Press, 1994, 752 pp., \$35.

This is not light, weekend reading. It is a meaty, thought-provoking, rewarding collection of 23 essays by top labor relations specialists surveying the development and current state of labor economics and industrial relations theory and practice. If these subjects turn you on, you should buy this book and read it—slowly and carefully. What will you find?

Former Secretary of Labor George Shultz tells of persuading President Richard M. Nixon to abstain from intervening in a “national emergency” strike, and uphold free collective bargaining. Shultz, also Secretary of State in the Reagan Administration, extends to international relations his view of collective bargaining as a way to solve problems.

George Hildebrand reviews labor economics from “classical” Adam Smith to Karl Marx, and “neo-classical” Alfred Marshall, A.C. Pigou, and John R. Hicks.

The Wisconsin Institutionalists—John Commons, Selig Perlman, and three generations of economists who followed these scholars—share with their forerunners “the view of the labor problem as a moral question, the research method of ‘go and see,’ and a preference for problem-solving over theory-making.” Jack Barbash describes them as “activist advocates and administrators in behalf of their case.” Barbash also credits scholars at Johns Hopkins University who “put together a sort of political science of trade unionism in the early years of the twentieth century.”

The neoclassical and institutionalist approaches were brought together from the 1930’s to the 1960’s by “social economics revisionists—Paul

Douglas (who later was elected a U.S. senator from Illinois); Sumner Slichter; John Dunlop, Secretary of Labor in the Ford Administration; Albert Rees; and George Shultz—according to Clark Kerr, who sees himself as one of the revisionists. “We saw not equilibrium but disequilibria. We saw not determinate solutions but indeterminate ranges for solutions. We saw not a market for labor but many markets with distinguishing characteristics. We saw collective action as well as atomistic decision-making. We saw systems of beliefs, including justice and benevolence, affecting people as well as self-love.”

Human capital theory has enlarged the field of labor economics, according to Jacob Mincer. He explains the contributions of human capital analysis to wage structure and distribution of labor income, labor mobility and its wage and unemployment consequences, and the effects of technological change on labor markets. He also finds human capital theory a powerful tool in new fields such as the economics of health, education and demography, linking these areas to labor economics.

To what extent are labor markets competitive? Bruce Kaufman finds institutionalists on the negative side and the Chicago school on the positive side. He surveys a range of factors and finds the net impact “uncertain,” but becoming more competitive. However, lower pay for women and minority workers and the absence of compensating wage differentials for workplace injuries indicate a need for institutional intervention in labor markets in equal employment, affirmative action, and occupational safety and health legislation. Kaufman deplors “the divorce of theory from reality” under the influence of the Chicago school for which “theory development has become an end in itself.”

Richard Lester, who has challenged neoclassical minimum wage–employment theory for 50 years, reports on re-

cent minimum wage studies by David Card, Lawrence Katz, Alan Krueger, and Lawrence Summers. Lester writes that his essay may require many textbooks “to have their treatment of wage differentials and minimum wage effects altered.”

Lloyd Reynolds challenges “dualistic models” of third world labor markets. Dual labor market theories “do not stand up well in the light of the evidence,” he says, adding that evidence does not exist to support the idea of wage rigidity. “Instead of a single rural and urban wage, the studies reveal a great variety of wage rates for particular kinds of labor. The whole wage structure moves generally upward, as rising productivity is translated into higher incomes.” As a result, “labor markets in the less developed countries bear a distinct family resemblance to our own.”

The so-called “natural rate of unemployment,” also known as the non-accelerating inflation rate of unemployment, is challenged by Robert Solow, a Nobel laureate in economics. Exploring equilibrium in the labor market, he writes that the field “is open to plausible scenarios in which many equilibrium unemployment rates are possible.” He adds that the equilibrium rate itself, and therefore eventually the observed amount of unemployment, can be changed by policies affecting the structure and institutions of the labor market.”

Richard Freeman examines union/nonunion wage differentials in the United States and other countries, finding that unions in the United States raise wages by 20 to 25 percent, push up the wages of nonunion workers, but reduce wage dispersion among organized workers. In addition, union workers are less satisfied with their jobs than nonunion workers in similar industries who are paid the same wage. Unions also reduce the number of workers who quit; increase the time a worker spends at a firm; and reduce employer profitability, according to Freeman. Thus, he



finds that "the voice component of unionism is more universal and less dependent on the system of labor relations than are monopoly wage effects. From this I conclude that voice factors must be intrinsic in any general theory of trade unionization." Freeman refers to "union voice factor" to describe union effects that produce less wage dispersion, more fringe benefits, fewer quits, longer job tenure, and less job satisfaction—in contrast to union economic effects on wage levels and profits.

Paul Osterman's essay on internal labor markets is itself worth the price of the book. From his own survey of 875 establishments he finds firms that are most likely to have some kind of "high-performance work system" are those "that competed in international markets, that were part of larger organizations, that used high skill technology, that followed a market strategy based on quality and variety rather than price competition, and that espoused values that emphasized employee well-being." This last item shows that "internal firm customs, norms, and politics modify . . . market forces." But Osterman warns that in a firm represented by a union, senior management may find it difficult to accept the degree of cooperation that is typically necessary. In the absence of a union, management is likely to fear that empowering the labor force is the first step toward unionization."

Despite the growth in human resource management among nonunion companies in the 1960's, "even heavily unionized firms eventually jumped on the human resource management bandwagon," writes Sanford Jacoby. Professionalism in this field is difficult to achieve because "today's human resource managers still risk ostracism by their fellow managers if they veer too much toward advocacy of the employees' rights," according to Jacoby.

Dunlop widens his theory of industrial relations systems by identifying eight categories of "structured" inter-

nal labor markets: small enterprises (31 million workers), participants in labor pools such as construction workers and banquet waiters (7 million), owner-operators (2 million), civil service (18 million), multitier internal labor markets in many large-scale establishments (15 million), short-tier internal labor markets in retail stores and supermarkets (15 million), clerical-oriented organizations in banking and insurance with a predominance of women workers (12 million), and technical-professional groupings such as high-tech and consulting firms and higher education institutions where employees (10 million) offer their loyalty more to the profession than to the employer. Multitier labor markets get much of the attention from industrial relations specialists, but cover only 1 of 7 workers in the United States, according to Dunlop.

About 25 percent of workers in the United States are covered by explicit individual employment contracts, a larger proportion of the work force than those who are covered by collective bargaining contracts, according to David Lewin. He is uncertain that this practice will expand because employers who seek high commitment from their employees may prefer implicit, rather than explicit, contracts. In contrast, Lewin believes that employers and employees may prefer explicit contracts to gain more certainty about inherently unstable employment conditions when they are jointly involved in contingent, nonpermanent relations, variable pay systems based on output, productivity, or profit-sharing, production or financial information-sharing, employer-sponsored worker training, and worker self-monitoring without supervision. As a result, "it is plausible to expect that explicit contracting will become the now dominant institutional arrangement in U.S. labor markets during the 1990's," Lewin writes.

Contract negotiations that forced concessions from unions in the 1980's marked a structural change in collec-

tive bargaining, says Daniel J.B. Mitchell. "Once the initial management probes succeeded, union vulnerability was exposed and the concession movement spread." But he finds two continuing features of union bargaining: long-term contracts and "a relative insensitivity of union wages to short-term business-cycle influences." Mitchell also examines the bargaining process itself. "The union side's behavior can be viewed as the outcome of an internal political process" that reflects the preferences and perceptions of union members.

However, from the management point of view, "information on union vulnerability is something of a public good. A firm obtaining information—through conflict with a union—pays the cost but does not capture most of the benefit." He concludes that macroeconomic determinants of real wage trends, such as productivity growth, trade competition from abroad, and immigration cannot be resisted indefinitely and that collective bargaining needs safety valves such as profitsharing to prevent excessive wage pressures from building, as occurred in the 1970's.

Peter Feuille reviews post-World War II developments in the resolution of disputes between management and workers represented by unions and those who were not represented. "In the unionized private sector, disputes have become much less likely to occur as disruptions to the normal workflow, whether as strikes, slowdowns, lockouts, boycotts, and so on," he writes. But in the unionized public sector since the mid-1960's, "strikes have become more 'normal' bargaining events (whether they are legal or illegal) and public employers have realized that the sky does not fall when such strikes occur."

Disputes in the nonunion sector are becoming much more important, says Feuille. "Whether these claims are based on anti-discrimination or on common law exceptions to the employment-at-will principle, their unifying

thread is a quest for fair treatment." Feuille believes that this trend will continue with the growth of implicit and explicit contracts between management and individual workers. As a result, an increasing number of nonunion firms will develop formal grievance procedures, he writes.

Unions must develop new strategies to survive, says Michael Piore. Instead of the alternatives of unions as political institutions as proposed by Arthur M. Ross, or unions as economic institutions, as proposed by Dunlop, Piore calls for a fuzzy "transformative vision" of unions "mediating between the economic and social structures" by pushing simultaneously for political action on social legislation and workplace democracy and for collective bargaining and other economic actions to

advance worker's direct economic interests. The Service Employees International Union offers a model for this approach to unionism, says Piore.

Ray Marshall, Secretary of Labor in the Carter Administration, calls for restructuring the Nation's learning systems, supporting a high-wage economic development strategy, and more worker participation in company decisions. His essay follows the argument of his 1992 book, *Thinking for a Living: Education and the Wealth of Nations*, and the 1990 report of the Commission on the Skills of the American Workforce of which Marshall was co-chairman.

In the final essay, Thomas Kochan calls for active government policy to encourage "mutual-gains strategies" to supplement rules governing adversarial labor-management relations. Kochan

also calls for labor law reforms to strengthen workers' rights to bargain effectively with "a labor organization that best suits their circumstances."

All these essays are more subtle and sophisticated than my remarks and quotations indicate. Jonathan Leonard is particularly effective in his essay about affirmative action. More predictable and less interesting essays are those by Albert Rees about occupational wage differentials; Melvin Reder, who discusses "labor's bargaining disadvantage," and J.K. Galbraith, who writes about countervailing power. This book is a treasure for those whose interest is in labor economics and industrial relations.

—Markley Roberts  
Economic Research Department  
AFL-CIO



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# 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 for 1994 in tables 1 and 4-9 were revised in the February 1995 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 12-14 and 16-17 were revised in the July 1995 *Review* and reflect the experience through March 1995. 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 appro-

priate 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*, Bulletin 2414. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 871. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted 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 2447. 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 March 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 2440.

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

**tio** is employment as a percent of the civilian noninstitutional population.

### Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

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

At the end of each calendar year, seasonally adjusted data for the previous 5 years usually are revised, and projected seasonal adjustment factors are calculated for use during the January-June period. Because of the changes introduced into the CPS in January 1994, only seasonally adjusted data for 1994 were revised at the end of 1994. 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 about 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 probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey

### Revisions to household data

Data relating to 1994 and subsequent years are not directly comparable with data for 1993 and earlier years because of the introduction of a major redesign of the survey questionnaire and collection methodology, and the introduction of 1990 census-based population controls, adjusted for the estimated undercount. 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.

Seasonally adjusted data for 1994 were revised at the end of 1994. Additional information on the revisions appears in the January 1995 issue of *Employment and Earnings*.

because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

## Definitions

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

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

**Production workers** in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and non-supervisory 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 1994 benchmarks, was made with the release of May 1995 data, published in the July 1995 issue of the *Review*. Coincident with the benchmark adjustment, seasonally adjusted data were revised to reflect the experience through March 1995. Comparable revisions in State data (table 11) occurred with the publication of January 1995 data. Unadjusted data from April 1994 forward and seasonally adjusted data from January 1991 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 Popu-

lation 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. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

## Notes on the data

Data refer to State of residence. Monthly data for 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 em-



ployee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

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

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

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

## Definitions

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

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

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

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

## Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981 = 100) 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, 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 adjustment 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 settlements. 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 De-



velopments 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 cen-

ters 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 PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

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

ally are reported for the Tuesday of the week containing the 13th day of the month.

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

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

## International Price Indexes

### Description of the series

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

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

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

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These cate-

ries 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 repricing 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 value-shared 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 nonproduction 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 Statistics, 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 in 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 denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite dif-

ferent in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8-11.

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

There are breaks in the data series for the United States (1994), Italy (1986, 1991, 1993), and Sweden (1987). 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 this *Review*.

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 method of weighting sample data was revised. 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 the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.1 percentage points. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the 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.

There have been two breaks in the Swedish labor force survey, in 1987 and in 1993. In 1987, a new questionnaire was introduced. Questions regarding current avail-

ability for work were added, and the period of active workseeking required for a person to be classified as unemployed was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 percent to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year, rather than 1 week of each month, and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 percent to 8.1 percent. Statistics Sweden revised its labor force survey data for the years 1987-92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987, and gradually rose to 0.5 percentage point in 1992.

Beginning with data for 1985, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987, and by 1.8 percentage points, to 9.6 percent, in 1994, when unemployment was higher.

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

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 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, Japan, 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 costs. 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 compensation 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 becomes 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. 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.

1. Labor market indicators

Selected indicators	1993	1994	1993		1994				1995	
			III	IV	I	II	III	IV	I	II
<b>Employment data<sup>1</sup></b>										
Employment status of the civilian noninstitutionalized population (household survey): <sup>2</sup>										
Labor force participation rate .....	66.2	66.6	66.1	66.2	66.7	66.5	66.5	66.6	66.9	66.6
Employment-population ratio .....	61.6	62.5	61.7	61.9	62.3	62.4	62.5	62.9	63.2	62.8
Unemployment rate .....	6.8	6.1	6.7	6.5	6.6	6.2	6.0	5.6	5.5	5.7
Men .....	7.1	6.2	7.1	6.7	6.7	6.2	6.0	5.6	5.5	5.7
16 to 24 years .....	14.3	13.2	14.2	13.5	14.1	13.3	13.1	12.2	11.9	12.0
25 years and over .....	5.8	4.8	5.8	5.5	5.2	4.8	4.7	4.4	4.2	4.4
Women .....	6.5	6.0	6.4	6.3	6.4	6.2	5.9	5.6	5.6	5.7
16 to 24 years .....	12.2	11.6	11.7	11.6	12.1	11.9	11.6	11.0	11.2	11.5
25 years and over .....	5.4	4.9	5.3	5.3	5.3	5.0	4.8	4.5	4.4	4.5
Employment, nonfarm (payroll data), in thousands: <sup>2</sup>										
Total .....	110,730	114,034	111,021	111,816	112,655	112,995	114,481	115,329	116,078	116,352
Private sector .....	91,889	94,917	92,143	92,877	93,656	93,990	95,314	96,099	96,841	97,094
Goods-producing .....	23,352	23,913	23,345	23,481	23,646	23,534	23,978	24,162	24,329	24,265
Manufacturing .....	18,075	18,303	18,049	18,096	18,181	18,020	18,333	18,436	18,517	18,461
Service-producing .....	87,378	90,121	87,676	88,335	89,008	89,461	90,503	91,167	91,749	92,087
Average hours:										
Private sector .....	34.5	34.7	34.5	34.5	34.6	34.7	34.7	34.7	34.7	34.4
Manufacturing .....	41.4	42.0	41.5	41.7	41.7	42.1	42.0	42.1	42.1	41.5
Overtime .....	4.1	4.7	4.1	4.4	4.5	4.7	4.7	4.8	4.8	4.4
<b>Employment Cost Index</b>										
Percent change in the ECI, compensation:										
All workers (excluding farm, household, and Federal workers) .....	3.5	3.0	1.0	.6	.9	.7	1.0	.4	.8	.6
Private industry workers .....	3.6	3.1	.9	.6	1.0	.8	.8	.4	.8	.7
Goods-producing <sup>3</sup> .....	3.9	3.1	.7	.6	1.0	1.0	.7	.3	.8	.5
Service-producing <sup>3</sup> .....	3.6	2.9	1.0	.7	.9	.7	.9	.4	.9	.8
State and local government workers .....	2.8	3.0	1.5	.4	.6	.4	1.5	.5	.6	.4
Workers by bargaining status (private industry):										
Union .....	4.3	2.7	.8	.8	.8	.9	.7	.3	.7	.6
Nonunion .....	3.5	3.1	.9	.6	1.0	.8	.8	.4	.9	.7

<sup>1</sup> 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.

<sup>2</sup> Quarterly data seasonally adjusted.

<sup>3</sup> 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	1993	1994	1993		1994				1995		
			III	IV	I	II	III	IV	I	II	
<b>Compensation data:<sup>1, 2</sup></b>											
Employment Cost Index--compensation (wages, salaries, benefits):											
Civilian nonfarm .....	3.5	3.0	1.0	0.6	0.9	0.7	1.0	0.4	0.8	0.6	
Private nonfarm .....	3.6	3.1	.9	.6	1.0	.8	.8	.4	.8	.7	
Employment Cost Index--wages and salaries											
Civilian nonfarm .....	3.1	2.8	1.0	.6	.6	.7	1.0	.5	.7	.7	
Private nonfarm .....	3.1	2.8	1.0	.6	.7	.8	.8	.5	.8	.7	
<b>Price data:<sup>1</sup></b>											
Consumer Price Index (All urban consumers): All items .....	2.7	2.7	.5	.5	1.0	.5	.9	.2	1.1	.7	
Producer Price Index:											
Finished goods .....	.2	1.7	-1.4	.2	.6	.6	.0	.5	.7	.9	
Finished consumer goods .....	-2	1.6	-1.5	-2	.6	.6	.2	.3	.6	1.0	
Capital equipment .....	1.8	2.0	-5	1.7	.8	.4	-5	1.2	.8	.3	
Intermediate materials, supplies, components .....	1.0	4.4	.1	-7	.7	1.2	1.6	.8	2.4	1.5	
Crude materials .....	.1	-5	-3.1	.0	3.1	-9	-3.4	.8	1.8	1.1	
<b>Productivity data:<sup>3</sup></b>											
Output per hour of all persons:											
Business sector .....	1.3	2.1	2.2	5.0	1.8	-1.4	3.2	4.3	2.1	3.0	
Nonfarm business sector .....	1.3	1.9	2.9	4.2	1.7	-1.4	2.7	4.3	2.5	3.0	
Nonfinancial corporations <sup>4</sup> .....	2.8	2.2	3.2	3.9	2.0	-8	1.6	3.4	1.7	-	

<sup>1</sup> 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.

<sup>2</sup> Excludes Federal and private household workers.

<sup>3</sup> 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.

<sup>4</sup> Output per hour of all employees.

- Data not available.

## 3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ended--					
	1994				1995		1994				1995	
	I	II	III	IV	I	II	I	II	III	IV	I	II
<b>Average hourly compensation:<sup>1</sup></b>												
All persons, business sector .....	5.1	0.9	3.1	3.6	3.8	3.7	2.9	2.3	2.7	3.2	2.8	3.6
All persons, nonfarm business sector .....	4.9	1.4	2.7	3.8	4.1	3.5	2.6	2.3	2.6	3.2	3.0	3.6
<b>Employment Cost Index--compensation:</b>												
Civilian nonfarm <sup>2</sup> .....	.9	.7	1.0	.4	.8	.6	3.2	3.2	3.2	3.0	2.9	2.9
Private nonfarm .....	1.0	.8	.8	.4	.8	.7	3.3	3.4	3.3	3.1	2.9	2.8
Union .....	.8	.9	.7	.3	.7	.6	3.5	3.3	3.2	2.7	2.6	2.3
Nonunion .....	1.0	.8	.8	.4	.9	.7	3.3	3.4	3.3	3.1	3.0	2.9
State and local governments .....	.6	.4	1.5	.5	.6	.4	2.8	2.9	3.0	3.0	3.1	3.1
<b>Employment Cost Index--wages and salaries:</b>												
Civilian nonfarm <sup>2</sup> .....	.6	.7	1.0	.5	.7	.7	2.9	3.0	2.9	2.8	3.0	3.0
Private nonfarm .....	.7	.8	.8	.5	.8	.7	2.9	3.1	2.9	2.8	2.9	2.9
Union .....	.7	.9	.9	.4	.6	.7	3.0	3.2	3.3	2.9	2.8	2.6
Nonunion .....	.7	.8	.8	.5	.8	.8	2.9	3.0	2.8	2.7	2.9	3.0
State and local governments .....	.6	.2	1.7	.5	.7	.2	2.7	2.8	2.9	3.1	3.2	3.2
<b>Total effective wage adjustments<sup>3</sup></b>												
From current settlements .....	.4	.8	.9	.6	.3	.8	2.9	2.7	2.9	2.7	2.6	2.6
From prior settlements .....	.1	.2	.1	.2	.1	.2	.9	.9	.8	.6	.5	.5
From cost-of-living provision .....	.3	.6	.7	.3	.2	.5	1.8	1.7	1.9	1.9	1.9	1.8
From cost-of-living provision .....	( <sup>4</sup> )	.1	.1	.1	( <sup>4</sup> )	.1	.2	.2	.2	.2	.3	.3
<b>Negotiated wage adjustments from settlements:<sup>3</sup></b>												
First-year adjustments .....	3.0	2.0	1.0	2.2	1.9	2.1	2.4	2.2	2.3	2.0	1.8	1.8
Annual rate over life of contract .....	2.4	2.4	1.9	2.5	2.1	2.2	2.1	2.1	2.2	2.3	2.3	2.2
<b>Negotiated wage and benefit adjustments from settlements:<sup>5</sup></b>												
First-year adjustment .....	3.0	3.4	( <sup>4</sup> )	1.5	1.4	1.8	3.0	3.1	3.1	2.3	2.1	1.2
Annual rate over life of contract .....	2.6	2.9	1.4	2.1	1.7	1.8	2.3	2.4	2.5	2.4	2.3	1.7

<sup>1</sup> Seasonally adjusted.

<sup>2</sup> Excludes Federal and household workers.

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

<sup>4</sup> Data round to zero.

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

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

(Numbers in thousands)

Employment status	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>TOTAL</b>															
Civilian noninstitutional population <sup>1</sup>	193,550	196,814	197,043	197,248	197,430	197,607	197,765	197,753	197,886	198,007	198,148	198,286	198,453	198,615	198,801
Civilian labor force	128,040	131,056	131,086	131,291	131,646	131,718	131,725	132,136	132,308	132,511	132,737	131,811	131,869	132,519	132,211
Participation rate	66.2	66.6	66.5	66.6	66.7	66.7	66.6	66.8	66.9	66.9	67.0	66.5	66.4	66.7	66.5
Employed	119,306	123,060	123,197	123,644	124,141	124,403	124,570	124,639	125,125	125,274	125,072	124,319	124,485	124,959	124,779
Employment-population ratio <sup>2</sup>	61.6	62.5	62.5	62.7	62.9	63.0	63.0	63.0	63.2	63.3	63.1	62.7	62.7	62.9	62.8
Unemployed	8,734	7,996	7,889	7,647	7,505	7,315	7,155	7,498	7,183	7,237	7,665	7,492	7,384	7,559	7,431
Unemployment rate	6.8	6.1	6.0	5.8	5.7	5.6	5.4	5.7	5.4	5.5	5.8	5.7	5.6	5.7	5.6
Not in labor force	65,509	65,758	65,957	65,957	65,784	65,889	66,040	65,617	65,578	65,496	65,412	66,476	66,583	66,096	66,590
<b>Men, 20 years and over</b>															
Civilian noninstitutional population <sup>1</sup>	85,907	87,151	87,248	87,321	87,439	87,529	87,617	87,528	87,572	87,622	87,664	87,691	87,750	87,818	87,905
Civilian labor force	66,069	66,921	66,817	66,909	67,177	67,345	67,450	67,539	67,552	67,643	67,563	67,250	67,232	67,258	67,077
Participation rate	76.9	76.8	76.6	76.6	76.8	76.9	77.0	77.2	77.1	77.2	77.1	76.7	76.6	76.6	76.3
Employed	61,865	63,294	63,271	63,517	63,820	64,051	64,281	64,133	64,478	64,465	64,224	63,841	63,994	64,066	63,871
Employment-population ratio <sup>2</sup>	72.0	72.6	72.5	72.7	73.0	73.2	73.4	73.3	73.6	73.6	73.3	72.8	72.9	73.0	72.7
Agriculture	2,263	2,351	2,377	2,293	2,329	2,377	2,410	2,390	2,512	2,519	2,384	2,242	2,344	2,327	2,288
Nonagricultural industries	59,602	60,943	60,894	61,224	61,491	61,674	61,871	61,743	61,965	61,946	61,840	61,599	61,649	61,739	61,583
Unemployed	4,204	3,627	3,546	3,392	3,357	3,294	3,169	3,406	3,074	3,178	3,339	3,410	3,238	3,192	3,206
Unemployment rate	6.4	5.4	5.3	5.1	5.0	4.9	4.7	5.0	4.6	4.7	4.9	5.1	4.8	4.7	4.8
<b>Women, 20 years and over</b>															
Civilian noninstitutional population <sup>1</sup>	94,388	95,467	95,544	95,658	95,729	95,821	95,873	95,961	96,020	96,037	96,099	96,141	96,204	96,265	96,327
Civilian labor force	55,146	56,655	56,747	57,031	56,951	56,984	56,725	56,951	57,096	57,042	57,360	56,819	56,773	57,471	57,346
Participation rate	58.4	59.3	59.4	59.6	59.5	59.5	59.2	59.3	59.5	59.4	59.7	59.1	59.0	59.7	59.5
Employed	51,912	53,806	53,722	54,044	54,090	54,129	54,037	54,134	54,334	54,242	54,403	54,097	53,915	54,519	54,498
Employment-population ratio <sup>2</sup>	55.0	56.2	56.2	56.5	56.5	56.5	56.4	56.4	56.6	56.5	56.6	56.3	56.0	56.6	56.6
Agriculture	599	809	815	847	863	850	882	877	898	913	925	828	791	787	809
Nonagricultural industries	51,313	52,796	52,907	53,197	53,227	53,279	53,155	53,257	53,436	53,329	53,477	53,268	53,124	53,732	53,688
Unemployed	3,234	3,049	3,025	2,987	2,861	2,855	2,688	2,817	2,763	2,800	2,957	2,722	2,857	2,952	2,849
Unemployment rate	5.9	5.4	5.3	5.2	5.0	5.0	4.7	4.9	4.8	4.9	5.2	4.8	5.0	5.1	5.0
<b>Both sexes, 16 to 19 years</b>															
Civilian noninstitutional population <sup>1</sup>	13,255	14,196	14,251	14,269	14,261	14,257	14,274	14,263	14,294	14,348	14,385	14,454	14,498	14,531	14,569
Civilian labor force	6,826	7,481	7,522	7,351	7,518	7,389	7,550	7,646	7,660	7,826	7,814	7,742	7,864	7,790	7,787
Participation rate	51.5	52.7	52.8	51.5	52.7	51.8	52.9	53.6	53.6	54.5	54.3	53.6	54.2	53.6	53.5
Employed	5,530	6,161	6,204	6,083	6,231	6,223	6,252	6,372	6,313	6,567	6,446	6,381	6,576	6,375	6,411
Employment-population ratio <sup>2</sup>	41.7	43.4	43.5	42.6	43.7	43.6	43.8	44.7	44.2	45.8	44.8	44.1	45.4	43.9	44.0
Agriculture	212	249	244	271	302	273	240	308	245	266	285	287	316	295	265
Nonagricultural industries	5,317	5,912	5,960	5,812	5,929	5,950	6,012	6,064	6,068	6,300	6,160	6,094	6,261	6,080	6,146
Unemployed	1,296	1,320	1,318	1,268	1,287	1,166	1,298	1,274	1,347	1,260	1,369	1,360	1,288	1,415	1,377
Unemployment rate	19.0	17.6	17.5	17.2	17.1	15.8	17.2	16.7	17.6	16.1	17.5	17.6	16.4	18.2	17.7
<b>White</b>															
Civilian noninstitutional population <sup>1</sup>	163,921	165,555	165,696	165,832	165,954	166,072	166,175	166,361	166,444	166,521	166,613	166,708	166,822	166,931	167,058
Civilian labor force	109,359	111,082	111,186	111,381	111,555	111,637	111,715	111,876	111,830	111,999	112,153	111,568	111,541	112,197	111,971
Participation rate	66.7	67.1	67.1	67.2	67.2	67.2	67.2	67.2	67.2	67.3	67.3	66.9	66.9	67.2	67.0
Employed	102,812	105,190	105,401	105,740	106,010	106,242	106,352	106,366	106,604	106,698	106,500	105,935	106,145	106,770	106,567
Employment-population ratio <sup>2</sup>	62.7	63.5	63.6	63.8	63.9	64.0	64.0	63.9	64.0	64.1	63.9	63.5	63.6	64.0	63.8
Unemployed	6,547	5,892	5,785	5,641	5,545	5,395	5,363	5,510	5,226	5,301	5,653	5,633	5,396	5,427	5,404
Unemployment rate	6.0	5.3	5.2	5.1	5.0	4.8	4.8	4.9	4.7	4.7	5.0	5.0	4.8	4.8	4.8
<b>Black</b>															
Civilian noninstitutional population <sup>1</sup>	22,329	22,879	22,917	22,955	22,990	23,023	23,052	23,089	23,117	23,142	23,169	23,192	23,221	23,249	23,284
Civilian labor force	13,943	14,502	14,429	14,477	14,649	14,578	14,541	14,697	14,868	14,818	14,938	14,803	14,707	14,856	14,715
Participation rate	62.4	63.4	63.0	63.1	63.7	63.3	63.1	63.7	64.3	64.0	64.5	63.8	63.3	63.0	63.2
Employed	12,146	12,835	12,795	12,927	13,022	13,054	13,119	13,192	13,362	13,370	13,337	13,336	13,142	13,033	13,049
Employment-population ratio <sup>2</sup>	54.4	56.1	55.8	56.3	56.6	56.7	56.9	57.1	57.8	57.8	57.6	57.5	56.6	56.1	56.0
Unemployed	1,796	1,666	1,634	1,550	1,627	1,524	1,422	1,505	1,505	1,448	1,601	1,467	1,565	1,623	1,666
Unemployment rate	12.9	11.5	11.3	10.7	11.1	10.5	9.8	10.2	10.1	9.8	10.7	9.9	10.6	11.1	11.3

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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>Hispanic origin</b>															
Civilian noninstitutional population <sup>1</sup> .....	15,753	18,117	18,193	18,244	18,291	18,339	18,385	18,368	18,413	18,458	18,509	18,554	18,604	18,653	18,702
Civilian labor force .....	10,377	11,975	12,002	11,997	12,222	12,324	12,224	12,036	12,017	12,001	12,131	12,111	12,229	12,323	12,383
Participation rate .....	65.9	66.1	66.0	65.8	66.8	67.2	66.5	65.5	65.3	65.0	65.5	65.3	65.7	66.1	66.2
Employed .....	9,272	10,788	10,786	10,806	11,074	11,236	11,105	10,811	10,943	10,903	11,058	10,895	11,131	11,235	11,158
Employment-population ratio <sup>2</sup> .....	58.9	59.5	59.3	59.2	60.5	61.3	60.4	58.9	59.4	59.1	59.7	58.7	59.8	60.2	59.7
Unemployed .....	1,104	1,187	1,216	1,191	1,148	1,088	1,119	1,224	1,073	1,098	1,073	1,216	1,098	1,088	1,225
Unemployment rate .....	10.6	9.9	10.1	9.9	9.4	8.8	9.2	10.2	8.9	9.1	8.8	10.0	9.0	8.8	9.9

<sup>1</sup> The population figures are not seasonally adjusted.

<sup>2</sup> 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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>CHARACTERISTIC</b>															
Employed, 16 years and over .....	119,306	123,060	123,197	123,644	124,141	124,403	124,570	124,639	125,125	125,274	125,072	124,319	124,485	124,959	124,779
Men .....	64,700	66,450	66,458	66,682	67,059	67,244	67,483	67,386	67,709	67,811	67,588	67,110	67,390	67,383	67,108
Women .....	54,606	56,610	56,739	56,962	57,082	57,159	57,087	57,252	57,416	57,462	57,484	57,208	57,095	57,576	57,672
Married men, spouse present ..	40,869	41,414	41,487	41,557	41,511	41,530	41,608	41,601	42,190	42,132	42,086	41,874	41,956	42,137	42,060
Married women, spouse present .....	30,512	31,536	31,593	31,905	31,764	31,775	31,723	31,705	31,893	32,135	32,108	32,022	31,918	32,309	32,226
Women who maintain families ..	6,764	7,053	6,974	7,029	7,098	7,141	7,074	7,199	7,067	7,071	7,152	7,175	7,201	7,081	7,268
<b>CLASS OF WORKER</b>															
Agriculture:															
Wage and salary workers .....	1,637	1,715	1,728	1,712	1,764	1,767	1,738	1,866	1,970	1,987	1,884	1,747	1,848	1,832	1,772
Self-employed workers .....	1,332	1,645	1,654	1,630	1,652	1,677	1,714	1,663	1,684	1,674	1,649	1,560	1,593	1,551	1,542
Unpaid family workers .....	105	49	50	63	43	48	49	35	27	57	70	55	46	45	45
Nonagricultural industries:															
Wage and salary workers .....	107,011	110,517	110,576	111,100	111,686	111,770	111,960	111,987	112,461	112,649	112,578	112,111	112,160	112,331	112,350
Government .....	18,504	18,293	18,225	18,306	18,201	18,357	18,340	18,295	18,504	18,685	18,646	18,493	18,387	18,358	18,326
Private industries .....	88,507	92,224	92,351	92,794	93,485	93,413	93,620	93,692	93,957	93,964	93,932	93,619	93,773	93,973	94,023
Private households .....	1,105	966	881	903	935	999	1,023	1,075	1,075	1,039	988	913	866	887	886
Other .....	87,402	91,258	91,470	91,891	92,550	92,414	92,597	92,617	92,882	92,925	92,945	92,705	92,907	93,086	93,138
Self-employed workers .....	9,003	9,003	9,021	8,989	8,878	8,915	8,959	9,039	8,904	8,865	8,848	8,763	8,765	9,098	8,869
Unpaid family workers .....	218	131	131	134	131	120	121	95	118	129	110	125	106	103	103
<b>PERSONS AT WORK PART TIME<sup>1</sup></b>															
All industries:															
Part time for economic reasons ..	6,348	4,625	4,348	4,333	4,411	4,411	4,422	4,693	4,460	4,530	4,469	4,476	4,442	4,402	4,526
Slack work or business conditions .....	3,140	2,432	2,396	2,404	2,394	2,394	2,384	2,504	2,372	2,333	2,517	2,502	2,304	2,497	2,586
Could only find part-time work ..	2,908	1,871	1,618	1,697	1,791	1,736	1,734	1,777	1,739	1,902	1,686	1,720	1,785	1,672	1,567
Part time for noneconomic reasons .....	15,062	17,638	17,955	17,609	17,644	17,756	17,576	17,940	18,041	17,627	18,121	17,666	17,745	18,299	18,113
Nonagricultural industries:															
Part time for economic reasons ..	6,106	4,414	4,173	4,154	4,226	4,246	4,254	4,430	4,187	4,347	4,171	4,289	4,185	4,234	4,316
Slack work or business conditions .....	2,977	2,311	2,272	2,290	2,257	2,282	2,272	2,359	2,216	2,226	2,328	2,364	2,158	2,385	2,448
Could only find part-time work ..	2,832	1,824	1,583	1,646	1,756	1,689	1,690	1,737	1,687	1,854	1,624	1,698	1,747	1,613	1,533
Part time for noneconomic reasons .....	14,637	17,007	17,314	16,982	16,992	17,101	16,917	17,307	17,381	16,991	17,232	17,034	17,056	17,660	17,473

<sup>1</sup> 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.

**6. Selected unemployment indicators, monthly data seasonally adjusted**

(Unemployment rates)

Selected categories	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>CHARACTERISTIC</b>															
Total, all workers .....	6.8	6.1	6.0	5.8	5.7	5.6	5.4	5.7	5.4	5.5	5.8	5.7	5.6	5.7	5.6
Both sexes, 16 to 19 years .....	19.0	17.6	17.5	17.2	17.1	15.8	17.2	16.7	17.6	16.1	17.5	17.6	16.4	18.2	17.7
Men, 20 years and over .....	6.4	5.4	5.3	5.1	5.0	4.9	4.7	5.0	4.6	4.7	4.9	5.1	4.8	4.7	4.8
Women, 20 years and over .....	5.9	5.4	5.3	5.2	5.0	5.0	4.7	4.9	4.8	4.9	5.2	4.8	5.0	5.1	5.0
White, total .....	6.0	5.3	5.2	5.1	5.0	4.8	4.8	4.9	4.7	4.7	5.0	5.0	4.8	4.8	4.8
Both sexes, 16 to 19 years .....	16.2	15.1	14.6	14.8	14.4	13.5	14.7	14.1	14.7	13.6	14.6	14.8	13.1	14.8	14.0
Men, 16 to 19 years .....	17.6	16.3	15.4	16.2	15.2	14.3	16.0	15.0	16.1	14.7	15.3	15.2	14.5	14.6	15.7
Women, 16 to 19 years .....	14.6	13.8	13.7	13.3	13.5	12.6	13.2	13.1	13.1	12.4	13.8	14.3	11.6	15.0	12.1
Men, 20 years and over .....	5.6	4.8	4.6	4.4	4.4	4.3	4.2	4.4	4.0	4.2	4.4	4.6	4.3	4.1	4.2
Women, 20 years and over .....	5.1	4.6	4.6	4.6	4.4	4.3	4.1	4.3	4.1	4.2	4.5	4.3	4.4	4.4	4.3
Black, total .....	12.9	11.5	11.3	10.7	11.1	10.5	9.8	10.2	10.1	9.8	10.7	9.9	10.6	11.1	11.3
Both sexes, 16 to 19 years .....	38.9	35.2	36.1	32.1	37.5	33.0	34.6	35.5	35.7	31.2	35.6	35.1	37.8	39.0	42.6
Men, 16 to 19 years .....	40.1	37.6	39.9	30.8	35.9	32.0	34.3	34.0	38.7	31.7	35.4	40.0	38.7	41.6	46.3
Women, 16 to 19 years .....	37.5	32.6	31.9	33.4	39.1	34.1	35.0	37.1	32.4	30.7	35.8	30.5	36.8	36.3	38.9
Men, 20 years and over .....	12.1	10.3	10.2	9.8	9.5	9.2	8.3	9.2	7.9	7.8	8.9	8.8	9.0	9.1	9.4
Women, 20 years and over .....	10.6	9.8	9.4	9.0	9.2	8.9	8.3	8.5	9.0	9.1	9.3	7.8	8.7	9.4	9.0
Hispanic origin, total .....	10.6	9.9	10.1	9.9	9.4	8.8	9.2	10.2	8.9	9.1	8.8	10.0	9.0	8.8	9.9
Married men, spouse present .....	4.4	3.7	3.5	3.4	3.3	3.2	3.2	3.4	3.0	3.2	3.4	3.4	3.4	3.4	3.3
Married women, spouse present .....	4.6	4.1	4.1	4.0	4.0	3.9	3.7	3.7	3.6	3.9	4.2	3.9	3.8	4.1	4.1
Women who maintain families .....	9.5	8.9	8.8	8.9	8.9	8.7	8.8	8.9	8.1	7.6	9.0	8.0	8.4	8.5	7.0
Full-time workers .....	7.4	6.8	6.0	5.8	5.8	5.6	5.3	5.5	5.3	5.4	5.6	5.6	5.5	5.5	5.6
Part-time workers .....	7.4	7.1	6.2	5.8	5.6	5.4	5.9	6.2	6.0	5.8	6.3	6.1	6.3	6.6	5.9
<b>INDUSTRY</b>															
Nonagricultural private wage and salary workers .....	7.0	6.3	6.1	6.0	5.9	5.9	5.6	5.7	5.5	5.5	5.9	6.0	5.7	5.9	5.8
Mining .....	7.3	5.4	5.0	5.1	4.7	4.5	3.9	5.1	5.2	6.1	4.3	4.9	4.4	3.4	4.1
Construction .....	14.3	11.8	10.7	10.7	10.7	10.7	10.9	11.7	10.5	10.8	11.8	12.6	10.6	10.9	12.2
Manufacturing .....	7.2	5.6	5.3	5.3	5.1	5.1	4.9	4.7	4.4	4.5	4.8	5.5	5.2	5.2	4.8
Durable goods .....	7.1	5.2	5.3	5.3	4.8	4.3	4.6	4.2	3.9	4.2	4.4	5.3	4.2	4.8	4.0
Nondurable goods .....	7.3	6.0	5.3	5.4	5.6	6.0	5.4	5.4	5.0	4.9	5.4	6.0	6.6	5.8	5.9
Transportation and public utilities .....	5.1	4.8	4.8	4.5	4.4	4.6	4.2	4.7	4.5	4.5	4.6	4.0	4.5	4.7	4.4
Wholesale and retail trade .....	7.8	7.4	7.4	7.0	7.2	7.0	6.7	6.6	6.4	6.2	6.8	6.7	6.2	6.6	6.4
Finance, insurance, and real estate .....	4.1	3.6	3.7	4.3	3.4	3.6	2.9	2.9	3.5	3.3	3.4	3.7	3.3	3.5	3.4
Services .....	6.5	6.1	5.7	5.5	5.3	5.4	5.2	5.2	5.2	5.3	5.6	5.5	5.5	5.8	5.7
Government workers .....	3.3	3.4	3.6	3.2	3.2	2.7	3.1	3.2	2.8	2.7	3.1	2.8	3.2	2.8	3.0
Agricultural wage and salary workers .....	11.6	11.3	11.1	11.1	10.3	10.4	11.1	10.7	9.1	10.5	11.3	12.5	11.9	9.7	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. Duration of unemployment, monthly data seasonally adjusted**

(Numbers in thousands)

Weeks of unemployment	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Less than 5 weeks .....	3,160	2,728	2,655	2,675	2,434	2,599	2,587	2,937	2,600	2,523	2,629	2,598	2,742	2,600	2,713
5 to 14 weeks .....	2,522	2,408	2,572	2,294	2,256	2,163	2,149	2,122	2,165	2,319	2,430	2,304	2,348	2,621	2,434
15 weeks and over .....	3,052	2,860	2,773	2,768	2,934	2,861	2,456	2,386	2,298	2,266	2,505	2,585	2,299	2,319	2,380
15 to 26 weeks .....	1,274	1,237	1,198	1,213	1,344	1,187	1,088	1,033	1,090	920	1,115	1,282	1,096	1,023	1,150
27 weeks and over .....	1,778	1,623	1,575	1,555	1,590	1,474	1,368	1,353	1,207	1,347	1,390	1,303	1,203	1,297	1,230
Mean duration, in weeks .....	18.1	18.8	18.9	18.8	19.3	18.2	17.8	16.7	16.9	17.5	17.7	16.9	15.6	16.5	16.3
Median duration, in weeks .....	8.4	9.2	9.2	9.5	10.1	9.1	8.7	7.9	7.8	7.9	8.5	9.0	7.5	9.1	8.7

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.



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

(Numbers in thousands)

Reason for unemployment	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Job losers <sup>1</sup> .....	4,769	3,815	3,706	3,574	3,513	3,495	3,442	3,658	3,339	3,352	3,532	3,614	3,423	3,615	3,426
On temporary layoff .....	1,104	977	1,012	824	848	881	930	1,061	1,025	1,032	1,145	958	1,066	1,184	1,036
Not on temporary layoff .....	3,664	2,838	2,694	2,750	2,665	2,614	2,512	2,598	2,314	2,320	2,387	2,657	2,357	2,431	2,390
Job leavers .....	946	791	786	874	755	710	704	694	773	811	817	870	834	832	871
Reentrants .....	2,145	2,786	2,758	2,620	2,626	2,575	2,525	2,488	2,474	2,430	2,779	2,458	2,526	2,593	2,537
New entrants .....	874	604	621	600	614	578	555	597	582	604	637	522	540	571	574
<b>PERCENT OF UNEMPLOYED</b>															
Job losers <sup>1</sup> .....	54.6	47.7	47.1	46.6	46.8	47.5	47.6	49.2	46.6	46.6	45.5	48.4	46.7	47.5	46.2
On temporary layoff .....	12.6	12.2	12.9	10.7	11.3	12.0	12.9	14.3	14.3	14.3	14.7	12.8	14.6	15.6	14.0
Not on temporary layoff .....	42.0	35.5	34.2	35.9	35.5	35.5	34.8	34.9	32.3	32.2	30.7	35.6	32.2	31.9	32.3
Job leavers .....	10.8	9.9	10.0	11.4	10.1	9.6	9.7	9.3	10.8	11.3	10.5	11.7	11.4	10.9	11.8
Reentrants .....	24.6	34.8	35.0	34.2	35.0	35.0	34.9	33.4	34.5	33.8	35.8	32.9	34.5	34.1	34.2
New entrants .....	10.0	7.6	7.9	7.8	8.2	7.9	7.7	8.0	8.1	8.4	8.2	7.0	7.4	7.5	7.8
<b>PERCENT OF CIVILIAN LABOR FORCE</b>															
Job losers <sup>1</sup> .....	3.7	2.9	2.8	2.7	2.7	2.7	2.6	2.8	2.5	2.5	2.7	2.7	2.6	2.7	2.6
Job leavers .....	.7	.6	.6	.7	.6	.5	.5	.5	.6	.6	.6	.7	.6	.6	.7
Reentrants .....	1.7	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	2.1	1.9	1.9	2.0	1.9
New entrants .....	.7	.5	.5	.5	.5	.4	.4	.5	.4	.5	.5	.4	.4	.4	.4

<sup>1</sup> Includes persons who completed temporary jobs.

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

(Civilian workers)

Sex and age	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Total, 16 years and over .....	6.8	6.1	6.0	5.8	5.7	5.6	5.4	5.7	5.4	5.5	5.8	5.7	5.6	5.7	5.6
16 to 24 years .....	13.3	12.5	12.6	12.1	11.8	11.4	11.6	11.4	11.7	11.6	11.8	11.8	11.7	12.5	12.7
16 to 19 years .....	19.0	17.6	17.5	17.2	17.1	15.8	17.2	16.7	17.6	16.1	17.5	17.6	16.4	18.2	17.7
16 to 17 years .....	21.3	19.9	19.9	18.8	17.8	17.2	18.1	20.0	20.7	20.0	20.6	21.5	18.5	21.4	21.2
18 to 19 years .....	17.5	16.0	15.6	16.0	16.8	14.7	16.6	14.2	15.3	13.0	15.7	14.7	15.2	15.4	15.0
20 to 24 years .....	10.5	9.7	9.9	9.4	9.0	9.1	8.6	8.5	8.5	9.1	8.7	8.6	9.0	9.3	9.9
25 years and over .....	5.6	4.8	4.7	4.6	4.5	4.5	4.3	4.5	4.2	4.2	4.6	4.5	4.4	4.3	4.3
25 to 54 years .....	5.8	5.0	4.8	4.8	4.7	4.5	4.4	4.6	4.3	4.3	4.7	4.6	4.5	4.5	4.4
55 years and over .....	4.3	4.1	4.2	3.8	3.9	3.9	3.5	3.9	3.4	3.5	3.8	3.8	3.8	3.9	3.8
Men, 16 years and over .....	7.1	6.2	6.1	5.8	5.7	5.5	5.5	5.7	5.4	5.4	5.7	5.8	5.5	5.5	5.6
16 to 24 years .....	14.3	13.2	13.3	12.6	12.4	11.8	12.2	12.0	12.1	11.7	11.8	12.3	12.0	12.5	13.8
16 to 19 years .....	20.4	19.0	18.8	18.5	18.1	16.5	18.5	17.4	19.4	17.0	17.8	18.4	17.4	18.7	19.7
16 to 17 years .....	22.8	21.0	20.7	19.4	18.2	16.5	18.8	20.9	22.6	20.2	21.7	22.6	18.4	21.9	23.1
18 to 19 years .....	18.8	17.6	17.1	17.5	18.1	16.5	18.2	14.5	16.7	14.6	16.1	15.2	17.4	15.9	17.0
20 to 24 years .....	11.3	10.2	10.5	9.5	9.4	9.5	9.0	9.1	8.2	8.9	8.6	8.9	9.0	9.0	10.5
25 years and over .....	5.8	4.8	4.7	4.5	4.5	4.4	4.3	4.5	4.0	4.1	4.5	4.6	4.3	4.2	4.2
25 to 54 years .....	5.9	4.9	4.8	4.6	4.6	4.4	4.3	4.6	4.2	4.2	4.5	4.7	4.3	4.3	4.3
55 years and over .....	4.7	4.3	4.2	3.9	4.1	4.0	3.5	4.0	3.6	3.7	4.3	4.0	3.9	3.9	3.6
Women, 16 years and over .....	6.5	6.0	6.0	5.8	5.7	5.6	5.4	5.6	5.5	5.5	5.9	5.5	5.7	5.9	5.6
16 to 24 years .....	12.2	11.6	11.7	11.6	11.2	10.9	10.9	10.7	11.2	11.5	11.9	11.4	11.3	12.6	11.5
16 to 19 years .....	17.4	16.2	16.1	15.9	16.0	15.0	15.8	15.9	15.6	15.2	17.2	16.7	15.2	17.6	15.5
16 to 17 years .....	19.6	18.7	19.0	18.2	17.4	17.9	17.4	19.1	18.7	19.8	19.4	20.4	18.6	21.0	19.2
18 to 19 years .....	16.0	14.3	14.0	14.2	15.4	12.8	14.9	13.9	13.7	11.3	15.2	14.0	12.8	14.9	12.8
20 to 24 years .....	9.6	9.2	9.3	9.3	8.6	8.7	8.1	7.8	8.7	9.4	8.8	8.2	9.0	9.7	9.2
25 years and over .....	5.4	4.9	4.8	4.7	4.6	4.6	4.3	4.6	4.3	4.3	4.7	4.4	4.5	4.6	4.4
25 to 54 years .....	5.6	5.0	4.9	5.0	4.8	4.7	4.4	4.6	4.5	4.4	5.0	4.6	4.7	4.6	4.5
55 years and over .....	3.8	3.9	4.1	3.6	3.7	3.8	3.4	3.7	3.2	3.4	3.3	3.6	3.7	3.9	4.1

**10. Unemployment rates by State, seasonally adjusted**

State	July 1994	June 1995	July 1995 <sup>P</sup>	State	July 1994	June 1995	July 1995 <sup>P</sup>
Alabama	5.9	6.2	6.3	Montana	4.9	5.5	5.3
Alaska	7.9	6.7	6.9	Nebraska	2.9	2.5	2.5
Arizona	6.6	5.2	5.3	Nevada	6.0	5.8	5.8
Arkansas	5.5	4.1	4.7	New Hampshire	4.6	3.6	3.9
California	8.8	7.6	7.9	New Jersey	6.5	6.6	6.8
Colorado	4.2	4.2	4.0	New Mexico	6.1	5.6	5.9
Connecticut	5.4	5.2	5.3	New York	7.0	5.9	6.2
Delaware	4.9	4.2	4.0	North Carolina	4.6	4.4	4.0
District of Columbia	8.5	8.9	9.0	North Dakota	3.9	3.1	3.0
Florida	6.3	5.3	5.2	Ohio	5.7	4.8	4.9
Georgia	5.5	5.0	5.1	Oklahoma	5.8	4.7	4.8
Hawaii	6.5	5.0	5.2	Oregon	5.2	5.2	4.6
Idaho	5.5	4.9	5.3	Pennsylvania	6.4	6.2	5.4
Illinois	5.7	4.1	5.1	Rhode Island	7.2	6.9	7.2
Indiana	5.2	4.8	4.8	South Carolina	6.1	4.7	5.2
Iowa	3.6	3.4	3.1	South Dakota	3.2	2.3	2.7
Kansas	5.3	4.5	4.7	Tennessee	4.9	5.0	5.2
Kentucky	5.5	4.9	5.1	Texas	6.7	6.3	6.0
Louisiana	8.0	7.0	7.1	Utah	3.8	3.5	3.3
Maine	7.3	6.1	6.2	Vermont	4.6	4.0	4.2
Maryland	5.1	5.1	5.1	Virginia	5.0	4.4	4.5
Massachusetts	6.0	5.6	5.7	Washington	6.3	6.3	6.2
Michigan	5.8	6.2	5.1	West Virginia	8.7	7.7	8.3
Minnesota	4.0	3.9	3.7	Wisconsin	4.7	3.3	3.3
Mississippi	6.6	6.0	5.7	Wyoming	5.2	4.7	4.6
Missouri	4.6	4.9	5.2				

• P = preliminary

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

(In thousands)

State	July 1994	June 1995	July 1995 <sup>P</sup>	State	July 1994	June 1995	July 1995 <sup>P</sup>
Alabama	1,750.4	1,776.0	1,767.3	Montana	341.8	349.3	351.7
Alaska	259.7	261.6	262.2	Nebraska	796.7	812.6	810.2
Arizona	1,676.4	1,754.8	1,762.6	Nevada	740.5	777.3	781.8
Arkansas	1,039.9	1,070.8	1,072.2	New Hampshire	528.6	529.9	529.5
California	12,148.4	12,256.4	12,270.4	New Jersey	3,560.3	3,603.4	3,607.5
Colorado	1,762.0	1,790.3	1,800.6	New Mexico	658.5	688.1	688.4
Connecticut	1,546.1	1,546.7	1,542.8	New York	7,826.1	7,848.3	7,868.7
Delaware	354.9	357.3	364.2	North Carolina	3,370.5	3,433.6	3,452.0
District of Columbia	656.4	642.5	638.8	North Dakota	295.3	301.7	302.7
Florida	5,805.3	6,002.1	6,000.9	Ohio	5,073.7	5,169.8	5,155.3
Georgia	3,262.6	3,396.3	3,402.1	Oklahoma	1,282.8	1,302.8	1,310.3
Hawaii	534.9	533.6	530.0	Oregon	1,367.1	1,419.6	1,425.3
Idaho	464.4	476.0	474.1	Pennsylvania	5,199.4	5,204.7	5,211.4
Illinois	5,486.4	5,534.9	5,536.4	Rhode Island	434.4	432.7	429.8
Indiana	2,705.9	2,750.0	2,745.2	South Carolina	1,615.9	1,632.8	1,634.3
Iowa	1,329.0	1,355.1	1,356.3	South Dakota	334.0	343.3	343.4
Kansas	1,160.1	1,202.4	1,200.3	Tennessee	2,429.5	2,486.4	2,486.8
Kentucky	1,605.8	1,636.2	1,632.7	Texas	7,784.1	8,015.8	8,040.6
Louisiana	1,727.8	1,797.1	1,788.9	Utah	863.5	907.5	914.3
Maine	533.9	542.4	540.6	Vermont	263.6	267.4	265.9
Maryland	2,153.0	2,162.1	2,161.0	Virginia	3,008.5	3,080.1	3,079.6
Massachusetts	2,914.9	2,953.8	2,961.0	Washington	2,301.5	2,368.2	2,364.9
Michigan	4,149.9	4,241.5	4,251.8	West Virginia	670.9	687.5	685.1
Minnesota	2,319.9	2,369.1	2,371.5	Wisconsin	2,492.2	2,541.8	2,544.1
Mississippi	1,065.9	1,052.4	1,052.5	Wyoming	217.1	217.9	218.1
Missouri	2,478.4	2,542.4	2,539.9				

<sup>P</sup> = 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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Aug. <sup>P</sup>
<b>TOTAL</b> .....	110,730	114,034	114,510	114,762	114,935	115,427	115,624	115,810	116,123	116,302	116,310	116,248	116,547	116,553	116,802
<b>PRIVATE SECTOR</b> .....	91,889	94,917	95,327	95,555	95,740	96,152	96,405	96,588	96,882	97,054	97,049	97,005	97,264	97,270	97,446
<b>GOODS-PRODUCING</b> .....	23,352	23,913	23,981	24,030	24,081	24,175	24,230	24,293	24,324	24,370	24,331	24,228	24,240	24,144	24,157
<b>Mining<sup>1</sup></b> .....	610	600	597	598	595	592	592	590	588	589	583	582	582	577	576
Metal mining .....	50	49	49	49	49	49	50	50	51	51	51	51	52	52	52
Oil and gas extraction .....	350	336	333	336	331	328	326	325	323	323	319	320	320	315	313
Nonmetallic minerals, except fuels .....	102	103	103	103	104	104	104	105	105	106	105	104	104	104	104
<b>Construction</b> .....	4,668	5,010	5,038	5,077	5,088	5,144	5,166	5,201	5,213	5,256	5,242	5,190	5,230	5,227	5,229
General building contractors .....	1,120	1,201	1,206	1,214	1,222	1,234	1,241	1,250	1,250	1,258	1,255	1,237	1,241	1,234	1,225
Heavy construction, except building .....	713	736	738	740	734	740	739	742	740	747	743	730	737	742	745
Special trades contractors .....	2,836	3,073	3,094	3,123	3,132	3,170	3,186	3,209	3,223	3,251	3,244	3,223	3,252	3,251	3,259
<b>Manufacturing</b> .....	18,075	18,303	18,346	18,355	18,398	18,439	18,472	18,502	18,523	18,525	18,506	18,456	18,428	18,340	18,352
Production workers .....	12,341	12,615	12,658	12,671	12,709	12,759	12,785	12,813	12,833	12,832	12,818	12,772	12,738	12,662	12,682
<b>Durable goods</b> .....	10,221	10,431	10,465	10,481	10,513	10,550	10,574	10,596	10,622	10,633	10,632	10,611	10,597	10,564	10,582
Production workers .....	6,849	7,092	7,128	7,145	7,175	7,218	7,239	7,259	7,288	7,297	7,296	7,271	7,250	7,225	7,241
Lumber and wood products .....	709	752	757	758	761	766	766	767	766	767	761	757	753	749	751
Furniture and fixtures .....	487	502	504	504	505	507	507	508	509	509	506	501	497	492	496
Stone, clay, and glass products ..	517	533	534	535	537	539	540	542	545	547	546	542	543	540	541
Primary metal industries .....	683	699	699	704	708	712	715	716	718	718	719	718	716	712	709
Blast furnaces and basic steel products .....	240	239	238	239	239	240	240	239	240	240	240	241	241	239	238
Fabricated metal products .....	1,339	1,387	1,396	1,397	1,405	1,412	1,421	1,428	1,435	1,439	1,442	1,439	1,432	1,431	1,432
Industrial machinery and equipment .....	1,931	1,985	1,992	1,995	1,999	2,006	2,010	2,017	2,025	2,029	2,036	2,034	2,041	2,044	2,049
Computer and office equipment ..	363	351	350	348	345	344	342	341	340	336	337	336	338	337	338
Electronic and other electrical equipment .....	1,526	1,571	1,581	1,586	1,589	1,595	1,603	1,608	1,613	1,614	1,616	1,620	1,622	1,622	1,628
Electronic components and accessories .....	528	544	549	552	554	556	560	563	565	569	571	574	578	582	587
Transportation equipment .....	1,756	1,749	1,751	1,753	1,761	1,764	1,764	1,764	1,766	1,767	1,766	1,761	1,753	1,739	1,741
Motor vehicles and equipment ..	837	899	908	913	921	924	926	932	934	937	938	936	933	931	933
Aircraft and parts .....	542	480	473	469	467	465	462	459	457	455	455	452	449	442	440
Instruments and related products ..	896	863	859	857	854	854	853	850	849	847	846	846	846	845	844
Miscellaneous manufacturing industries .....	378	390	392	392	394	395	395	396	396	396	394	393	394	390	391
<b>Nonurable goods</b> .....	7,854	7,872	7,881	7,874	7,885	7,889	7,898	7,906	7,901	7,892	7,874	7,845	7,831	7,776	7,770
Production workers .....	5,492	5,523	5,530	5,526	5,534	5,541	5,546	5,554	5,545	5,535	5,522	5,501	5,488	5,437	5,441
Food and kindred products .....	1,680	1,680	1,679	1,677	1,677	1,683	1,684	1,690	1,689	1,690	1,687	1,687	1,695	1,679	1,676
Tobacco products .....	44	42	42	41	41	41	41	40	40	39	40	39	40	39	40
Textile mill products .....	675	673	674	671	674	674	673	672	671	670	669	664	660	650	649
Apparel and other textile products .....	989	969	972	971	970	963	960	957	951	946	940	931	921	911	905
Paper and allied products .....	692	691	691	689	692	692	692	693	692	691	692	690	689	687	688
Printing and publishing .....	1,517	1,542	1,547	1,547	1,550	1,551	1,556	1,557	1,561	1,561	1,557	1,555	1,561	1,557	1,551
Chemicals and allied products ..	1,081	1,061	1,057	1,056	1,055	1,054	1,054	1,055	1,054	1,053	1,051	1,048	1,045	1,042	1,042
Petroleum and coal products .....	152	149	150	149	149	149	150	147	148	148	146	145	144	144	143
Rubber and miscellaneous plastics products .....	909	952	956	960	965	970	975	982	983	982	981	976	968	962	969
Leather and leather products .....	117	114	113	113	112	112	113	113	112	112	111	110	108	105	107
<b>SERVICE-PRODUCING</b> .....	87,378	90,121	90,529	90,732	90,854	91,252	91,394	91,517	91,799	91,932	91,979	92,020	92,307	92,409	92,645
<b>Transportation and public utilities</b> .....	5,829	6,006	6,045	6,048	6,061	6,092	6,121	6,129	6,156	6,175	6,184	6,177	6,192	6,194	6,211
Transportation .....	3,615	3,775	3,810	3,813	3,821	3,846	3,870	3,886	3,900	3,914	3,919	3,910	3,920	3,927	3,946
Railroad transportation .....	248	241	237	240	240	242	241	241	242	242	242	240	238	236	236
Local and interurban passenger transit .....	379	410	425	418	417	421	425	428	431	433	437	439	443	458	462
Trucking and warehousing .....	1,698	1,797	1,819	1,824	1,828	1,843	1,857	1,864	1,871	1,877	1,879	1,872	1,878	1,875	1,882
Water transportation .....	168	169	168	168	167	165	164	166	165	164	164	161	158	157	159
Transportation by air .....	740	748	746	746	748	750	754	754	756	760	759	758	762	761	765
Pipelines, except natural gas .....	18	18	18	18	18	18	18	17	17	17	17	17	17	16	16
Transportation services .....	363	392	397	399	403	407	411	416	418	421	421	423	424	424	426
Communications and public utilities .....	2,214	2,231	2,235	2,235	2,240	2,246	2,251	2,243	2,256	2,261	2,265	2,267	2,272	2,267	2,265
Communications .....	1,269	1,305	1,314	1,314	1,320	1,325	1,331	1,327	1,343	1,351	1,355	1,359	1,366	1,365	1,363
Electric, gas, and sanitary services .....	944	927	921	921	920	921	920	916	913	910	910	908	906	902	902
<b>Wholesale trade</b> .....	5,981	6,140	6,163	6,181	6,195	6,210	6,229	6,251	6,275	6,287	6,300	6,298	6,320	6,332	6,334
<b>Retail trade</b> .....	19,773	20,437	20,497	20,565	20,580	20,703	20,759	20,760	20,794	20,760	20,762	20,747	20,798	20,855	20,840
Building materials and garden supplies .....	779	828	835	838	840	844	846	851	851	849	852	849	849	847	848
General merchandise stores .....	2,488	2,545	2,551	2,555	2,563	2,598	2,585	2,562	2,545	2,530	2,539	2,532	2,532	2,533	2,533
Department stores .....	2,140	2,212	2,219	2,225	2,232	2,268	2,256	2,236	2,223	2,207	2,218	2,213	2,215	2,218	2,217
Food stores .....	3,224	3,289	3,297	3,296	3,298	3,308	3,320	3,325	3,328	3,332	3,345	3,343	3,353	3,357	3,374

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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>p</sup>	Aug. <sup>p</sup>
<b>Automotive dealers and service stations</b> .....	2,014	2,123	2,135	2,145	2,154	2,165	2,173	2,182	2,191	2,202	2,205	2,205	2,206	2,206	2,218
New and used car dealers .....	908	964	971	975	979	984	989	993	996	998	1,000	1,000	998	999	1,003
<b>Apparel and accessory stores</b> .....	1,144	1,134	1,132	1,135	1,136	1,130	1,126	1,122	1,118	1,110	1,103	1,095	1,097	1,092	1,085
<b>Furniture and home furnishings stores</b> .....	828	890	899	906	915	926	927	933	936	943	945	944	946	947	953
<b>Eating and drinking places</b> .....	6,821	7,069	7,084	7,103	7,086	7,134	7,182	7,188	7,221	7,191	7,170	7,169	7,209	7,262	7,230
<b>Miscellaneous retail establishments</b> .....	2,476	2,560	2,564	2,587	2,588	2,598	2,600	2,597	2,604	2,603	2,603	2,610	2,606	2,611	2,599
<b>Finance, insurance, and real estate</b> .....	6,757	6,933	6,948	6,942	6,935	6,937	6,931	6,927	6,929	6,938	6,924	6,925	6,930	6,935	6,950
<b>Finance</b> .....	3,238	3,323	3,329	3,324	3,320	3,319	3,317	3,312	3,312	3,313	3,305	3,307	3,304	3,306	3,314
Depository institutions .....	2,089	2,075	2,074	2,072	2,072	2,071	2,070	2,067	2,066	2,066	2,063	2,060	2,054	2,052	2,053
Commercial banks .....	1,497	1,492	1,492	1,492	1,496	1,498	1,498	1,497	1,497	1,499	1,494	1,492	1,488	1,491	1,491
Savings institutions .....	324	308	305	303	300	296	295	293	291	289	288	285	284	282	281
Nondepository institutions .....	455	499	499	494	490	485	481	478	475	475	473	476	480	484	489
<b>Security and commodity brokers</b> .....	472	518	524	525	525	528	530	530	532	532	528	528	528	526	531
<b>Holding and other investment offices</b> .....	223	231	232	233	233	235	236	237	239	240	241	243	242	244	241
<b>Insurance</b> .....	2,197	2,237	2,238	2,236	2,236	2,236	2,232	2,233	2,233	2,238	2,239	2,237	2,240	2,242	2,246
Insurance carriers .....	1,529	1,551	1,549	1,546	1,544	1,542	1,537	1,535	1,534	1,536	1,536	1,534	1,534	1,538	1,540
Insurance agents, brokers and service .....	668	686	689	690	692	694	695	698	699	702	703	703	706	704	706
<b>Real estate</b> .....	1,322	1,373	1,381	1,382	1,379	1,382	1,382	1,382	1,384	1,387	1,380	1,381	1,386	1,387	1,390
<b>Services<sup>1</sup></b> .....	30,197	31,488	31,693	31,789	31,888	32,035	32,135	32,228	32,404	32,524	32,548	32,630	32,784	32,810	32,954
<b>Agricultural services</b> .....	519	565	571	574	578	584	588	575	580	584	589	577	582	586	586
<b>Hotels and other lodging places</b> .....	1,596	1,618	1,620	1,617	1,612	1,605	1,612	1,614	1,614	1,616	1,611	1,615	1,628	1,631	1,632
<b>Personal services</b> .....	1,137	1,139	1,139	1,139	1,140	1,140	1,138	1,148	1,160	1,158	1,152	1,146	1,145	1,144	1,139
<b>Business services</b> .....	5,735	6,239	6,314	6,358	6,392	6,457	6,487	6,513	6,555	6,570	6,538	6,567	6,589	6,603	6,684
Services to buildings .....	823	855	860	861	861	869	870	868	870	871	866	866	867	870	879
<b>Personnel supply services</b> .....	1,906	2,254	2,296	2,321	2,337	2,373	2,386	2,408	2,427	2,399	2,368	2,371	2,375	2,374	2,414
Help supply services .....	1,669	2,002	2,040	2,061	2,077	2,107	2,118	2,138	2,152	2,138	2,097	2,096	2,098	2,096	2,140
<b>Computer and data processing services</b> .....	893	950	958	967	974	984	991	994	1,006	1,017	1,026	1,039	1,045	1,051	1,062
<b>Auto repair services, and parking</b> .....	925	971	979	984	989	995	1,000	1,006	1,010	1,014	1,016	1,016	1,022	1,027	1,029
<b>Miscellaneous repair services</b> .....	349	334	334	334	335	337	338	340	342	344	342	341	340	340	342
<b>Motion pictures</b> .....	412	471	481	491	505	519	529	545	566	577	580	596	598	601	595
<b>Amusement and recreation services</b> .....	1,258	1,344	1,365	1,354	1,364	1,371	1,375	1,380	1,398	1,434	1,462	1,471	1,511	1,519	1,519
<b>Health services</b> .....	8,756	9,001	9,037	9,055	9,074	9,096	9,121	9,141	9,168	9,197	9,211	9,223	9,253	9,266	9,294
Offices and clinics of medical doctors .....	1,506	1,541	1,549	1,548	1,553	1,557	1,562	1,563	1,570	1,576	1,578	1,580	1,585	1,585	1,591
<b>Nursing and personal care facilities</b> .....	1,585	1,649	1,657	1,659	1,661	1,663	1,667	1,672	1,676	1,679	1,682	1,683	1,689	1,693	1,697
<b>Hospitals</b> .....	3,779	3,774	3,776	3,779	3,781	3,785	3,790	3,792	3,796	3,802	3,810	3,810	3,811	3,812	3,826
Home health care services .....	469	555	566	572	575	579	588	591	596	599	597	600	606	610	614
<b>Legal services</b> .....	924	927	927	928	928	930	930	931	932	933	932	930	929	927	929
<b>Educational services</b> .....	1,711	1,822	1,831	1,840	1,843	1,851	1,854	1,843	1,864	1,863	1,866	1,875	1,887	1,882	1,885
<b>Social services</b> .....	2,070	2,181	2,205	2,211	2,216	2,226	2,233	2,244	2,254	2,264	2,265	2,275	2,274	2,247	2,269
Child day care services .....	473	502	518	509	510	512	512	514	517	519	519	522	524	526	530
Residential care .....	567	602	606	610	613	617	620	623	626	629	631	634	636	636	641
<b>Museums and botanical and zoological gardens</b> .....	76	79	80	79	79	80	80	80	81	81	81	81	82	83	83
<b>Membership organizations</b> .....	2,035	2,059	2,060	2,065	2,066	2,066	2,062	2,062	2,060	2,059	2,057	2,060	2,062	2,066	2,068
<b>Engineering and management services</b> .....	2,521	2,567	2,578	2,589	2,595	2,606	2,616	2,634	2,648	2,658	2,674	2,685	2,710	2,716	2,729
Engineering and architectural services .....	757	775	780	785	785	787	790	793	795	795	799	799	801	802	806
<b>Management and public relations</b> .....	688	716	719	725	731	737	742	752	762	773	785	790	809	812	819
<b>Government</b> .....	18,841	19,118	19,183	19,207	19,195	19,275	19,219	19,222	19,241	19,248	19,261	19,243	19,283	19,283	19,356
<b>Federal</b> .....	2,915	2,870	2,861	2,863	2,858	2,854	2,853	2,838	2,831	2,828	2,826	2,831	2,838	2,837	2,834
Federal, except Postal Service .....	2,128	2,053	2,041	2,039	2,031	2,022	2,014	2,004	1,997	1,992	1,987	1,995	1,993	1,993	1,991
<b>State</b> .....	4,488	4,562	4,594	4,589	4,589	4,596	4,598	4,599	4,610	4,613	4,608	4,602	4,612	4,602	4,623
Education .....	1,834	1,875	1,900	1,891	1,888	1,892	1,891	1,889	1,901	1,904	1,905	1,906	1,919	1,923	1,937
<b>Other State government</b> .....	2,654	2,687	2,694	2,698	2,701	2,704	2,707	2,710	2,709	2,709	2,703	2,696	2,693	2,679	2,686
<b>Local</b> .....	11,438	11,685	11,728	11,755	11,748	11,825	11,768	11,785	11,800	11,807	11,827	11,810	11,833	11,844	11,899
Education .....	6,353	6,490	6,548	6,554	6,544	6,549	6,557	6,577	6,591	6,599	6,614	6,606	6,609	6,639	6,679
<b>Other local government</b> .....	5,085	5,195	5,180	5,201	5,204	5,276	5,211	5,208	5,209	5,208	5,213	5,204	5,224	5,205	5,220

<sup>1</sup> Includes other industries not shown separately.

<sup>p</sup> = 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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Aug. <sup>P</sup>
<b>PRIVATE SECTOR</b> .....	34.5	34.7	34.6	34.7	34.9	34.6	34.7	34.8	34.6	34.6	34.6	34.2	34.4	34.6	34.4
<b>GOODS-PRODUCING</b> .....	40.9	41.4	41.4	41.4	41.4	41.4	41.5	41.6	41.4	41.3	40.7	40.6	40.9	40.8	40.9
<b>MINING</b> .....	44.3	44.7	44.6	44.9	44.8	44.9	44.7	44.9	44.9	44.6	44.7	44.3	44.9	44.9	44.5
<b>MANUFACTURING</b> .....	41.4	42.0	42.0	42.1	42.1	42.1	42.1	42.2	42.1	42.0	41.5	41.4	41.5	41.3	41.5
Overtime hours .....	4.1	4.7	4.7	4.8	4.7	4.8	4.8	4.9	4.8	4.7	4.5	4.4	4.2	4.3	4.4
<b>Durable goods</b> .....	42.1	42.8	42.9	42.9	42.9	43.0	43.0	43.0	43.0	42.8	42.3	42.1	42.2	41.9	42.3
Overtime hours .....	4.3	5.0	5.0	5.1	5.0	5.1	5.1	5.3	5.2	5.1	4.9	4.6	4.5	4.5	4.6
Lumber and wood products .....	40.8	41.2	41.2	41.0	41.3	41.1	41.2	41.2	40.9	40.7	40.4	40.3	40.6	40.1	40.7
Furniture and fixtures .....	40.1	40.4	40.5	40.7	40.7	40.6	40.4	40.8	40.5	39.8	38.7	39.2	39.4	39.1	39.6
Stone, clay, and glass products .....	42.7	43.4	43.4	43.6	43.5	43.5	43.5	43.6	43.3	43.4	42.5	42.4	43.0	42.9	43.1
Primary metal industries .....	43.7	44.7	44.7	44.9	44.9	45.0	45.0	44.8	44.8	44.5	43.5	43.8	43.8	43.0	43.7
Blast furnaces and basic steel products .....	44.1	44.9	45.1	45.3	45.5	45.6	45.6	45.7	45.4	45.1	45.4	44.1	43.7	43.2	44.2
Fabricated metal products .....	42.1	42.9	42.9	42.9	42.9	43.0	43.0	43.2	43.1	42.8	42.0	42.1	42.1	42.0	42.3
Industrial machinery and equipment .....	43.0	43.7	43.6	43.8	43.7	43.8	43.8	44.0	44.0	43.9	43.3	43.4	43.2	42.9	43.2
Electronic and other electrical equipment .....	41.8	42.2	42.2	42.0	42.2	42.1	42.0	42.1	41.9	41.8	41.5	41.4	41.5	41.3	41.6
Transportation equipment .....	43.0	44.3	44.4	44.3	44.4	44.7	44.7	44.6	44.7	44.5	44.3	43.4	43.6	43.3	44.0
Motor vehicles and equipment .....	44.3	46.0	45.9	45.9	45.8	46.4	46.2	46.1	46.1	45.8	43.1	44.2	44.3	44.3	44.7
Instruments and related products .....	41.1	41.7	41.8	41.8	41.9	41.8	41.7	41.8	41.7	41.7	41.5	41.3	41.2	41.3	41.2
Miscellaneous manufacturing .....	39.8	40.0	40.0	39.9	40.1	40.0	39.9	40.1	40.2	39.9	40.1	39.8	40.0	39.5	39.9
<b>Nondurable goods</b> .....	40.6	40.9	40.9	41.0	41.0	41.0	41.1	41.0	41.0	40.9	40.4	40.4	40.5	40.4	40.4
Overtime hours .....	4.0	4.3	4.2	4.3	4.3	4.3	4.3	4.4	4.3	4.2	4.0	4.0	3.9	4.0	4.1
Food and kindred products .....	40.7	41.3	41.3	41.4	41.3	41.5	41.5	41.5	41.3	41.3	40.7	41.0	41.3	41.2	41.2
Textile mill products .....	41.4	41.6	41.6	41.6	41.8	41.5	41.6	41.8	41.9	41.8	41.0	40.4	40.3	40.3	40.7
Apparel and other textile products .....	37.2	37.5	37.6	37.6	37.7	37.6	37.7	37.5	37.7	37.6	37.0	36.9	36.9	36.8	36.9
Paper and allied products .....	43.6	43.9	44.1	43.9	44.0	43.9	44.0	44.0	43.9	43.7	43.0	42.9	43.0	43.2	43.1
Printing and publishing .....	38.3	38.6	38.6	38.6	38.7	38.6	38.7	38.5	38.5	38.4	38.2	38.4	38.1	38.1	37.9
Chemicals and allied products .....	43.1	43.2	43.2	43.2	43.4	43.4	43.2	43.3	43.4	43.4	43.4	43.2	43.3	43.2	43.3
Rubber and miscellaneous plastics products .....	41.8	42.2	42.2	42.3	42.3	42.3	42.3	42.3	42.3	42.0	41.2	41.6	41.4	41.0	41.2
Leather and leather products .....	38.6	38.6	38.6	38.6	39.0	38.7	38.6	38.0	38.4	38.4	38.1	38.5	38.3	36.7	38.4
<b>SERVICE-PRODUCING</b> .....	32.7	32.8	32.7	32.8	33.0	32.7	32.8	32.9	32.7	32.7	32.9	32.4	32.7	32.8	32.6
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	39.6	39.9	39.7	40.0	40.0	39.8	39.6	39.8	39.7	39.5	39.8	39.1	39.4	39.7	39.3
<b>WHOLESALE TRADE</b> .....	38.2	38.4	38.2	38.4	38.6	38.4	38.4	38.4	38.4	38.2	38.3	37.9	38.2	38.3	38.2
<b>RETAIL TRADE</b> .....	28.8	28.9	28.9	28.9	29.2	28.9	28.9	29.0	28.8	28.8	29.1	28.7	28.8	28.9	28.8

<sup>P</sup> = 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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Aug. <sup>P</sup>
<b>PRIVATE SECTOR (in current dollars)</b> .....	\$10.83	\$11.13	\$11.14	\$11.18	\$11.25	\$11.24	\$11.27	\$11.29	\$11.32	\$11.34	\$11.40	\$11.37	\$11.43	\$11.49	\$11.47
<b>Goods-producing</b> .....	12.37	12.71	12.74	12.78	12.81	12.83	12.83	12.84	12.89	12.91	12.94	12.94	13.02	13.09	13.09
Mining .....	14.60	14.89	14.85	14.95	15.04	15.04	15.08	15.08	15.12	15.15	15.17	15.18	15.30	15.45	15.42
Construction .....	14.38	14.72	14.74	14.82	14.90	14.84	14.81	14.74	14.88	14.90	14.95	14.99	15.10	15.10	15.09
Manufacturing .....	11.74	12.06	12.09	12.12	12.14	12.17	12.18	12.21	12.24	12.25	12.28	12.28	12.32	12.40	12.41
Excluding overtime .....	11.18	11.42	11.44	11.47	11.49	11.52	11.53	11.56	11.60	11.61	11.72	11.67	11.71	11.80	11.80
<b>Service-producing</b> .....	10.30	10.57	10.57	10.62	10.70	10.68	10.71	10.74	10.76	10.79	10.87	10.83	10.88	10.94	10.91
Transportation and public utilities .....	13.62	13.86	13.87	13.88	13.99	14.02	14.01	14.03	14.00	14.05	14.15	14.13	14.21	14.26	14.28
Wholesale trade .....	11.74	12.05	12.05	12.08	12.22	12.15	12.20	12.23	12.24	12.27	12.41	12.31	12.36	12.44	12.41
Retail trade .....	7.29	7.49	7.51	7.53	7.56	7.56	7.60	7.59	7.60	7.61	7.63	7.65	7.67	7.71	7.73
Finance, insurance, and real estate .....	11.35	11.83	11.81	11.90	12.05	11.99	12.01	12.06	12.09	12.16	12.28	12.19	12.30	12.43	12.33
Services .....	10.78	11.05	11.06	11.11	11.20	11.17	11.21	11.26	11.28	11.30	11.39	11.34	11.38	11.44	11.39
<b>PRIVATE SECTOR (in constant (1982) dollars)</b> .....	7.39	7.41	7.37	7.38	7.42	7.40	7.40	7.39	7.39	7.38	7.40	7.36	7.39	7.43	-

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

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

Industry	Annual average		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Aug. <sup>P</sup>
<b>PRIVATE SECTOR</b> .....	\$10.83	\$11.13	\$11.05	\$11.22	\$11.28	\$11.27	\$11.28	\$11.36	\$11.36	\$11.36	\$11.41	\$11.38	\$11.36	\$11.41	\$11.38
<b>MINING</b> .....	14.60	14.89	14.69	14.92	14.91	14.97	15.09	15.25	15.26	15.24	15.31	15.21	15.25	15.33	15.25
<b>CONSTRUCTION</b> .....	14.38	14.72	14.79	14.97	15.05	14.87	14.83	14.67	14.82	14.84	14.88	14.96	14.99	15.10	15.15
<b>MANUFACTURING</b> .....	11.74	12.06	12.01	12.14	12.10	12.17	12.26	12.23	12.24	12.25	12.29	12.28	12.31	12.38	12.34
<b>Durable goods</b> .....	12.33	12.67	12.62	12.76	12.70	12.77	12.87	12.81	12.83	12.83	12.80	12.83	12.85	12.90	12.89
Lumber and wood products .....	9.61	9.84	9.87	9.95	9.96	9.93	9.97	9.95	9.94	9.95	9.98	10.01	10.11	10.22	10.17
Furniture and fixtures .....	9.27	9.55	9.56	9.69	9.70	9.67	9.76	9.67	9.66	9.67	9.75	9.71	9.77	9.83	9.91
Stone, clay, and glass products .....	11.85	12.13	12.19	12.27	12.22	12.21	12.21	12.19	12.23	12.25	12.43	12.31	12.35	12.46	12.47
Primary metal industries .....	13.99	14.33	14.34	14.40	14.37	14.44	14.53	14.54	14.43	14.41	14.72	14.50	14.58	14.68	14.67
Blast furnaces and basic steel products .....	16.36	16.85	16.95	17.05	17.08	17.13	17.16	17.30	17.09	17.03	17.50	17.23	17.35	17.42	17.56
Fabricated metal products .....	11.69	11.93	11.87	11.99	11.92	12.03	12.09	12.04	12.03	12.05	12.03	12.07	12.05	12.10	12.12
Industrial machinery and equipment .....	12.73	12.99	12.92	13.04	13.03	13.11	13.19	13.15	13.15	13.15	13.05	13.15	13.15	13.20	13.20
Electronic and other electrical equipment .....	11.24	11.50	11.52	11.57	11.51	11.54	11.59	11.59	11.53	11.54	11.51	11.55	11.62	11.73	11.75
Transportation equipment .....	15.80	16.48	16.44	16.71	16.52	16.62	16.83	16.60	16.71	16.66	16.48	16.57	16.63	16.63	16.56
Motor vehicles and equipment .....	16.10	16.98	16.92	17.27	16.98	17.11	17.37	17.12	17.26	17.23	17.03	17.13	17.17	17.19	17.05
Instruments and related products .....	12.23	12.47	12.48	12.55	12.54	12.55	12.63	12.54	12.63	12.63	12.69	12.66	12.69	12.78	12.75
Miscellaneous manufacturing .....	9.39	9.66	9.63	9.71	9.72	9.79	9.90	9.98	9.94	9.90	9.95	9.98	9.95	10.02	9.97
<b>Nondurable goods</b> .....	10.98	11.25	11.20	11.31	11.30	11.35	11.42	11.44	11.43	11.45	11.58	11.52	11.55	11.67	11.60
Food and kindred products .....	10.45	10.66	10.59	10.64	10.65	10.81	10.85	10.85	10.83	10.87	10.93	10.91	10.92	10.93	10.90
Tobacco products .....	16.89	19.10	18.91	18.89	18.71	19.46	18.64	18.71	19.67	20.44	20.12	21.05	21.93	22.02	19.01
Textile mill products .....	8.88	9.13	9.12	9.20	9.19	9.26	9.31	9.35	9.31	9.30	9.36	9.35	9.38	9.40	9.47
Apparel and other textile products .....	7.09	7.34	7.36	7.44	7.43	7.45	7.47	7.53	7.48	7.51	7.61	7.56	7.60	7.62	7.67
Paper and allied products .....	13.42	13.77	13.80	13.96	13.89	13.92	13.98	14.01	14.02	14.03	14.27	14.17	14.14	14.42	14.26
Printing and publishing .....	11.93	12.13	12.12	12.26	12.23	12.20	12.26	12.24	12.24	12.26	12.21	12.22	12.24	12.32	12.33
Chemicals and allied products .....	14.82	15.14	15.08	15.27	15.30	15.29	15.42	15.40	15.42	15.43	15.72	15.53	15.53	15.70	15.68
Petroleum and coal products .....	18.53	19.07	18.76	19.32	19.29	19.25	19.32	19.19	19.55	19.38	19.57	19.18	19.17	19.25	19.13
Rubber and miscellaneous plastics products .....	10.57	10.70	10.65	10.65	10.66	10.69	10.79	10.82	10.76	10.80	10.77	10.86	10.91	11.01	10.96
Leather and leather products .....	7.63	7.98	7.97	7.99	8.03	8.05	8.06	8.13	8.14	8.13	8.32	8.19	8.12	8.01	8.09
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	13.62	13.86	13.84	13.91	14.01	14.07	14.04	14.08	14.04	14.06	14.14	14.07	14.11	14.23	14.25
<b>WHOLESALE TRADE</b> .....	11.74	12.05	12.00	12.09	12.20	12.15	12.21	12.30	12.28	12.25	12.45	12.32	12.31	12.42	12.36
<b>RETAIL TRADE</b> .....	7.29	7.49	7.44	7.54	7.57	7.57	7.59	7.64	7.63	7.63	7.65	7.65	7.65	7.66	7.65
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	11.35	11.83	11.73	11.85	12.02	11.98	12.05	12.17	12.19	12.21	12.32	12.24	12.19	12.32	12.24
<b>SERVICES</b> .....	10.78	11.05	10.90	11.11	11.20	11.22	11.29	11.39	11.38	11.36	11.40	11.34	11.25	11.28	11.23

<sup>P</sup> = 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		1994					1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Aug. <sup>P</sup>
<b>PRIVATE SECTOR</b>															
Current dollars .....	\$373.64	\$386.21	\$386.75	\$390.46	\$394.80	\$389.94	\$392.54	\$390.78	\$388.51	\$389.65	\$391.36	\$390.33	\$393.06	\$398.21	\$396.02
Seasonally adjusted .....	-	-	385.44	387.95	392.63	388.90	391.07	392.89	391.67	392.36	394.44	388.85	393.19	397.55	394.57
Constant (1982) dollars .....	254.87	256.96	255.79	257.56	260.25	256.54	258.42	256.25	253.93	253.84	253.96	252.80	254.08	257.41	-
<b>MINING</b> .....	646.78	665.58	661.05	677.37	673.93	679.64	680.56	683.20	677.54	670.56	678.23	673.80	684.73	682.19	684.73
<b>CONSTRUCTION</b> .....	553.63	572.61	588.64	598.80	595.98	572.50	573.92	553.06	546.86	565.40	559.49	574.46	592.11	604.00	601.46
<b>MANUFACTURING</b>															
Current dollars .....	486.04	506.52	504.42	514.74	511.83	517.23	525.95	513.66	510.41	510.83	496.52	508.39	512.10	505.10	512.11
Constant (1982) dollars .....	331.54	337.01	333.61	339.54	337.40	340.28	346.25	336.83	333.60	332.79	322.21	329.27	331.03	326.50	-
<b>Durable goods</b> .....	519.09	542.28	538.87	549.96	547.37	552.94	563.71	549.55	546.56	546.56	524.80	541.43	544.84	532.77	543.96
Lumber and wood products .....	392.09	405.41	410.59	412.93	414.34	409.12	414.75	404.97	397.60	401.98	400.20	406.41	412.49	407.78	417.99
Furniture and fixtures .....	371.73	385.82	389.09	399.23	399.64	396.47	406.02	392.60	383.50	381.00	367.58	375.78	384.94	380.42	394.42
Stone, clay, and glass products .....	506.00	526.44	536.36	542.33	540.12	533.58	528.69	515.64	512.44	520.63	525.79	529.33	538.46	538.27	544.94
Primary metal industries .....	611.36	640.55	636.70	648.00	642.34	652.69	662.57	652.85	643.58	639.80	637.38	636.55	641.52	628.30	636.68
Blast furnaces and basic steel products .....	721.48	756.57	764.45	780.89	772.02	779.42	787.64	787.15	769.05	761.24	794.50	759.84	763.40	761.25	776.15
Fabricated metal products .....	492.15	511.80	508.04	517.97	514.94	523.31	531.96	518.92	513.68	512.13	484.81	508.15	509.72	498.52	511.46
Industrial machinery and equipment .....	547.39	567.86	556.85	569.85	569.41	575.53	590.91	581.23	578.60	577.29	545.49	570.71	568.08	559.68	563.64
Electronic and other electrical equipment .....	469.83	485.30	483.84	488.25	486.87	491.60	499.53	489.10	478.50	478.91	462.70	477.02	482.23	476.24	486.45
Transportation equipment .....	679.40	730.06	725.00	748.61	735.14	747.90	767.45	735.38	741.92	741.37	693.81	724.11	728.39	700.12	723.67
Motor vehicles and equipment .....	713.23	781.08	771.55	801.33	779.38	797.33	818.13	780.67	792.23	790.86	730.59	769.14	769.22	732.29	755.32
Instruments and related products .....	502.65	520.00	517.92	524.59	524.17	528.36	538.04	525.43	524.15	526.67	513.95	521.59	524.10	521.42	521.48
Miscellaneous manufacturing .....	373.72	386.40	384.24	389.37	394.63	398.45	399.96	397.20	395.61	395.01	387.06	395.21	397.01	388.78	396.81
<b>Nondurable goods</b> .....	445.79	460.13	460.32	468.23	466.69	471.03	476.21	465.61	462.92	463.73	458.57	464.26	467.78	467.97	470.96
Food and kindred products .....	425.32	440.26	442.66	450.07	445.17	456.18	457.87	445.94	438.62	441.32	435.01	444.04	449.90	450.32	454.53
Tobacco products .....	631.69	750.63	746.95	778.27	783.95	776.45	767.97	731.56	759.26	778.76	774.62	844.11	914.48	865.39	792.72
Textile mill products .....	367.63	379.81	382.13	387.32	385.98	387.07	391.02	388.03	383.57	383.16	373.46	378.68	382.70	374.12	388.27
Apparel and other textile products .....	263.75	275.25	278.21	281.23	282.34	283.10	284.61	280.12	279.00	280.12	270.92	279.72	282.72	278.13	284.56
Paper and allied products .....	585.11	604.50	605.82	619.82	615.33	615.26	626.30	616.44	607.07	604.69	603.62	606.48	608.02	618.62	611.75
Printing and publishing .....	456.92	468.22	469.04	479.37	475.75	477.02	481.82	466.34	466.34	470.78	460.32	464.36	462.67	465.70	468.54
Chemicals and allied products .....	638.74	654.05	646.93	658.14	664.02	668.17	678.48	666.82	666.14	668.12	680.68	670.90	672.45	675.10	674.24
Petroleum and coal products .....	819.03	846.71	816.06	894.52	869.98	854.70	853.94	840.52	868.02	841.09	859.12	828.58	839.65	847.00	822.59
Rubber and miscellaneous plastics products .....	441.83	451.54	448.37	450.50	450.92	455.39	463.97	456.60	451.92	451.44	434.03	451.78	453.86	443.70	450.46
Leather and leather products .....	294.52	308.03	307.64	310.81	314.78	313.95	314.34	307.31	309.32	309.75	308.67	315.32	314.24	293.17	310.66
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	539.35	553.01	556.37	557.79	563.20	559.99	555.98	554.75	551.77	549.75	559.94	551.54	558.76	570.62	567.15
<b>WHOLESALE TRADE</b> .....	448.47	462.72	459.60	464.26	472.14	466.56	470.09	469.86	467.87	465.50	476.84	469.39	471.47	476.93	473.39
<b>RETAIL TRADE</b> .....	209.95	216.46	220.97	218.66	220.29	217.26	222.39	215.45	214.40	215.93	221.09	219.56	222.62	227.50	226.44
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	406.33	423.51	416.42	420.68	435.12	425.29	430.19	441.77	435.18	433.46	447.22	433.30	433.96	447.22	435.74
<b>SERVICES</b> .....	350.35	359.13	356.43	359.96	366.24	362.41	365.80	369.04	367.57	365.79	370.50	364.01	365.63	369.98	367.22

- Data not available.

<sup>P</sup> = preliminary

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

**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:												
1993 .....	57.6	61.5	51.4	58.3	61.4	55.1	57.7	56.3	61.4	59.7	61.1	60.7
1994 .....	60.0	63.3	65.9	62.4	58.0	63.8	60.5	61.5	60.7	61.1	65.3	61.1
1995 .....	60.3	61.7	57.6	51.3	46.2	55.3	46.3	54.6	-	-	-	-
Over 3-month span:												
1993 .....	64.0	61.2	61.8	58.8	61.4	61.8	59.3	61.8	62.6	66.7	65.7	63.6
1994 .....	68.8	70.9	69.8	67.1	66.0	66.0	68.4	68.3	67.8	67.3	68.1	67.4
1995 .....	66.4	64.9	57.9	49.3	50.6	47.3	51.4	-	-	-	-	-
Over 6-month span:												
1993 .....	63.2	63.8	62.8	64.2	60.8	63.9	64.5	64.7	66.2	67.3	70.8	70.8
1994 .....	71.2	70.2	70.5	69.5	69.8	69.1	70.5	70.9	69.0	69.0	67.4	67.0
1995 .....	65.9	58.8	56.3	51.8	48.5	-	-	-	-	-	-	-
Over 12-month span:												
1993 .....	64.9	63.9	64.0	65.4	67.0	67.6	67.6	67.0	70.2	69.4	68.8	69.4
1994 .....	68.4	70.8	71.9	70.2	69.5	69.7	70.4	70.8	70.4	70.2	66.0	64.0
1995 .....	63.1	60.1	-	-	-	-	-	-	-	-	-	-
Manufacturing payrolls, 139 industries												
Over 1-month span:												
1993 .....	52.2	57.9	52.9	44.2	51.4	46.0	50.7	48.6	56.1	54.7	56.5	54.3
1994 .....	59.4	61.2	59.4	56.5	55.0	59.0	54.0	56.5	53.2	59.4	59.0	57.6
1995 .....	56.8	54.7	49.6	44.2	36.7	41.7	38.1	48.2	-	-	-	-
Over 3-month span:												
1993 .....	60.8	60.4	57.2	46.4	46.4	50.7	49.6	54.3	53.2	60.1	56.1	57.6
1994 .....	65.1	66.5	64.4	59.0	58.6	58.3	61.5	59.0	61.5	60.4	64.0	62.2
1995 .....	61.5	56.1	47.1	35.6	32.4	28.1	33.5	-	-	-	-	-
Over 6-month span:												
1993 .....	57.6	56.5	56.1	55.0	49.3	52.2	55.4	57.9	56.8	57.6	65.1	62.9
1994 .....	61.9	62.9	64.4	61.5	60.8	59.0	62.2	62.6	61.5	64.0	61.5	61.5
1995 .....	57.2	47.1	40.3	31.7	27.3	-	-	-	-	-	-	-
Over 12-month span:												
1993 .....	56.8	57.9	55.8	58.6	57.2	57.6	58.6	59.0	61.2	60.4	60.1	59.4
1994 .....	58.3	59.7	61.9	61.5	61.5	61.5	61.9	63.3	61.5	59.7	56.5	49.6
1995 .....	46.4	43.9	-	-	-	-	-	-	-	-	-	-

- 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	1986	1987	1988	1989	1990	1991	1992	1993	1994
Civilian noninstitutional population .....	180,587	182,753	184,613	186,393	188,049	189,765	191,576	193,550	196,814
Civilian labor force .....	117,834	119,865	121,669	123,869	124,787	125,303	126,982	128,040	131,056
Labor force participation rate .....	65.3	65.6	65.9	66.5	66.4	66.0	66.3	66.2	66.6
Employed .....	109,597	112,440	114,968	117,342	117,914	116,877	117,598	119,306	123,060
Employment-population ratio .....	60.7	61.5	62.3	63.0	62.7	61.6	61.4	61.6	62.5
Agriculture .....	3,163	3,208	3,169	3,199	3,186	3,233	3,207	3,074	3,409
Nonagricultural industries .....	106,434	109,232	111,800	114,142	114,728	113,644	114,391	116,232	119,651
Unemployed .....	8,237	7,425	6,701	6,528	6,874	8,426	9,384	8,734	7,996
Unemployment rate .....	7.0	6.2	5.5	5.3	5.5	6.7	7.4	6.8	6.1
Not in labor force .....	62,752	62,888	62,944	62,523	63,262	64,462	64,593	65,509	65,758



## 19. Annual data: Employment levels by industry

(In thousands)

Industry	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total employment .....	99,344	101,958	105,210	107,895	109,419	108,256	108,604	110,730	114,034
Private sector .....	82,651	84,948	87,824	90,117	91,115	89,854	89,959	91,889	94,917
Goods-producing .....	24,533	24,674	25,125	25,254	24,905	23,745	23,231	23,352	23,913
Mining .....	777	717	713	692	709	689	635	610	600
Construction .....	4,810	4,958	5,098	5,171	5,120	4,650	4,492	4,668	5,010
Manufacturing .....	18,947	18,999	19,314	19,391	19,076	18,406	18,104	18,075	18,303
Service-producing .....	74,811	77,284	80,086	82,642	84,514	84,511	85,373	87,378	90,121
Transportation and public utilities .....	5,247	5,362	5,514	5,625	5,793	5,762	5,721	5,829	6,006
Wholesale trade .....	5,761	5,848	6,030	6,187	6,173	6,081	5,997	5,981	6,140
Retail trade .....	17,880	18,422	19,023	19,475	19,601	19,284	19,356	19,773	20,437
Finance, insurance, and real estate .....	6,273	6,533	6,630	6,668	6,709	6,646	6,602	6,757	6,933
Services .....	22,957	24,110	25,504	26,907	27,934	28,336	29,052	30,197	31,488
Government .....	16,693	17,010	17,386	17,779	18,304	18,402	18,645	18,841	19,118
Federal .....	2,899	2,943	2,971	2,988	3,085	2,966	2,969	2,915	2,870
State .....	3,893	3,967	4,076	4,182	4,305	4,355	4,408	4,488	4,562
Local .....	9,901	10,100	10,339	10,609	10,914	11,081	11,267	11,438	11,685

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	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Private sector:</b>									
Average weekly hours .....	34.8	34.8	34.7	34.6	34.5	34.3	34.4	34.5	34.7
Average hourly earnings (in dollars) .....	8.76	8.98	9.28	9.66	10.01	10.32	10.57	10.83	11.13
Average weekly earnings (in dollars) .....	304.85	312.50	322.02	334.24	345.35	353.98	363.61	373.64	386.21
<b>Mining:</b>									
Average weekly hours .....	42.2	42.4	42.3	43.0	44.1	44.4	43.9	44.3	44.7
Average hourly earnings (in dollars) .....	12.46	12.54	12.80	13.26	13.68	14.19	14.54	14.60	14.89
Average weekly earnings (in dollars) .....	525.81	531.70	541.44	570.18	603.29	630.04	638.31	646.78	665.58
<b>Construction:</b>									
Average weekly hours .....	37.4	37.8	37.9	37.9	38.2	38.1	38.0	38.5	38.9
Average hourly earnings (in dollars) .....	12.48	12.71	13.08	13.54	13.77	14.00	14.15	14.38	14.72
Average weekly earnings (in dollars) .....	466.75	480.44	495.73	513.17	526.01	533.40	537.70	553.63	572.61
<b>Manufacturing:</b>									
Average weekly hours .....	40.7	41.0	41.1	41.0	40.8	40.7	41.0	41.4	42.0
Average hourly earnings (in dollars) .....	9.73	9.91	10.19	10.48	10.83	11.18	11.46	11.74	12.06
Average weekly earnings (in dollars) .....	396.01	406.31	418.81	429.68	441.86	455.03	469.86	486.04	506.52
<b>Transportation and public utilities:</b>									
Average weekly hours .....	39.2	39.2	38.8	38.9	38.9	38.7	38.9	39.6	39.9
Average hourly earnings (in dollars) .....	11.70	12.03	12.26	12.60	12.97	13.22	13.45	13.62	13.86
Average weekly earnings (in dollars) .....	458.64	471.58	475.69	490.14	504.53	511.61	523.21	539.35	553.01
<b>Wholesale trade:</b>									
Average weekly hours .....	38.3	38.1	38.1	38.0	38.1	38.1	38.2	38.2	38.4
Average hourly earnings (in dollars) .....	9.34	9.59	9.98	10.39	10.79	11.15	11.39	11.74	12.05
Average weekly earnings (in dollars) .....	357.72	365.38	380.24	394.82	411.10	424.82	435.10	448.47	462.72
<b>Retail trade:</b>									
Average weekly hours .....	29.2	29.2	29.1	28.9	28.8	28.6	28.8	28.8	28.9
Average hourly earnings (in dollars) .....	6.03	6.12	6.31	6.53	6.75	6.94	7.12	7.29	7.49
Average weekly earnings (in dollars) .....	176.08	178.70	183.62	188.72	194.40	198.48	205.06	209.95	216.46
<b>Finance, insurance, and real estate:</b>									
Average weekly hours .....	36.4	36.3	35.9	35.8	35.8	35.7	35.8	35.8	35.8
Average hourly earnings (in dollars) .....	8.36	8.73	9.06	9.53	9.97	10.39	10.82	11.35	11.83
Average weekly earnings (in dollars) .....	304.30	316.90	325.25	341.17	356.93	370.92	387.36	406.33	423.51
<b>Services:</b>									
Average weekly hours .....	32.5	32.5	32.6	32.6	32.5	32.4	32.5	32.5	32.5
Average hourly earnings (in dollars) .....	8.18	8.49	8.88	9.38	9.83	10.23	10.54	10.78	11.05
Average weekly earnings (in dollars) .....	265.85	275.93	289.49	305.79	319.48	331.45	342.55	350.35	359.13

**21. Employment Cost Index, compensation,<sup>1</sup> by occupation and industry group**

(June 1989=100)

Series	1993			1994				1995		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1995	
<b>Civilian workers<sup>2</sup></b> .....	118.3	119.5	120.2	121.3	122.1	123.3	123.8	124.8	125.6	0.6	2.9
Workers, by occupational group:											
White-collar workers .....	118.6	119.9	120.6	121.8	122.6	123.9	124.4	125.5	126.3	.6	3.0
Professional specialty and technical .....	120.6	122.0	122.5	123.7	124.2	125.7	126.2	127.0	127.5	.4	2.7
Executive, administrative, and managerial .....	117.5	118.6	119.4	120.6	121.6	122.9	123.6	125.2	125.7	.4	3.4
Administrative support, including clerical .....	119.3	120.4	121.3	122.6	123.5	124.6	125.2	126.5	127.3	.6	3.1
Blue-collar workers .....	117.8	118.8	119.4	120.4	121.3	122.4	122.7	123.6	124.5	.7	2.6
Service occupations .....	118.7	119.9	120.5	121.6	122.1	123.5	124.3	125.0	125.8	.6	3.0
Workers, by industry division:											
Goods-producing .....	119.1	120.0	120.6	121.9	123.0	123.9	124.4	125.3	126.0	.6	2.4
Manufacturing .....	119.7	120.6	121.3	122.5	123.5	124.4	125.1	126.2	126.9	.6	2.8
Service-producing .....	118.0	119.3	120.0	121.0	121.7	123.1	123.6	124.6	125.5	.7	3.1
Services .....	120.6	122.2	122.9	123.8	124.2	125.8	126.4	127.2	127.8	.5	2.9
Health services .....	123.2	124.4	125.4	126.1	126.6	127.8	128.5	129.4	130.2	.6	2.8
Hospitals .....	122.6	123.9	125.0	125.9	126.4	127.5	128.4	128.8	129.7	.7	2.6
Educational services .....	120.2	122.6	122.9	123.2	123.6	126.0	126.4	126.9	127.4	.4	3.1
Public administration <sup>3</sup> .....	118.0	119.3	120.0	121.5	122.2	123.7	124.2	125.4	126.1	.6	3.2
Nonmanufacturing .....	117.9	119.2	119.8	120.9	121.7	123.0	123.4	124.4	125.2	.6	2.9
<b>Private industry workers</b> .....	118.0	119.1	119.8	121.0	122.0	123.0	123.5	124.5	125.4	.7	2.8
Excluding sales occupations .....	118.5	119.5	120.2	121.4	122.3	123.4	123.9	125.0	125.7	.6	2.8
Workers, by occupational group:											
White-collar workers .....	118.3	119.4	120.2	121.5	122.5	123.5	124.1	125.3	126.2	.7	3.0
Excluding sales occupations .....	119.2	120.2	121.0	122.4	123.3	124.4	125.1	126.3	127.0	.6	3.0
Professional specialty and technical occupations .....	121.3	122.2	122.9	124.6	125.3	126.3	126.8	127.7	128.4	.5	2.5
Executive, administrative, and managerial occupations .....	117.2	118.1	118.9	120.3	121.3	122.6	123.3	124.9	125.4	.4	3.4
Sales occupations .....	113.8	115.6	116.5	117.2	118.8	119.2	119.6	120.2	122.4	1.8	3.0
Administrative support occupations, including clerical .....	119.2	120.3	121.2	122.5	123.5	124.5	125.1	126.5	127.3	.6	3.1
Blue-collar workers .....	117.7	118.7	119.3	120.3	121.2	122.3	122.6	123.5	124.4	.7	2.6
Precision production, craft, and repair occupations .....	117.6	118.7	118.9	120.2	121.2	122.5	122.5	123.4	124.4	.8	2.6
Machine operators, assemblers, and inspectors .....	119.0	120.0	120.8	121.3	122.2	122.9	123.4	124.2	124.8	.5	2.1
Transportation and material moving occupations .....	115.2	115.9	117.0	118.5	119.1	120.3	120.6	121.8	122.4	.5	2.8
Handlers, equipment cleaners, helpers, and laborers .....	117.6	118.4	119.1	120.2	121.4	122.7	122.9	124.1	125.3	1.0	3.2
Service occupations .....	118.0	118.9	119.5	120.6	121.0	121.8	122.9	123.4	124.0	.5	2.5
Production and nonsupervisory occupations <sup>4</sup> .....	117.9	119.0	119.7	120.7	121.6	122.6	123.1	124.1	125.0	.7	2.8
Workers, by industry division:											
Goods-producing .....	119.1	119.9	120.6	121.8	123.0	123.9	124.3	125.3	125.9	.5	2.4
Excluding sales occupations .....	118.8	119.6	120.1	121.4	122.5	123.5	124.0	124.9	125.6	.6	2.5
White-collar occupations .....	119.6	120.5	121.1	123.0	124.3	125.1	125.9	127.2	127.6	.3	2.7
Excluding sales occupations .....	119.0	119.7	119.9	121.9	123.2	124.1	125.0	126.2	126.7	.4	2.8
Blue-collar occupations .....	118.7	119.6	120.2	121.1	122.2	123.1	123.0	124.1	124.9	.6	2.2
Service occupations .....	120.6	121.5	122.4	123.5	123.8	126.5	126.3	127.3	127.9	.5	3.3
Construction .....	116.0	116.8	116.5	118.6	120.2	121.4	120.8	121.1	122.0	.7	1.5
Manufacturing .....	119.7	120.6	121.3	122.5	123.5	124.4	125.1	126.2	126.9	.6	2.8
White-collar occupations .....	119.7	120.5	121.3	122.7	123.9	124.9	126.0	127.4	128.0	.5	3.3
Excluding sales occupations .....	118.8	119.5	119.9	121.3	122.5	123.6	124.9	126.1	126.6	.4	3.3
Blue-collar occupations .....	119.6	120.5	121.3	122.3	123.2	124.0	124.5	125.3	126.0	.6	2.3
Service occupations .....	120.7	121.7	122.7	123.8	124.1	127.0	127.0	128.0	128.6	.5	3.6
Durable goods .....	120.0	121.0	121.9	122.9	123.8	125.4	125.8	127.0	127.7	.6	3.2
Nondurable goods .....	119.0	119.7	120.3	121.7	122.8	123.2	123.8	124.7	125.4	.6	2.1
Service-producing .....	117.3	118.5	119.3	120.4	121.2	122.3	122.8	123.9	124.9	.8	3.1
Excluding sales occupations .....	118.3	119.3	120.2	121.4	122.1	123.3	123.8	125.0	125.8	.6	3.0
White-collar occupations .....	117.8	119.0	119.8	121.0	121.9	122.9	123.4	124.6	125.6	.8	3.0
Excluding sales occupations .....	119.3	120.4	121.4	122.7	123.4	124.6	125.1	126.4	127.1	.6	3.0
Blue-collar occupations .....	115.5	116.6	117.2	118.4	119.1	120.6	120.7	122.1	123.1	.8	3.4
Service occupations .....	117.7	118.6	119.1	120.2	120.7	121.3	122.5	123.0	123.6	.5	2.4
Transportation and public utilities .....	116.0	116.8	117.5	119.2	119.8	121.4	122.1	124.0	124.7	.6	4.1
Transportation .....	114.1	114.8	115.7	117.1	117.7	119.7	120.3	122.3	123.0	.6	4.5
Public utilities .....	118.3	119.2	119.9	121.7	122.6	123.6	124.4	126.1	126.8	.6	3.4
Communications .....	117.5	118.5	119.2	121.0	122.1	122.9	124.0	126.3	126.6	.2	3.7
Electric, gas, and sanitary services .....	119.4	120.2	120.8	122.7	123.2	124.4	124.8	125.9	127.0	.9	3.1
Wholesale and retail trade .....	115.9	116.4	117.1	117.6	119.4	120.5	120.6	121.7	122.8	.9	2.8
Excluding sales occupations .....	116.2	117.0	118.0	118.6	119.8	120.9	120.9	122.4	123.1	.6	2.8
Wholesale trade .....	116.4	116.6	117.8	117.9	119.7	120.6	121.5	123.2	124.8	1.3	4.3
Excluding sales occupations .....	116.8	117.6	118.7	119.3	120.3	121.3	122.0	124.4	125.1	.6	4.0
Retail trade .....	115.6	116.2	116.8	117.5	119.2	120.4	120.1	120.9	121.8	.7	2.2
Food stores .....	117.2	117.1	118.3	119.6	120.6	120.3	120.0	120.8	120.7	-.1	1.1
General merchandise stores .....	114.7	115.5	116.3	115.3	118.0	118.7	119.3	120.1	120.7	.5	2.3

See footnotes at end of table.



## 21. Continued—Employment Cost Index, compensation,<sup>1</sup> by occupation and industry group

(June 1989=100)

Series	1993			1994			1995		Percent change		
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1995	
Finance, insurance, and real estate .....	113.1	115.7	116.4	117.7	117.7	118.5	118.9	120.2	121.8	1.3	3.5
Excluding sales occupations .....	116.4	117.5	118.2	119.7	120.3	121.5	121.8	123.7	124.6	.7	3.6
Banking, savings and loan, and other credit agencies .....	116.0	116.9	117.8	118.7	119.4	120.8	120.5	123.5	124.1	.5	3.9
Insurance .....	116.1	117.4	119.7	119.9	120.5	121.5	122.3	123.5	124.6	.9	3.4
Services .....	120.9	122.3	123.1	124.4	124.9	125.9	126.6	127.5	128.2	.5	2.6
Business services .....	117.4	118.1	118.6	121.3	122.1	122.4	123.0	124.5	125.3	.6	2.6
Health services .....	124.0	125.0	126.0	126.7	127.1	127.9	128.7	129.7	130.3	.5	2.5
Hospitals .....	123.4	124.5	125.6	126.7	127.1	127.7	128.6	128.9	129.7	.6	2.0
Educational services .....	120.6	123.8	124.1	124.5	125.4	126.2	128.4	128.8	130.3	1.2	3.9
Colleges and universities .....	121.5	125.0	125.3	125.7	126.0	128.5	128.8	129.3	131.3	1.5	4.2
Nonmanufacturing .....	117.2	118.4	119.0	120.3	121.2	122.3	122.6	123.7	124.6	.7	2.8
White-collar occupations .....	117.9	119.0	119.9	121.1	122.1	123.1	123.5	124.7	125.6	.7	2.9
Excluding sales occupations .....	119.4	120.4	121.4	122.8	123.6	124.7	125.1	126.4	127.1	.6	2.8
Blue-collar occupations .....	115.6	116.6	117.1	118.2	119.1	120.5	120.5	121.5	122.5	.8	2.9
Service occupations .....	117.7	118.6	119.1	120.2	120.7	121.3	122.4	123.0	123.5	.4	2.3
<b>State and local government workers .....</b>	<b>119.6</b>	<b>121.4</b>	<b>121.9</b>	<b>122.6</b>	<b>123.1</b>	<b>125.0</b>	<b>125.6</b>	<b>126.4</b>	<b>126.9</b>	<b>.4</b>	<b>3.1</b>
Workers, by occupational group:											
White-collar workers .....	119.6	121.5	121.9	122.6	122.9	124.9	125.5	126.2	126.6	.3	3.0
Professional specialty and technical .....	119.7	121.7	122.0	122.5	122.7	125.0	125.5	126.0	126.3	.2	2.9
Executive, administrative, and managerial .....	119.2	121.0	121.6	122.8	123.4	124.7	125.3	126.9	127.4	.4	3.2
Administrative support, including clerical .....	119.6	121.0	121.6	122.7	123.3	124.9	125.6	126.3	126.9	.5	2.9
Blue-collar workers .....	118.7	120.5	121.4	122.3	122.7	124.2	124.7	125.4	126.3	.7	2.9
Workers, by industry division:											
Services .....	120.2	122.2	122.6	123.1	123.4	125.6	126.1	126.7	127.1	.3	3.0
Services excluding schools <sup>5</sup> .....	120.0	121.4	121.9	122.8	123.3	124.9	125.6	126.4	127.7	1.0	3.6
Health services .....	120.7	122.2	123.1	124.2	125.2	127.2	127.7	128.4	129.8	1.1	3.7
Hospitals .....	120.4	122.0	123.3	123.7	124.5	127.0	127.7	128.4	129.9	1.2	4.3
Educational services .....	120.1	122.3	122.7	122.9	123.1	125.5	126.0	126.5	126.8	.2	3.0
Schools .....	120.3	122.5	122.9	123.2	123.4	125.9	126.3	126.8	127.1	.2	3.0
Elementary and secondary .....	120.8	123.0	123.6	123.7	123.8	126.3	126.5	127.1	127.4	.2	2.9
Colleges and universities .....	118.5	120.8	120.7	121.5	122.0	124.5	125.5	126.0	126.1	.1	3.4
Public administration <sup>3</sup> .....	118.0	119.3	120.0	121.5	122.2	123.7	124.2	125.4	126.1	.6	3.2

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

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

<sup>3</sup> Consist of legislative, judicial, administrative, and regulatory activities.

<sup>4</sup> This series has the same industry and occupational coverage as the Hourly Earnings Index, which was discontinued in January 1989.

<sup>5</sup> Includes, for example, library, social, and health services.

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

(June 1989=100)

Series	1993			1994				1995			Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended	
										June 1995		
<b>Civilian workers<sup>1</sup></b> .....	115.2	116.4	117.1	117.8	118.6	119.8	120.4	121.3	122.2	0.7	3.0	
<b>Workers, by occupational group:</b>												
White-collar workers .....	116.0	117.4	118.1	118.8	119.7	120.8	121.5	122.4	123.1	.6	2.8	
Professional specialty and technical .....	118.0	119.5	120.0	120.7	121.3	122.8	123.5	124.2	124.7	.4	2.8	
Executive, administrative, and managerial .....	115.5	116.5	117.3	118.1	119.0	120.2	120.8	122.2	122.8	.5	3.2	
Administrative support, including clerical .....	116.1	117.1	118.0	118.9	119.8	120.9	121.6	122.8	123.4	.5	3.0	
Blue-collar workers .....	113.4	114.4	115.0	115.8	116.7	117.8	118.2	119.2	120.3	.9	3.1	
Service occupations .....	115.2	116.1	116.6	117.5	118.1	119.4	120.4	121.2	121.8	.5	3.1	
<b>Workers, by industry division:</b>												
Goods-producing .....	114.6	115.4	116.2	117.0	118.0	119.0	119.6	120.5	121.4	.7	2.9	
Manufacturing .....	115.5	116.3	117.3	118.0	119.0	120.0	120.8	121.9	122.9	.8	3.3	
Service-producing .....	115.5	116.8	117.5	118.2	118.9	120.2	120.7	121.7	122.5	.7	3.0	
Services .....	117.8	119.5	120.0	120.9	121.3	122.8	123.5	124.4	124.8	.3	2.9	
Health services .....	120.3	121.4	122.2	122.8	123.4	124.4	125.4	126.1	126.6	.4	2.6	
Hospitals .....	119.5	120.7	121.7	122.4	123.0	124.0	124.9	125.5	126.0	.4	2.4	
Educational services .....	118.0	120.4	120.7	121.0	121.3	123.8	124.3	125.0	125.1	.1	3.1	
Public administration <sup>2</sup> .....	114.9	115.9	116.6	117.9	118.5	119.9	120.6	121.9	122.3	.3	3.2	
Nonmanufacturing .....	115.1	116.4	117.0	117.7	118.5	119.7	120.2	121.1	121.9	.7	2.9	
<b>Private industry workers</b> .....	114.6	115.7	116.4	117.2	118.1	119.1	119.7	120.6	121.5	.7	2.9	
Excluding sales occupations .....	115.0	115.9	116.6	117.5	118.3	119.4	120.0	121.0	121.8	.7	3.0	
<b>Workers, by occupational group:</b>												
White-collar workers .....	115.5	116.7	117.5	118.3	119.3	120.2	120.8	121.7	122.7	.8	2.8	
Excluding sales occupations .....	116.4	117.4	118.2	119.0	119.9	121.0	121.7	122.8	123.4	.5	2.9	
Professional specialty and technical occupations .....	117.9	118.9	119.5	120.4	121.3	122.2	123.0	123.7	124.4	.6	2.6	
Executive, administrative, and managerial occupations .....	115.3	116.2	117.0	117.8	118.8	120.0	120.5	121.9	122.5	.5	3.1	
Sales occupations .....	111.6	113.8	114.7	114.8	116.2	116.5	116.7	116.9	119.3	2.1	2.7	
Administrative support occupations, including clerical .....	116.1	117.1	118.0	119.0	119.9	120.9	121.6	122.9	123.5	.5	3.0	
Blue-collar workers .....	113.2	114.1	114.8	115.6	116.5	117.5	118.0	119.0	120.1	.9	3.1	
Precision production, craft, and repair occupations .....	113.2	114.2	114.7	115.5	116.5	117.8	117.9	118.8	119.9	.9	2.9	
Machine operators, assemblers, and inspectors .....	113.8	114.7	115.6	116.2	117.2	118.0	118.8	119.6	120.9	1.1	3.2	
Transportation and material moving occupations .....	111.2	111.7	112.6	113.5	114.0	115.2	115.6	117.0	117.8	.7	3.3	
Handlers, equipment cleaners, helpers, and laborers .....	114.3	114.9	115.7	116.6	117.3	117.9	118.9	120.1	121.2	.9	3.3	
Service occupations .....	114.1	114.9	115.3	116.3	116.8	117.6	118.8	119.4	120.0	.5	2.7	
Production and nonsupervisory occupations <sup>3</sup> .....	114.2	115.3	115.9	116.6	117.5	118.5	119.1	119.9	121.0	.9	3.0	
<b>Workers, by industry division:</b>												
Goods-producing .....	114.5	115.3	116.1	116.9	118.0	118.9	119.6	120.4	121.4	.8	2.9	
Excluding sales occupations .....	114.2	114.9	115.6	116.4	117.4	118.4	119.1	119.9	120.9	.8	3.0	
White-collar occupations .....	116.4	117.3	118.2	119.1	120.3	121.1	122.0	123.0	123.8	.7	2.9	
Excluding sales occupations .....	115.6	116.4	116.8	117.7	118.8	119.8	120.8	121.8	122.5	.6	3.1	
Blue-collar occupations .....	113.4	114.1	114.9	115.6	116.6	117.5	118.1	118.8	119.9	.9	2.8	
Service occupations .....	114.4	115.7	116.9	116.4	117.7	120.1	119.7	120.6	121.9	1.1	3.6	
Construction .....	110.4	111.3	111.1	112.2	113.6	114.6	114.7	114.8	115.7	.8	1.8	
Manufacturing .....	115.5	116.3	117.3	118.0	119.0	120.0	120.8	121.9	122.9	.8	3.3	
White-collar occupations .....	116.9	117.7	118.8	119.5	120.6	121.7	122.7	123.9	124.7	.6	3.4	
Excluding sales occupations .....	115.9	116.7	117.2	118.0	119.1	120.2	121.4	122.4	123.2	.7	3.4	
Blue-collar occupations .....	114.5	115.2	116.2	116.9	117.8	118.7	119.5	120.4	121.6	1.0	3.2	
Service occupations .....	114.5	116.0	117.3	116.8	118.2	120.6	120.6	121.5	122.8	1.1	3.9	
Durables .....	115.1	115.9	117.2	117.8	118.7	119.8	120.8	121.9	122.9	.8	3.5	
Nondurables .....	116.3	116.9	117.5	118.3	119.5	120.3	120.8	121.9	122.9	.8	2.8	
Service-producing .....	114.7	115.9	116.6	117.3	118.2	119.2	119.7	120.7	121.6	.7	2.9	
Excluding sales occupations .....	115.6	116.6	117.4	118.3	119.0	120.2	120.7	121.8	122.5	.6	2.9	
White-collar occupations .....	115.2	116.5	117.3	118.0	118.9	119.9	120.4	121.3	122.3	.8	2.9	
Excluding sales occupations .....	116.8	117.8	118.7	119.6	120.4	121.5	122.1	123.2	123.8	.5	2.8	
Blue-collar occupations .....	112.9	114.1	114.6	115.5	116.2	117.5	117.6	119.2	120.3	.9	3.5	
Service occupations .....	114.1	114.9	115.2	116.3	116.7	117.3	118.7	119.3	119.8	.4	2.7	
Transportation and public utilities .....	114.0	114.7	115.4	116.4	117.2	118.9	119.6	121.2	122.0	.7	4.1	
Transportation .....	112.0	112.6	113.4	114.2	114.8	116.7	117.5	119.0	119.8	.7	4.4	
Public utilities .....	116.4	117.2	117.9	119.1	120.1	121.4	122.3	123.9	124.5	.5	3.7	
Communications .....	115.6	116.5	117.1	118.4	119.5	121.0	122.1	124.3	124.6	.2	4.3	
Electric, gas, and sanitary services .....	117.4	118.2	118.8	119.9	120.9	121.9	122.4	123.4	124.4	.8	2.9	

See footnotes at end of table.



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

(June 1989=100)

Series	1993			1994				1995		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1995	
Wholesale and retail trade .....	114.2	114.7	115.4	115.5	117.4	118.3	118.4	119.4	120.6	1.0	2.7
Excluding sales occupations .....	114.4	115.2	116.1	116.5	117.8	118.7	118.8	120.2	120.9	.6	2.6
Wholesale trade .....	115.1	115.1	116.4	116.2	118.3	118.9	119.9	120.9	122.7	1.5	3.7
Excluding sales occupations .....	115.5	116.3	117.5	117.8	118.8	119.6	120.2	122.2	122.9	.6	3.5
Retail trade .....	113.8	114.5	115.0	115.2	117.0	118.0	117.8	118.7	119.6	.8	2.2
Food stores .....	115.4	114.9	115.9	117.0	117.8	117.4	117.3	117.8	117.6	-.2	-.2
General merchandise stores .....	113.4	114.5	115.0	114.0	116.4	116.5	117.5	117.9	118.6	.6	1.9
Finance, insurance, and real estate .....	109.3	112.3	112.9	113.7	113.2	113.8	114.2	115.0	117.0	1.7	3.4
Excluding sales occupations .....	113.1	114.0	114.6	115.5	116.0	117.2	117.4	119.3	120.2	.8	3.6
Banking, savings and loan, and other credit agencies .....	112.9	113.7	114.5	114.7	115.0	116.5	116.2	119.2	119.7	.4	4.1
Insurance .....	112.9	113.9	116.6	116.0	116.8	117.7	118.6	119.8	120.8	.8	3.4
Services .....	117.6	118.9	119.6	120.8	121.3	122.2	123.0	123.9	124.4	.4	2.6
Business services .....	114.6	115.3	115.7	118.8	119.4	119.9	120.4	122.1	122.9	.7	2.9
Health services .....	120.7	121.7	122.6	123.1	123.5	124.3	125.4	126.2	126.7	.4	2.6
Hospitals .....	119.9	121.0	122.0	122.8	123.3	123.9	124.8	125.4	125.9	.4	2.1
Educational services .....	117.4	120.7	120.9	121.2	122.2	124.9	125.1	125.6	125.9	.2	3.0
Colleges and universities .....	117.7	121.3	121.6	122.0	122.2	124.5	124.9	125.5	125.9	.3	3.0
Nonmanufacturing .....	114.2	115.4	116.0	116.8	117.7	118.7	119.1	120.0	120.9	.8	2.7
White-collar occupations .....	115.2	116.4	117.2	117.9	118.9	119.7	120.2	121.1	122.1	.8	2.7
Excluding sales occupations .....	116.6	117.6	118.5	119.4	120.2	121.3	121.8	122.9	123.5	.5	2.7
Blue-collar occupations .....	111.9	113.0	113.4	114.2	115.1	116.4	116.4	117.5	118.5	.9	3.0
Service occupations .....	114.1	114.8	115.1	116.3	116.7	117.3	118.6	119.2	119.8	.5	2.7
<b>State and local government workers .....</b>	<b>117.4</b>	<b>119.3</b>	<b>119.7</b>	<b>120.4</b>	<b>120.7</b>	<b>122.8</b>	<b>123.4</b>	<b>124.3</b>	<b>124.6</b>	<b>.2</b>	<b>3.2</b>
Workers, by occupational group:											
White-collar workers .....	117.6	119.6	119.9	120.6	120.9	122.9	123.6	124.4	124.6	.2	3.1
Professional, specialty and technical .....	118.2	120.4	120.7	121.1	121.3	123.6	124.2	124.8	125.0	.2	3.1
Executive, administrative, and managerial .....	116.6	118.2	118.8	119.8	120.3	121.6	122.4	124.1	124.3	.2	3.3
Administrative support, including clerical .....	115.9	117.2	117.8	118.9	119.4	120.9	121.7	122.5	122.9	.3	2.9
Blue-collar workers .....	116.5	118.4	119.0	119.7	120.1	121.8	122.5	123.1	123.8	.6	3.1
Workers, by industry division:											
Services .....	118.2	120.3	120.6	121.1	121.3	123.6	124.2	124.9	125.1	.2	3.1
Services excluding schools <sup>4</sup> .....	118.7	120.1	120.4	121.3	121.9	123.2	124.0	125.0	125.5	.4	3.0
Health services .....	118.8	120.4	121.0	121.9	122.9	124.7	125.3	126.0	126.6	.5	3.0
Hospitals .....	118.2	119.9	120.7	121.2	122.0	124.2	125.1	125.8	126.3	.4	3.5
Educational services .....	118.1	120.3	120.6	120.9	121.1	123.6	124.2	124.8	124.9	.1	3.1
Schools .....	118.0	120.3	120.7	121.0	121.2	123.8	124.3	125.0	125.1	.1	3.2
Elementary and secondary .....	118.8	121.1	121.6	121.7	121.8	124.5	124.9	125.5	125.8	.2	3.3
Colleges and universities .....	115.6	117.8	117.7	118.6	119.2	121.5	122.5	123.2	122.9	-.2	3.1
Public administration <sup>2</sup> .....	114.9	115.9	116.6	117.9	118.5	119.9	120.6	121.9	122.3	.3	3.2

<sup>1</sup> Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

<sup>2</sup> Consists of legislative, judicial, administrative, and regulatory activities.

<sup>3</sup> This series has the same industry and occupational coverage as the Hourly Earnings Index, which was discontinued in January 1989.

<sup>4</sup> 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	1993			1994				1995		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1995	
<b>Private industry workers .....</b>	<b>126.7</b>	<b>127.7</b>	<b>128.3</b>	<b>130.7</b>	<b>131.7</b>	<b>132.8</b>	<b>133.0</b>	<b>134.5</b>	<b>135.1</b>	<b>0.4</b>	<b>2.6</b>
Workers, by occupational group:											
White-collar workers .....	125.9	126.8	127.6	130.5	131.6	132.8	133.3	135.2	136.0	.6	3.3
Blue-collar workers .....	127.3	128.4	128.9	130.5	131.5	132.7	132.5	133.3	133.6	.2	1.6
Workers, by industry group:											
Goods-producing .....	129.0	130.0	130.3	132.7	133.9	134.8	134.8	135.9	135.9	.0	1.5
Service-producing .....	124.6	125.7	126.7	128.9	129.7	131.2	131.5	133.2	134.1	.7	3.4
Manufacturing .....	128.6	129.7	130.0	132.0	133.0	133.9	134.3	135.4	135.2	-.1	1.7
Nonmanufacturing .....	125.5	126.5	127.4	129.9	130.8	132.2	132.3	133.9	134.7	.6	3.0

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

(June 1989 = 100)

Series	1993			1994				1995		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
	June 1995										
<b>COMPENSATION</b>											
<b>Workers, by bargaining status<sup>1</sup></b>											
Union .....	119.1	120.0	120.9	121.9	123.0	123.8	124.2	125.1	125.8	0.6	2.3
Goods-producing .....	120.0	121.0	121.9	122.5	123.8	124.4	124.7	125.2	125.9	.6	1.7
Service-producing .....	117.7	118.6	119.6	121.0	121.8	122.9	123.6	124.8	125.6	.6	3.1
Manufacturing .....	121.1	121.9	123.0	123.6	124.8	125.3	125.8	126.3	126.6	.2	1.4
Nonmanufacturing .....	117.4	118.5	119.3	120.5	121.5	122.6	123.0	124.0	125.0	.8	2.9
Nonunion .....	117.7	118.8	119.5	120.7	121.7	122.7	123.2	124.3	125.2	.7	2.9
Goods-producing .....	118.6	119.4	119.9	121.5	122.6	123.6	124.1	125.2	125.9	.6	2.7
Service-producing .....	117.2	118.4	119.2	120.3	121.1	122.2	122.7	123.8	124.8	.8	3.1
Manufacturing .....	119.0	120.0	120.6	122.0	122.9	124.0	124.8	126.1	126.9	.6	3.3
Nonmanufacturing .....	117.2	118.3	119.0	120.2	121.1	122.2	122.5	123.6	124.5	.7	2.8
<b>Workers, by region<sup>1</sup></b>											
Northeast .....	119.1	120.2	120.7	121.6	122.8	124.0	124.3	125.6	126.6	.8	3.1
South .....	117.0	118.1	118.8	120.0	120.8	121.8	122.5	123.7	124.3	.5	2.9
Midwest (formerly North Central) .....	119.3	120.1	121.2	122.8	123.6	124.6	125.0	125.8	126.9	.9	2.7
West .....	116.4	117.8	118.1	119.4	120.5	121.3	121.7	122.6	123.4	.7	2.4
<b>Workers, by area size<sup>1</sup></b>											
Metropolitan areas .....	118.1	119.1	119.8	120.9	121.9	122.9	123.4	124.5	125.4	.7	2.9
Other areas .....	117.8	118.7	119.7	121.3	122.5	123.2	123.5	124.8	125.3	.4	2.3
<b>WAGES AND SALARIES</b>											
<b>Workers, by bargaining status<sup>1</sup></b>											
Union .....	113.9	114.8	115.7	116.5	117.6	118.6	119.1	119.8	120.6	.7	2.6
Goods-producing .....	113.0	113.8	114.8	115.4	116.7	117.5	117.9	118.4	119.3	.8	2.2
Service-producing .....	115.1	116.0	116.8	118.0	118.7	120.1	120.6	121.6	122.3	.6	3.0
Manufacturing .....	113.9	114.6	115.9	116.6	117.8	118.5	119.2	119.8	120.5	.6	2.3
Nonmanufacturing .....	113.9	114.9	115.5	116.4	117.3	118.6	119.0	119.9	120.6	.7	2.8
Nonunion .....	114.8	115.9	116.6	117.4	118.3	119.2	119.8	120.8	121.8	.8	3.0
Goods-producing .....	115.2	116.0	116.7	117.6	118.6	119.5	120.3	121.3	122.2	.7	3.0
Service-producing .....	114.6	115.9	116.6	117.2	118.1	119.0	119.5	120.5	121.5	.8	2.9
Manufacturing .....	116.1	117.0	117.9	118.6	119.5	120.5	121.5	122.7	123.8	.9	3.6
Nonmanufacturing .....	114.3	115.5	116.1	116.9	117.8	118.7	119.1	120.0	121.0	.8	2.7
<b>Workers, by region<sup>1</sup></b>											
Northeast .....	115.7	116.8	117.3	117.8	118.8	120.0	120.2	121.3	122.1	.7	2.8
South .....	114.3	115.3	116.0	116.6	117.4	118.5	119.1	120.0	120.8	.7	2.9
Midwest (formerly North Central) .....	114.6	115.2	116.5	117.5	118.3	119.5	120.1	120.9	122.2	1.1	3.3
West .....	113.7	115.3	115.7	116.6	117.9	118.1	119.0	119.9	120.9	.8	2.5
<b>Workers, by area size<sup>1</sup></b>											
Metropolitan areas .....	114.7	115.8	116.5	117.2	118.1	119.1	119.7	120.6	121.6	.8	3.0
Other areas .....	114.4	115.0	115.8	117.0	118.1	118.6	119.0	120.5	121.3	.7	2.7

<sup>1</sup> 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 <sup>1</sup>										Small private establishments <sup>2</sup>	State and local governments <sup>3</sup>	
	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1990	1987	1990
<b>Time-off plans</b>													
Participants with:													
Paid lunch time .....	10	10	9	11	9	10	10	11	10	8	8	<sup>4</sup> 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	72	71	67	48	<sup>4</sup> 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
<b>Insurance plans</b>													
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 <sup>5</sup> .....	-	-	-	\$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
<b>Retirement plans</b>													
Participants in defined benefit pension plans <sup>6</sup> .....	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 .....	-	-	-	-	-	<sup>7</sup> 53	<sup>7</sup> 60	45	48	48	31	9	9
Participants in plans with tax-deferred savings arrangements .....	-	-	-	-	-	26	33	36	41	44	17	28	45
<b>Other benefits</b>													
Employees eligible for:													
Flexible benefits plans .....	-	-	-	-	-	-	2	5	9	10	1	5	5
Reimbursement accounts .....	-	-	-	-	-	-	5	12	23	36	8	5	31

<sup>1</sup> 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.

<sup>2</sup> Includes private sector establishments with fewer than 100 workers.

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

<sup>4</sup> Data exclude college teachers.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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							
	1993	1994	1993		1994				1995	
			III	IV	I	II	III	IV	IP	IIP
<b>Rate changes under settlements:</b>										
Specified total compensation changes, settlements covering 5,000 workers or more:										
First year of contract .....	3.0	2.3	1.0	3.8	3.0	3.4	0.0	1.5	1.4	1.8
Annual average over life of contract .....	2.4	2.4	1.4	2.5	2.6	2.9	1.4	2.1	1.7	1.8
Specified wage changes, settlements covering 1,000 workers or more:										
First year of contract .....	2.3	2.0	1.1	2.8	3.0	2.0	1.0	2.2	1.9	2.1
Annual average over life of contract .....	2.1	2.3	1.7	2.0	2.4	2.4	1.9	2.5	2.1	2.2
<b>Wage rate changes under all agreements:</b>										
Average wage change <sup>1</sup> .....	3.0	2.7	.8	.7	.4	.8	.9	.6	.3	.8
Source:										
Current settlements .....	.9	.6	.1	.5	.1	.2	.1	.2	.1	.2
Prior settlements .....	1.9	1.9	.6	.2	.3	.6	.7	.3	.2	.5
COLA provisions .....	.2	.2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	.1	.1	.1	.0	.1

<sup>1</sup> Because of rounding, total may not equal sum of parts.

P = preliminary.

<sup>2</sup> More than zero but less than 0.05 percent.



**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--							
	1993		1994				1995	
	III	IV	I	II	III	IV	I <sup>P</sup>	II <sup>P</sup>
<b>Rate changes under settlements:</b>								
Specified total compensation changes, settlements covering 5,000 workers or more, all industries:								
First year of contract .....	2.1	3.0	3.0	3.1	3.1	2.3	2.1	1.2
Annual average over life of contract .....	2.4	2.4	2.3	2.4	2.5	2.4	2.3	1.7
Specified wage changes, settlements covering 1,000 workers or more:								
All industries:								
First year of contract .....	2.0	2.3	2.4	2.2	2.3	2.0	1.8	1.8
Contracts with COLA clauses .....	2.5	2.8	2.7	3.0	2.9	2.7	2.5	1.7
Contracts without COLA clauses .....	1.8	2.1	2.3	1.9	2.0	1.8	1.6	1.8
Contracts with either lump sums, COLA, or both .....	2.3	2.6	2.6	2.8	2.7	2.5	2.2	1.6
Contracts with neither lump sums nor COLA .....	1.7	2.0	2.1	1.5	1.6	1.6	1.5	1.8
Annual average over life of contract .....	2.3	2.1	2.1	2.1	2.2	2.3	2.3	2.2
Contracts with COLA clauses .....	2.1	1.4	1.0	1.5	1.7	2.5	2.4	1.8
Contracts without COLA clauses .....	2.4	2.5	2.5	2.4	2.3	2.3	2.2	2.2
Contracts with either lump sums, COLA, or both .....	2.1	1.9	1.8	2.0	2.1	2.3	2.2	1.8
Contracts with neither lump sums nor COLA .....	2.5	2.5	2.5	2.2	2.2	2.3	2.3	2.3
Manufacturing:								
First year of contract .....	2.5	2.7	2.5	2.7	2.6	2.4	2.2	1.9
Contracts with COLA clauses .....	2.6	2.9	2.7	3.0	3.0	3.0	2.6	( <sup>1</sup> )
Contracts without COLA clauses .....	2.5	2.3	1.9	1.9	1.9	1.8	1.8	( <sup>1</sup> )
Contracts with either lump sums, COLA, or both .....	2.3	2.7	2.4	2.7	2.7	2.4	2.2	1.7
Contracts with neither lump sums nor COLA .....	3.1	2.9	2.6	2.6	2.2	2.2	2.2	2.2
Annual average over life of contract .....	2.1	1.5	1.3	1.5	1.7	2.3	2.1	2.0
Contracts with COLA clauses .....	1.9	1.3	1.0	1.3	1.5	2.5	2.3	( <sup>1</sup> )
Contracts without COLA clauses .....	2.5	2.1	1.9	2.0	1.9	2.1	2.0	( <sup>1</sup> )
Contracts with either lump sums, COLA, or both .....	1.8	1.3	1.0	1.4	1.5	2.3	2.1	1.7
Contracts with neither lump sums nor COLA .....	2.9	2.5	2.3	2.3	2.0	2.2	2.3	2.3
Nonmanufacturing:								
First year of contract .....	1.7	2.1	2.3	2.0	2.0	1.8	1.6	1.7
Contracts with COLA clauses .....	2.5	1.8	1.9	2.9	2.5	2.2	2.2	( <sup>1</sup> )
Contracts without COLA clauses .....	1.6	2.1	2.3	1.9	2.0	1.8	1.5	( <sup>1</sup> )
Contracts with either lump sums, COLA, or both .....	2.3	2.4	2.8	2.9	2.8	2.6	2.3	1.5
Contracts with neither lump sums nor COLA .....	1.5	1.8	2.0	1.3	1.4	1.6	1.4	1.8
Annual average over life of contract .....	2.4	2.5	2.6	2.4	2.5	2.3	2.3	2.2
Contracts with COLA clauses .....	2.7	2.3	2.5	2.7	2.7	2.6	2.6	( <sup>1</sup> )
Contracts without COLA clauses .....	2.4	2.6	2.6	2.4	2.5	2.3	2.3	( <sup>1</sup> )
Contracts with either lump sums, COLA, or both .....	2.5	2.6	2.7	2.7	2.7	2.4	2.4	1.9
Contracts with neither lump sums nor COLA .....	2.4	2.5	2.5	2.2	2.3	2.3	2.3	2.3
Construction:								
First year of contract .....	2.0	2.1	2.4	1.7	1.8	1.8	1.5	2.3
Annual average over life of contract .....	2.4	2.6	2.7	2.5	2.6	2.5	2.4	2.7
<b>Wage rate changes under all agreements:</b>								
Average wage change <sup>2</sup> .....	2.6	3.0	2.9	2.7	2.9	2.7	2.6	2.6
Source:								
Current settlements .....	.6	.9	.9	.9	.8	.6	.5	.5
Prior settlements .....	1.8	1.9	1.8	1.7	1.9	1.9	1.9	1.8
COLA provisions .....	.3	.2	.2	.2	.2	.2	.3	.3

<sup>1</sup> Data do not meet publication standards.

<sup>2</sup> Because of rounding, total may not equal sum of parts.

<sup>P</sup> = preliminary.

**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	1993		1994				1995	
	III	IV	I	II	III	IV	I	II
	Quarterly average							
<b>All industries:</b>								
Compensation .....	0.9	1.8	2.0	1.9	0.8	1.2	1.1	1.1
Cash payments .....	.8	1.4	1.9	1.4	.9	1.5	1.2	1.1
Wages .....	.7	1.4	1.7	1.4	.9	1.5	1.0	1.1
Benefits .....	1.1	2.4	2.1	2.7	.5	.6	.9	1.1
<b>Average for four quarters</b>								
<b>All industries:</b>								
Compensation .....	1.4	1.6	1.6	1.6	1.7	1.6	1.4	1.1
Cash payments .....	1.2	1.3	1.3	1.3	1.4	1.4	1.3	1.2
Wages .....	1.3	1.3	1.3	1.3	1.4	1.3	1.3	1.1
Benefits .....	1.7	2.1	2.0	2.2	2.2	1.8	1.6	.8
<b>With contingent pay provisions:</b>								
Compensation .....	1.4	1.5	1.4	1.7	1.9	2.2	2.1	1.4
Cash payments .....	1.2	1.2	1.2	1.3	1.4	1.8	1.7	1.5
Wages .....	1.4	1.4	1.3	1.4	1.6	1.7	1.6	1.3
Benefits .....	1.8	2.0	1.8	2.3	2.5	3.0	2.8	1.1
<b>Without contingent pay provisions:</b>								
Compensation .....	1.4	1.7	1.8	1.6	1.5	1.3	1.1	1.0
Cash payments .....	1.3	1.4	1.6	1.3	1.3	1.3	1.1	1.1
Wages .....	1.2	1.3	1.4	1.1	1.1	1.2	1.1	1.1
Benefits .....	1.6	2.1	2.2	2.1	1.8	1.3	1.1	.8
<b>Manufacturing:</b>								
Compensation .....	1.1	1.2	1.1	1.3	1.5	1.9	1.7	1.2
Cash payments .....	1.0	.8	.7	.9	1.0	1.7	1.6	1.3
Wages .....	1.2	1.1	.9	1.1	1.2	1.6	1.4	1.2
Benefits .....	1.4	1.6	1.5	1.9	2.1	2.3	2.0	1.0
<b>Nonmanufacturing:</b>								
Compensation .....	1.5	1.9	2.0	1.8	1.8	1.4	1.3	1.0
Cash payments .....	1.3	1.6	1.8	1.5	1.6	1.3	1.2	1.1
Wages .....	1.3	1.5	1.6	1.4	1.5	1.3	1.2	1.1
Benefits .....	1.8	2.4	2.3	2.4	2.2	1.6	1.5	.8
<b>Goods-producing:</b>								
Compensation .....	1.6	1.4	1.4	1.4	1.4	1.6	1.4	1.3
Cash payments .....	1.4	1.1	1.2	1.1	1.2	1.5	1.3	1.4
Wages .....	1.5	1.2	1.2	1.1	1.2	1.4	1.2	1.3
Benefits .....	2.1	1.9	1.8	1.8	1.8	1.6	1.5	1.2
<b>Service-producing:</b>								
Compensation .....	1.2	1.8	1.8	2.0	2.0	1.5	1.5	.8
Cash payments .....	1.1	1.5	1.6	1.6	1.6	1.3	1.3	1.0
Wages .....	1.0	1.5	1.5	1.5	1.6	1.3	1.3	1.0
Benefits .....	1.3	2.3	2.2	2.7	2.6	1.9	1.7	.4



**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		
	1992	1993	1994
<b>Changes under settlements:</b>			
Total compensation <sup>1</sup> changes, <sup>2</sup> settlements covering 5,000 workers or more:			
First year of contract .....	0.6	0.9	2.8
Annual average over life of contract .....	1.9	1.8	3.1
<b>Wage changes, settlements covering 1,000 workers or more:</b>			
First year of contract .....	1.1	1.1	2.7
Annual average over life of contract .....	2.1	2.1	3.0
<b>Wage changes under all agreements:</b>			
Average wage change <sup>3</sup> .....	1.9 <sup>4</sup>	2.8	3.3
Source:			
Current settlements .....	.8	1.6	1.4
Prior settlements .....	1.1	1.1	1.9
COLA provisions .....	(*)	(*)	(*)

<sup>1</sup> Compensation includes wages, salaries, and employers' cost of employee benefits when contract is negotiated.

<sup>2</sup> Changes are the net result of increases, decreases, and zero change in

compensation or wages.

<sup>3</sup> Because of rounding, total may not equal sum of parts.

<sup>4</sup> Less than 0.05 percent.

**30. Work stoppages involving 1,000 workers or more**

Measure	Annual totals		1994					1995						
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. <sup>P</sup>	Feb. <sup>P</sup>	Mar. <sup>P</sup>	Apr. <sup>P</sup>	May <sup>P</sup>	June <sup>P</sup>	July <sup>P</sup>
<b>Number of stoppages:</b>														
Beginning in period .....	35	45	5	7	4	1	0	1	1	4	2	1	2	3
In effect during period .....	36	45	11	14	9	6	4	4	4	7	5	3	3	5
<b>Workers involved:</b>														
Beginning in period (in thousands) .....	18.2	322.2	58.6	32.0	8.0	2.6	.0	37.7	3.0	17.6	32.0	14.0	2.0	8.0
In effect during period (in thousands) .....	18.4	322.2	88.2	59.4	32.7	26.8	17.2	52.9	18.2	32.8	56.9	28.2	13.0	20.0
<b>Days idle:</b>														
Number (in thousands) .....	3,981.0	5,020.5	678.5	638.5	505.9	420.8	342.2	368.5	306.8	367.8	529.7	336.2	262.0	279.6
Percent of estimated working time <sup>1</sup> .....	.01	.02	.02	.02	.02	.02	.02	.02	.01	.01	.01	.02	.01	.01

<sup>1</sup> 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 Review*, October 1968, pp. 54-56.

<sup>P</sup> = 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		1994						1995						
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS:</b>															
All items .....	144.5	148.2	149.0	149.4	149.5	149.7	149.7	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9
All items (1967=100) .....	432.7	444.0	446.4	447.5	448.0	448.6	448.4	450.3	452.0	453.5	455.0	455.8	456.7	457.0	458.0
<b>Food and beverages</b> .....	<b>141.6</b>	<b>144.9</b>	<b>145.3</b>	<b>145.6</b>	<b>145.6</b>	<b>145.9</b>	<b>147.2</b>	<b>147.9</b>	<b>147.8</b>	<b>147.9</b>	<b>148.9</b>	<b>148.7</b>	<b>148.4</b>	<b>148.6</b>	<b>148.9</b>
Food .....	140.9	144.3	144.8	145.0	145.0	145.3	146.8	147.5	147.4	147.4	148.4	148.3	147.9	148.1	148.4
Food at home .....	140.1	144.1	144.7	145.0	144.8	145.1	147.3	148.2	147.9	147.6	149.2	148.7	148.1	148.2	148.4
Cereals and bakery products .....	156.6	163.0	164.7	164.8	164.6	163.7	164.2	164.6	165.8	165.3	166.9	166.6	167.5	168.2	168.8
Meats, poultry, fish, and eggs .....	135.5	137.2	137.1	137.3	136.8	136.9	136.4	137.3	137.6	138.4	137.7	137.3	137.1	137.3	138.7
Dairy products .....	129.4	131.7	131.8	131.3	131.5	131.7	131.6	132.7	132.1	132.2	132.1	132.8	132.2	132.9	132.8
Fruits and vegetables .....	159.0	165.0	162.8	163.2	162.9	165.7	180.3	180.4	177.1	174.0	183.1	181.0	177.5	176.7	174.0
Other foods at home .....	130.5	135.6	138.9	139.4	139.5	139.0	138.8	140.3	140.6	140.7	140.9	140.8	140.6	140.7	141.3
Sugar and sweets .....	133.4	135.2	135.1	135.4	135.6	134.5	134.5	135.5	135.8	136.4	136.7	137.3	137.3	138.1	138.7
Fats and oils .....	130.0	133.5	134.1	134.2	135.0	134.3	134.2	136.4	136.8	136.8	137.2	137.1	136.4	138.0	137.5
Nonalcoholic beverages .....	114.6	123.2	131.3	132.1	132.7	132.4	131.7	133.3	133.7	132.9	132.9	131.7	131.5	130.8	131.3
Other prepared foods .....	143.7	147.5	148.4	148.8	148.5	148.1	149.4	149.7	150.5	150.6	151.3	151.2	151.4	151.4	152.2
Food away from home .....	143.2	145.7	145.9	146.2	146.4	146.8	147.1	147.4	147.6	148.1	148.3	148.6	148.8	149.1	149.4
Alcoholic beverages .....	149.6	151.5	151.3	151.4	151.6	151.9	151.8	152.0	152.4	153.1	153.6	153.9	154.0	153.8	154.5
<b>Housing</b> .....	<b>141.2</b>	<b>144.8</b>	<b>145.9</b>	<b>145.8</b>	<b>145.7</b>	<b>145.5</b>	<b>145.4</b>	<b>146.4</b>	<b>147.0</b>	<b>147.4</b>	<b>147.4</b>	<b>147.6</b>	<b>148.5</b>	<b>149.2</b>	<b>149.6</b>
Shelter .....	155.7	160.5	161.7	161.6	162.0	162.1	161.8	162.9	163.8	164.5	164.7	164.8	165.5	166.4	166.8
Renters' costs (12/82=100) .....	165.0	169.4	172.1	169.4	169.8	168.9	168.2	170.7	172.9	174.6	174.1	173.7	174.7	176.7	176.9
Rent, residential .....	150.3	154.0	154.5	155.0	155.2	155.6	155.7	156.1	156.4	156.7	157.0	157.2	157.5	157.9	158.2
Other renters' costs .....	190.3	196.3	205.9	193.5	194.0	189.2	186.2	195.0	202.9	208.7	206.0	203.4	206.6	213.5	213.7
Homeowners' costs (12/82=100) .....	160.2	165.5	166.1	167.1	167.5	167.9	167.8	168.4	168.9	169.2	169.6	170.0	170.6	171.2	171.6
Owners' equivalent rent (12/82=100) .....	160.5	165.8	166.4	167.3	167.8	168.2	168.1	168.7	169.1	169.5	169.9	170.3	170.9	171.4	171.9
Household insurance (12/82=100) .....	146.9	152.3	154.0	154.3	154.5	155.0	155.4	155.9	156.1	157.1	157.2	157.4	158.1	158.3	158.7
Maintenance and repairs .....	130.6	130.8	131.2	131.6	130.8	131.2	132.7	133.1	133.8	134.2	134.2	134.6	135.0	135.1	135.4
Maintenance and repair services .....	135.0	134.5	135.4	135.8	135.9	136.4	137.0	137.3	137.9	138.8	139.0	139.4	139.4	139.8	140.3
Maintenance and repair commodities .....	124.6	125.8	125.6	126.0	123.8	124.3	126.8	127.5	128.2	128.2	127.6	128.1	129.0	128.7	128.8
Fuel and other utilities .....	121.3	122.8	124.3	124.2	124.2	121.8	122.0	122.9	122.6	122.3	122.6	122.5	125.0	125.1	125.7
Fuels .....	111.2	111.7	114.0	113.8	110.8	109.9	110.1	110.7	110.4	109.8	109.3	109.8	113.8	113.7	114.6
Fuel oil, coal, and bottled gas .....	90.3	88.8	86.8	86.8	87.0	87.7	88.4	89.4	89.6	89.0	88.4	88.3	87.9	87.1	86.6
Gas (piped) and electricity .....	118.5	119.2	122.2	122.1	118.5	117.3	117.4	118.0	117.6	117.1	116.6	117.2	121.9	121.9	123.0
Other utilities and public services .....	147.0	150.2	150.6	150.3	150.4	150.5	150.6	152.1	151.8	151.9	152.2	152.3	152.7	153.0	153.1
Household furnishings and operations .....	119.3	121.0	121.4	121.4	121.4	121.1	120.8	121.8	122.4	122.6	122.6	122.7	122.5	123.0	123.4
Housefurnishings .....	109.5	111.0	111.5	111.2	110.9	110.8	110.3	110.5	111.1	111.2	111.2	111.0	110.7	111.1	111.5
Housekeeping supplies .....	130.7	132.3	132.2	132.6	133.7	132.6	132.9	133.8	134.6	135.7	135.9	136.4	136.4	137.4	138.0
Housekeeping services .....	135.8	138.5	138.9	139.3	139.4	139.1	139.1	142.4	142.8	142.9	142.9	143.3	143.1	143.6	143.9
<b>Apparel and upkeep</b> .....	<b>133.7</b>	<b>133.4</b>	<b>131.1</b>	<b>134.2</b>	<b>135.2</b>	<b>134.2</b>	<b>130.5</b>	<b>129.4</b>	<b>131.1</b>	<b>134.4</b>	<b>134.8</b>	<b>133.4</b>	<b>130.5</b>	<b>128.3</b>	<b>130.1</b>
Apparel commodities .....	131.0	130.4	127.8	131.2	132.3	131.1	127.2	126.0	127.7	131.3	131.7	130.2	127.1	124.8	126.7
Men's and boys' apparel .....	127.5	126.4	125.7	128.4	128.9	129.2	125.3	124.0	125.6	127.2	127.0	127.9	125.5	123.4	124.5
Women's and girls' apparel .....	132.6	130.9	125.5	131.1	133.4	130.5	125.7	123.0	125.9	131.5	132.2	129.6	124.4	121.1	123.5
Infants' and toddlers' apparel .....	127.1	128.1	128.6	129.5	128.6	131.2	131.3	129.0	126.8	127.1	127.1	123.6	121.6	123.0	128.0
Footwear .....	125.9	126.0	124.5	125.1	125.5	125.7	123.6	124.0	124.8	125.9	127.2	126.6	124.6	123.3	123.6
Other apparel commodities .....	145.6	149.5	152.4	152.3	151.4	150.8	146.5	150.1	150.4	155.0	154.4	150.3	153.6	151.8	155.4
Apparel services .....	151.7	155.4	155.9	156.3	156.4	156.3	156.4	157.0	157.3	157.6	157.7	157.7	156.9	157.2	157.3
<b>Transportation</b> .....	<b>130.4</b>	<b>134.3</b>	<b>135.9</b>	<b>135.9</b>	<b>136.1</b>	<b>137.1</b>	<b>137.1</b>	<b>137.3</b>	<b>137.5</b>	<b>138.0</b>	<b>139.1</b>	<b>140.3</b>	<b>141.1</b>	<b>140.1</b>	<b>139.2</b>
Private transportation .....	127.5	131.4	133.0	133.1	133.6	134.8	134.9	134.9	135.0	135.2	136.2	137.5	137.9	136.9	136.3
New vehicles .....	132.7	137.6	137.3	137.5	138.4	139.4	140.1	140.6	140.7	140.7	141.1	141.1	141.0	140.3	140.0
New cars .....	131.5	136.0	135.6	135.7	136.6	137.7	138.5	139.0	139.1	139.0	139.3	139.3	139.1	138.3	137.9
Used cars .....	133.9	141.7	144.0	145.4	147.7	150.1	151.5	152.4	153.3	154.8	156.7	157.7	158.3	157.5	157.0
Motor fuel .....	98.0	98.5	104.1	103.7	101.8	102.7	100.4	98.7	98.0	97.5	99.5	104.2	106.1	103.6	101.1
Gasoline .....	97.7	98.2	104.1	103.6	101.7	102.6	100.2	98.4	97.7	97.2	99.3	104.2	106.3	103.7	101.0
Maintenance and repair .....	145.9	150.2	150.7	151.2	151.7	151.8	151.9	152.0	152.5	152.7	153.2	153.8	153.6	154.0	154.5
Other private transportation .....	156.8	162.1	162.0	162.1	164.1	166.2	167.6	168.8	169.4	170.2	170.9	170.5	169.9	169.6	170.3
Other private transportation commodities .....	103.4	103.5	103.3	103.2	103.1	104.0	104.3	104.2	104.6	104.6	104.5	104.7	104.6	104.8	105.0
Other private transportation services .....	169.1	175.8	175.7	175.8	178.4	180.7	182.4	184.0	184.6	185.6	186.5	185.9	185.2	184.8	185.7
Public transportation .....	167.0	172.0	173.2	171.7	168.4	167.2	165.6	168.4	169.9	174.5	176.7	176.7	182.5	181.8	177.1
<b>Medical care</b> .....	<b>201.4</b>	<b>211.0</b>	<b>212.2</b>	<b>212.8</b>	<b>214.0</b>	<b>214.7</b>	<b>215.3</b>	<b>216.6</b>	<b>217.9</b>	<b>218.4</b>	<b>218.9</b>	<b>219.3</b>	<b>219.8</b>	<b>220.8</b>	<b>221.6</b>
Medical care commodities .....	195.0	200.7	201.7	201.7	202.2	202.7	202.9	203.1	203.5	203.7	203.6	203.4	203.8	204.4	204.7
Medical care services .....	202.9	213.4	214.7	215.4	216.8	217.5	218.2	219.8	221.3	221.8	222.4	223.0	223.5	224.6	225.6
Professional services .....	184.7	192.5	193.5	194.0	195.1	195.5	196.0	197.2	198.5	199.1	199.5	200.2	200.8	201.6	202.0
Hospital and related services .....	231.9	245.6	247.3	248.1	249.8	250.6	251.3	253.2	254.7	254.7	255.3	255.6	255.9	257.6	259.4
<b>Entertainment</b> .....	<b>145.8</b>	<b>150.1</b>	<b>150.2</b>	<b>150.7</b>	<b>151.0</b>	<b>151.6</b>	<b>151.2</b>	<b>152.1</b>	<b>152.5</b>	<b>152.6</b>	<b>153.3</b>	<b>153.6</b>	<b>153.2</b>	<b>153.6</b>	<b>154.1</b>
Entertainment commodities .....	133.4	136.1	136.5	137.0	136.9	137.3	136.8	137.5	137.4	137.3	138.1	138.1	138.1		



**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		1994						1995							
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	
All items .....	144.5	148.2	149.0	149.4	149.5	149.7	149.7	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	
Commodities .....	131.5	133.8	134.3	134.8	134.9	135.2	135.1	135.1	135.4	135.9	136.6	136.9	136.6	136.2	136.3	
Food and beverages .....	141.6	144.9	145.3	145.6	145.6	145.9	147.2	147.9	147.8	147.9	148.9	148.7	148.4	148.6	148.9	
Commodities less food and beverages .....	125.3	126.9	127.5	128.1	128.3	128.6	127.6	127.4	127.9	128.6	129.2	129.7	129.4	128.5	128.6	
Nondurables less food and beverages .....	128.1	128.4	129.2	130.3	130.2	130.1	128.1	127.5	128.1	129.2	129.9	130.8	130.4	129.1	129.3	
Apparel commodities .....	131.0	130.4	127.8	131.2	132.3	131.1	127.2	126.0	127.7	131.3	131.7	130.2	127.1	124.8	126.7	
Nondurables less food, beverages, and apparel .....	129.6	130.3	132.8	132.8	132.2	132.5	131.5	131.2	131.3	131.1	132.0	134.2	135.1	134.3	133.6	
Durables .....	121.3	124.8	125.1	125.1	125.7	126.5	126.9	127.2	127.6	127.7	128.1	128.1	128.0	127.8	127.7	
Services .....	157.9	163.1	164.2	164.4	164.6	164.7	164.7	165.9	166.7	167.3	167.5	167.7	168.6	169.2	169.8	
Rent of shelter (12/82=100) .....	162.0	167.0	168.2	168.2	168.6	168.6	168.3	169.4	170.4	171.2	171.3	171.5	172.2	173.2	173.6	
Household services less rent of shelter (12/82=100) .....	134.2	136.3	138.0	137.9	136.3	135.8	135.9	137.2	137.0	136.9	136.7	137.1	139.5	139.7	140.3	
Transportation services .....	162.9	168.6	168.9	168.8	169.5	170.5	171.1	172.6	173.4	175.0	176.1	175.9	176.8	176.5	176.0	
Medical care services .....	202.9	213.4	214.7	215.4	216.8	217.5	218.2	219.8	221.3	221.8	222.4	223.0	223.5	224.6	225.6	
Other services .....	177.0	185.4	185.8	187.8	188.5	189.0	188.9	189.7	190.9	191.1	191.4	191.7	191.5	192.1	193.7	
Special indexes:																
All items less food .....	145.1	149.0	149.8	150.2	150.4	150.6	150.2	150.8	151.5	152.1	152.5	152.9	153.3	153.4	153.7	
All items less shelter .....	141.4	144.8	145.5	146.0	146.1	146.3	146.3	146.8	147.2	147.7	148.3	148.6	148.8	148.6	148.9	
All items less homeowners' costs (12/82=100) .....	146.0	149.5	150.4	150.6	150.7	150.9	150.8	151.5	152.1	152.7	153.2	153.4	153.7	153.7	154.0	
All items less medical care .....	141.2	144.7	145.5	145.8	145.9	146.1	146.0	146.6	147.1	147.6	148.1	148.4	148.7	148.7	149.0	
Commodities less food .....	126.3	127.9	128.4	129.0	129.3	129.5	128.5	128.3	128.8	129.5	130.1	130.6	130.4	129.5	129.7	
Nondurables less food .....	129.3	129.7	130.4	131.4	131.4	131.2	129.5	128.9	129.5	130.5	131.3	132.1	131.7	130.5	130.8	
Nondurables less food and apparel .....	130.7	131.6	133.7	133.7	133.2	133.5	132.6	132.4	132.5	132.4	133.3	132.1	130.6	135.3	134.8	
Nondurables .....	135.1	136.8	137.4	138.1	138.1	138.2	137.8	137.8	138.1	138.7	139.6	139.9	139.6	139.0	139.3	
Services less rent of shelter (12/82=100) .....	164.8	170.7	171.7	172.2	172.2	172.4	172.7	174.0	174.7	175.1	175.5	175.8	176.9	177.3	177.9	
Services less medical care .....	153.6	158.4	159.4	159.6	159.7	159.8	159.7	160.9	161.6	162.2	162.4	162.6	163.5	164.1	164.6	
Energy .....	104.2	104.6	105.5	108.2	105.8	105.7	104.7	104.2	103.7	103.2	103.9	106.3	109.3	108.1	107.4	
All items less energy .....	150.0	154.1	154.6	155.0	155.5	155.7	155.7	156.5	157.2	157.8	158.3	158.3	158.3	158.5	159.0	
All items less food and energy .....	152.2	156.5	157.0	157.5	158.0	158.2	157.9	158.7	159.6	160.4	160.7	160.8	160.9	161.1	161.6	
Commodities less food and energy .....	135.2	137.1	136.8	137.7	138.3	138.4	137.6	137.7	138.4	139.4	139.7	139.6	138.9	138.3	138.9	
Energy commodities .....	97.3	97.6	102.4	102.0	100.4	101.2	99.2	97.9	97.2	96.7	98.4	102.6	104.3	101.9	99.7	
Services less energy .....	161.9	167.6	168.5	168.8	169.3	169.6	169.6	170.8	171.7	172.4	172.7	172.9	173.4	174.1	174.6	
Purchasing power of the consumer dollar:																
1982-84=\$1.00 .....	69.2	67.5	67.1	66.9	66.9	66.8	66.8	66.5	66.3	66.0	65.8	65.7	65.6	65.6	65.4	
1967=\$1.00 .....	23.1	22.5	22.4	22.3	22.3	22.3	22.3	22.2	22.1	22.0	22.0	21.9	21.9	21.9	21.8	
<b>CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS:</b>																
All items .....	142.1	145.6	146.5	146.9	147.0	147.3	147.2	147.8	148.3	148.7	149.3	149.6	149.9	149.9	150.2	
All items (1967=100) .....	423.1	433.8	436.4	437.5	437.8	438.6	438.6	440.2	441.7	443.0	444.6	445.6	446.5	446.5	447.4	
Food and beverages .....	141.2	144.4	144.9	145.1	145.1	145.3	146.6	147.2	147.3	147.3	148.3	148.1	147.8	148.0	148.3	
Food .....	140.5	143.9	144.4	144.6	144.6	144.8	146.2	146.9	146.9	146.8	147.9	147.7	147.4	147.6	147.9	
Food at home .....	139.6	143.4	144.1	144.4	144.1	144.3	146.3	147.2	147.1	146.8	148.2	147.8	147.2	147.4	147.7	
Cereals and bakery products .....	156.3	162.7	164.4	164.6	164.3	163.5	163.9	164.3	165.6	165.1	166.7	166.3	167.3	167.9	168.5	
Meats, poultry, fish, and eggs .....	135.4	137.0	136.9	137.2	136.6	136.7	136.0	137.1	137.4	138.1	137.3	136.9	136.6	137.0	138.3	
Dairy products .....	129.1	131.5	131.6	131.0	131.2	131.4	131.4	132.4	131.8	131.9	131.8	132.5	131.9	132.5	132.5	
Fruits and vegetables .....	158.2	164.2	162.3	162.6	162.0	164.5	178.8	178.8	175.8	172.7	182.1	179.8	176.7	176.1	173.5	
Other foods at home .....	130.4	135.3	138.3	138.8	139.0	138.5	138.3	139.7	140.2	140.3	140.4	140.4	140.2	140.3	140.8	
Sugar and sweets .....	133.1	135.2	135.1	135.4	135.7	134.5	134.4	135.5	135.8	136.4	136.6	137.3	137.3	138.0	138.6	
Fats and oils .....	129.9	133.5	134.0	134.2	135.0	134.1	134.1	136.3	136.7	136.7	137.1	136.9	136.3	137.9	137.4	
Nonalcoholic beverages .....	115.1	122.9	130.2	130.9	131.5	131.1	130.6	132.2	132.9	132.2	131.2	131.0	130.7	130.0	130.6	
Other prepared foods .....	143.5	147.2	148.1	148.5	148.2	147.8	148.0	149.1	149.5	150.2	150.3	151.0	151.0	151.1	151.9	
Food away from home .....	143.1	145.5	145.8	146.1	146.3	146.7	147.0	147.3	147.5	147.9	148.2	148.5	148.7	149.0	149.2	
Alcoholic beverages .....	149.3	151.0	150.7	150.9	151.1	151.3	151.4	151.6	152.0	152.7	153.2	153.4	153.4	153.1	153.8	
Housing .....	138.5	142.0	143.0	143.0	142.8	142.7	142.7	143.5	144.0	144.3	144.4	144.6	145.5	146.1	146.5	
Shelter .....	151.6	156.2	157.2	157.4	157.7	157.9	157.7	158.6	159.3	159.9	160.1	160.3	160.9	161.7	162.1	
Renters' costs (12/84=100) .....	144.7	148.5	150.3	148.9	149.2	148.8	148.5	149.9	151.3	152.3	152.1	152.0	152.6	153.9	154.2	
Rent, residential .....	150.0	153.7	154.2	154.7	154.9	155.4	155.4	155.7	156.1	156.4	156.7	156.9	157.2	157.5	157.8	
Other renters' costs .....	190.2	196.6	206.7	194.1	194.4	189.6	187.2	195.3	202.9	208.5	205.8	203.8	206.2	213.7	214.2	
Homeowners' costs (12/84=100) .....	146.1	150.9	151.5	152.3	152.8	153.1	153.1	153.6	154.0	154.3	154.7	155.1	155.6	156.1	156.5	
Owners' equivalent rent (12/84=100) .....	146.3	151.1	151.7	152.6	153.0	153.3	153.3	153.8	154.2	154.5	154.9	155.3	155.8	156.3	156.8	
Household insurance (12/84=100) .....	134.4	139.7	141.4	141.7	141.9	142.4	142.9	143.2	143.4	144.2	144.5	144.6	145.2	145.4	145.7	
Maintenance and repairs .....	130.9	130.8	131.3	131.8	131.0	131.4	132.4	132.8	133.2	133.7	133.7	134.1	134.4	134.7	134.9	
Maintenance and repair services .....	138.6	138.1	139.1	139.4	139.5	140.0	140.3	140.5	140.8	141.7	141.9	142.3	142.4	142.9	143.0	
Maintenance and repair commodities .....	120.7	121.1	120.9	121.6	120.0	120.2	121.9	122.5	123.0	123.1	122.9	123.2	123.8	124.0	124.1	
Fuel and other utilities .....	121.1	122.5	124.0	123.9	122.0	121.5	121.6	122.5	122.2	122.2	121.9	122.0	122.6	122.6	125.3	
Fuels .....	110.7	111.1	113.5	113.3	110.2	109.3	109.5	110.1	109.7	109.1	108.4	109.1	113.1	113.1	114.0	
Fuel oil, coal, and bottled gas .....	90.2	88.7	86.6	86.7	86.9	87.6	88.3	89.3	89.5	88.9	88.3	88.2	87.8	87.0	86.5	
Gas (piped) and electricity .....	118.0	118.7	121.6	121.5	117.8	116.7	116.8	117.4	116.9	116.3	115.6	116.3	121.1	121.2	122.4	
Other utilities and public services .....	147.7	150.8	151.1	150.9	150.9	150.9	151.1	152.4	152.2	1						

**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		1994						1995						
	1993	1994	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Apparel and upkeep .....	132.4	132.2	130.2	133.1	133.9	133.0	129.3	128.3	130.0	133.2	133.6	132.1	129.6	127.4	129.1
Apparel commodities .....	129.8	129.4	127.2	130.2	131.1	130.1	126.1	125.0	126.8	130.3	130.7	129.1	126.4	124.0	125.8
Men's and boys' apparel .....	126.8	125.8	125.3	127.8	128.1	128.4	124.5	123.5	125.2	126.7	126.5	127.8	125.6	123.1	124.2
Women's and girls' apparel .....	130.4	129.2	124.5	129.4	131.7	129.1	124.0	121.2	124.3	129.8	130.6	128.1	123.2	120.0	121.9
Infants' and toddlers' apparel .....	128.9	129.3	129.9	131.1	130.3	133.2	132.9	130.3	127.0	127.4	127.7	123.9	122.4	123.5	129.1
Footwear .....	126.5	126.9	125.3	126.0	126.3	126.1	124.2	124.4	125.3	126.8	127.9	127.4	125.5	124.2	124.4
Other apparel commodities .....	145.4	148.7	151.5	151.3	149.9	149.1	144.1	149.1	149.7	154.6	153.5	146.9	151.5	149.3	153.7
Apparel services .....	151.2	154.9	155.4	155.9	156.0	155.8	156.5	156.8	157.1	157.2	157.1	156.5	156.8	156.9	156.9
Transportation .....	129.4	133.4	135.2	135.3	135.6	136.7	136.7	136.9	137.1	137.6	138.7	140.1	140.8	139.8	138.9
Private transportation .....	127.4	131.4	133.3	133.5	133.9	135.1	135.2	135.2	135.4	135.7	136.8	138.3	138.7	137.7	136.9
New vehicles .....	133.3	138.3	138.2	138.4	139.2	140.1	140.9	141.2	141.4	141.5	141.9	141.8	141.8	141.3	140.9
New cars .....	131.2	135.7	135.3	135.4	136.3	137.3	138.1	138.6	138.7	138.9	139.0	138.9	138.7	138.1	137.6
Used cars .....	134.6	142.4	144.7	146.1	148.4	150.8	152.1	153.0	154.0	155.5	157.4	158.4	159.1	158.4	157.9
Motor fuel .....	97.9	98.4	104.2	103.7	101.7	102.6	100.2	98.5	97.8	97.3	99.5	104.2	106.2	103.5	101.0
Gasoline .....	97.6	98.2	104.3	103.7	101.5	102.5	100.0	98.3	97.5	97.0	99.3	104.3	106.4	103.6	101.0
Maintenance and repair .....	146.5	150.9	151.4	151.9	152.4	152.5	152.6	152.7	153.3	153.5	154.0	154.6	154.5	154.9	155.3
Other private transportation .....	152.9	157.9	157.8	158.0	160.0	162.0	163.4	164.7	165.4	166.3	166.9	166.5	166.0	165.6	166.1
Other private transportation commodities .....	102.8	102.8	102.8	102.4	102.4	103.2	103.5	103.4	103.8	103.8	103.7	103.9	103.8	104.0	104.2
Other private transportation services .....	165.0	171.5	171.5	171.8	174.3	176.6	178.4	180.0	180.9	181.9	182.8	182.2	181.6	181.1	181.5
Public transportation .....	163.0	167.7	168.7	167.6	164.8	163.8	162.5	164.8	166.5	170.1	172.3	172.5	177.2	176.6	172.6
Medical care .....	200.9	210.4	211.5	212.0	213.4	214.0	214.6	215.9	217.3	217.7	218.2	218.7	219.2	220.2	221.1
Medical care commodities .....	193.2	198.6	199.5	199.3	199.9	200.6	200.8	200.9	201.3	201.5	201.3	201.0	201.5	202.2	202.6
Medical care services .....	202.7	213.0	214.2	214.9	216.4	217.1	217.7	219.3	220.9	221.4	222.0	222.6	223.2	224.3	225.3
Professional services .....	185.2	193.4	194.4	194.9	196.0	196.5	196.9	198.1	199.4	200.0	200.5	201.2	201.9	202.7	203.2
Hospital and related services .....	229.2	242.7	244.4	245.2	246.9	247.7	248.5	250.5	252.1	252.2	252.8	253.1	253.4	255.0	256.8
Entertainment .....	144.1	148.2	148.3	148.6	149.0	149.6	149.2	150.1	150.4	150.6	151.3	151.5	151.2	151.5	152.0
Entertainment commodities .....	132.9	135.5	135.9	136.0	136.2	136.6	136.1	136.8	136.8	136.7	137.5	137.5	137.4	137.7	138.2
Entertainment services .....	160.5	166.7	166.5	167.0	167.5	168.5	168.3	169.2	170.1	170.6	171.2	171.8	171.2	171.4	172.0
Other goods and services .....	192.2	196.4	197.5	198.9	199.4	199.8	200.0	200.5	201.5	201.4	201.7	202.5	203.0	203.3	205.0
Tobacco products .....	228.3	220.1	222.1	221.1	221.6	221.7	222.2	222.4	222.9	222.6	223.1	225.4	226.5	226.3	227.4
Personal care .....	141.6	144.8	145.2	145.4	145.5	145.9	146.1	146.0	146.4	146.1	146.5	146.8	146.8	146.9	147.4
Toilet goods and personal care appliances .....	139.6	142.2	142.6	142.6	142.8	143.1	143.5	143.1	143.4	142.9	143.1	143.7	143.5	143.3	143.8
Personal care services .....	143.9	147.9	148.2	148.6	148.6	149.1	149.2	149.5	150.1	150.2	150.7	150.6	150.9	151.3	151.7
Personal and educational expenses .....	206.9	219.2	220.2	223.6	224.4	224.9	224.9	226.0	227.5	227.7	227.8	228.0	228.4	229.2	231.9
School books and supplies .....	199.2	207.1	207.5	209.8	208.8	208.8	208.5	213.4	213.4	213.6	213.7	213.2	213.6	213.8	214.1
Personal and educational services .....	207.8	220.4	221.5	225.0	225.9	226.5	226.5	227.2	228.9	229.0	229.2	229.5	229.8	230.6	233.6
All items .....	142.1	145.6	146.5	146.9	147.0	147.3	147.2	147.8	148.3	148.7	149.3	149.6	149.9	149.9	150.2
Commodities .....	131.2	133.4	134.1	134.6	134.7	135.0	134.8	134.9	135.3	135.7	136.5	136.9	136.7	136.2	136.3
Food and beverages .....	141.2	144.4	144.9	145.1	145.1	145.3	146.6	147.2	147.3	147.3	148.3	148.1	147.8	148.0	148.3
Commodities less food and beverages .....	125.0	126.6	127.5	128.1	128.2	128.6	127.6	127.4	127.9	128.6	129.3	130.0	129.9	128.9	128.9
Nondurables less food and beverages .....	127.7	127.9	129.1	129.9	129.7	129.7	127.7	127.0	127.6	128.5	129.4	130.5	130.3	128.9	128.9
Apparel commodities .....	129.8	129.4	127.2	130.2	131.1	130.1	126.1	125.0	126.8	130.3	130.7	129.1	126.4	124.0	125.8
Nondurables less food, beverages, and apparel .....	129.7	130.1	133.0	132.8	132.0	132.4	131.3	130.9	130.8	130.6	131.7	134.2	135.2	134.2	133.4
Durables .....	120.1	123.8	124.3	124.4	125.1	126.0	126.5	126.8	127.2	127.5	128.0	128.1	128.1	127.9	127.8
Services .....	155.5	160.6	161.6	161.9	162.1	162.3	162.4	163.4	164.1	164.6	164.8	165.1	166.0	166.5	167.0
Rent of shelter (12/84=100) .....	145.8	150.3	151.3	151.4	151.8	151.9	151.7	152.5	153.3	153.8	154.0	154.2	154.8	155.5	156.0
Household services less rent of shelter (12/84=100) .....	123.5	125.4	126.9	126.9	125.2	124.7	124.9	126.1	125.8	125.6	125.4	125.9	128.2	128.3	128.9
Transportation services .....	160.0	165.7	165.9	166.0	167.2	168.4	169.2	170.6	171.5	172.8	173.8	173.6	174.0	173.7	173.4
Medical care services .....	202.7	213.0	214.2	214.9	216.4	217.1	217.7	219.3	220.9	221.4	222.0	222.6	223.2	224.3	225.3
Other services .....	174.1	182.4	182.9	184.7	185.3	185.9	185.9	186.6	187.7	188.0	188.3	188.6	188.5	189.0	190.6
Special indexes:															
All items less food .....	142.3	145.9	146.8	147.2	147.4	147.7	147.4	147.9	148.5	149.0	149.5	149.9	150.3	150.3	150.6
All items less shelter .....	139.7	143.0	143.8	144.2	144.3	144.6	144.6	145.0	145.5	145.9	146.5	146.9	147.1	146.8	147.1
All items less homeowners' costs (12/84=100) .....	133.9	137.0	137.9	138.1	138.2	138.4	138.4	139.0	139.4	139.9	140.4	140.7	141.0	140.9	141.2
All items less medical care .....	139.2	142.6	143.4	143.8	143.8	144.1	144.0	144.6	145.0	145.5	146.0	146.3	146.6	146.6	146.9
Commodities less food .....	125.9	127.6	128.4	128.9	129.1	129.4	128.5	128.3	128.8	129.5	130.2	130.9	130.8	129.9	129.9
Nondurables less food .....	128.9	129.2	130.3	131.1	130.9	130.8	129.0	128.4	129.0	129.9	130.7	131.8	131.6	130.3	130.4
Nondurables less food and apparel .....	130.7	131.2	133.7	133.6	133.0	133.3	132.4	132.0	131.9	132.9	133.7	135.1	136.0	135.1	134.5
Durables .....	134.7	136.4	137.3	137.8	137.7	137.8	137.4	137.4	137.7	138.2	139.1	139.6	139.4	138.8	138.9
Services less rent of shelter (12/84=100) .....	147.0	152.1	153.0	153.5	153.4	153.7	154.0	155.2	155.8	156.1	156.4	156.7	157.7	157.9	158.6
Services less medical care .....	151.4	156.1	157.1	157.3	157.4	157.6	157.6	158.6	159.3	159.7	160.0	160.2	161.1	161.5	162.1
Energy .....	103.6	104.1	108.2	107.8	105.3	105.3	104.2	103.6	103.1	102.5	103.3	106.0	109.0	107.6	106.8
All items less energy .....	147.5	151.5	151.9	152.4	152.9	153.2	153.3	154.0	154.6	155.2	155.7	155.7	155.7	155.8	156.3
All items less food and energy .....	149.3	153.5	153.9	154.4	155.0	155.3	155.1	155.8	156.6	157.3	157.7	157.8	157.9	158.0	158.5
Commodities less food and energy .....	134.3	136.2	136.1	136.9	137.5	137.7	137.1	137.1	137.9	138.3	139.3	139.1	138.6	138.1	138.6
Energy commodities .....	97.5	97.8	102.9	102.4	100.6	101.5	99.4	98.0	97.3	96.8	98.7	103.1			



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

(1982-84=100, unless otherwise indicated)

Area <sup>1</sup>	Pricing schedule <sup>2</sup>	All Urban Consumers						Urban Wage Earners							
		1994		1995				1994		1995					
		July	Aug.	Apr.	May	June	July	Aug.	July	Aug.	Apr.	May	June	July	Aug.
U.S. city average .....	M	148.4	149.0	151.9	152.2	152.5	152.5	152.9	145.8	146.5	149.3	149.6	149.9	149.9	150.2
<b>Region and area size<sup>3</sup></b>															
Northeast urban .....	M	155.2	155.9	158.3	158.5	158.9	159.2	159.7	152.7	153.4	155.8	156.1	156.4	156.6	157.1
Size A - More than 1,200,000 .....	M	155.7	156.6	159.0	159.2	159.6	159.8	160.3	152.2	153.1	155.4	155.7	156.1	156.1	156.7
Size B - 500,000 to 1,200,000 .....	M	154.3	154.8	156.3	156.4	156.5	157.5	157.9	152.3	152.8	154.2	154.3	154.5	155.3	155.7
Size C - 50,000 to 500,000 .....	M	152.9	153.8	157.0	157.1	157.2	157.8	158.5	154.4	155.2	158.6	158.8	158.9	159.2	159.8
North Central urban .....	M	144.3	145.2	148.1	148.3	148.7	148.8	148.9	141.3	142.2	145.0	145.2	145.6	145.5	145.6
Size A - More than 1,200,000 .....	M	145.4	146.3	149.0	149.0	149.5	149.5	149.8	141.6	142.6	145.3	145.2	145.7	145.6	145.8
Size B - 360,000 to 1,200,000 .....	M	143.6	144.4	146.9	147.3	147.7	148.0	147.8	140.1	141.0	143.4	143.9	144.2	144.1	144.0
Size C - 50,000 to 360,000 .....	M	145.0	145.9	149.5	150.0	149.9	149.6	149.9	142.6	143.6	146.9	147.5	147.4	147.1	147.3
Size D - Nonmetropolitan (less than 50,000) .....	M	140.2	140.8	143.9	144.6	145.4	146.0	145.7	138.9	139.5	142.2	142.9	143.7	144.2	144.0
South urban .....	M	145.0	145.5	148.4	148.8	149.1	149.2	149.7	143.6	144.1	147.0	147.4	147.8	147.8	148.3
Size A - More than 1,200,000 .....	M	145.3	145.7	148.3	148.7	148.8	148.8	149.4	143.6	144.1	146.4	147.1	147.2	147.2	147.6
Size B - 450,000 to 1,200,000 .....	M	147.1	147.9	150.9	150.8	151.3	151.5	152.0	143.7	144.5	147.4	147.4	147.8	147.9	148.3
Size C - 50,000 to 450,000 .....	M	143.8	144.3	147.3	147.6	148.5	148.4	149.4	143.7	144.2	147.3	147.8	148.6	148.5	149.4
Size D - Nonmetropolitan (less than 50,000) .....	M	142.7	142.9	147.1	148.0	147.8	148.1	147.8	142.9	143.2	147.3	148.2	148.1	148.3	148.3
West urban .....	M	149.5	150.1	153.2	153.5	153.6	153.5	153.7	146.7	147.2	150.3	150.6	150.7	150.5	150.7
Size A - More than 1,250,000 .....	M	150.9	151.3	154.0	154.2	154.1	154.0	154.1	146.5	146.9	149.6	149.7	149.8	149.5	149.6
Size C - 50,000 to 330,000 .....	M	150.0	151.1	155.9	156.4	156.6	156.7	157.0	147.7	148.6	152.8	153.8	153.8	153.7	153.9
<b>Size classes:</b>															
A (12/86=100) .....	M	134.6	135.2	137.5	137.7	137.9	137.9	138.2	133.6	134.3	136.6	136.8	137.0	136.9	137.2
B .....	M	148.1	148.8	151.6	151.8	152.1	152.6	152.8	145.5	146.3	148.9	149.1	149.4	149.7	150.0
C .....	M	146.8	147.5	151.0	151.4	151.8	151.8	152.4	146.1	146.8	150.2	150.7	151.1	150.9	151.5
D .....	M	143.8	144.0	147.7	148.5	148.9	149.1	148.8	143.2	143.4	147.0	147.9	148.2	148.4	148.2
<b>Selected local areas</b>															
Chicago, IL-Northwestern IN ...	M	148.3	149.8	153.1	153.0	153.5	153.6	153.8	143.7	145.1	148.3	148.2	148.5	148.7	148.8
Los Angeles-Long Beach, Anaheim, CA .....	M	151.7	152.0	154.7	155.1	154.8	154.5	154.4	146.5	146.8	149.5	149.8	149.7	149.3	149.2
New York, NY-Northeastern NJ .....	M	158.2	159.1	161.4	161.8	162.2	162.3	162.8	154.4	155.3	157.5	158.0	158.4	158.3	158.9
Philadelphia, PA-NJ .....	M	155.3	155.7	157.8	157.8	158.4	158.9	159.6	154.9	155.3	157.4	157.4	158.1	158.5	159.2
San Francisco-Oakland, CA .....	M	148.9	149.4	151.5	151.3	151.7	151.5	151.5	146.6	147.1	149.4	149.0	149.6	149.3	149.3
Baltimore, MD .....	1	148.2	-	-	150.4	-	151.5	-	147.3	-	-	149.4	-	150.5	-
Boston, MA .....	1	153.9	-	-	157.7	-	157.8	-	152.9	-	-	156.5	-	156.6	-
Cleveland, OH .....	1	143.7	-	-	147.4	-	148.1	-	136.3	-	-	139.9	-	140.3	-
Miami, FL .....	1	143.4	-	-	148.6	-	148.3	-	141.4	-	-	146.8	-	146.5	-
St. Louis, MO-IL .....	1	141.9	-	-	144.6	-	145.6	-	141.4	-	-	144.2	-	145.2	-
Washington, DC-MD-VA .....	1	151.8	-	-	154.7	-	156.1	-	149.4	-	-	152.3	-	153.5	-
Dallas-Ft. Worth, TX .....	2	-	142.2	145.0	-	144.4	-	145.1	-	141.6	144.5	-	144.4	-	144.8
Detroit, MI .....	2	-	145.3	148.1	-	148.3	-	148.8	-	141.0	143.6	-	143.7	-	144.0
Houston, TX .....	2	-	139.2	138.0	-	139.9	-	140.1	-	138.8	137.6	-	139.5	-	139.8
Pittsburgh, PA .....	2	-	145.7	148.9	-	149.2	-	150.1	-	139.4	142.6	-	143.0	-	143.7

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Consumer Price Index for All Urban Consumers:</b>									
<b>All Items:</b>									
Index .....	109.6	113.6	118.3	124.0	130.7	136.2	140.3	144.5	148.2
Percent change .....	1.9	3.6	4.1	4.8	5.4	4.2	3.0	3.0	2.6
<b>Food and beverages:</b>									
Index .....	109.1	113.5	118.2	124.9	132.1	136.8	138.7	141.6	144.9
Percent change .....	3.3	4.0	4.1	5.7	5.8	3.6	1.4	2.1	2.3
<b>Housing:</b>									
Index .....	110.9	114.2	118.5	123.0	128.5	133.6	137.5	141.2	144.8
Percent change .....	3.0	3.0	3.8	3.8	4.5	4.0	2.9	2.7	2.5
<b>Apparel and upkeep:</b>									
Index .....	105.9	110.6	115.4	118.6	124.1	128.7	131.9	133.7	133.4
Percent change .....	.9	4.4	4.3	2.8	4.6	3.7	2.5	1.4	-2
<b>Transportation:</b>									
Index .....	102.3	105.4	108.7	114.1	120.5	123.8	126.5	130.4	134.3
Percent change .....	-3.9	3.0	3.1	5.0	5.6	2.7	2.2	3.1	3.0
<b>Medical care:</b>									
Index .....	122.0	130.1	138.6	149.3	162.8	177.0	190.1	201.4	211.0
Percent change .....	7.5	6.6	6.5	7.7	9.0	8.7	7.4	5.9	4.8
<b>Entertainment:</b>									
Index .....	111.6	115.3	120.3	126.5	132.4	138.4	142.3	145.8	150.1
Percent change .....	3.4	3.3	4.3	5.2	4.7	4.5	2.8	2.5	2.9
<b>Other goods and services:</b>									
Index .....	121.4	128.5	137.0	147.7	159.0	171.6	183.3	192.9	198.5
Percent change .....	6.0	5.8	6.6	7.8	7.7	7.9	6.8	5.2	2.9
<b>Consumer Price Index for Urban Wage Earners and Clerical Workers:</b>									
<b>All Items:</b>									
Index .....	108.6	112.5	117.0	122.6	129.0	134.3	138.2	142.1	145.6
Percent change .....	1.6	3.6	4.0	4.8	5.2	4.1	2.9	2.8	2.5



### 34. Producer Price Indexes, by stage of processing

(1982=100)

Grouping	Annual average		1994				1995							
	1993	1994	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>Finished goods</b> .....	124.7	125.5	125.6	125.8	126.1	126.2	126.6	126.9	127.1	127.6	128.0	128.2	128.3	128.1
Finished consumer goods .....	123.0	123.3	123.5	123.4	123.8	123.9	124.2	124.5	124.7	125.2	125.8	126.0	126.0	125.8
Finished consumer goods .....	125.7	126.8	126.3	126.1	126.9	128.6	127.9	128.4	128.7	128.7	127.9	127.4	128.5	128.6
Finished consumer goods excluding foods .....	121.7	121.6	122.2	122.0	122.3	121.8	122.4	122.6	122.9	123.6	124.7	125.2	124.8	124.4
Nondurable goods less food .....	117.6	116.2	117.8	116.3	116.7	115.9	116.7	116.9	117.3	118.4	120.0	120.8	120.2	119.8
Durable goods .....	128.0	130.9	129.2	132.1	132.1	132.2	132.6	132.7	132.4	132.4	132.4	132.3	132.1	131.9
Capital equipment .....	131.4	134.1	133.5	134.8	134.8	135.1	135.9	136.1	136.2	136.4	136.4	136.6	136.7	136.6
<b>Intermediate materials, supplies, and components</b> .....	116.2	118.5	120.1	120.0	120.9	121.1	122.5	123.4	124.0	124.7	125.3	125.9	126.0	126.0
Materials and components for manufacturing .....	118.9	122.1	123.7	124.5	125.5	126.2	128.1	129.3	129.9	130.7	130.8	131.0	131.5	131.4
Materials for food manufacturing .....	115.6	118.5	118.5	116.8	118.0	117.5	117.8	118.4	119.0	117.2	116.5	117.2	119.3	120.1
Materials for nondurable manufacturing .....	115.5	119.2	122.3	124.3	125.4	126.7	129.7	132.1	133.2	135.9	136.5	137.4	137.8	137.6
Materials for durable manufacturing .....	119.1	125.2	127.4	128.5	130.6	131.8	134.6	136.1	136.6	136.9	136.5	136.1	136.4	136.3
Components for manufacturing .....	123.0	124.3	124.5	124.6	124.8	124.9	125.7	126.0	126.1	126.3	126.3	126.3	126.5	126.5
Materials and components for construction .....	132.0	136.6	137.5	138.0	139.1	139.4	140.5	141.0	141.7	142.2	142.2	142.0	142.6	142.9
Processed fuels and lubricants .....	84.7	83.1	86.6	83.0	83.5	82.3	82.3	82.5	82.7	83.5	85.7	87.9	86.5	86.0
Containers .....	126.4	129.7	131.6	133.9	136.2	137.4	139.9	144.6	145.9	146.9	149.0	150.6	150.8	151.2
Supplies .....	125.0	127.0	127.2	127.5	127.9	128.4	129.5	130.0	130.6	131.2	131.3	131.8	132.5	132.8
<b>Crude materials for further processing</b> .....	102.4	101.8	99.7	98.2	99.1	100.5	101.5	102.6	102.3	103.6	103.5	103.4	101.9	100.2
Foodstuffs and feedstuffs .....	108.4	106.5	101.3	98.9	100.4	101.6	102.2	104.1	103.2	101.8	99.5	102.2	104.7	104.6
Crude nonfood materials .....	94.7	94.8	94.8	94.0	94.5	95.9	97.2	97.7	97.8	100.7	102.0	100.2	96.2	93.6
<b>Special groupings:</b>														
Finished goods, excluding foods .....	124.4	125.1	125.3	125.6	125.8	125.5	126.2	126.4	126.6	127.2	128.0	128.4	128.1	127.8
Finished energy goods .....	78.0	77.0	79.6	77.1	77.7	75.9	76.6	76.6	76.8	78.2	80.4	81.5	80.0	79.2
Finished goods less energy .....	132.9	134.2	133.6	134.5	134.7	135.4	135.7	136.0	136.2	136.4	136.3	136.3	136.3	136.7
Finished consumer goods less energy .....	133.5	134.2	133.6	134.4	134.7	135.5	135.6	136.0	136.3	136.4	136.3	136.2	136.7	136.7
Finished goods less food and energy .....	135.8	137.1	136.4	137.8	137.8	138.1	138.7	139.0	139.2	139.4	139.7	139.8	140.0	139.9
Finished consumer goods less food and energy .....	138.5	139.0	138.2	139.6	139.7	140.0	140.5	140.8	141.1	141.3	141.7	141.8	142.0	141.9
Consumer nondurable goods less food and energy .....	146.1	144.4	144.6	144.7	144.8	145.2	145.9	146.4	147.1	147.5	148.2	148.5	149.0	149.1
Intermediate materials less foods and feeds .....	116.4	118.7	120.4	120.4	121.3	121.6	123.0	124.0	124.5	125.4	126.0	126.6	126.7	126.6
Intermediate foods and feeds .....	112.7	114.8	113.9	112.2	112.1	111.5	111.8	111.8	112.6	111.7	110.7	111.6	113.5	114.9
Intermediate energy goods .....	84.6	83.0	86.5	83.0	83.4	82.2	82.2	82.4	82.6	83.5	85.6	87.7	86.3	85.9
Intermediate goods less energy .....	123.2	126.3	127.5	128.2	129.1	129.7	131.4	132.5	133.1	133.8	134.0	134.3	134.8	134.9
Intermediate materials less foods and energy .....	123.8	127.1	128.3	129.2	130.2	130.9	132.6	133.8	134.4	135.2	135.5	135.7	136.1	136.2
Crude energy materials .....	76.7	72.1	71.3	70.2	69.3	69.9	69.8	69.6	69.1	72.0	74.1	71.6	67.7	65.1
Crude materials less energy .....	116.3	119.3	116.4	114.6	117.0	119.1	121.0	123.2	123.1	122.7	120.6	122.7	123.6	122.9
Crude nonfood materials less energy .....	140.2	156.2	159.2	159.3	164.1	168.4	174.1	177.0	179.1	181.4	179.8	180.4	176.7	174.6

### 35. Producer price indexes for the net output of major industry groups

(December 1984=100, unless otherwise indicated)

Industry	SIC	Annual average		1994				1995							
		1993	1994	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>Total mining industries</b> .....		76.4	73.3	72.4	71.0	70.5	72.0	72.1	71.2	70.7	72.6	74.3	72.6	70.0	67.0
Metal mining .....	10	69.7	81.4	87.6	88.3	91.1	94.2	101.9	102.3	103.7	105.1	99.1	99.4	103.4	101.6
Coal mining (12/85=100) .....	12	93.3	93.2	94.3	95.0	94.9	92.0	88.4	91.3	93.7	92.6	92.1	91.0	91.0	90.4
Oil and gas extraction (12/85=100) .....	13	76.2	71.1	69.2	67.1	66.2	68.6	68.7	66.9	65.7	68.3	71.2	69.1	65.2	61.2
Mining and quarrying of nonmetallic minerals, except fuels .....	14	118.8	120.5	120.5	120.7	120.8	120.9	122.4	123.3	123.6	123.5	123.1	123.3	123.7	123.9
<b>Total manufacturing industries</b> .....		119.1	120.7	121.1	121.5	121.9	121.7	122.6	123.1	123.4	124.1	124.5	124.5	124.4	124.4
Food and kindred products .....	20	118.7	120.1	119.9	119.6	119.6	119.4	120.2	120.8	121.1	120.5	120.2	120.4	121.4	121.8
Tobacco manufactures .....	21	218.0	187.8	187.9	187.6	188.1	187.9	188.1	188.7	190.6	190.7	195.3	195.3	195.1	195.0
Textile mill products .....	22	113.6	113.6	113.8	113.9	114.2	114.3	114.7	115.5	115.7	116.1	116.6	116.5	116.7	116.8
Apparel and other finished products made from fabrics and similar materials .....	23	119.2	119.7	119.7	119.8	119.7	119.8	120.0	120.3	120.6	120.4	120.5	120.4	120.5	120.7
Lumber and wood products, except furniture .....	24	148.3	154.4	154.1	153.9	155.9	155.5	155.7	155.0	155.5	155.0	154.6	153.1	154.1	154.3
Furniture and fixtures .....	25	125.4	129.7	130.3	130.5	130.9	131.0	131.5	132.0	132.1	132.6	132.9	133.4	133.4	133.5
Paper and allied products .....	26	120.2	123.7	125.5	128.2	130.4	132.8	136.0	139.1	141.4	143.9	145.6	148.2	149.6	150.5
Printing, publishing, and allied industries .....	27	145.6	149.7	150.3	150.8	151.7	152.4	154.7	155.6	156.4	157.2	157.4	157.9	159.4	159.9
Chemicals and allied products .....	28	127.2	130.0	132.0	133.6	134.4	136.1	138.4	140.6	141.4	144.8	145.0	144.2	144.7	144.6
Petroleum refining and related products .....	29	77.6	74.8	79.5	76.2	77.8	73.5	74.3	74.6	75.3	80.2	84.4	83.1	78.6	77.5
Rubber and miscellaneous plastic products .....	30	115.4	117.1	117.9	118.8	119.5	120.1	121.3	121.8	122.5	123.2	123.2	124.1	124.2	123.9
Leather and leather products .....	31	129.0	130.6	131.3	131.7	132.1	132.5	133.3	133.7	133.8	134.2	134.4	134.2	134.2	134.0
Stone, clay, glass, and concrete products .....	32	115.4	119.6	120.7	121.1	121.4	121.6	122.4	123.1	123.8	124.5	124.8	124.5	124.5	124.6
Primary metal industries .....	33	111.4	117.0	118.7	119.7	121.7	122.9	126.6	128.2	129.1	129.7	129.1	128.9	128.7	128.5
Fabricated metal products, except machinery and transportation equipment .....	34	118.2	120.3	120.8	121.2	121.6	121.8	122.6	123.6	124.1	124.4	124.7	124.9	125.1	125.4
Machinery, except electrical .....	35	116.8	117.5	117.7	117.7	117.7	117.8	118.3	118.6	118.7	119.0	119.0	119.3	119.3	119.3
Electrical and electronic machinery, equipment, and supplies .....	36	112.0	112.7	112.6	112.6	112.6	112.7	113.1	113.3	113.1	113.3	113.4	113.2	113.2	113.2
Transportation equipment .....	37	126.3	130.1	128.2	131.5	131.2	131.6	132.2	132.2	132.0	131.9	131.8	131.9	131.7	131.4
Measuring and controlling instruments; photographic, medical, optical goods; watches, clocks .....	38	120.8	122.1	122.0	122.3	122.6	122.6	122.9	123.4	123.4	123.6	123.6	124.1	124.6	124.4
Miscellaneous manufacturing industries (12/85=100) .....	39	121.5	123.3	123.6	123.6	123.8	124.0	125.0	125.3	125.4	125.6	125.6	125.8	126.1	126.1
<b>Service Industries:</b>															
Motor freight transportation and warehousing (06/93=100) .....	42	-	101.9	102.3	102.7	102.7	102.9	103.1	104.2	104.4	104.3	104.5	104.4	104.7	104.7
U.S. Postal Service (06/89=100) .....	43	119.8	119.8	119.8	119.8	119.8	119.8	132.1	132.1	132.1	132.1	132.1	132.1	132.3	132.3
Water transportation (12/92=100) .....	44	99.7	100.0	100.3	102.9	101.4	101.6	102.6	102.8	102.6	102.0	102.2	102.6	103.5	103.5
Transportation by air (12/92=100) .....	45	105.6	108.5	108.5	108.3	108.1	107.9	108.1	109.6	110.1	110.0	113.6	114.2	115.6	114.9
Pipelines, except natural gas (12/86=100) .....	46	96.6	102.6	103.0	103.7	106.5	107.0	110.9	110.9	110.9	110.9	110.9	110.7	110.7	110.6

- Data not available.



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

(1982 = 100)

Index	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Finished goods:</b>									
Total .....	103.2	105.4	108.0	113.6	119.2	121.7	123.2	124.7	125.5
Foods .....	107.3	109.5	112.6	118.7	124.4	124.1	123.3	125.7	126.8
Energy .....	63.0	61.8	59.8	65.7	75.0	78.1	77.8	78.0	77.0
Other .....	110.6	113.3	117.0	122.1	126.6	131.1	134.2	135.8	137.1
<b>Intermediate materials, supplies, and components:</b>									
Total .....	99.1	101.5	107.1	112.0	114.5	114.4	114.7	116.2	118.5
Foods .....	102.2	105.3	113.2	118.1	118.7	118.1	117.9	118.9	122.1
Energy .....	72.6	73.0	70.9	76.1	85.5	85.1	84.3	84.6	83.0
Other .....	104.9	107.8	115.2	120.2	120.9	121.4	122.0	123.8	127.1
<b>Crude materials for further processing:</b>									
Total .....	87.7	93.7	96.0	103.1	108.9	101.2	100.4	102.4	101.8
Foods .....	93.2	96.2	106.1	111.2	113.1	105.5	105.1	108.4	106.5
Energy .....	71.8	75.0	67.7	75.9	85.9	80.4	78.8	76.7	72.1
Other .....	103.1	115.7	133.0	137.9	136.3	128.2	128.4	140.2	156.2

### 37. U.S. export price indexes by Standard International Trade Classification

(1990 = 100, unless otherwise indicated)

Category	SITC Rev. 3	1994				1995						
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>Food and live animals</b> .....	0	102.4	103.9	105.2	106.7	105.7	106.6	108.2	111.3	112.6	114.1	119.9
Meat and meat preparations .....	01	107.7	108.8	112.4	109.0	109.3	108.7	112.4	113.5	113.0	115.6	116.8
Cereals and cereal preparations .....	04	96.1	99.6	100.8	103.9	102.8	104.6	103.1	106.8	110.8	114.4	124.1
Vegetables, fruit, and nuts, prepared fresh or dry .....	05	109.6	106.6	109.2	113.3	109.9	109.2	116.8	122.5	122.2	117.3	125.2
<b>Crude materials, inedible, except fuels</b> .....	2	108.9	108.9	112.7	116.8	120.4	124.3	127.4	131.0	129.4	130.2	127.4
Hides, skins, and furskins, raw .....	21	103.9	107.2	109.9	110.4	111.2	110.7	109.6	108.6	107.3	103.5	92.4
Oilseeds and oleaginous fruits .....	22	96.2	87.4	89.5	91.9	91.9	92.0	93.7	96.3	95.0	96.7	100.2
Crude rubber (including synthetic and reclaimed) .....	23	99.3	102.0	104.5	104.7	109.6	115.4	115.9	120.8	119.3	118.0	116.1
Cork and wood .....	24	149.1	149.0	151.0	151.5	154.6	157.9	157.3	159.5	158.2	156.8	155.0
Pulp and waste paper .....	25	105.0	108.6	118.5	126.8	135.5	145.9	156.0	168.3	167.0	172.5	161.2
Textile fibers and their waste .....	26	101.8	100.2	103.8	110.5	116.2	122.7	132.5	130.7	131.4	133.9	130.9
Crude fertilizers and crude minerals .....	27	96.2	95.4	96.4	96.4	97.5	97.2	98.4	98.2	99.3	97.7	98.4
Metalliferous ores and metal scrap .....	28	100.2	104.3	108.9	116.5	119.9	124.4	124.9	130.2	124.5	124.5	123.8
<b>Mineral fuels, lubricants, and related products</b> .....	3	87.6	87.5	88.2	89.3	89.3	89.4	88.9	90.5	92.2	92.9	91.2
Coal, coke, and briquettes .....	32	93.3	93.6	93.9	94.1	94.0	94.7	94.7	96.4	96.5	97.3	98.1
Petroleum, petroleum products, and related materials .....	33	81.1	80.6	81.1	82.8	82.8	82.4	81.9	83.3	86.4	86.9	83.5
<b>Animal and vegetable oils, fats, and waxes</b> .....	4	116.2	118.1	119.1	132.1	134.7	124.2	122.0	116.1	113.9	114.8	119.2
<b>Chemicals and related products, n.e.s.</b> .....	5	103.8	106.6	108.1	109.2	112.4	113.8	115.4	116.7	117.4	116.8	116.2
Medicinal and pharmaceutical products .....	54	107.9	107.6	107.5	107.5	107.5	107.7	108.3	108.3	108.4	109.3	109.3
Essential oils; polishing and cleaning preparations .....	55	109.7	109.5	109.7	109.4	109.7	110.1	110.4	110.7	110.8	110.4	111.4
Plastics in primary forms (12/92=100) .....	57	121.5	129.5	132.5	134.0	137.0	138.6	141.9	144.6	143.9	140.3	137.7
Plastics in nonprimary forms (12/92=100) .....	58	101.4	104.6	104.2	104.8	105.7	106.0	106.5	108.3	109.3	109.5	109.8
Chemical materials and products, n.e.s. ....	59	109.0	109.2	109.7	110.9	113.1	114.7	113.3	114.7	114.9	115.0	115.5
<b>Manufactured goods classified chiefly by materials</b> .....	6	106.6	108.0	109.3	110.9	112.1	113.1	113.9	115.1	116.3	115.8	115.6
Rubber manufactures, n.e.s. ....	62	110.2	110.7	110.3	110.5	111.6	112.6	115.8	114.7	116.0	116.3	117.2
Paper, paperboard, and articles of paper, pulp, and paperboard .....	64	101.8	105.9	108.2	111.0	115.6	117.1	118.5	123.8	128.1	126.8	126.9
Nonmetallic mineral manufactures, n.e.s. ....	66	107.6	107.6	107.4	108.6	108.6	108.5	109.3	109.3	109.1	109.4	109.5
Nonferrous metals .....	68	98.7	102.5	107.1	111.4	113.8	116.1	115.2	115.4	115.8	113.6	113.8
<b>Machinery and transport equipment</b> .....	7	103.7	103.7	103.8	103.7	104.0	104.1	104.2	104.5	104.6	104.8	104.9
Power generating machinery and equipment .....	71	113.7	113.6	114.5	114.6	115.1	115.3	114.5	114.8	114.9	114.8	115.0
Machinery specialized for particular industries .....	72	109.9	109.9	109.9	109.9	110.6	111.1	111.6	112.1	112.2	112.8	113.3
General industrial machines and parts, n.e.s., and machine parts .....	74	110.5	110.5	110.5	110.5	111.2	111.8	111.8	111.9	112.0	111.2	111.3
Computer equipment and office machines .....	75	78.8	78.5	78.4	78.1	77.6	77.2	76.9	77.1	76.9	76.6	76.4
Telecommunications and sound recording and reproducing apparatus and equipment .....	76	106.8	106.7	106.7	106.4	107.1	107.1	106.4	106.0	106.2	106.7	106.3
Electrical machinery and equipment .....	77	101.8	101.9	101.7	101.5	101.8	101.5	102.2	102.9	103.0	104.0	104.4
Road vehicles .....	78	106.6	107.2	107.2	107.3	107.4	107.7	107.8	107.8	107.9	107.9	108.0
<b>Professional, scientific, and controlling instruments and apparatus</b> .....	87	112.5	112.2	113.1	112.6	113.5	113.4	113.2	113.4	113.2	113.9	113.9

## 38. U.S. import price indexes by Standard International Trade Classification

(1990=100, unless otherwise indicated)

Category	SITC Rev.3	1994			1995						
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>Food and live animals</b> .....	0	120.6	118.4	118.7	120.1	116.9	120.6	115.9	117.8	116.2	116.6
Meat and meat preparations .....	01	91.0	90.9	91.7	90.3	89.7	88.6	86.6	85.1	85.2	85.9
Fish and crustaceans, mollusks, and other aquatic invertebrates .....	03	126.1	126.5	127.9	125.7	125.6	127.7	127.2	126.3	126.1	126.1
Cereals and cereal preparations .....	04	102.5	101.9	101.9	101.6	101.5	102.2	91.6	96.3	101.4	100.9
Vegetables and fruit, prepared fresh or dried .....	05	99.4	100.6	112.6	120.3	110.0	114.4	104.2	111.6	110.6	120.5
Sugars, sugar preparations, and honey .....	06	97.1	96.7	97.2	98.3	98.8	98.1	99.6	98.4	103.9	104.3
Coffee, tea, cocoa, spices, and manufactures thereof .....	07	212.0	194.5	172.3	172.2	168.6	183.7	176.6	178.3	166.4	152.8
<b>Beverages and tobacco</b> .....	1	113.6	113.7	113.5	114.0	113.4	114.4	115.0	114.6	114.9	115.4
Beverages .....	11	113.6	113.8	113.6	114.2	113.6	114.5	114.7	114.7	114.8	115.4
<b>Crude materials, inedible, except fuels</b> .....	2	110.4	113.9	114.6	118.9	121.6	121.3	123.1	123.3	123.5	124.3
Crude rubber (including synthetic and reclaimed) .....	23	134.0	135.7	143.8	159.8	164.8	165.6	168.6	166.3	156.8	146.9
Cork and wood .....	24	151.3	157.2	149.6	152.7	150.0	143.3	141.1	139.2	131.0	138.3
Pulp and waste paper .....	25	86.4	90.0	90.7	97.4	97.4	104.7	108.1	109.5	116.0	115.3
Crude fertilizers .....	27	86.0	86.1	86.6	87.9	87.9	90.2	92.4	97.8	100.7	100.5
Metalliferous ores and metal scrap .....	28	92.8	94.3	97.2	98.6	101.1	106.6	105.8	105.7	106.4	108.6
Crude animal and vegetable materials, n.e.s. ....	29	117.4	126.6	139.2	142.8	166.3	140.1	155.5	159.0	163.9	158.6
<b>Mineral fuels, lubricants, and related products</b> .....	3	73.9	76.9	75.3	76.0	77.8	79.1	82.7	85.3	82.8	75.3
Petroleum, petroleum products, and related materials .....	33	73.1	76.1	74.5	75.4	77.5	79.0	82.9	85.6	82.8	75.0
Gas, natural and manufactured .....	34	86.0	87.5	88.3	84.8	81.7	79.5	78.1	79.2	79.7	78.2
Electrical energy .....	35	86.2	83.3	83.5	82.3	79.9	78.0	77.4	81.1	78.8	79.8
<b>Animal and vegetable oils, fats, and waxes</b> .....	4	141.6	144.1	155.0	152.2	145.4	152.4	154.4	157.6	159.0	164.2
<b>Chemicals and related products, n.e.s.</b> .....	5	106.6	107.8	108.8	109.1	110.1	110.8	111.3	112.5	112.3	112.2
Inorganic chemicals .....	52	105.6	106.8	107.6	108.5	109.4	113.1	112.2	113.2	114.3	112.0
Dyeing, tanning, and coloring materials .....	53	102.9	103.2	102.9	102.4	103.3	106.4	110.9	109.0	108.6	109.2
Medicinal and pharmaceutical products .....	54	120.2	121.4	120.5	120.2	120.7	121.6	124.7	129.1	128.0	128.4
Essential oils; polishing and cleaning preparations .....	55	111.8	112.7	113.4	114.5	115.3	116.8	120.1	124.1	123.4	123.7
Fertilizers .....	56	105.0	107.0	107.2	108.2	109.7	112.0	113.1	112.8	111.0	109.0
Plastics in primary forms (12/92=100) .....	57	101.4	102.1	102.9	107.3	107.3	106.8	109.0	110.3	109.7	109.8
Plastics in nonprimary forms (12/92=100) .....	58	102.1	105.8	107.1	110.0	112.8	115.5	116.5	117.4	117.9	117.5
Chemical materials and products, n.e.s. ....	59	103.1	103.4	103.7	102.6	103.4	103.8	105.0	105.6	106.9	108.7
<b>Manufactured goods classified chiefly by material</b> .....	6	103.9	105.4	106.4	107.4	108.8	109.1	110.8	112.1	111.7	113.2
Rubber manufactures, n.e.s. ....	62	102.5	102.6	102.3	102.4	102.1	102.8	103.7	105.1	105.0	105.0
Paper, paperboard, and articles of paper pulp, paper, or paperboard .....	64	99.2	101.3	105.2	108.6	109.9	114.4	119.5	125.2	125.1	128.0
Nonmetallic mineral manufactures, n.e.s. ....	66	109.6	109.9	110.5	110.4	110.7	110.8	111.3	111.2	111.4	111.9
Nonferrous metals .....	68	95.6	99.1	103.1	105.6	110.8	105.9	106.4	106.5	103.8	105.8
Manufactures of metals, n.e.s. ....	69	106.2	107.0	106.4	106.3	107.0	108.4	110.0	110.8	110.8	111.4
<b>Machinery and transport equipment</b> .....	7	108.1	108.2	108.0	107.9	108.2	108.5	109.5	110.1	110.1	110.4
Machinery specialized for particular industries .....	72	112.0	112.8	112.5	112.3	113.2	114.0	116.0	117.1	117.0	116.9
General industrial machinery and equipment, n.e.s., and machine parts .....	74	110.9	111.6	111.6	112.1	112.8	113.0	115.7	116.4	116.6	117.1
Computer equipment and office machines .....	75	85.7	84.5	84.8	84.7	84.6	84.0	84.3	84.3	84.0	84.2
Telecommunications and sound recording and reproducing apparatus and equipment .....	76	97.6	97.7	97.7	97.4	97.6	97.6	98.5	98.9	98.7	99.0
Electrical machinery and equipment .....	77	106.9	106.7	106.5	106.4	106.6	106.9	107.6	108.9	108.9	109.0
Road vehicles .....	78	115.0	115.3	115.1	115.0	115.3	115.8	116.3	116.8	116.8	117.2
<b>Footwear</b> .....	85	101.0	101.3	101.1	100.7	101.0	101.1	101.4	101.5	101.9	102.0
<b>Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.</b> .....	88	111.1	110.8	110.6	109.9	110.7	111.0	113.5	115.1	115.3	116.1



### 39. U.S. export price indexes by end-use category

(1990 = 100 unless otherwise indicated)

Category	1994			1995						
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>ALL COMMODITIES</b> .....	104.4	105.1	105.8	106.7	107.3	107.9	108.9	109.2	109.4	109.7
Foods, feeds, and beverages .....	101.5	102.9	104.7	103.8	104.5	106.0	108.7	109.7	111.3	116.7
Agricultural foods, feeds, and beverages .....	100.1	101.5	103.4	102.5	102.8	103.9	106.8	108.0	109.8	115.9
Nonagricultural (fish, beverages) food products .....	112.1	112.8	113.0	113.5	117.1	122.1	123.1	122.6	122.4	121.8
Industrial supplies and materials .....	106.0	107.9	109.9	112.5	114.1	115.3	117.1	117.7	117.4	116.3
Agricultural industrial supplies and materials .....	107.7	109.7	114.4	117.7	118.7	121.8	120.7	120.3	120.7	117.1
Fuels and lubricants .....	90.0	90.6	91.4	91.5	91.6	91.0	92.5	93.9	94.5	93.5
Nonagricultural supplies and materials, excluding fuel and building materials .....	104.9	107.1	109.2	112.2	114.2	115.6	117.9	118.8	118.4	117.6
Selected building materials .....	147.3	148.6	149.7	151.4	153.3	153.4	153.5	151.1	150.6	148.3
Capital goods .....	103.6	103.7	103.6	103.9	104.0	104.3	104.7	104.8	105.1	105.2
Electric and electrical generating equipment .....	106.7	106.8	106.4	106.9	107.0	107.2	108.1	107.9	108.2	108.9
Nonelectrical machinery .....	100.6	100.8	100.6	100.9	100.9	101.0	101.5	101.5	101.8	101.9
Automotive vehicles, parts, and engines .....	107.2	107.2	107.3	107.4	107.7	107.4	107.4	107.4	107.6	107.7
Consumer goods, excluding automotive .....	108.2	108.3	108.2	108.3	108.8	109.1	109.4	109.6	109.5	109.6
Nondurables, manufactured .....	110.1	110.2	110.0	110.3	110.9	111.3	112.0	112.2	112.0	111.9
Durables, manufactured .....	106.5	106.6	106.3	106.3	106.9	106.9	106.8	107.2	107.3	107.6
Nonmanufactured consumer goods .....	99.3	98.9	100.7	-	-	99.9	.0	.0	98.4	.0
Agricultural commodities .....	101.6	103.2	105.7	105.6	106.1	107.6	109.7	110.5	112.0	116.0
Nonagricultural commodities .....	104.9	105.5	106.0	107.0	107.7	108.1	109.0	109.2	109.3	109.1

- Data not available.

### 40. U.S. import price indexes by end-use category

(1990 = 100)

Category	1994			1995						
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>ALL COMMODITIES</b> .....	103.5	104.2	104.1	104.4	105.1	105.7	106.7	107.7	107.2	106.6
Foods, feeds, and beverages .....	121.8	120.1	120.2	121.1	118.7	121.9	118.8	120.2	119.1	119.3
Agricultural foods, feeds, and beverages .....	120.2	117.7	117.6	119.4	116.2	119.9	115.7	117.9	116.5	116.7
Nonagricultural (fish, beverages) food products .....	125.3	125.7	126.7	125.1	125.0	126.7	126.5	125.7	125.6	125.7
Industrial supplies and materials .....	91.5	93.8	93.7	94.8	96.6	97.7	100.0	101.7	100.3	97.6
Fuels and lubricants .....	74.8	77.7	76.1	77.0	78.7	80.3	83.9	86.6	84.0	76.5
Petroleum and petroleum products .....	72.8	75.8	74.2	75.1	77.1	78.6	82.3	84.9	82.3	74.6
Paper and paper base stocks .....	94.7	96.8	100.1	104.7	107.2	112.3	117.1	121.3	123.6	125.9
Materials associated with nondurable supplies and materials .....	107.5	109.4	110.3	111.5	112.7	113.3	113.8	114.2	114.3	113.5
Selected building materials .....	126.5	129.8	125.7	125.7	125.2	123.1	122.4	121.9	117.9	124.7
Unfinished metals associated with durable goods .....	98.1	100.1	102.5	103.8	107.5	106.1	107.1	107.0	105.2	107.1
Nonmetals associated with durable goods .....	100.4	100.5	100.7	100.8	101.2	103.0	104.2	106.7	106.8	107.5
Capital goods .....	105.1	105.0	104.9	104.7	105.1	105.2	106.3	107.1	107.1	107.3
Electric and electrical generating equipment .....	107.7	108.3	108.1	107.9	109.2	109.6	111.0	112.3	112.5	113.4
Nonelectrical machinery .....	103.9	103.7	103.6	103.4	103.7	103.8	104.9	105.7	105.7	105.9
Transportation equipment, excluding motor vehicles and spacecraft (12/92 = 100) .....	105.7	105.8	105.3	-	-	-	-	-	-	-
Automotive vehicles, parts and engines .....	112.9	113.2	113.0	112.9	113.2	113.6	114.3	114.9	114.8	115.2
Consumer goods, excluding automotives .....	106.2	106.4	106.4	106.3	106.8	106.9	107.2	107.8	107.8	107.9
Nondurables, manufactured .....	106.2	106.5	106.4	106.1	106.4	107.0	107.0	107.6	107.9	107.7
Durables, manufactured .....	105.6	105.6	105.6	105.6	106.0	106.2	106.6	107.1	107.3	107.7
Nonmanufactured consumer goods .....	110.6	112.0	113.4	114.0	117.2	112.1	114.2	114.6	112.5	111.9

- Data not available.

**41. U.S. international price indexes for selected categories of services**

(1990=100 unless otherwise indicated)

Category	1993			1994				1995	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June
Air freight (inbound) .....	106.4	106.6	106.1	105.9	108.1	108.6	110.4	115.3	118.0
Air freight (outbound) .....	96.6	95.6	96.4	96.5	96.2	96.2	97.3	98.4	98.2
Air passenger fares (U.S. carriers) .....	117.2	119.0	111.4	113.1	119.7	121.4	113.8	116.1	128.6
Air passenger fares (foreign carriers) .....	115.7	117.0	107.2	108.1	114.6	118.1	110.0	113.8	125.2
Ocean liner freight (inbound) .....	103.5	103.3	102.1	103.4	106.3	106.2	106.6	108.5	106.6

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

(1982=100)

Item	Quarterly Indexes										
	1992	1993				1994				1995	
	IV	I	II	III	IV	I	II	III	IV	I	II
<b>Business:</b>											
Output per hour of all persons .....	116.8	116.2	116.3	117.0	118.4	118.9	118.5	119.5	120.7	121.3	122.7
Compensation per hour .....	157.7	158.7	159.9	160.6	161.3	163.3	163.6	164.9	166.4	167.9	169.5
Real compensation per hour .....	107.1	107.0	107.0	107.0	106.6	107.4	106.9	106.8	107.2	107.3	107.4
Unit labor costs .....	135.1	136.6	137.5	137.3	136.2	137.3	138.1	138.0	137.8	138.4	138.1
Unit nonlabor payments .....	150.2	149.5	149.6	150.5	154.0	153.4	155.6	157.8	159.0	159.3	161.3
Implicit price deflator .....	140.1	140.8	141.4	141.6	142.1	142.6	143.8	144.5	144.8	145.3	145.7
<b>Nonfarm business:</b>											
Output per hour of all persons .....	115.0	114.3	114.5	115.3	116.5	117.0	116.6	117.3	118.6	119.3	120.7
Compensation per hour .....	156.4	157.2	158.1	158.7	159.3	161.2	161.8	162.9	164.4	166.1	167.5
Real compensation per hour .....	106.2	105.9	105.8	105.7	105.3	106.0	105.7	105.5	105.9	106.2	106.2
Unit labor costs .....	136.1	137.4	138.1	137.7	136.8	137.8	138.8	138.8	138.7	139.2	138.8
Unit nonlabor payments .....	152.1	151.5	151.8	153.6	156.3	155.5	158.3	160.9	161.8	162.1	164.2
Implicit price deflator .....	141.2	142.0	142.5	142.8	143.1	143.5	145.1	145.9	146.1	146.6	147.0
<b>Nonfinancial corporations:</b>											
Output per hour of all employees .....	120.6	119.9	121.2	122.2	123.4	124.0	123.8	124.3	125.3	125.8	127.5
Compensation per hour .....	153.1	153.9	154.4	154.8	155.0	156.5	156.8	157.9	159.1	160.5	161.8
Real compensation per hour .....	104.0	103.7	103.3	103.1	102.5	102.9	102.4	102.3	102.5	102.6	102.6
Total unit costs .....	123.8	125.0	124.1	123.6	122.6	123.5	123.4	124.0	123.8	124.2	124.0
Unit labor costs .....	127.0	128.3	127.3	126.7	125.7	126.2	126.7	127.1	127.0	127.5	126.9
Unit nonlabor costs .....	115.7	116.8	115.8	115.8	114.8	116.6	115.2	116.2	115.9	116.0	116.6
Unit profits .....	191.2	183.7	199.4	202.5	220.9	218.2	228.7	228.8	230.3	224.0	227.6
Unit nonlabor payments .....	129.9	129.4	131.5	132.1	134.8	135.7	136.6	137.4	137.4	136.3	137.5
Implicit price deflator .....	127.9	128.7	128.7	128.5	128.7	129.4	129.9	130.5	130.4	130.4	130.4
<b>Manufacturing:</b>											
Output per hour of all persons .....	129.1	130.8	131.3	132.1	133.6	135.4	136.8	138.0	139.3	140.5	141.4
Compensation per hour .....	150.7	149.9	151.7	152.5	153.3	154.3	153.6	154.5	155.9	157.7	157.9
Real compensation per hour .....	102.3	101.0	101.5	101.6	101.4	101.4	100.3	100.0	100.4	100.8	100.1
Unit labor costs .....	116.8	114.6	115.5	115.4	114.7	113.9	112.2	111.9	112.0	112.3	111.7



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

(1987 = 100)

Item	1960	1970	1973	1980	1986	1987	1988	1989	1990	1991	1992	1993
<b>Private business:</b>												
Productivity:												
Output per hour of all persons .....	53.5	74.8	83.0	89.1	99.6	100.0	100.9	101.0	101.9	102.9	105.9	106.6
Output per unit of capital services .....	116.0	115.1	120.1	105.8	99.7	100.0	101.4	101.3	99.8	96.8	97.9	98.8
Multifactor productivity .....	70.5	87.2	95.3	96.0	99.8	100.0	100.5	100.3	100.0	99.0	100.5	101.1
Output .....	37.8	57.4	67.9	79.9	96.7	100.0	104.3	107.0	107.9	106.5	109.3	112.5
Inputs:												
Labor input .....	66.7	74.2	78.7	86.8	96.8	100.0	104.2	107.2	107.8	106.5	107.5	110.1
Capital services .....	32.6	49.8	56.6	75.5	97.0	100.0	102.9	105.6	108.2	110.0	111.6	113.8
Combined units of labor and capital input .....	53.6	65.8	71.3	83.2	96.8	100.0	103.8	106.7	107.9	107.5	108.8	111.3
Capital per hour of all persons .....	46.1	65.0	69.1	84.2	99.9	100.0	99.6	99.7	102.1	106.3	108.1	107.9
<b>Private nonfarm business:</b>												
Productivity:												
Output per hour of all persons .....	57.7	77.3	85.6	90.6	99.8	100.0	100.9	100.7	101.3	102.5	105.1	105.9
Output per unit of capital services .....	122.6	120.5	125.3	108.2	100.0	100.0	101.3	100.9	99.1	96.0	96.8	97.8
Multifactor productivity .....	74.9	89.9	98.1	97.7	100.0	100.0	100.5	99.9	99.4	98.5	99.6	100.3
Output .....	37.4	57.4	68.3	80.2	96.7	100.0	104.5	107.1	107.8	106.4	108.9	112.4
Inputs:												
Labor input .....	61.4	72.0	76.9	85.7	96.6	100.0	104.4	107.6	108.3	106.8	108.0	110.9
Capital services .....	30.5	47.7	54.5	74.2	96.7	100.0	103.2	106.1	108.8	110.8	112.6	115.0
Combined units of labor and capital input .....	49.9	63.9	69.6	82.1	96.7	100.0	104.0	107.1	108.5	108.0	109.3	112.1
Capital per hour of all persons .....	47.0	64.1	68.3	83.8	99.9	100.0	99.6	99.9	102.3	106.7	108.7	108.2

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	1983	1985	1987	1988	1989	1990	1991	1992	1993	1994
<b>Business:</b>													
Output per hour of all persons .....	65.6	87.0	95.1	102.3	106.3	109.6	110.7	109.9	110.7	112.1	115.5	117.0	119.4
Compensation per hour .....	21.1	36.7	45.1	103.8	113.2	123.1	128.5	133.0	140.6	147.4	154.9	160.1	164.5
Real compensation per hour .....	68.8	91.3	98.1	100.6	101.5	104.6	104.8	103.5	103.8	104.4	106.6	106.9	107.1
Unit labor costs .....	32.2	42.2	47.5	101.5	106.5	112.3	116.0	121.0	127.1	131.5	134.2	136.9	137.8
Unit nonlabor payments .....	33.6	42.7	52.1	107.5	120.8	125.5	130.6	136.6	139.8	144.9	148.3	150.9	156.4
Implicit price deflator .....	32.6	42.4	49.0	103.4	111.2	116.6	120.8	126.1	131.2	135.9	138.8	141.5	143.9
<b>Nonfarm business:</b>													
Output per hour of all persons .....	69.9	88.5	96.4	102.5	105.6	108.6	109.6	108.6	109.1	110.7	113.7	115.2	117.4
Compensation per hour .....	22.2	37.0	45.4	104.0	112.8	122.5	127.7	132.0	139.2	146.2	153.7	158.3	162.6
Real compensation per hour .....	72.4	92.0	98.7	100.8	101.1	104.1	104.2	102.7	102.8	103.6	105.7	105.7	105.9
Unit labor costs .....	31.8	41.8	47.1	101.5	106.8	112.8	116.5	121.5	127.6	132.1	135.2	137.5	138.5
Unit nonlabor payments .....	33.3	43.0	49.6	109.2	121.6	126.6	131.8	137.1	140.6	146.5	149.7	153.4	159.2
Implicit price deflator .....	32.3	42.2	47.9	104.0	111.6	117.2	121.4	126.5	131.8	136.7	139.9	142.6	145.2
<b>Nonfinancial corporations:</b>													
Output per hour of all employees .....	75.3	90.3	95.0	103.8	106.5	111.2	113.3	111.5	112.7	115.0	118.5	121.8	124.4
Compensation per hour .....	23.6	38.4	46.6	103.4	112.0	120.9	125.9	130.2	137.1	143.8	150.4	154.6	157.7
Real compensation per hour .....	77.0	95.4	101.2	100.2	100.4	102.7	102.7	101.3	101.9	103.5	103.3	102.7	
Total unit costs .....	29.5	40.5	46.5	99.5	103.7	107.0	109.8	115.7	120.1	123.7	124.4	123.8	123.7
Unit labor costs .....	31.4	42.5	49.0	99.6	105.2	108.8	111.1	116.8	121.7	125.0	126.9	127.0	126.7
Unit nonlabor costs .....	24.8	35.5	40.2	99.3	100.1	102.5	106.4	112.9	116.3	120.5	118.0	115.8	116.0
Unit profits .....	75.1	69.5	87.9	135.9	168.1	172.1	183.5	168.5	167.5	164.7	177.2	201.9	226.5
Unit nonlabor payments .....	34.2	41.9	49.2	106.2	112.9	115.6	120.9	123.3	125.9	128.8	129.1	132.0	136.8
Implicit price deflator .....	32.3	42.3	49.1	101.8	107.7	111.0	114.3	119.0	123.1	126.3	127.7	128.6	130.0
<b>Manufacturing:</b>													
Output per hour of all persons .....	-	-	-	102.2	106.7	116.6	119.2	119.9	122.1	124.9	127.5	132.0	137.4
Compensation per hour .....	-	-	-	102.7	111.3	118.4	123.1	127.9	134.7	141.9	147.9	152.0	154.5
Real compensation per hour .....	-	-	-	99.5	99.8	100.6	100.4	99.5	99.5	100.5	101.7	101.5	100.6
Unit labor costs .....	-	-	-	100.5	104.2	101.6	103.2	106.7	110.4	113.7	116.0	115.1	112.5
Unit nonlabor payments .....	-	-	-	113.5	120.1	134.5	147.4	153.3	153.7	157.0	157.0	160.8	-
Implicit price deflator .....	-	-	-	103.8	108.2	109.8	114.3	118.4	121.2	124.5	126.3	126.5	-

- Data not available.

**45. Annual indexes of output per hour for selected industries**

(1987 = 100)

Industry	SIC	1973	1979	1985	1986	1987	1988	1989	1990	1991
Iron mining, usable ore .....	101	51.7	51.8	76.6	79.6	100.0	103.7	99.5	90.0	87.0
Copper mining, recoverable metal .....	102	42.4	48.5	93.6	109.7	100.0	109.8	107.8	104.5	102.9
Coal mining .....	12	68.9	54.5	85.1	92.4	100.0	110.6	116.5	118.5	122.1
Crude petroleum and natural gas .....	131	173.5	110.3	83.0	90.3	100.0	101.0	98.1	97.0	98.1
Nonmetallic minerals, except fuels .....	14	86.5	92.6	95.1	95.1	100.0	102.2	101.9	108.3	103.6
Meatpacking plants .....	2011	65.1	75.0	98.3	98.7	100.0	99.5	92.2	92.9	94.9
Sausages and other prepared meats .....	2013	67.2	92.8	97.8	98.6	100.0	105.6	99.8	93.6	90.8
Poultry dressing and processing .....	2015	58.0	81.7	100.5	95.6	100.0	95.9	101.2	107.7	114.2
Cheese, natural and processed .....	2022	56.6	79.8	94.7	101.1	100.0	106.4	104.3	101.1	98.9
Fluid milk .....	2026	49.5	62.7	88.3	94.0	100.0	103.9	106.7	108.0	110.7
Canned fruits and vegetables .....	2033	66.0	74.0	93.0	98.4	100.0	100.2	92.5	96.2	103.4
Frozen fruits and vegetables .....	2037	80.1	86.6	97.0	104.9	100.0	95.1	98.9	92.3	98.7
Flour and other grain mill products .....	2041	68.5	80.5	95.8	95.9	100.0	102.0	101.6	107.0	107.4
Cereal breakfast foods .....	2043	65.6	74.2	97.1	98.6	100.0	98.6	96.0	102.0	105.3
Rice milling .....	2044	59.3	69.3	68.6	72.7	100.0	83.8	98.6	106.9	101.1
Wet corn milling .....	2046	24.1	47.1	74.6	97.3	100.0	96.6	103.0	104.7	100.1
Prepared feeds for animals and fowls .....	2047,48	51.6	66.5	96.9	95.2	100.0	101.2	103.1	106.6	107.2
Bakery products .....	2051,52	82.3	83.8	95.6	100.1	100.0	93.8	93.2	96.2	92.9
Raw and refined cane sugar .....	2061,62	76.7	96.4	96.6	96.9	100.0	97.5	97.4	100.9	101.3
Beet sugar .....	2063	75.9	78.3	73.4	80.8	100.0	95.3	87.9	91.1	93.4
Malt beverages .....	2082	43.3	63.8	73.7	85.1	100.0	99.1	102.0	110.9	110.1
Bottled and canned soft drinks .....	2086	49.2	64.4	85.2	91.4	100.0	109.9	119.3	126.7	135.1
Fresh or frozen fish and seafood .....	2092	93.2	93.8	88.0	91.2	100.0	99.2	92.9	87.1	84.8
Cigarettes, chewing and smoking tobacco .....	211,3	79.4	90.3	93.5	95.3	100.0	106.8	107.3	112.9	119.2
Cotton and synthetic broadwoven fabrics .....	221,2	58.1	75.6	93.4	99.0	100.0	100.3	104.5	109.3	115.2
Hosiery .....	2251,52	63.2	93.3	100.9	102.5	100.0	107.0	108.4	106.0	111.3
Yarn spinning mills .....	2281	55.9	68.3	89.6	93.2	100.0	98.6	103.6	106.7	106.3
Men's and boys' suits and coats .....	231	75.6	95.9	106.3	103.5	100.0	102.5	101.9	98.8	91.3
Sawmills and planing mills, general .....	2421	68.3	73.3	93.5	102.3	100.0	101.7	101.0	101.5	105.0
Hardwood dimension and flooring .....	2426	84.0	83.0	95.1	98.8	100.0	97.4	96.5	95.4	98.2
Millwork .....	2431	104.2	95.4	97.4	102.2	100.0	98.3	97.7	97.9	95.8
Wood kitchen cabinets .....	2434	80.5	89.1	87.1	85.2	100.0	97.8	91.0	93.7	92.6
Hardwood veneer and plywood .....	2435	80.2	79.6	84.5	83.2	100.0	98.3	97.4	90.2	90.7
Softwood veneer and plywood .....	2436	67.7	65.6	88.3	90.4	100.0	100.3	102.0	107.3	113.0
Wood containers .....	244	-	72.9	99.6	98.7	100.0	103.4	108.9	112.0	114.2
Wood household furniture .....	2511,17	91.2	90.4	93.3	100.2	100.0	101.0	100.1	98.8	100.2
Upholstered household furniture .....	2512	71.9	82.8	98.6	100.6	100.0	99.8	101.0	98.5	103.4
Metal household furniture .....	2514	75.6	72.5	98.8	101.7	100.0	100.6	100.0	103.9	107.3
Mattresses and bedsprings .....	2515	71.6	86.2	77.2	83.1	100.0	99.2	105.0	105.7	110.3
Wood office furniture .....	2521	82.5	117.0	99.4	96.2	100.0	94.8	94.2	95.8	99.1
Office furniture, except wood .....	2522	70.6	76.7	96.9	100.6	100.0	96.0	99.0	95.7	93.0
Pulp, paper, and paperboard mills .....	261,2,3	67.1	77.3	87.6	93.3	100.0	102.9	103.2	102.1	101.5
Corrugated and solid fiber boxes .....	2653	70.3	87.2	99.6	102.8	100.0	99.6	97.7	100.3	100.0
Folding paperboard boxes .....	2657	86.4	90.7	90.0	88.5	100.0	99.6	101.1	99.4	102.8
Paper and plastic bags .....	2673,74	90.7	94.1	99.7	101.8	100.0	97.4	93.6	91.4	88.6
Alkalies and chlorine .....	2812	38.4	50.8	70.8	97.7	100.0	100.9	92.6	90.7	84.0
Inorganic pigments .....	2816	72.6	67.8	84.4	88.6	100.0	101.2	107.3	102.5	96.3
Industrial inorganic chemicals, not elsewhere classified .....	2819 pt.	90.6	91.5	87.3	88.6	100.0	96.8	104.3	106.8	99.0
Synthetic fibers .....	2823,24	38.4	70.9	79.3	90.8	100.0	102.7	103.5	98.3	97.1
Soaps and detergents .....	2841	89.1	91.0	91.5	92.3	100.0	103.4	110.7	132.1	131.7
Cosmetics and other toiletries .....	2844	88.6	93.6	90.3	96.6	100.0	105.0	101.6	100.8	103.4
Paints and allied products .....	285	63.2	79.8	96.9	98.0	100.0	103.0	106.6	111.4	111.2
Industrial organic chemicals, not elsewhere classified .....	2869	73.1	93.0	87.8	92.3	100.0	110.7	109.9	99.5	93.2
Nitrogenous fertilizers .....	2873	65.4	72.7	100.7	90.5	100.0	101.7	105.4	108.9	110.1
Phosphatic fertilizers .....	2874	62.4	68.3	84.2	79.6	100.0	93.4	85.6	104.5	114.5
Fertilizers, mixing only .....	2875	90.5	110.9	100.8	95.1	100.0	103.4	110.8	108.7	109.3
Agricultural chemicals, not elsewhere classified .....	2879	74.3	83.6	92.9	93.2	100.0	108.4	108.9	106.2	102.8
Petroleum refining .....	291	84.0	82.6	84.7	94.9	100.0	105.3	109.6	109.1	106.7
Tires and inner tubes .....	301	56.0	63.9	89.3	92.6	100.0	104.6	107.2	108.3	109.5
Rubber and plastics hose and belting .....	3052	79.3	80.6	100.5	102.2	100.0	107.3	96.3	100.9	93.0
Miscellaneous plastic products, not elsewhere classified .....	308	72.8	74.3	88.2	88.9	100.0	98.4	97.5	100.4	100.9
Footwear .....	314	89.9	94.5	99.9	101.7	100.0	102.4	101.4	93.0	93.3
Glass containers .....	3221	75.2	83.8	93.4	98.5	100.0	101.1	104.8	112.5	114.9
Cement, hydraulic .....	324	71.3	68.7	91.8	97.1	100.0	103.3	110.1	112.5	108.3
Clay construction products .....	3251,53,59	78.5	79.0	94.2	95.5	100.0	103.9	96.7	100.5	95.1
Clay refractories .....	3255	80.1	93.9	94.9	100.8	100.0	101.3	97.3	102.2	96.2
Concrete products .....	3271,72	92.5	91.3	99.5	104.4	100.0	102.3	105.2	104.6	105.9
Ready-mixed concrete .....	3273	99.1	96.2	93.7	96.1	100.0	100.3	101.0	99.7	96.1
Steel .....	331	64.2	65.9	85.8	89.7	100.0	113.4	108.5	110.5	108.1
Gray and ductile iron foundries .....	3321	91.3	92.4	96.9	99.3	100.0	106.8	104.1	104.1	99.3
Steel foundries .....	3324,25	105.8	104.5	99.5	104.9	100.0	95.3	96.6	95.9	93.2
Primary copper .....	3331	32.8	41.1	73.8	88.7	100.0	103.7	96.8	86.3	84.7
Primary aluminum .....	3334	73.6	74.7	97.6	102.7	100.0	102.2	104.6	106.3	110.3
Copper rolling and drawing .....	3351	77.5	82.0	86.2	92.3	100.0	100.0	94.1	93.9	96.9
Aluminum rolling and drawing .....	3353,54,55	79.0	84.3	85.7	95.8	100.0	96.9	91.2	92.4	92.0

See footnotes at end of table.



45. Continued—Annual indexes of output per hour for selected industries

(1987=100)

Industry	SIC	1973	1979	1985	1986	1987	1988	1989	1990	1991
Metal cans .....	3411	59.2	75.2	99.2	95.9	100.0	107.4	109.0	119.1	126.0
Hand and edge tools, not elsewhere classified .....	3423	108.6	111.6	98.8	97.1	100.0	100.9	102.1	96.4	95.0
Heating equipment, except electric .....	3433	78.0	86.2	91.9	96.2	100.0	112.7	103.2	111.2	115.4
Fabricated structural metal .....	3441	98.1	86.0	98.6	98.8	100.0	98.9	94.7	96.8	98.3
Metal doors, sash, and trim .....	3442	90.5	92.6	104.8	102.0	100.0	102.4	101.5	97.0	94.7
Bolts, nuts, rivets, and washers .....	3452	75.8	78.9	88.8	91.0	100.0	97.0	93.8	93.7	96.2
Automotive stampings .....	3465	74.9	81.4	94.5	95.7	100.0	104.5	104.7	100.8	104.2
Metal stampings, not elsewhere classified .....	3469	96.8	100.2	88.6	93.9	100.0	99.6	98.3	95.1	96.3
Valves and pipe fittings .....	3491,92,94	93.6	95.7	94.4	93.9	100.0	101.3	101.0	101.9	101.2
Fabricated pipe and fittings .....	3498	140.8	116.0	120.0	121.4	100.0	99.2	101.7	106.5	113.3
Internal combustion engines, not elsewhere classified .....	3519	83.1	86.4	92.0	98.5	100.0	105.1	110.9	105.0	98.9
Farm machinery and equipment .....	3523	108.6	112.6	101.6	95.7	100.0	112.5	123.1	130.6	123.6
Lawn and garden equipment .....	3524	70.0	83.3	82.4	93.2	100.0	97.2	91.9	93.4	94.5
Construction machinery .....	3531	87.9	91.5	92.2	99.1	100.0	107.2	109.7	108.9	98.2
Mining machinery .....	3532	102.2	89.3	93.7	95.1	100.0	102.2	107.3	99.0	90.7
Oil and gas field machinery .....	3533	105.9	100.6	92.3	95.0	100.0	99.3	104.6	107.4	109.2
Metal-cutting machine tools .....	3541	101.4	100.9	89.9	92.0	100.0	96.1	101.2	103.1	100.2
Metal-forming machine tools .....	3542	112.5	98.5	93.1	93.7	100.0	113.8	109.9	100.6	91.9
Machine tool accessories .....	3545	105.9	100.6	92.3	95.0	100.0	99.3	104.6	107.4	109.2
Pumps and pumping equipment .....	3561,94	84.0	91.4	91.9	92.7	100.0	105.8	101.5	103.5	102.7
Ball and roller bearings .....	3562	108.0	110.2	91.6	94.1	100.0	102.4	98.2	92.1	88.3
Air and gas compressors .....	3563	87.6	86.1	92.2	96.0	100.0	104.1	106.1	109.2	111.8
Refrigeration and heating equipment .....	3585	100.3	98.8	98.1	95.8	100.0	103.5	105.7	104.6	102.6
Carburetors, pistons, rings, and valves .....	3592	102.9	82.0	98.9	95.7	100.0	108.8	117.1	110.9	110.7
Transformers, except electronic .....	3612	100.2	109.8	97.0	99.3	100.0	102.9	103.9	107.8	111.4
Switchgear and switchboard apparatus .....	3613	88.2	87.5	95.1	95.9	100.0	109.5	106.6	107.8	105.7
Motors and generators .....	3621	89.0	89.7	94.9	96.8	100.0	103.3	103.8	102.4	106.4
Household cooking equipment .....	3631	61.8	79.1	90.3	104.6	100.0	116.4	99.4	100.1	106.2
Household refrigerators and freezers .....	3632	70.1	86.8	104.1	101.2	100.0	103.1	106.9	107.4	112.3
Household laundry equipment .....	3633	72.3	84.7	93.8	97.4	100.0	106.6	100.8	104.8	111.4
Household appliances, not elsewhere classified .....	3639	63.7	76.1	86.3	89.1	100.0	101.0	98.4	91.9	81.1
Electric lamps .....	3641	61.3	76.1	94.2	91.5	100.0	101.1	86.2	91.4	97.0
Lighting fixtures and equipment .....	3645,46,47,48	84.1	86.2	96.7	103.0	100.0	98.3	97.2	96.5	94.7
Household audio and video equipment .....	3651	22.3	39.1	96.3	106.9	100.0	107.3	122.3	128.4	142.0
Motor vehicles and equipment .....	371	68.7	77.7	95.3	95.1	100.0	103.2	103.3	102.5	96.9
Aircraft .....	3721	79.2	98.6	94.2	93.5	100.0	104.8	108.2	109.8	126.7
Instruments to measure electricity .....	3825	63.7	70.8	95.4	90.4	100.0	106.6	109.6	108.2	111.5
Photographic equipment and supplies .....	386	58.9	79.0	86.1	94.1	100.0	106.8	115.7	111.7	115.6
Railroad transportation, revenue traffic .....	4011	49.3	54.0	79.8	86.1	100.0	109.3	115.4	122.6	128.1
Bus carriers, class 1 .....	411,13,14 pts.	116.8	108.3	96.1	95.6	100.0	107.9	104.6	-	-
Trucking, except local .....	4213	69.5	83.9	93.8	96.8	100.0	105.2	109.4	-	-
Air transportation .....	4512,13,22 pts.	54.3	75.5	92.0	93.8	100.0	99.5	95.1	92.2	92.5
Petroleum pipelines .....	4612,13	93.2	96.9	99.9	102.0	100.0	104.8	103.2	102.5	99.1
Telephone communications .....	481	46.2	68.7	92.6	98.1	100.0	107.8	113.4	115.1	121.8
Electric utilities .....	491,493 pt.	88.4	95.3	93.0	95.2	100.0	104.9	107.7	110.0	113.3
Gas utilities .....	492,493 pt.	145.5	141.4	111.9	102.1	100.0	105.5	103.6	95.0	94.2
Scrap and waste materials .....	5093	-	81.1	93.4	97.7	100.0	94.3	87.8	92.2	93.1
Hardware stores .....	525	83.3	97.5	95.6	101.6	100.0	108.7	115.4	110.5	102.5
Department stores .....	531	60.8	74.0	92.6	97.4	100.0	99.4	97.4	94.8	99.2
Variety stores .....	533	148.9	123.3	129.2	106.7	100.0	97.3	113.7	132.1	130.2
Grocery stores .....	541	109.1	106.8	105.7	103.8	100.0	98.6	95.8	94.8	94.0
Retail bakeries .....	546	125.6	112.3	87.6	93.6	100.0	94.2	87.3	84.8	90.0
New and used car dealers .....	551	85.1	86.3	99.8	101.6	100.0	102.7	103.8	107.1	105.6
Auto and home supply stores .....	553	71.1	80.1	94.5	94.3	100.0	106.5	108.9	114.2	114.6
Gasoline service stations .....	554	59.5	73.7	93.5	101.8	100.0	102.4	104.0	101.0	102.0
Men's and boys' clothing stores .....	561	77.6	82.3	98.3	100.7	100.0	102.6	102.3	101.6	102.0
Women's clothing stores .....	562	58.9	72.8	99.8	107.0	100.0	99.4	102.9	106.7	110.1
Family clothing stores .....	565	76.2	75.4	103.1	103.3	100.0	101.3	103.2	101.5	102.3
Shoe stores .....	566	81.3	90.9	97.6	105.5	100.0	102.7	107.3	106.3	105.5
Furniture and home furnishings stores .....	571	83.9	91.0	94.8	101.2	100.0	99.5	102.6	104.3	104.2
Household appliance stores .....	572	58.8	72.9	94.9	106.5	100.0	101.1	108.7	111.2	117.4
Radio, television, and computer stores .....	573	45.6	53.0	89.3	94.1	100.0	122.2	122.0	131.4	146.2
Eating and drinking places .....	581	110.3	106.6	96.2	99.3	100.0	102.6	101.9	103.1	104.5
Drug and proprietary stores .....	591	92.2	101.8	102.5	101.6	100.0	102.0	102.8	104.1	105.5
Liquor stores .....	592	95.0	90.2	101.9	93.8	100.0	99.9	104.7	110.6	112.3
Commercial banks .....	602	81.2	84.1	94.3	96.2	100.0	103.4	102.2	108.6	112.3
Hotels and motels .....	701	102.4	109.7	101.2	98.9	100.0	95.8	91.4	90.6	91.3
Laundry, cleaning, and garment services .....	721	110.8	109.9	103.3	100.8	100.0	97.1	98.6	99.0	96.6
Beauty shops .....	723	85.9	89.4	96.1	96.9	100.0	93.3	96.0	91.3	87.6
Automotive repair shops .....	753	109.3	105.0	99.4	96.1	100.0	105.6	107.8	106.3	99.9

- Data not available.

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

Country	Annual average		1993	1994				1995	
	1993	1994	IV	I	II	III	IV	I	II
United States <sup>1</sup> .....	6.8	6.1	6.5	6.6	6.2	6.0	5.6	5.5	5.7
Canada .....	11.2	10.4	11.2	11.0	10.6	10.2	9.8	9.7	9.5
Australia .....	10.9	9.7	10.8	10.4	10.0	9.5	9.1	8.9	8.4
Japan .....	2.5	2.9	2.8	2.8	2.9	3.0	2.9	3.0	3.2
France .....	11.9	12.7	12.3	12.7	12.7	12.7	12.6	12.5	-
Germany .....	5.8	6.5	6.2	6.4	6.5	6.5	6.5	6.5	-
Italy <sup>2</sup> .....	10.3	11.4	11.0	11.0	11.6	11.1	11.8	12.2	12.2
Sweden .....	9.3	9.6	9.8	9.8	9.7	9.7	9.3	9.3	9.4
United Kingdom .....	10.5	9.6	10.2	10.0	9.8	9.6	9.0	8.8	8.8

<sup>1</sup> 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.

<sup>2</sup> Quarterly rates are for the first month of the quarter. Break in series beginning in 1993.

- 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	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Civilian labor force</b>										
United States <sup>1</sup> .....	115,461	117,834	119,865	121,669	123,869	124,787	125,303	126,982	128,040	131,056
Canada .....	13,123	13,378	13,631	13,900	14,151	14,329	14,408	14,482	14,663	14,832
Australia .....	7,300	7,588	7,758	7,974	8,228	8,444	8,490	8,562	8,619	8,776
Japan .....	58,820	59,410	60,050	60,860	61,920	63,050	64,280	65,040	65,470	65,780
France .....	23,620	23,760	23,890	23,980	24,170	24,300	24,490	24,600	24,710	24,970
Germany .....	28,020	28,240	28,390	28,610	28,840	29,410	29,760	30,040	29,960	29,840
Italy .....	21,800	22,290	22,350	22,660	22,530	22,670	22,940	22,910	22,570	22,450
Netherlands .....	6,250	6,380	6,500	6,530	6,540	6,770	6,870	6,970	7,070	-
Sweden .....	4,418	4,443	4,437	4,494	4,552	4,597	4,591	4,520	4,443	4,418
United Kingdom .....	27,210	27,380	27,720	28,150	28,420	28,540	28,450	28,400	28,310	28,310
<b>Participation rate<sup>2</sup></b>										
United States <sup>1</sup> .....	64.8	65.3	65.6	65.9	66.5	66.4	66.0	66.3	66.2	66.6
Canada .....	65.8	66.3	66.7	67.2	67.5	67.3	66.7	65.9	65.5	65.3
Australia .....	61.6	62.8	63.0	63.3	64.0	64.6	64.1	63.9	63.6	63.9
Japan .....	62.3	62.1	61.9	61.9	62.2	62.6	63.2	63.4	63.3	63.1
France .....	56.9	56.9	56.7	56.4	56.1	55.6	55.6	55.9	55.7	56.0
Germany .....	54.7	54.9	55.0	55.1	55.2	55.0	55.4	55.1	54.5	-
Italy .....	47.2	47.8	47.6	47.4	47.3	47.2	48.6	48.5	48.3	48.0
Netherlands .....	55.5	56.0	56.3	56.1	56.5	56.8	57.5	57.9	58.6	-
Sweden .....	66.9	67.0	66.4	66.9	67.3	67.0	66.6	65.3	64.2	63.6
United Kingdom .....	62.1	62.1	62.5	63.2	63.6	63.7	63.3	62.9	62.8	62.7
<b>Employed</b>										
United States <sup>1</sup> .....	107,150	109,597	112,440	114,968	117,342	117,914	118,877	117,598	119,306	123,060
Canada .....	11,742	12,095	12,422	12,819	13,086	13,165	12,916	12,842	13,015	13,292
Australia .....	6,697	6,974	7,129	7,398	7,720	7,859	7,676	7,637	7,680	7,921
Japan .....	57,260	57,740	58,920	59,310	60,500	61,710	62,920	63,620	63,810	63,860
France .....	21,150	21,240	21,320	21,520	21,850	22,100	22,140	22,010	21,780	21,810
Germany .....	26,010	26,380	26,590	26,800	27,200	27,950	28,480	28,660	28,220	27,900
Italy .....	20,490	20,610	20,590	20,870	20,770	21,080	21,360	21,230	20,240	19,890
Netherlands .....	5,650	5,740	5,850	5,920	6,070	6,260	6,380	6,470	6,450	-
Sweden .....	4,293	4,326	4,340	4,410	4,480	4,513	4,447	4,265	4,028	3,992
United Kingdom .....	24,150	24,300	24,860	25,730	26,350	26,550	25,930	25,520	25,340	25,590
<b>Employment-population ratio<sup>3</sup></b>										
United States <sup>1</sup> .....	60.1	60.7	61.5	62.3	63.0	62.7	61.6	61.4	61.6	62.5
Canada .....	58.9	59.9	60.8	62.0	62.4	61.9	59.8	58.4	58.2	58.5
Australia .....	56.5	57.7	57.9	58.7	60.1	60.1	57.9	57.0	56.6	57.7
Japan .....	60.6	60.4	60.1	60.4	60.8	61.3	61.8	62.0	61.7	61.3
France .....	51.0	50.8	50.6	50.6	50.7	50.5	50.3	50.0	49.1	48.9
Germany .....	50.7	51.3	51.5	51.6	52.0	52.2	53.0	52.6	51.3	-
Italy .....	44.4	44.2	43.8	43.7	43.6	43.9	45.3	44.9	43.3	42.5
Netherlands .....	50.1	50.3	50.7	50.8	51.7	52.5	53.4	53.8	53.4	-
Sweden .....	65.0	65.2	65.0	65.7	66.2	65.8	64.5	61.7	58.2	57.4
United Kingdom .....	55.1	55.1	56.1	57.8	59.0	59.2	57.7	56.5	56.2	56.7
<b>Unemployed</b>										
United States <sup>1</sup> .....	8,312	8,237	7,425	6,701	6,528	6,874	8,426	9,384	8,734	7,996
Canada .....	1,381	1,283	1,208	1,082	1,065	1,164	1,492	1,640	1,649	1,541
Australia .....	603	613	629	576	508	585	814	925	939	856
Japan .....	1,560	1,670	1,730	1,550	1,420	1,340	1,360	1,420	1,660	1,920
France .....	2,470	2,520	2,570	2,460	2,320	2,200	2,350	2,590	2,930	3,160
Germany .....	2,010	1,860	1,800	1,810	1,640	1,460	1,280	1,380	1,740	1,940
Italy .....	1,310	1,680	1,760	1,790	1,760	1,590	1,580	1,680	2,330	2,560
Netherlands .....	600	640	650	610	570	510	490	500	620	-
Sweden .....	125	117	97	84	72	84	144	255	415	426
United Kingdom .....	3,060	3,080	2,860	2,420	2,070	1,990	2,520	2,880	2,970	2,720
<b>Unemployment rate</b>										
United States <sup>1</sup> .....	7.2	7.0	6.2	5.5	5.3	5.5	6.7	7.4	6.8	6.1
Canada .....	10.5	9.6	8.9	7.8	7.5	8.1	10.4	11.3	11.2	10.4
Australia .....	8.3	8.1	8.1	7.2	6.2	6.9	9.6	10.8	10.9	9.7
Japan .....	2.6	2.8	2.9	2.5	2.3	2.1	2.1	2.2	2.5	2.9
France .....	10.5	10.6	10.8	10.3	9.6	9.1	9.6	10.5	11.9	12.7
Germany .....	7.2	6.6	6.3	6.3	5.7	5.0	4.3	4.6	5.8	6.5
Italy .....	6.0	7.5	7.9	7.9	7.8	7.0	6.9	7.3	10.3	11.4
Netherlands .....	9.6	10.0	10.0	9.3	8.6	7.5	7.1	7.2	8.8	-
Sweden .....	2.8	2.6	2.2	1.9	1.6	1.8	3.1	5.6	9.3	9.6
United Kingdom .....	11.2	11.2	10.3	8.6	7.3	7.0	8.9	10.1	10.5	9.6

<sup>1</sup> 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.

<sup>2</sup> Labor force as a percent of the working-age population.

<sup>3</sup> Employment as a percent of the working-age population.

- Data not available.

NOTE: See "Notes on the data" for information on breaks in series for Italy and Sweden.

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

(1982=100)

Item and country	1960	1970	1973	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Output per hour</b>													
United States .....	-	-	-	103.5	106.7	109.5	116.6	119.2	119.9	122.1	124.9	127.5	132.0
Canada .....	51.6	76.9	91.9	116.3	119.8	117.9	119.0	119.5	120.0	122.0	122.9	128.0	130.9
Japan .....	18.5	50.3	64.4	107.9	114.9	113.0	122.4	129.6	138.7	149.1	156.9	156.6	159.5
Belgium .....	26.2	47.9	62.5	117.5	119.6	121.4	123.7	128.6	134.4	134.1	138.1	143.6	149.5
Denmark .....	32.4	57.2	72.7	104.3	105.0	98.9	98.4	102.1	105.6	105.5	107.5	109.6	111.2
France .....	29.6	58.6	69.4	103.9	107.9	109.7	111.6	119.3	125.4	127.6	127.1	131.1	132.3
Germany .....	37.1	66.4	77.9	109.0	113.4	114.2	112.7	116.7	120.5	125.6	130.1	128.5	130.5
Italy .....	29.3	54.9	65.1	115.7	122.3	123.7	127.2	130.0	134.0	139.3	143.8	151.0	158.0
Netherlands .....	27.3	54.4	69.2	118.5	123.4	125.3	126.2	128.9	133.7	134.5	136.8	137.4	140.0
Norway .....	46.4	73.0	85.4	112.2	115.8	114.7	120.4	119.5	119.5	124.5	123.8	128.9	131.6
Sweden .....	36.0	68.9	81.1	111.8	113.8	115.7	117.7	118.6	122.5	124.0	124.0	130.6	139.2
United Kingdom .....	50.3	72.1	86.2	112.4	116.4	120.6	126.9	133.5	138.4	140.1	145.3	152.3	159.2
<b>Output</b>													
United States .....	-	-	-	111.3	114.0	115.2	123.5	130.0	131.2	130.6	128.2	130.1	136.6
Canada .....	44.1	78.5	100.0	120.2	127.0	127.9	134.1	140.9	142.1	136.8	127.5	128.3	134.7
Japan .....	15.1	55.1	71.8	113.2	121.2	117.9	126.5	138.2	149.3	160.6	170.8	167.4	163.2
Belgium .....	40.8	76.5	93.9	109.9	111.8	111.9	112.2	117.7	124.9	126.5	126.9	127.0	123.1
Denmark .....	45.4	75.7	88.5	111.7	115.3	110.6	112.3	113.6	112.4	112.3	113.4	109.9	
France .....	35.1	72.7	87.0	98.7	99.1	99.1	98.9	104.6	110.3	112.4	110.4	110.2	105.2
Germany .....	51.0	87.0	96.4	104.6	108.4	110.1	108.1	111.5	115.4	121.7	126.2	123.3	113.8
Italy .....	28.1	58.8	70.5	105.4	108.9	111.5	116.3	125.0	129.7	132.3	132.1	132.6	129.2
Netherlands .....	42.8	80.5	91.5	109.1	112.1	114.8	116.4	120.8	126.3	130.5	131.1	130.3	127.4
Norway .....	56.0	88.4	101.3	105.0	108.8	108.8	110.8	105.5	99.0	99.8	96.5	99.6	101.3
Sweden .....	51.8	91.0	98.6	113.4	115.9	117.4	120.1	122.9	124.5	123.3	115.4	111.5	113.2
United Kingdom .....	82.9	110.5	121.9	105.9	108.9	110.3	115.5	123.6	129.1	128.9	121.9	121.1	122.7
<b>Total hours</b>													
United States .....	94.1	106.5	112.6	107.6	106.8	105.2	106.0	109.0	109.4	107.0	102.7	102.0	103.5
Canada .....	85.5	102.1	108.8	103.3	106.0	108.5	112.7	117.9	118.4	112.2	103.7	100.3	102.9
Japan .....	81.7	109.6	111.5	104.9	105.5	104.3	103.4	106.7	107.6	107.7	108.8	106.9	102.3
Belgium .....	156.2	159.9	150.3	93.6	93.5	92.2	90.7	91.5	93.0	94.3	91.9	88.4	82.3
Denmark .....	140.0	132.3	121.8	107.1	109.8	116.6	112.4	110.0	107.6	106.6	104.5	103.5	98.8
France .....	118.5	123.9	125.3	95.0	91.8	90.3	88.6	87.7	88.0	88.1	86.8	84.1	79.5
Germany .....	137.2	131.1	123.7	96.0	95.6	96.4	95.9	95.6	95.7	96.9	97.0	96.0	87.3
Italy .....	96.2	107.0	108.3	91.1	89.0	90.1	91.4	96.1	96.8	95.0	91.8	87.8	81.7
Netherlands .....	156.8	148.1	132.2	92.0	90.8	91.7	92.2	93.7	94.5	96.3	95.8	94.9	91.0
Norway .....	120.9	121.1	118.7	93.5	94.0	94.8	92.0	88.3	80.2	77.9	77.3	77.0	
Sweden .....	143.7	132.0	121.6	101.5	101.9	101.5	102.0	103.6	101.6	99.4	93.1	85.4	81.4
United Kingdom .....	164.9	153.3	141.4	94.2	93.5	91.5	91.0	92.6	93.3	92.0	83.9	79.5	77.1
<b>Compensation per hour</b>													
United States .....	-	-	-	106.0	111.3	115.8	118.4	123.1	127.9	134.7	141.9	147.9	152.0
Canada .....	16.4	28.7	35.9	111.1	116.8	121.3	125.0	130.5	135.4	143.0	152.3	158.2	158.7
Japan .....	6.6	25.0	40.7	105.8	110.1	115.8	118.6	120.6	128.2	138.3	146.2	152.4	159.3
Belgium .....	9.1	23.2	35.5	114.8	122.0	127.0	130.0	132.7	139.7	147.5	156.8	164.9	171.2
Denmark .....	7.7	22.3	34.5	113.0	120.6	123.1	134.6	139.4	147.3	156.5	162.6	169.1	175.7
France .....	7.6	18.5	26.2	119.6	129.6	135.1	140.0	145.4	153.2	161.3	169.1	174.9	181.5
Germany .....	13.5	34.5	48.2	110.0	116.3	121.2	126.9	131.8	138.2	147.9	157.8	166.2	178.5
Italy .....	3.9	11.6	17.7	134.3	150.9	157.1	166.0	172.5	185.0	210.8	233.1	250.4	267.1
Netherlands .....	9.1	28.5	44.5	108.4	114.1	118.6	122.4	122.0	123.1	126.4	132.3	139.2	145.6
Norway .....	9.9	24.6	35.3	120.9	132.2	145.0	165.6	175.7	183.9	194.7	205.6	219.9	212.9
Sweden .....	9.3	24.4	34.3	119.6	131.8	142.4	151.9	161.8	179.0	197.5	215.1	225.0	221.6
United Kingdom .....	7.1	14.7	22.6	114.6	125.1	135.4	149.8	159.4	174.7	180.6	199.4	219.6	235.6
<b>Unit labor costs: National currency basis</b>													
United States .....	-	-	-	102.4	104.2	105.8	101.6	103.2	106.7	110.4	113.7	116.0	115.1
Canada .....	31.9	37.3	39.1	95.5	97.6	102.9	105.0	109.2	112.8	117.2	123.9	123.6	121.2
Japan .....	35.5	49.7	63.2	98.1	95.8	102.4	96.8	93.1	92.4	92.7	93.2	97.3	99.8
Belgium .....	34.9	48.4	56.8	97.7	102.0	104.7	105.1	103.1	103.9	110.0	113.5	114.8	114.5
Denmark .....	23.8	39.0	47.4	108.3	114.9	124.5	136.8	136.5	139.5	148.3	151.2	154.3	158.0
France .....	25.7	31.5	37.7	115.2	120.2	123.2	125.5	121.8	122.2	126.4	133.0	133.4	137.2
Germany .....	36.4	51.9	61.9	101.0	102.6	106.2	112.6	113.0	114.6	117.8	121.3	129.4	136.8
Italy .....	13.4	21.1	27.2	116.1	123.4	127.1	130.5	132.6	141.4	151.3	162.1	165.8	169.0
Netherlands .....	33.3	52.5	64.3	91.5	92.5	94.6	97.0	94.6	92.1	93.3	96.7	101.4	104.0
Norway .....	21.3	33.7	41.4	107.8	114.2	126.4	137.5	147.1	154.0	156.5	166.1	163.7	161.8
Sweden .....	25.8	35.4	42.2	107.0	115.8	123.1	129.0	136.4	146.1	159.2	173.4	172.3	159.3
United Kingdom .....	14.2	20.4	26.3	101.9	107.5	112.3	118.0	119.4	126.2	128.9	137.2	144.2	148.0
<b>Unit labor costs: U.S. dollar basis</b>													
United States .....	-	-	-	102.4	104.2	105.8	101.6	103.2	106.7	110.4	113.7	116.0	115.1
Canada .....	40.6	44.1	48.2	91.0	88.2	91.4	97.8	109.5	117.6	124.0	133.5	126.2	116.0
Japan .....	24.6	34.6	58.1	102.9	100.1	151.5	166.8	180.9	166.7	159.3	172.5	191.2	223.8
Belgium .....	32.0	44.6	67.0	77.5	78.7	107.3	128.8	128.4	120.7	150.6	152.0	163.5	151.6
Denmark .....	28.8	43.4	65.7	87.3	90.4	128.3	166.7	169.0	159.0	200.0	197.1	213.3	203.3
France .....	34.4	37.5	55.9	86.7	88.0	117.0	137.3	134.5	126.0	152.7	155.0	165.8	159.3
Germany .....	21.2	34.6	56.8	86.2	84.7	118.8	152.1	156.1	148.0	176.9	177.3	201.2	200.8
Italy .....	29.3	45.7	63.2	89.5	87.5	115.4	136.3	137.9	139.5	170.9	176.8	182.1	145.4
Netherlands .....	23.6	38.8	61.8	76.2	74.5	103.3	127.9	127.8	115.9	139.9	138.0	150.1	149.5
Norway .....	19.3	30.4	46.5	85.3	85.8	110.3	131.7	145.5	143.8	161.5	165.2	170.1	147.2
Sweden .....	31.4	42.9	61.0	81.3	84.6	108.5	127.7	139.7	142.2	168.9	180.1	185.8	128.4
United Kingdom .....	22.8	28.0	36.8	77.9	79.8	94.3	110.7	121.6	118.3	131.6	138.7	145.7	127.1

- Data not available.



49. Occupational injury and illness incidence rates by industry,<sup>1</sup> United States

Industry and type of case <sup>2</sup>	Incidence rates per 100 full-time workers <sup>3</sup>								
	1985	1986	1987	1988	1989 <sup>1</sup>	1990	1991	1992	1993 <sup>4</sup>
<b>PRIVATE SECTOR<sup>5</sup></b>									
Total cases .....	7.9	7.9	8.3	8.6	8.6	8.8	8.4	8.9	8.5
Lost workday cases .....	3.6	3.6	3.8	4.0	4.0	4.1	3.9	3.9	3.8
Lost workdays .....	64.9	65.8	69.9	76.1	78.7	84.0	86.5	93.8	-
<b>Agriculture, forestry, and fishing<sup>5</sup></b>									
Total cases .....	11.4	11.2	11.2	10.9	10.9	11.6	10.8	11.6	11.2
Lost workday cases .....	5.7	5.6	5.7	5.6	5.7	5.9	5.4	5.4	5.0
Lost workdays .....	91.3	93.6	94.1	101.8	100.9	112.2	108.3	126.9	-
<b>Mining</b>									
Total cases .....	8.4	7.4	8.5	8.8	8.5	8.3	7.4	7.3	6.8
Lost workday cases .....	4.8	4.1	4.9	5.1	4.8	5.0	4.5	4.1	3.9
Lost workdays .....	145.3	125.9	144.0	152.1	137.2	119.5	129.6	204.7	-
<b>Construction</b>									
Total cases .....	15.2	15.2	14.7	14.6	14.3	14.2	13.0	13.1	12.2
Lost workday cases .....	6.8	6.9	6.8	6.8	6.8	6.7	6.1	5.8	5.5
Lost workdays .....	128.9	134.5	135.8	142.2	143.3	147.9	148.1	161.9	-
General building contractors:									
Total cases .....	15.2	14.9	14.2	14.0	13.9	13.4	12.0	12.2	11.5
Lost workday cases .....	6.8	6.6	6.5	6.4	6.5	6.4	5.5	5.4	5.1
Lost workdays .....	120.4	122.7	134.0	132.2	137.3	137.6	132.0	142.7	-
Heavy construction, except building:									
Total cases .....	14.5	14.7	14.5	15.1	13.8	13.8	12.8	12.1	11.1
Lost workday cases .....	6.3	6.3	6.4	7.0	6.5	6.3	6.0	5.4	5.1
Lost workdays .....	127.3	132.9	139.1	162.3	147.1	144.6	160.1	165.8	-
Special trade contractors:									
Total cases .....	15.4	15.6	15.0	14.7	14.6	14.7	13.5	13.8	12.8
Lost workday cases .....	7.0	7.2	7.1	7.0	6.9	6.9	6.3	6.1	5.8
Lost workdays .....	133.3	140.4	135.7	141.1	144.9	153.1	151.3	168.3	-
<b>Manufacturing</b>									
Total cases .....	10.4	10.6	11.9	13.1	13.1	13.2	12.7	12.5	12.1
Lost workday cases .....	4.6	4.7	5.3	5.7	5.8	5.8	5.6	5.4	5.3
Lost workdays .....	80.2	85.2	95.5	107.4	113.0	120.7	121.5	124.6	-
Durable goods:									
Total cases .....	10.9	11.0	12.5	14.2	14.1	14.2	13.6	13.4	13.1
Lost workday cases .....	4.7	4.8	5.4	5.9	6.0	6.0	5.7	5.5	5.4
Lost workdays .....	82.0	87.1	96.8	111.1	116.5	123.3	122.9	126.7	-
Lumber and wood products:									
Total cases .....	18.5	18.9	18.9	19.5	18.4	18.1	16.8	16.3	15.9
Lost workday cases .....	9.3	9.7	9.6	10.0	9.4	8.8	8.3	7.6	7.6
Lost workdays .....	171.4	177.2	176.5	189.1	177.5	172.5	172.0	165.8	-
Furniture and fixtures:									
Total cases .....	15.0	15.2	15.4	16.6	16.1	16.9	15.9	14.8	14.6
Lost workday cases .....	6.3	6.3	6.7	7.3	7.2	7.8	7.2	6.6	6.5
Lost workdays .....	100.4	103.0	103.6	115.7	-	-	-	128.4	-
Stone, clay, and glass products:									
Total cases .....	13.9	13.6	14.9	16.0	15.5	15.4	14.8	13.6	13.8
Lost workday cases .....	6.7	6.5	7.1	7.5	7.4	7.3	6.8	6.1	6.3
Lost workdays .....	127.8	126.0	135.8	141.0	149.8	160.5	156.0	152.2	-
Primary metal industries:									
Total cases .....	12.6	13.6	17.0	19.4	18.7	19.0	17.7	17.5	17.0
Lost workday cases .....	5.7	6.1	7.4	8.2	8.1	8.1	7.4	7.1	7.3
Lost workdays .....	113.8	125.5	145.8	161.3	168.3	180.2	169.1	175.5	-
Fabricated metal products:									
Total cases .....	16.3	16.0	17.0	18.8	18.5	18.7	17.4	16.8	16.2
Lost workday cases .....	6.9	6.8	7.2	8.0	7.9	7.9	7.1	6.6	6.7
Lost workdays .....	110.1	115.5	121.9	138.8	147.6	155.7	146.6	144.0	-
Industrial machinery and equipment:									
Total cases .....	10.8	10.7	11.3	12.1	12.1	12.0	11.2	11.1	11.1
Lost workday cases .....	4.2	4.2	4.4	4.7	4.8	4.7	4.4	4.2	4.2
Lost workdays .....	69.3	72.0	72.7	82.8	86.8	88.9	86.6	87.7	-
Electronic and other electrical equipment:									
Total cases .....	6.4	6.4	7.2	8.0	9.1	9.1	8.6	8.4	8.3
Lost workday cases .....	2.7	2.7	3.1	3.3	3.9	3.8	3.7	3.6	3.5
Lost workdays .....	45.7	49.8	55.9	64.6	77.5	79.4	83.0	81.2	-
Transportation equipment:									
Total cases .....	9.0	9.6	13.5	17.7	17.7	17.8	18.3	18.7	18.5
Lost workday cases .....	3.9	4.1	5.7	6.6	6.8	6.9	7.0	7.1	7.1
Lost workdays .....	71.6	79.1	105.7	134.2	138.6	153.7	166.1	186.6	-
Instruments and related products:									
Total cases .....	5.2	5.3	5.8	6.1	5.6	5.9	6.0	5.9	5.6
Lost workday cases .....	2.2	2.3	2.4	2.6	2.5	2.7	2.7	2.7	2.5
Lost workdays .....	37.9	42.2	43.9	51.5	55.4	57.8	64.4	65.3	-
Miscellaneous manufacturing industries:									
Total cases .....	9.7	10.2	10.7	11.3	11.1	11.3	11.3	10.7	10.0
Lost workday cases .....	4.2	4.3	4.6	5.1	5.1	5.1	5.1	5.0	4.6
Lost workdays .....	73.2	70.9	81.5	91.0	97.6	113.1	104.0	108.2	-
Nondurable goods:									
Total cases .....	9.6	10.0	11.1	11.4	11.6	11.7	11.5	11.3	10.7

See footnotes at end of table.

49. Continued— Occupational injury and illness incidence rates by industry,<sup>1</sup> United States

Industry and type of case <sup>2</sup>	Incidence rates per 100 full-time workers <sup>3</sup>								
	1985	1986	1987	1988	1989 <sup>1</sup>	1990	1991	1992	1993 <sup>4</sup>
Lost workday cases .....	4.4	4.6	5.1	5.4	5.5	5.6	5.5	5.3	5.0
Lost workdays .....	77.6	82.3	93.5	101.7	107.8	116.9	119.7	121.8	-
<b>Food and kindred products:</b>									
Total cases .....	16.7	16.5	17.7	18.5	18.5	20.0	19.5	18.8	17.6
Lost workday cases .....	8.1	8.0	8.6	9.2	9.3	9.9	9.9	9.5	8.9
Lost workdays .....	138.0	137.8	153.7	169.7	174.7	202.6	207.2	211.9	-
<b>Tobacco products:</b>									
Total cases .....	7.3	6.7	8.6	9.3	8.7	7.7	6.4	6.0	5.8
Lost workday cases .....	3.0	2.5	2.5	2.9	3.4	3.2	2.8	2.4	2.3
Lost workdays .....	51.7	45.6	46.4	53.0	64.2	62.3	52.0	42.9	-
<b>Textile mill products:</b>									
Total cases .....	7.5	7.8	9.0	9.6	10.3	9.6	10.0	9.9	9.7
Lost workday cases .....	3.0	3.1	3.6	4.0	4.2	4.0	4.4	4.2	4.1
Lost workdays .....	57.4	59.3	65.9	78.8	81.4	85.1	88.3	87.1	-
<b>Apparel and other textile products:</b>									
Total cases .....	6.7	6.7	7.4	8.1	8.6	8.8	9.2	9.5	9.0
Lost workday cases .....	2.6	2.7	3.1	3.5	3.8	3.9	4.2	4.0	3.8
Lost workdays .....	44.1	49.4	59.5	68.2	80.5	92.1	99.9	104.6	-
<b>Paper and allied products:</b>									
Total cases .....	10.2	10.5	12.8	13.1	12.7	12.1	11.2	11.0	9.9
Lost workday cases .....	4.7	4.7	5.8	5.9	5.8	5.5	5.0	5.0	4.6
Lost workdays .....	94.6	99.5	122.3	124.3	132.9	124.8	122.7	125.9	-
<b>Printing and publishing:</b>									
Total cases .....	6.3	6.5	6.7	6.6	6.9	6.9	6.7	7.3	6.9
Lost workday cases .....	2.9	2.9	3.1	3.2	3.3	3.3	3.2	3.2	3.1
Lost workdays .....	49.2	50.8	55.1	58.8	63.8	69.8	74.5	74.8	-
<b>Chemicals and allied products:</b>									
Total cases .....	5.1	6.3	7.0	7.0	7.0	6.5	6.4	6.0	5.9
Lost workday cases .....	2.3	2.7	3.1	3.3	3.2	3.1	3.1	2.8	2.7
Lost workdays .....	38.8	49.4	58.8	59.0	63.4	61.6	62.4	64.2	-
<b>Petroleum and coal products:</b>									
Total cases .....	5.1	7.1	7.3	7.0	6.6	6.6	6.2	5.9	5.2
Lost workday cases .....	2.4	3.2	3.1	3.2	3.3	3.1	2.9	2.8	2.5
Lost workdays .....	49.9	67.5	65.9	68.4	68.1	77.3	68.2	71.2	-
<b>Rubber and miscellaneous plastics products:</b>									
Total cases .....	13.4	14.0	15.9	16.3	16.2	16.2	15.1	14.5	13.9
Lost workday cases .....	6.3	6.6	7.6	8.1	8.0	7.8	7.2	6.8	6.5
Lost workdays .....	107.4	118.2	130.8	142.9	147.2	151.3	150.9	153.3	-
<b>Leather and leather products:</b>									
Total cases .....	10.3	10.5	12.4	11.4	13.6	12.1	12.5	12.1	12.1
Lost workday cases .....	4.6	4.8	5.8	5.6	6.5	5.9	5.9	5.4	5.5
Lost workdays .....	88.3	83.4	114.5	128.2	130.4	152.3	140.8	128.5	-
<b>Transportation and public utilities</b>									
Total cases .....	8.6	8.2	8.4	8.9	9.2	9.6	9.3	9.1	9.5
Lost workday cases .....	5.0	4.8	4.9	5.1	5.3	5.5	5.4	5.1	5.4
Lost workdays .....	107.1	102.1	108.1	118.6	121.5	134.1	140.0	144.0	-
<b>Wholesale and retail trade</b>									
Total cases .....	7.4	7.7	7.7	7.8	8.0	7.9	7.6	8.4	8.1
Lost workday cases .....	3.2	3.3	3.4	3.5	3.6	3.5	3.4	3.5	3.4
Lost workdays .....	50.7	54.0	56.1	60.9	63.5	65.6	72.0	80.1	-
<b>Wholesale trade:</b>									
Total cases .....	7.2	7.2	7.4	7.6	7.7	7.4	7.2	7.6	7.8
Lost workday cases .....	3.5	3.6	3.7	3.8	4.0	3.7	3.7	3.6	3.7
Lost workdays .....	59.8	62.5	64.0	69.2	71.9	71.5	79.2	82.4	-
<b>Retail trade:</b>									
Total cases .....	7.5	7.8	7.8	7.9	8.1	8.1	7.7	8.7	8.2
Lost workday cases .....	3.1	3.2	3.3	3.4	3.4	3.4	3.3	3.4	3.3
Lost workdays .....	47.0	50.5	52.9	57.6	60.0	63.2	69.1	79.2	-
<b>Finance, insurance, and real estate</b>									
Total cases .....	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.9	2.9
Lost workday cases .....	.9	.9	.9	.9	.9	1.1	1.1	1.2	1.2
Lost workdays .....	15.4	17.1	14.3	17.2	17.6	27.3	24.1	32.9	-
<b>Services</b>									
Total cases .....	5.4	5.3	5.5	5.4	5.5	6.0	6.2	7.1	6.7
Lost workday cases .....	2.6	2.5	2.7	2.6	2.7	2.8	2.8	3.0	2.8
Lost workdays .....	45.4	43.0	45.8	47.7	51.2	56.4	60.0	68.6	-

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

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

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

N = number of injuries and illnesses or lost workdays.  
EH = total hours worked by all employees during the calendar year.  
200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

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

<sup>5</sup> Excludes farms with fewer than 11 employees since 1976.  
- Data not available.



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Employment situation	October 6	September	November 3	October	December 8	November	1; 4-20
Producer Price Indexes	October 12	September	November 9	October	December 12	November	2; 34-36
Consumer Price Indexes	October 13	September	November 15	October	December 13	November	2; 31-33
Real earnings	October 13	September	November 15	October	December 13	November	13-16
Employment Cost Indexes	October 31	3 <sup>rd</sup> quarter					1-3; 21-24
Major collective bargaining settlements	October 31	3 <sup>rd</sup> quarter					3; 26-29
U.S. Import and Export Price Indexes	November 1	September	November 30	October	December 29	November	37-41
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Nonfarm business and manufacturing			November 7	3 <sup>rd</sup> quarter			2; 42-45
Nonfinancial corporations					December 14	3 <sup>rd</sup> quarter	2; 42-45