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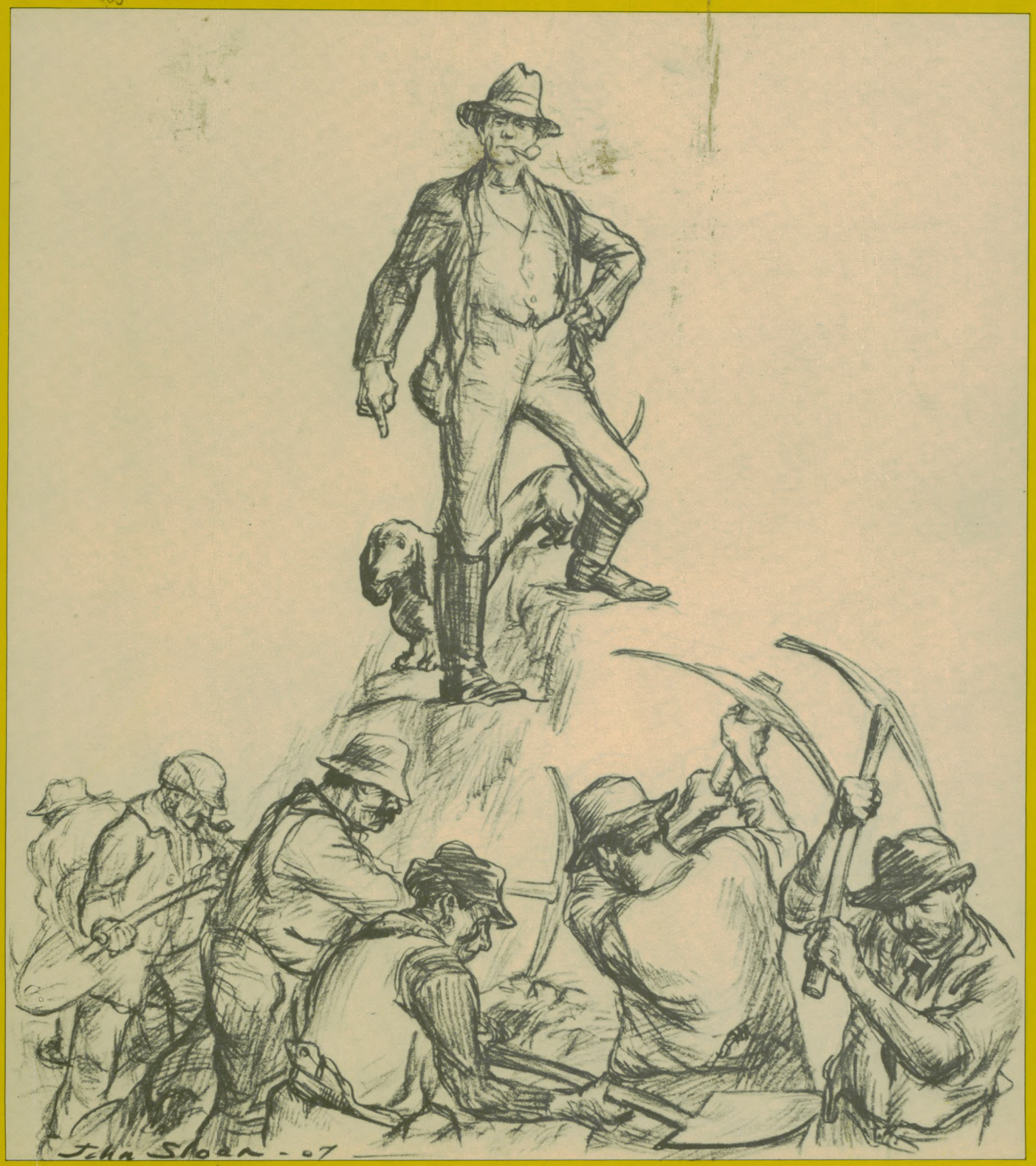

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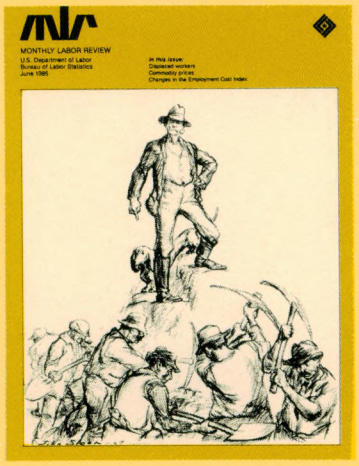

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MONTHLY LABOR REVIEW

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Henry Lowenstern, Editor-in-Chief
Robert W. Fisher, Executive Editor

Labor Month In Review

NEW EMPLOYMENT BENCHMARK. With the release of data for May 1985, national estimates of employment, hours, and earnings from the Bureau of Labor Statistics monthly survey of establishments reflect March 1984 benchmark employment counts, the most recent available. As is the usual practice with the introduction of updated benchmarks, the Bureau has also revised the seasonally adjusted series for the previous 5-year period and has introduced new seasonal adjustment factors.

Adjustment procedure. Monthly employment estimates from the establishment survey are based on information provided by a sample of establishments. Each year, the "benchmarking" procedure adjusts these estimates to accord with those based on comprehensive counts of employment. The comprehensive counts are primarily derived from summations of the mandatory unemployment insurance reports filed by employers with their State employment security agencies. Because estimates of hours and earnings are weighted by employment estimates, they are also subject to change as a result of benchmarking.

The current revision affects unadjusted series from April 1983 (the month following the previous benchmark) forward to the current month's estimate. Revision of the seasonal adjustment factors affects seasonally adjusted series from January 1980 forward.

Effects of current adjustment. The March 1984 benchmark for total nonagricultural employment—92.6 million—was 353,000 above the corresponding sample-based estimate, a difference of 0.4 percent. A downward revision of 172,000 in manufacturing was more than offset by upward revisions of 262,000 in retail trade and 120,000 in construction.

Within the 255 3-digit Standard Industrial Classification industry groups for which employment estimates are published, 48 were revised by 5 percent or more. As has generally been the case in the past, the largest industries in terms of employment tended to have the smallest percentage revisions.

Why the differences? Differences between benchmarks and estimates result from both sampling and nonsampling error. Sampling error occurs any time a sample is used to make inferences about a universe. As with any sample-based estimate, a certain amount of error is to be expected in the estimation of employment, hours, and earnings from the establishment survey.

There are three major sources of nonsampling error which also can cause the estimate to differ from the benchmark: (1) the estimates can be biased, especially with regard to employment increases stemming from the creation of new firms; (2) changes in the quality of source data can affect the benchmark; and (3) changes in the industrial classification of individual establishments will affect the estimates for individual industries, but not the total.

Effects on other series. Benchmarks for BLS series on women workers, production or nonsupervisory workers, and earnings are not available. The series for women and for production or nonsupervisory workers are revised by applying ratios derived from the sample to the revised all-employee figures. Revisions at the basic cell level are then added to become the summary level revisions.

The production or nonsupervisory worker employment estimates for the basic cells are used as weights for the hours and earnings estimates for broader industry groupings. Adjustments of the all-employee estimates to new benchmarks may alter the weights, which in turn may change the estimates for hours and earnings of production and nonsupervisory workers at higher levels of aggregation. To influence the estimates for a broader group, employment changes have to be relatively large and must affect industries which have substantially different hours or earnings averages than the other industries in their group. This occurred in the current revision, where there were relatively large changes in average hourly earnings in construction and in the tobacco manufacturing industry.

Seasonal adjustment. Each year, employment, hours, and earnings data from the new benchmark are incorporated into the calculation of updated seasonal adjustment factors. The Bureau uses the X-11 ARIMA seasonal adjustment methodology, an adaptation of the standard ratio-to-moving average method, which provides for "moving" adjustment factors to take account of changing seasonal patterns.

Revised estimates for detailed industry categories of employment, hours, and earnings appear in the June issue of *Employment and Earnings,* along with a more complete discussion of the benchmarking procedure, entitled "BLS Establishment Estimates Revised to March 1984 Benchmarks." Estimates reflecting the new benchmark will appear in the Current Labor Statistics section of the *Monthly Labor Review* beginning with the July issue. The Bureau also plans a publication containing all of the historical estimates revised as a result of the benchmark, as well as the seasonal adjustment factors that will be used for the period April 1985 through March 1986 for all published series. □

Displaced workers of 1979–83: how well have they fared?

A total of 5.1 million had worked at least 3 years before being let go because of plant closings or job cuts; about 3.1 million had become reemployed by January 1984, although often earning less than in their previous jobs

PAUL O. FLAIM AND ELLEN SEHGAL

What happens to workers when recessions close their plants or severely curtail operations? And what happens to those who lose their jobs because of structural problems of the type that have recently affected some of our key manufacturing industries? How many of these workers manage to return to the same or similar jobs as economic conditions improve? How many remain without jobs or eventually settle for different and usually lower paying jobs?

In an attempt to obtain answers to these questions in connection with the 1980–81 and 1982–83 recessions, two agencies of the U.S. Department of Labor arranged for a special household survey in January 1984. Among the principal findings:

- A total of 11.5 million workers 20 years of age and over lost jobs because of plant closings or employment cutbacks over the January 1979–January 1984 period. Those who had worked at least 3 years on their jobs—the focus of this study—numbered 5.1 million.
- About half of the 5.1 million workers reported they had become displaced because their plants or businesses closed down or moved. Two-fifths reported job losses due to "slack work" (or insufficient demand), and the rest said their shifts or individual jobs had been abolished.
- About 3.5 million of the displaced workers had collected unemployment insurance benefits after losing their jobs. Nearly one-half of these reported they had exhausted their benefits.
- Many no longer had health insurance coverage, including some who subsequently found work.
- Of the 5.1 million displaced workers, about 3.1 million had become reemployed by January 1984, but often in different industries than in the ones they had previously worked. About 1.3 million were looking for work, and the remaining 700,000 had left the labor force.
- Of the 3.1 million displaced workers who were reemployed, about half were earning as much or more in the jobs they held when surveyed than in the ones they had lost. However, many others had taken large pay cuts, often exceeding 20 percent.
- Blacks accounted for about 600,000 of the 5.1 million displaced workers, and Hispanics made up 300,000. The proportion reemployed as of January 1984 was relatively small for both of these groups—42 percent for blacks and 52 percent for Hispanics. Conversely, the proportions looking for work were relatively high—41 percent for blacks and 34 percent for Hispanics.

These data are discussed in detail below, as are the concepts of displacement and how they were applied in this special survey.

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The concept and the measurement

Concern over displaced workers began to grow during the early 1980's when it was feared that a large part of the

employment cutbacks taking place in some industries might be permanent, leaving many of the affected workers with little hope of reemployment in the same industry. The steel industry and the auto industry were prime examples of this type of situation. And many other manufacturing industries, particularly in the hard goods sector, were similarly affected by a combination of cyclical factors and such deep-seated structural problems as plants that were no longer competitive in the face of foreign imports.

Table 1. Employment status of displaced workers by age, sex, race, and Hispanic origin, January 1984

[In percent]

Characteristic	Number (thousands)[1]	Total	Employed	Unemployed	Not in the labor force
Total					
Total, 20 years and over	5,091	100.0	60.1	25.5	14.4
20 to 24 years	342	100.0	70.4	20.2	9.4
25 to 54 years	3,809	100.0	64.9	25.4	9.6
55 to 64 years	748	100.0	40.8	31.8	27.4
65 years and over	191	100.0	20.8	12.1	67.1
Men					
Total, 20 years and over	3,328	100.0	63.6	27.1	9.2
20 to 24 years	204	100.0	72.2	21.7	6.1
25 to 54 years	2,570	100.0	68.2	26.8	5.0
55 to 64 years	461	100.0	43.6	34.1	22.3
65 years and over	92	100.0	16.8	12.9	70.3
Women					
Total, 20 years and over	1,763	100.0	53.4	22.5	24.2
20 to 24 years	138	100.0	67.8	18.0	14.2
25 to 54 years	1,239	100.0	58.0	22.6	19.4
55 to 64 years	287	100.0	36.3	28.0	35.7
65 years and over	99	100.0	24.6	11.3	64.1
White					
Total, 20 years and over	4,397	100.0	62.6	23.4	13.9
Men	2,913	100.0	66.1	25.1	8.8
Women	1,484	100.0	55.8	20.2	24.1
Black					
Total, 20 years and over	602	100.0	41.8	41.0	17.1
Men	358	100.0	43.9	44.7	11.4
Women	244	100.0	38.8	35.6	25.6
Hispanic origin					
Total, 20 years and over	282	100.0	52.2	33.7	14.1
Men	189	100.0	55.2	35.5	9.3
Women	93	100.0	46.3	30.0	23.6

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

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

Given this situation, it was feared that a large number of workers who had spent many years in relatively high-paying jobs would suddenly find themselves without work and with little hope of finding similar employment. These are the persons generally referred to as "displaced (or dislocated) workers." While there has never been a precise definition of such workers, the term is generally applied to persons who have lost jobs in which they had a considerable investment in terms of tenure and skill development and for whom the prospects of reemployment in similar jobs are rather dim.[1]

Because there were only widely different estimates of a rather speculative nature as to the number of such workers as of late 1983, the Employment and Training Administration contracted with the Bureau of Labor Statistics to design a special survey to identify and count them. The survey was planned as a supplement to the Bureau of the Census' Current Population Survey (which provides the monthly estimates of unemployment). It was first of all decided to identify all adult workers who had lost a job over the 1979–83 period because of "a plant closing, an employer going out of business, a layoff from which . . . (the worker in question) was not recalled, or other similar reasons." For these workers, a series of questions would then follow to determine the precise reason for the job loss, the nature of the job in terms of industry and occupation, how long the workers had held the job, how much they had been earning, and whether they had been covered by group health insurance. Other questions focused on the period of unemployment which might have followed the job loss, including the receipt and possible exhaustion of unemployment insurance benefits, and the possible loss of health insurance coverage. If the worker in question was again employed at the time of the interview, additional information was sought on the earnings on the current job.

This sequence of questions yielded information that allowed much flexibility in deciding who among these workers could properly be considered as "displaced." Different cutoffs could be made in terms of the years of tenure on the job lost, the period of unemployment resulting, the extent of the cut in wages incurred in taking a new job, and other possible factors.

In publishing the preliminary results of the survey,[2] and in conducting the more detailed analysis discussed in this article, the only cutoffs that were made were those deemed absolutely necessary in order not to stray too far from the general consensus as to who is and who is not a displaced worker. Thus, an exclusion was first made with regard to workers whose job losses could not be categorized definitively as displacements—those attributed either to seasonal factors or to a variety of miscellaneous reasons that could not be easily classified. An additional exclusion was made with regard to all workers with less than 3 years in the jobs they had lost.

Table 2. Employment status of displaced workers by industry and class of worker of lost job, January 1984

[In percent]

Industry	Number (thousands)[1]	Total	Employed	Unemployed	Not in the labor force
Total, workers 20 years and over[2]	5,091	100.0	60.1	25.5	14.4
Nonagricultural private wage and salary workers	4,700	100.0	59.8	25.8	14.4
Mining	150	100.0	60.4	31.0	8.6
Construction	401	100.0	55.0	30.7	14.3
Manufacturing	2,483	100.0	58.5	27.4	14.1
Durable goods	1,675	100.0	58.2	28.9	12.9
Lumber and wood products	81	100.0	67.9	19.1	13.0
Furniture and fixtures	65	100.0	[3]	[3]	[3]
Stone, clay, and glass products	75	100.0	47.5	30.5	22.0
Primary metal industries	219	100.0	45.7	38.7	15.6
Fabricated metal products	173	100.0	62.0	32.2	5.8
Machinery, except electrical	396	100.0	62.3	27.4	10.3
Electrical machinery	195	100.0	48.2	34.5	17.3
Transportation equipment	354	100.0	62.6	26.0	11.4
Automobiles	224	100.0	62.9	24.0	13.1
Other transportation equipment	130	100.0	62.1	29.4	8.5
Professional and photographic equipment	54	100.0	[3]	[3]	[3]
Other durable goods industries	62	100.0	[3]	[3]	[3]
Nondurable goods	808	100.0	59.1	24.2	16.7
Food and kindred products	175	100.0	52.5	32.6	15.0
Textile mill products	80	100.0	59.8	26.2	13.9
Apparel and other finished textile products	132	100.0	63.0	14.2	22.8
Paper and allied products	60	100.0	[3]	[3]	[3]
Printing and publishing	103	100.0	58.0	22.9	19.1
Chemical and allied products	110	100.0	64.0	27.3	8.7
Rubber and miscellaneous plastics products	100	100.0	62.8	18.3	18.8
Other nondurable goods industries	49	100.0	[3]	[3]	[3]
Transportation and public utilities	336	100.0	57.9	26.8	15.3
Transportation	280	100.0	58.8	30.5	10.7
Communication and other public utilities	56	100.0	[3]	[3]	[3]
Wholesale and retail trade	732	100.0	61.4	21.6	16.9
Wholesale trade	234	100.0	69.6	22.0	8.4
Retail trade	498	100.0	57.6	21.5	20.9
Finance, insurance, and real estate	93	100.0	78.5	12.4	9.1
Services	506	100.0	65.0	20.5	14.5
Professional services	187	100.0	64.0	19.8	16.1
Other service industries	318	100.0	65.6	20.9	13.5
Agricultural wage and salary workers	100	100.0	69.9	22.9	7.2
Government workers	248	100.0	63.3	18.7	18.0
Self-employed and unpaid family workers	25	100.0	[3]	[3]	[3]

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

[2]Total includes a small number who did not report industry or class of worker.

[3]Data not shown where base is less than 75,000.

Summarizing the results of the survey, a total of 13.9 million workers 20 years of age and over were initially identified as having lost a job over the January 1979–January 1984 period because of plant closings, employers going out of business, or layoffs from which they had not been recalled. Further probing disclosed that about 2.4 million of this total had lost their jobs because of seasonal causes or a variety of other reasons which could not be easily classified. These were dropped from the universe to be examined.

Of the remaining 11.5 million workers, a large proportion had only been at their jobs for a relatively short time before they were dismissed. For example, 4.4 million had been at their jobs a year or less. To focus only on workers who had developed a rather firm attachment to their jobs, the universe to be studied was limited to those with at least 3 years of tenure on the jobs they lost. As noted, these numbered 5.1 million. Had a more liberal cutoff of 2 years been used as a parameter, the count of displaced workers would have been raised to 6.9 million. On the other hand, the imposition of a 5-year cutoff would have lowered the total to 3.2 million.

Not all of the 5.1 million workers deemed to have been displaced should be regarded as having suffered serious economic consequences. While a great majority were indeed either still unemployed or had taken jobs entailing a drop in pay, or had left the labor force, there were also many for whom the job loss had been only a temporary setback. Some had apparently been out of work for only a very short period and, as already noted, many were actually earning more when surveyed than in the jobs they had lost. In short, while all of the 5.1 million workers had clearly been displaced from a job at some point over the 1979–83 period, not all could be properly regarded as being still "displaced" when surveyed in January 1984. And even among the majority for whom the "displaced" label was still applicable when surveyed, there were many who probably found suitable employment in subsequent months.

Who were the displaced?

A large number of the 5.1 million workers who had been displaced from their jobs fit the conventional description. They were primarily men of prime working age, had lost typical factory jobs, were heavily concentrated in the Midwest and other areas with heavy industry, and, if reemployed, were likely to have shifted to other industries. However, the universe also included persons from practically all industry and occupational groups, a large number of whom were women.

Age-sex-race-Hispanic origin. As shown in table 1, men 25 to 54 years of age accounted for nearly 2.6 million of the displaced workers, or slightly more than one-half. There were 200,000 men age 20 to 24, about 460,000 men 55 to 64, and 90,000 in the 65-and-over group. The younger the workers, the more likely they were to have found new jobs after their displacement. As shown in table 1, the proportion reemployed as of January 1984 ranged from a high of 72 percent for men age 20 to 24 to a low of 17 percent for those 65 years of age and over. Most of the men in the latter age group had apparently retired after losing their jobs.

The women who had been displaced from their jobs numbered nearly 1.8 millon, with 1.2 million of them in the 25 to 54 age group. As indicated by table 1, these women were less likely than the displaced men to have returned to work as of January 1984 and were far more likely to have left the labor force regardless of their age.

About 600,000 of the displaced workers were black, and less than half of them were reemployed when interviewed (42 percent). The proportion unemployed was almost as large (41 percent). Hispanic workers accounted for about 280,000 of the displaced. For them, the proportion reemployed (52 percent) was higher than for blacks but considerably lower than for whites. Of the whites who had been displaced, over three-fifths were reemployed and less than a quarter were unemployed.

Industry and occupation. Nearly 2.5 million of the displaced workers, or almost one-half of the total, had lost jobs in manufacturing, an industry group that now accounts for less than one-fifth of total employment. Some of the key durable goods industries which were most severely affected by the recessionary contractions of demand as well as by more fundamental structural problems figured most prominently as the sources of displacements. There were, for example, about 220,000 workers who had lost jobs in the primary metals industry, 400,000 who had worked in machinery (except electrical), and 350,000 had been in the transportation equipment industry, with autos accounting for 225,000 of the latter. (See table 2.)

Reflecting primarily the long-lasting nature of the problems of the steel industry—and of the areas where its plants are (or were) located—less than one-half (46 percent) of the workers who had been displaced from primary metal jobs were reemployed when surveyed. About 39 percent were unemployed, and 16 percent had left the labor force. However, the reemployment percentage for workers displaced from jobs in the nonelectrical machinery industry (62 percent) and the transportation equipment industry (63 percent) was considerably higher. But even among these workers, many were now working in different industries, and usually at lower wages.

While these troubled durable goods industries figured most prominently as sources of workers' displacements, it should be noted that other industries, both within and outside the manufacturing sector, had also contributed heavily to the problem. For example, 800,000 workers had been displaced from jobs in the various nondurable goods industries, 500,000 had been in retail sales, another 500,000 in services, and 400,000 in construction.

In terms of their occupational distribution, a large number of displaced workers (1.8 million) had lost jobs as operators, fabricators, and laborers—the typical jobs on a factory floor. But all occupational groups had contributed to the displacement problem. There were, for example, 700,000 persons who had lost managerial and professional jobs, 1.2 million who had been in technical, sales, and administrative jobs, and slightly over 1 million who had been in precision production, craft, and repair jobs. (See table 3.)

In general, the more skilled the occupation the more likely was the displaced worker to be reemployed. Thus, about 75 percent of those who had been in managerial and professional jobs were back at work when interviewed. In contrast, among the workers who had lost low-skill jobs as handlers, equipment cleaners, helpers, and laborers, less than one-half were working in January 1984.

Regional distribution. While displaced workers were found in all regions of the country, a particularly large number (about 1.2 million) was found to reside in the East North Central area, which includes the heavily industrialized States of the Midwest. (See table 4 for regional data and area definitions.) Another large concentration of such workers (800,000) was found in the Middle Atlantic area, which consists of New Jersey, New York, and Pennsylvania.

The severity of the job losses incurred in these two areas during 1979–83 was denoted not only by the relatively large numbers of displaced workers found within them in January 1984, but also by the fact that the proportion that had managed to return to work—either in their former jobs or entirely new ones—barely exceeded 50 percent. As a further indication of the seriousness of the displacement problem in the East North Central area, this region was found to contain nearly one-third of the displaced workers who were unemployed in January 1984 (400,000 out of 1.3 million), and almost one-half of them were reported as having been jobless 6 months or more.

Table 3. Employment status of displaced workers by occupation of lost job, January 1984

[In percent]

Occupation	Number (thousands)[1]	Total	Employed	Unemployed	Not in the labor force
Total, workers 20 years and over[2]	5,091	100.0	60.1	25.5	14.4
Managerial and professional specialty	703	100.0	74.7	16.6	8.8
Executive, administrative, and managerial	444	100.0	75.7	15.6	8.7
Professional specialty	260	100.0	72.9	18.2	8.9
Technical, sales, and administrative support	1,162	100.0	60.6	21.1	18.3
Technicians and related support	122	100.0	67.9	25.3	6.8
Sales occupations	468	100.0	66.7	14.6	18.7
Administrative support, including clerical	572	100.0	54.1	25.5	20.5
Service occupations	275	100.0	51.0	24.1	24.9
Protective service	32	100.0	[3]	[3]	[3]
Service, except private household and protective	243	100.0	53.0	23.6	23.4
Precision production, craft, and repair	1,042	100.0	61.6	26.1	12.3
Mechanics and repairers	261	100.0	61.3	29.3	9.4
Construction trades	315	100.0	63.2	23.8	13.0
Other precision production, craft, and repair	467	100.0	60.8	25.8	13.4
Operators, fabricators, and laborers	1,823	100.0	54.6	31.6	13.7
Machine operators, assemblers, and inspectors	1,144	100.0	56.0	27.5	16.5
Transportation and material moving occupations	324	100.0	63.8	28.7	7.5
Handlers, equipment cleaners, helpers, and laborers	355	100.0	41.8	47.6	10.6
Construction laborers	55	100.0	[3]	[3]	[3]
Other handlers, equipment cleaners, helpers, and laborers	300	100.0	42.0	47.0	11.0
Farming, forestry, and fishing	68	100.0	[3]	[3]	[3]

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

[2]Total includes a small number who did not report occupation.

[3]Data not shown where base is less than 75,000.

Tenure on jobs lost. Many of the displaced workers had been at their jobs for many years. As seen below, of the 5.1 million total—all of whom had worked at least 3 years on the jobs they had lost—nearly one-third had spent at least 10 years in their jobs. Another third had been at their jobs from 5 to 9 years. The remaining third had lost jobs at which they had worked either 3 or 4 years. Not surprisingly, the older the displaced workers the more likely they were to report a relatively longer period of service in the jobs they had lost. This is clearly shown in the tabulation below, which gives the percent distribution of the displaced by age and years of tenure on the lost job:

Age	*Total*	*3 to 4 years*	*5 to 9 years*	*10 years or more*	*20 years or more*	*Median years of tenure*
Total, 20 years and over	100.0	36.2	33.6	30.2	8.8	6.1
25 to 54 years	100.0	37.9	36.9	25.1	4.7	5.8
55 to 64 years	100.0	15.5	23.2	61.3	27.9	12.4
65 years and over	100.0	14.6	31.1	54.2	30.0	11.9

As shown, while the overall median job tenure for the entire 5.1 million total was 6.1 years, median tenure for those 55 to 64 years of age was 12.4 years. Nearly one-third of the workers in this age group reported they had lost jobs in which they had spent 20 years or more.

The displacements and their aftermath

Various questions concerning the reasons for the displacements and what occurred in their aftermath were also asked as part of the January 1984 survey. The data obtained through these questions are the focus of the following sections.

Reasons for dismissals. About one-half of the 5.1 million displaced workers reported they had lost their jobs because their plant or business had closed down or moved. Another two-fifths cited "slack work" as the reason (an answer which may be translated as insufficient demand for the products or services of the employer). The remainder reported simply that their individual jobs, or the entire shift on which they had been working, had been abolished. (See table 5.)

Older workers were most likely to have lost their jobs due to plant closings. Evidently, while their seniority protected their jobs in the face of such problems as "slack work," it afforded little protection against the shutdown of their plants or the folding of their companies. The younger displaced workers, however, were about as likely to have lost their jobs due to slack work as due to plant closings.

Notification of dismissal. More than one-half of the displaced workers reported that they had received an advance notice of their dismissal, or that they had expected it. However, only 1 in 10 of these had apparently left their jobs before the actual dismissal occurred. (See table 6.)

Workers who reported that they lost their jobs because the plant or company closed or moved (61 percent) were more likely than workers who reported other reasons for job loss (52 percent) to respond that they received advance

notice or had expected a dismissal. But even among those whose plants had closed, only a little more than one-tenth reported that they had left their jobs before they ended.

Of the displaced workers who did leave their jobs before they were to be laid off, a substantially higher proportion were reemployed in January 1984 (79 percent) than was the case among those who were informed but stayed on (60 percent). The evidence here, therefore, adds some support for policies to encourage firms to provide early notification of layoffs; but, as noted, most workers remained on their jobs even with the advance notification.

Moving to another area. Only a small minority of the 5.1 million displaced workers (680,000) moved to a different city or county to look for work or to take a different job. However, of those who did move, a higher proportion were reemployed in January 1984—almost 3 in 4, in contrast to 3 in 5 of the nonmovers. (See table 7.) Men were more likely to move than women, and of the male movers, proportionately more were reemployed (77 percent) than was the case for their women counterparts (60 percent). Relatively few older workers relocated—only 6 percent among those 55 and over. However, even among them, about three-fifths of those who moved were working again, a substantially higher proportion than for nonmovers.

Although the data point up the employment benefits of relocation, it should be recognized that there are important reasons for the reluctance of workers to move. Many have established community ties; they may own homes which are particularly hard to sell if located in a depressed area; and there may be family members who are still employed locally, thereby adding to the costs of a move. They may also not have sufficient information about job opportunities in other areas. Finally, it has been found that a sizable proportion of workers who do relocate are likely to return.[3]

A recently published guidebook for employers on managing plant closings estimates that only about 20 percent or fewer workers in a plant would consider relocating as part of their "reemployment strategy." The authors mention, for example, that only 20 percent of laid-off steelworkers from a Youngstown steel plant had moved out of the area; that only 20 percent of enrollees in the Job Search and Relocation Assistance Pilot Program of the U.S. Department of Labor, and only 6 percent of enrollees for Trade Adjustment Assistance, used the relocation assistance which was offered them.[4]

Table 4. Employment status and area of residence in January 1984 of displaced workers by selected characteristics

[Numbers in thousands]

Characteristic	Total[1]	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Workers who lost jobs										
Total	5,091	260	794	1,206	426	664	378	484	211	667
Men	3,328	155	530	772	282	428	236	347	152	427
Women	1,763	105	264	434	145	236	143	137	59	241
Reason for job loss										
Plant or company closed down or moved	2,492	118	410	556	208	339	204	231	103	323
Slack work	1,970	106	269	513	164	236	132	211	83	256
Position or shift abolished	629	36	115	138	54	89	42	42	26	88
Industry of lost job										
Construction	481	16	68	88	36	81	34	63	30	63
Manufacturing	2,514	158	414	658	210	296	189	215	58	315
Durable goods	1,686	94	260	514	137	175	107	142	40	218
Nondurable goods	828	64	154	145	73	122	82	73	18	97
Transportation and public utilities	352	14	61	83	34	34	33	41	19	32
Wholesale and retail trade	740	41	100	182	68	132	40	54	32	90
Finance and service industries	648	22	122	133	45	70	32	54	39	132
Public administration	84	2	10	22	5	13	4	8	5	16
Other industries[2]	272	5	20	40	28	38	45	49	27	19
Employment status in January 1984										
Employed	3,058	171	428	621	276	461	209	344	148	399
Unemployed	1,299	48	225	400	96	117	113	85	33	181
Percent less than 5 weeks	22.1	[3]	24.1	21.2	13.0	29.4	17.3	25.4	[3]	18.4
Percent 27 weeks or more	38.8	[3]	36.8	47.2	47.5	25.5	51.7	29.8	[3]	28.0
Not in the labor force	733	41	141	185	54	85	56	55	30	86

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

[2]Includes a small number who did not report industry.

[3]Data not shown where base is less than 75,000.

NOTE: The following list shows the States which make up each of the geographical divisions used in this table: New England—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; Middle Atlantic—New Jersey, New York, and Pennsylvania; East North Central—Illinois, Indiana, Michigan, Ohio, and Wisconsin; West North Central—Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; South Atlantic—Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; East South Central—Alabama, Kentucky, Mississippi, and Tennessee; West South Central—Arkansas, Louisiana, Oklahoma, and Texas; Mountain—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; Pacific—Alaska, California, Hawaii, Oregon, and Washington.

How long without work? On average, the displaced workers had spent nearly 6 months without work after they had lost their jobs. That is, the median period without work—which need not have been a continuous spell and could have included time spent outside the labor force—was 24.1 weeks. However, it should also be noted that about one-fourth of these 5.1 million workers were still jobless when surveyed. For many of them, the period of unemployment would obviously extend beyond the January 1984 survey period.

As has historically been the case for the unemployed in general, older workers were without work longer than their younger counterparts. For workers 55 years and over, the median period without a job was 30 weeks, while for workers 25 to 34 it was 22 weeks.

Workers who were no longer in the labor force in January 1984 had been without work many more weeks, on average, than those who were still looking for work (57 versus 32 weeks), while workers who were reemployed had spent far fewer weeks without a job (13). (See table 8.)

Receipt of unemployment insurance. The economic difficulties of most of the displaced workers were alleviated by their receipt of unemployment insurance benefits. Yet, while 3.5 million of the 5.1 million displaced workers had received such benefits, almost one-half had exhausted them by January 1984. (See table 9.) Understandably, the probability of exhausting one's benefits was closely tied to the length of one's period of unemployment, being very high for workers reporting more than 6 months (27 weeks) without work and much lower for those with only a short spell of joblessness.

A larger percentage of the workers who were unemployed in January 1984 had received unemployment insurance benefits—80 percent—than their counterparts who were either reemployed or had left the labor force—65 percent for both. Of the workers who had received benefits, the proportion that had exhausted them by January 1984 was about 50 percent for those still unemployed, 40 percent for those reemployed, and 70 percent for those no longer in the labor force.

Loss of health insurance. Because a large proportion of the displaced workers had held relatively "good" jobs in terms of pay and other benefits, a large majority of them had participated in a group health insurance program on these jobs. As shown in table 10, many of them no longer were covered under any plan when surveyed in January 1984.

Of the 3.1 million persons who were working again in January 1984, 2.5 million had been covered by group health insurance coverage on their lost jobs. Even among these, about 1 in 4 were no longer covered under a health plan in January 1984.

For the 1.3 million displaced workers who were jobless in January 1984 and who previously had been covered by group health insurance, 60 percent no longer had any coverage at the time of the survey. For black unemployed workers previously covered, the uncovered proportion was 75 percent when surveyed.

In general, women were less likely than men to be left without any health insurance coverage after displacement, even if unemployed. This is probably because many of them had spouses who were working, and thus were likely to have been covered under the spouse's plan.

Among the previously covered displaced workers who were out of the labor force when surveyed, about 40 percent were not covered under any plan in January 1984. Again, for blacks the proportion who had lost all coverage was much larger—67 percent.

Some additional information on this topic is provided by

Table 5. Displaced workers by reason for job loss and by age, sex, race, and Hispanic origin

[In percent]

Characteristic	Number (thousands)[1]	Total	Plant or company closed down or moved	Slack work	Position or shift abolished
Total					
Total, 20 years and over	5,091	100.0	49.0	38.7	12.4
20 to 24 years	342	100.0	47.1	47.1	5.8
25 to 54 years	3,809	100.0	46.3	41.0	12.7
55 to 64 years	748	100.0	57.8	28.2	14.0
65 years and over	191	100.0	70.8	18.1	11.1
Men					
Total, 20 years and over	3,328	100.0	46.0	42.9	11.1
20 to 24 years	204	100.0	39.5	59.6	.9
25 to 54 years	2,570	100.0	43.9	44.8	11.3
55 to 64 years	461	100.0	55.6	30.5	14.0
65 years and over	92	100.0	68.7	15.7	15.5
Women					
Total, 20 years and over	1,763	100.0	54.6	30.8	14.6
20 to 24 years	138	100.0	58.3	28.7	12.9
25 to 54 years	1,239	100.0	51.1	33.3	15.6
55 to 64 years	287	100.0	61.4	24.5	14.1
65 years and over	99	100.0	72.8	20.3	6.9
White					
Total, 20 years and over	4,397	100.0	49.6	37.9	12.5
Men	2,913	100.0	46.0	42.6	11.4
Women	1,484	100.0	56.7	28.7	14.6
Black					
Total, 20 years and over	602	100.0	43.8	44.7	11.6
Men	358	100.0	44.9	46.4	8.8
Women	244	100.0	42.2	42.2	15.7
Hispanic origin					
Total, 20 years and over	282	100.0	47.4	45.2	7.3
Men	189	100.0	48.1	43.8	8.1
Women	93	100.0	46.2	48.1	5.7

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

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

a University of Michigan survey conducted in 1983 in the Detroit area. This survey found that, of those persons who had been without work for only 3 months or less, about 30 percent had no health insurance coverage. In contrast, the uncovered proportion among those without work for more than 2 years was 55 percent. Almost four-fifths of those workers had previously had health insurance when employed. The male workers were more likely than their female counterparts to be without health insurance at the time of the survey.[5]

The new jobs

Of the 5.1 million displaced workers, 2.8 million who had been displaced from full-time wage and salary jobs were reemployed in January 1984. Among them, 2.3 million were again working at full-time wage and salary jobs, about 220,000 were in other types of full-time employment (mainly self-employment), and about 360,000 were holding part-time jobs. (See table 11.)

Many reemployed workers were in occupations different from those they previously had held. For example, among the workers who were employed in January 1984, about 525,000 had been in managerial and professional specialty occupations at their lost jobs. Of these, only about half were reemployed in such jobs. Similarly, about 640,000 had been in precision production, craft, and repair work at their lost jobs; among them only 360,000 were working again in these occupations in January 1984. (See table 12.)

Reemployed workers not only were working in different occupations, but also in different industries. For example, of the 980,000 displaced workers who had been in durable goods manufacturing, only about 40 percent were reemployed in these industries in January 1984. Similarly, about 35 percent of 493,000 workers were reemployed in nondurable goods manufacturing. In wholesale and retail trade, 50 percent of 455,000 were reemployed and in service industries, 46 percent of 347,000. The tabulation below shows the percentage reemployed by key industry group:

	Durable	*Nondurable*	*Trade*	*Services*
Durable goods	40	14	9	8
Nondurable goods	6	35	6	4
Wholesale trade	5	4	10	5
Retail trade	12	9	40	15
Service	16	19	17	46
Other industries	22	19	18	22

Table 6. Displaced workers[1] by age, whether they received advance notice or expected layoff, selected reason for job loss, and employment status, January 1984

[Numbers in thousands]

Characteristic	Total who lost jobs				Plant or company closed down or moved				All other reasons			
	Total	Employment status in January 1984			Total	Employment status in January 1984			Total	Employment status in January 1984		
		Employed	Unemployed	Not in the labor force		Employed	Unemployed	Not in the labor force		Employed	Unemployed	Not in the labor force
All persons 20 years and over												
Total[1]	5,091	3,058	1,299	733	2,492	1,547	509	437	2,599	1,512	791	296
Received advance notice or expected layoff	2,870	1,715	709	446	1,525	945	297	283	1,346	770	412	163
Left before job ended	318	250	23	45	185	151	7	27	133	99	16	18
Did not leave before job ended	2,532	1,450	683	399	1,331	787	290	254	1,202	664	393	145
Did not receive advance notice or expect layoff	2,221	1,343	590	287	967	602	211	154	1,253	741	378	134
20 to 34 years												
Total	2,034	1,330	504	200	885	615	184	86	1,148	715	320	114
Received advance notice or expected layoff	1,160	771	274	114	550	393	100	58	609	379	174	56
Left before job ended	146	117	11	17	74	61	3	9	72	57	7	8
Did not leave before job ended	1,004	643	264	97	470	325	96	48	534	319	167	48
Did not receive advance notice or expect layoff	874	558	230	85	335	222	84	28	539	336	146	57
35 to 54 years												
Total	2,118	1,384	534	200	1,039	714	203	122	1,079	670	331	78
Received advance notice or expected layoff	1,183	784	284	115	626	439	115	71	557	345	169	43
Left before job ended	137	112	10	15	85	73	3	9	52	40	7	6
Did not leave before job ended	1,040	668	272	100	541	367	112	62	499	302	160	37
Did not receive advance notice or expect layoff	935	599	250	85	413	274	87	51	522	325	163	34
55 years and over												
Total	939	345	261	334	568	218	122	229	371	127	139	105
Received advance notice or expected layoff	528	160	151	217	349	113	82	154	179	47	69	63
Left before job ended	35	21	2	12	26	18	—	9	9	3	2	4
Did not leave before job ended	489	139	148	203	320	95	82	143	169	44	66	59
Did not receive advance notice or expect layoff	412	186	109	117	219	105	40	75	192	80	70	42

[1]Data refer to persons with tenure of 3 years or more who lost or left a full-time wage and salary job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

Table 7. Displaced workers by whether they moved to a different city or county to find or take another job, by age, sex, and current employment status, January 1984

[Numbers in thousands]

Age and sex	Nonmovers				Movers			
	Total	Employment status in January 1984			Total	Employment status in January 1984		
		Employed	Unemployed	Not in the labor force		Employed	Unemployed	Not in the labor force
Total:								
Total, 20 years and over[1]	4,374	2,537	1,157	680	682	500	134	48
25 to 54 years	3,234	2,044	859	332	556	413	108	34
25 to 34 years	1,370	864	365	141	318	221	71	26
35 to 44 years	1,055	706	267	81	158	125	26	6
45 to 54 years	809	473	227	109	80	67	11	2
55 years and over	880	312	246	321	53	32	12	9
Men:								
Total, 20 years and over	2,784	1,700	800	284	519	401	96	21
25 to 54 years	2,114	1,399	609	107	440	342	78	19
25 to 34 years	936	616	270	50	262	191	55	16
35 to 44 years	671	459	189	23	117	98	18	2
45 to 54 years	507	324	150	33	61	54	5	2
55 years and over	510	191	155	164	38	24	12	2
Women:								
Total, 20 years and over	1,590	837	357	397	163	99	38	27
25 to 54 years	1,120	645	250	225	116	71	30	15
25 to 34 years	434	249	94	91	56	30	15	11
35 to 44 years	384	247	78	58	41	27	9	5
45 to 54 years	303	149	77	76	19	13	6	—
55 years and over	369	121	92	157	14	8	—	7

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

As shown, even among the nearly half a million reemployed who had been displaced from nondurable goods industries, only about one-third were again working in this industry group in January 1984. In fact, generally more than one-half of the displaced workers who were reemployed in January 1984 were no longer in the industry group from which they had been displaced.

Understandably, the workers who had been displaced from high-wage industries were most likely to have suffered a drop in earnings in taking a new job. For example, as seen below, for the 980,000 who had previously been in durable goods manufacturing, the median weekly earnings on the old jobs had been $344. In contrast, the median for the jobs they held in January 1984 was only $273. And it should be noted that these numbers, which are shown below for a few illustrative industries, understate the actual loss in purchasing power as they are stated in "current" dollars, that is, they do not take into account the effects of inflation:

Industry of lost jobs	*Reemployed workers (in thousands)*	*Median weekly earnings*	
		Lost job	*Job held in January 1984*
Durable goods	980	$344	$273
Primary metals	100	407	246
Transportation equipment	222	399	319
Nondurable goods	493	264	254
Textile mill products	48	181	187
Apparel and other finished textile products	83	202	197

As shown, workers who had been displaced from jobs in nondurable goods manufacturing (made up primarily of lower paying industries) showed only slight declines, if any, between their earnings on their new and old jobs. For example, the median weekly earnings on their lost jobs were $202 for workers in apparel and other finished textile products, while their earnings on their new jobs were $197; for workers in textile mill products, their median earnings on their lost jobs were $181, and on their new jobs, $187.

Among the individual displaced workers who had previously been in full-time jobs in durable goods industries and who were again working full time in January 1984, about 40 percent had seen their weekly earnings drop by 20 percent or more. Yet, as seen in table 11, for those who had been displaced from jobs in other industries, the earnings in the new jobs compared more favorably with those in the old jobs.

Of the entire universe of about 2 million workers who were in full-time wage and salary jobs both before displacement and when surveyed—and who reported the earnings both for their old and new jobs—more than one-half (55 percent) were making as much or more in January 1984 than before displacement. These workers could, therefore, be seen as having readjusted rather well after their initial job losses. However, among these 2 million workers, there were also 900,000 who had taken some pay cuts, and for about 600,000 of these the cut was in the range of 20 percent or more.

In addition to the workers who had taken pay cuts although they were again working in full-time jobs, there were also, as already noted, a considerable number—about

360,000—who had gone from a full-time to a part-time job. Needless to say, these workers were even more likely to have suffered a considerable drop in weekly earnings after their displacement. When these are added to our universe, we can conclude that at least one-half of the displaced workers who were reemployed in January 1984 were earning less than in the jobs they had lost.

Among the findings from other studies on displacement which have dealt with earnings differences between the displaced workers' old and new jobs,[6] are the following:

- Older workers and workers with less education are more likely to experience earnings losses.
- Because there are fewer job opportunities available, earnings losses are larger in areas of high unemployment and in small labor markets.
- Earnings losses are particularly large for workers displaced from well-paying unionized industries such as autos and industrial chemicals.

A special assessment of Department of Labor funded programs in six local areas that provided training and other services to displaced workers in 1982–83, found that for the program participants who were reemployed, the average wages at their new jobs had dropped substantially from their pre-layoff wages: The mean hourly wage at the new jobs was in the $7 or $8 range, while the mean wage at layoff ranged from approximately $9 to $11 an hour.[7] And in addition to the losses in wages, there were obviously some losses of fringe benefits relative to those enjoyed on the previous jobs.

Table 8. Displaced workers[1] by weeks without work, age, and employment status, January 1984

Characteristic	Weeks without work					
	Less than 5 weeks	5 to 14 weeks	15 to 26 weeks	27 to 52 weeks	More than 52 weeks	Median weeks without work
Total:						
Age 20 and over	1,173	912	707	983	1,211	24.1
25 to 54 years	856	729	538	745	871	23.1
25 to 34 years	399	347	214	349	359	21.9
35 to 44 years	268	228	200	220	278	22.3
45 to 54 years	189	154	125	177	234	25.8
55 years and over	203	109	122	179	302	29.8
Employed:						
Age 20 and over	910	657	453	590	393	13.1
25 to 54 years	705	540	364	486	334	13.4
25 to 34 years	322	252	147	222	129	12.5
35 to 44 years	223	185	134	150	130	15.4
45 to 54 years	160	103	83	114	74	15.3
55 years and over	119	65	52	63	41	12.4
Unemployed:						
Age 20 and over	166	201	201	264	447	32.2
25 to 54 years	124	156	142	185	348	32.6
25 to 34 years	64	75	57	81	153	33.8
35 to 44 years	40	37	50	57	106	30.9
45 to 54 years	21	43	35	46	90	32.5
55 years and over	25	31	50	65	88	33.3
Not in the labor force:						
Age 20 and over	98	55	53	130	370	56.8
25 to 54 years	27	34	33	74	189	57.6
25 to 34 years	14	20	10	46	77	53.0
35 to 44 years	6	7	17	13	42	54.7
45 to 54 years	8	7	7	16	69	96.2
55 years and over	59	14	19	51	173	61.2

[1] "Displaced" refers to persons whose jobs were lost because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

A focus on steel and automobile workers

Much of the public discussion about workers' displacements in recent years has focused on the steel and auto industries. This is probably because any plant shutdowns or mass layoffs in these two industries have a particularly large impact on the geographic areas where they are concentrated, as well as a large multiplier effect on the other sectors of the economy. Moreover, the two industries were not only hard hit by the recessions of the early 1980's, but also had to retrench and alter their production methods because of foreign competition and other structural factors. These developments led to large reductions in employment, with the payrolls in both of these industries being considerably lower in January 1984—even after some rapid recovery from the latest recession—than they had been 5 years earlier. Specifically, over this 5-year period, employment had dropped by about 400,000 (or nearly one-third) in the primary metals industry and by about 200,000 (or one-fifth) in the motor vehicles industry. Of course, many other durable goods industries also underwent large reductions in employment over this period, but because their plants are generally not as concentrated in certain areas, nor as dominant in the local economies as are steel and automobile plants, their cutbacks received less nationwide publicity.

Steel workers. Of the 5.1 million displaced workers in January 1984, about 220,000 had worked in primary metals industries (largely steel). Forty percent of them reported they lost their jobs because their plants had closed down, and most of the others cited slack work as the reason for job loss. Reflecting the deep-seated problems of this industry and the generally depressed conditions of some of the areas where its plants are (or were) located, less than half (46 percent) of these displaced workers were working again in January 1984. Nearly 40 percent were still looking for work, while 16 percent were no longer in the labor force. Among those who had lost their jobs because of plant closings, almost one-fourth had left the labor force. Thus, the employment status of the workers displaced from primary metals jobs was far worse than that for the entire universe of displaced workers.

Not surprisingly, of the former steel (and other primary metals) workers who were again employed when surveyed, most had left the primary metals industry. Only 25,000 of them were working in durable-goods industries in January 1984. Of the others, some 20,000 were in services industries, 15,000 in construction, and another 15,000 in retail trade. Having had to find work in generally new fields, the displaced workers who had previously held jobs in primary metals industries reported a larger decline in earnings at their new jobs (40 percent) than workers from any other industry group. As already indicated, median earnings of

Table 9. Workers who lost jobs in past 5 years[1] by duration of joblessness, receipt of unemployment insurance, whether benefits exhausted, weeks without work, and employment status, January 1984

[Numbers in thousands]

Weeks without work and employment status	Lost a job in last 5 years			Plant or company closed down or moved			All other reasons		
	Total	Received unemployment benefits	Exhausted benefits	Total	Received unemployment benefits	Exhausted benefits	Total	Received unemployment benefits	Exhausted benefits
Both sexes:									
All persons:									
Total[1]	5,091	3,497	1,670	2,492	1,589	755	2,599	1,908	915
Less than 5 weeks	1,173	298	44	665	144	21	508	155	23
5 to 14 weeks	912	687	59	419	297	19	494	391	40
15 to 26 weeks	707	604	165	325	270	63	381	334	102
27 to 51 weeks	656	583	316	309	270	157	347	313	160
52 weeks or more	1,538	1,273	1,064	724	584	482	814	689	582
Employed:									
Total	3,058	1,973	802	1,547	904	357	1,512	1,068	445
Less than 5 weeks	910	182	18	546	98	8	364	84	9
5 to 14 weeks	657	499	44	313	225	16	343	274	28
15 to 26 weeks	453	389	111	204	171	43	249	218	69
27 to 51 weeks	368	342	182	190	169	98	178	172	84
52 weeks or more	615	533	436	269	228	186	346	305	251
Unemployed:									
Total	1,299	1,043	541	509	390	203	791	653	338
Less than 5 weeks	166	69	9	61	15	2	105	54	7
5 to 14 weeks	201	167	11	75	59	3	126	108	8
15 to 26 weeks	201	174	38	88	75	12	113	99	26
27 to 51 weeks	199	176	93	72	64	34	127	112	59
52 weeks or more	512	447	387	206	174	151	306	273	236
Not in the labor force:									
Total	733	481	327	437	294	195	296	187	132
Less than 5 weeks	98	48	17	58	30	10	40	18	7
5 to 14 weeks	55	22	3	30	13	—	24	9	3
15 to 26 weeks	53	40	16	33	24	8	20	17	8
27 to 51 weeks	89	65	41	47	37	25	42	28	16
52 weeks or more	411	294	241	249	182	145	162	112	96

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

these reemployed workers were $246 at their new jobs versus $407 at their old ones. Such earnings losses must have caused substantial changes in the consumption pattern of these workers and their families.

Automobile workers. About 225,000 auto workers had been displaced from their jobs during the January 1979–January 1984 survey period. Of these, 44 percent reported they had lost their jobs because their plants had closed, while 46 percent reported slack work as the reason for job loss. Reflecting partly the fact that the industry had enjoyed a substantial recovery by January 1984, nearly two-thirds of these workers were again employed when surveyed. However, while some automobile workers had gone back to their former jobs, many others had apparently switched to different—and generally lower paying—jobs in other industries. As indicated above, for all those who were reemployed, the median weekly earnings for the jobs they held in January 1984 were substantially lower than the median for the auto industry jobs they had lost.

It is also important to note that 25 percent of the displaced auto workers were still looking for work in January 1984 and that 13 percent had left the labor force. For those who lost their jobs because their plant closed, the proportions unemployed or out of the labor force in January 1984 were even a bit higher.

Of course, an additional number of automobile workers were recalled to their jobs during 1984. Employment in the motor vehicles and equipment industry increased from about 850,000 (seasonally adjusted) in January 1984 to about 900,000 by the year's end. So, the displacement problem in this industry was likely to have been alleviated considerably during the year following the survey.

Other studies of displaced workers

In addition to the data from the January 1984 survey, special case studies evaluating the effectiveness of Department of Labor programs for displaced workers, particularly displaced auto and steel workers, are another valuable source of information on this topic.

In order to obtain information on the effectiveness of various types of assistance which might be provided to displaced workers, the Department of Labor funded a series of pilot projects in 1980–83. One project, the Downriver Community Conference Economic Readjustment Program, served laid-off automotive workers from the Detroit metropolitan area.[8] Among the findings from this demonstration study are the following:

1. The displaced workers were predominantly men, aged 25 to 44, and married. Most had graduated from high school; however, when tested in the program, one-fifth scored below

a sixth grade literacy level. They had, on average, worked more than 10 years on the lost job—and they had earned about $10 an hour.

2. Depending upon the particular plant from which they had been laid off, the workers were found to have received either unemployment insurance benefits, or unemployment insurance coupled with company-funded supplemental unemployment benefits, or, in some cases, both of these benefits as well as trade adjustment assistance, which was paid to those whose jobs were deemed to have been lost because of imports. Therefore, some of the workers had their pre-layoff earnings almost entirely replaced by benefits, at least for a time.

3. Although resources were made available to the workers for job search and relocation outside their area, only 8 percent of the program enrollees relocated. About 20 percent of those who relocated subsequently returned.

4. Two years after the job loss, only about 50 percent of the workers in the program had found another job. The reemployment rate declined the longer the workers remained in the program, and this reflected in part the worsening labor market conditions in the Detroit area during that particular period.

5. On average, the earnings of participants who became reemployed were more than 30 percent below their pre-layoff earnings.

Table 10. Displaced workers by health insurance coverage and employment status, January 1984

[Numbers in thousands]

Characteristic	Total[1]	Covered by group health insurance on lost job			Not covered on lost job
		Total	Not covered under any plan in January 1984		
			Number	Percent	
Total					
Total, 20 years and over	5,091	3,977	1,381	34.7	1,033
Employed	3,058	2,454	573	23.4	554
Unemployed	1,299	1,037	612	59.0	236
Not in the labor force	733	486	196	40.3	242
Men					
Total, 20 years and over	3,328	2,757	985	35.7	507
Employed	2,117	1,780	413	23.2	301
Unemployed	903	743	469	63.1	139
Not in the labor force	307	235	102	43.6	67
Women					
Total, 20 years and over	1,763	1,220	396	32.4	526
Employed	941	675	160	23.7	253
Unemployed	396	294	142	48.4	98
Not in the labor force	426	251	93	37.2	175
White					
Total, 20 years and over	4,397	3,433	1,118	32.6	902
Employed	2,754	2,203	516	23.4	509
Unemployed	1,031	822	452	55.0	192
Not in the labor force	613	408	150	36.7	201
Black					
Total, 20 years and over	602	468	239	51.0	117
Employed	252	208	50	23.9	38
Unemployed	247	193	144	74.5	44
Not in the labor force	103	67	45	66.7	34
Hispanic origin					
Total, 20 years and over	282	193	66	34.2	83
Employed	147	111	29	25.6	32
Unemployed	95	60	33	55.5	33
Not in the labor force	40	22	5	20.5	17

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

The Department of Labor had also funded a pilot program in Buffalo, New York (among other sites), the aim of which was to assist displaced workers, largely from auto and steel jobs. In this demonstration, it was found that the reemployed workers were placed in jobs paying a mean wage of about $6.50 an hour, a decline from a mean pre-layoff hourly wage of more than $10 an hour. The program participants were primarily men, between their mid-20's and mid-40's, most with a high school education. Nearly 70 percent of the participants were reemployed at the time of the project's termination, with the younger workers being slightly more likely to be placed in jobs than were the others.[9]

Some additional data on displaced workers are available from a sample of 379 workers from a population of about 11,000 workers on indefinite layoff from a major automobile manufacturer in April 1983.[10] The survey, which was funded by the Department of Commerce, was conducted by the University of Michigan from November 1983 to January 1984. Among the findings are the following:

- Auto workers who were recalled to jobs with their previous employer reported a mean hourly wage of $12.26, with a weekly gross pay of $490.42. In contrast, the other reemployed workers cited a mean hourly wage of $7.42 and an average weekly gross pay of $314.70.
- Of the 379 respondents, 30 percent had been recalled to their old jobs at the time of the survey, 25 percent were employed elsewhere, about 35 percent were looking for work, and 10 percent were no longer in the labor force.
- Compensation payments (for example, unemployment insurance and trade adjustment assistance benefits) had covered, on average, about 30 percent of the displaced workers' income loss since they had been laid off. The proportion of lost income offset by such benefits was lower the longer the layoff period, dropping from about 55 percent for workers laid off less than 1 year to about 13 percent for those laid off more than 2 years.
- Workers with more than 10 years' seniority at their old jobs had received benefits that replaced larger proportions of their lost wages. However, these workers also reported relatively lower earnings when they were reemployed.

Summary

The two recessions of the early 1980's, coupled with more deep-seated structural problems affecting certain industries, took a heavy toll among American workers. About 5.1 million who had worked at least 3 years on their jobs found

Table 11. Displaced full-time workers by industry, by reemployment in January 1984, and by comparison of earnings between new and old jobs

[In thousands]

Industry of lost job	Total reemployed January 1984	Part-time job	Full-time wage and salary job					Self employment or other full-time job
			Total[1]	Earnings relative to those of lost job				
				20 percent or more below	Below, but within 20 percent	Equal or above, but within 20 percent	20 percent or more above	
Displaced after 3 years or more on job[2]	2,841	357	2,266	621	320	571	533	218
Construction	253	26	199	48	30	47	61	28
Manufacturing	1,418	151	1,200	366	171	286	247	67
Durable goods	954	106	797	281	102	181	155	51
Primary metals industries	98	14	77	40	5	22	5	7
Steel[3]	78	14	59	33	3	14	5	4
Other primary metals	20	—	18	7	2	9	—	2
Fabricated metal products	102	12	81	30	6	21	16	9
Machinery, except electrical	244	17	215	77	34	39	40	12
Electrical machinery	94	10	84	26	12	14	22	—
Transportation equipment	219	30	174	66	22	42	34	14
Automobiles	141	19	115	43	16	21	26	7
Other transportation equipment	77	11	59	23	6	21	8	7
Nondurable goods	464	45	403	85	69	105	92	16
Transportation and public utilities	191	15	154	40	22	44	27	22
Wholesale and retail trade	399	72	296	61	41	79	85	31
Finance and service industries	378	58	270	59	35	83	74	50
Public administration	48	4	42	11	5	7	18	2
Other industries[4]	153	31	104	36	16	24	22	18

[1]Includes 221,000 persons who did not report earnings on lost job.

[2]Data refer to persons who lost or left a full-time wage and salary job between January 1979 and January 1984 because of plant closings or moves, slack work, or abolishment of their positions or shifts.

[3]Includes blast furnaces, steelworks, rolling and finishing mills, and iron and steel foundries.

[4]Includes a small number who did not report industry.

Table 12. Reemployed workers by occupation in January 1984 and by occupation of job lost in preceding 5 years

[Numbers in thousands]

Occupation on job lost	Occupation on job held in January 1984											
	Total employed	Managerial and professional specialty		Technical, sales,and administrative support			Service occupations	Precision production, craft, and repair	Operators, fabricators, and laborers			Farming, forestry, and fishing
		Executive, administrative, and managerial	Professional specialty	Technicians and related support	Sales occupations	Administrative support, including clerical			Machine operators, assemblers, and inspectors	Transportation and material moving occupations	Handlers, equipment cleaners, helpers, and laborers	
Total, 20 years and over	3,058	282	194	73	359	364	320	621	387	223	183	52
Managerial and professional specialty	525	153	116	16	62	79	31	38	11	11	6	2
Executive, administrative, and managerial	336	141	26	10	43	57	12	27	7	7	3	2
Professional specialty	189	12	91	6	18	22	19	11	4	4	3	—
Technical, sales, and administrative support	704	70	38	41	197	188	56	50	27	19	16	3
Technicians and related support	83	3	10	39	4	4	6	6	6	1	6	—
Sales occupations	312	34	15	—	159	27	18	30	10	11	6	2
Administrative support, including clerical	309	34	13	2	34	157	32	14	11	7	4	1
Service occupations	140	1	6	2	10	8	81	18	4	5	5	—
Precision production, craft, and repair	642	33	19	4	28	25	35	359	64	27	40	9
Operators, fabricators, and laborers	995	18	14	10	58	64	118	145	277	159	107	26
Machine operators, assemblers, and inspectors	640	6	10	8	37	44	94	98	248	35	50	9
Transportation and material moving occupations	207	4	2	1	14	7	6	19	12	107	24	9
Handlers, equipment cleaners, helpers, and laborers	148	7	2	1	8	13	16	28	16	16	33	8
Farming, forestry, and fishing	47	5	—	—	3	0	0	9	4	4	9	13

[1]Data refer to persons with tenure of 3 years or more who lost or left a job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

themselves without employment over the 1979–83 period due to plant closings, payroll curtailments, or companies going out of business. In some cases, these job losses were only temporary, entailing little sacrifice in terms of unemployment and lost income. In many other cases, the readjustment to the job loss has been much more painful.

Some of the workers displaced from their jobs over this 5-year period had returned to work after a relatively short time, and their earnings when surveyed in January 1984 were as high or higher than they had been before the job loss. Many others had found different jobs, but frequently at much lower wages than in the jobs from which they had been displaced. About one-fourth were still unemployed when surveyed, though some may have been employed during part of the period since their displacement. Finally, about 15 percent had left the labor force.

Given the resiliency of the U.S. economy and the rapid advances which it posted during most of 1984, it is quite likely that many of the displaced who were still jobless in January 1984 were either recalled to their old jobs or managed to find new ones during the year. But even as the year came to a close, some industries—steel being a prime example—were still plagued by serious structural problems. This, in turn, was reflected by the still high jobless rates in some geographic areas where the displacement problem had taken a particularly large toll. For many of the workers displaced from long-held jobs in these areas, the prospects of reemployment were obviously not very bright—unless they were willing to relocate to new areas and to search in new fields. □

———*FOOTNOTES*———

[1] One writer's rather typical description of displaced (or dislocated) workers reads: "Dislocated workers are individuals with established work histories who have lost their jobs through no fault of their own and who are likely to encounter considerable difficulty finding comparable employment. Such individuals are commonly thought to have lost their jobs because the industries or occupations in which they worked are in long-term decline. . . . However, while it may be conceptually appealing to distinguish between long-term and cyclical declines, as a practical matter such a distinction is not very meaningful when cyclical declines last several years. Moreover, an industry may be growing overall but declining in particular geographic or subindustry segments." Quoted from Lynn E. Browne, "Structural Change and Dislocated Workers," *New England Economic Review*, January–February 1985, p. 21. Also see reports on topic by Marc Bendick and Steven Sheingold.

[2] "BLS Reports on Displaced Workers," U.S. Department of Labor, Bureau of Labor Statistics, Press Release, Nov. 30, 1984.

[3] Richard P. Swigart, ed., *Managing Plant Closings and Occupational Readjustments: An Employer's Guidebook* (National Center on Occupational Readjustment, Inc., 1984), p. 48. Also see Walter Corson, Rebecca Maynard, and Jack Wichita, *Process and Implementation Issues in the Design and Conduct of Programs to Aid the Reemployment of Dislocated Workers* (Mathematica Policy Research, Inc., October 1984), p. 79.

[4] Swigart, *Managing Plant Closings*, p. 49.

[5] S.E. Berki, Leon Wyszewianski, Richard Lichtenstein, and others, *Insurance Coverage of the Unemployed* (The Department of Medical Care Organization, School of Public Health, The University of Michigan, Jan. 15, 1985).

[6] Raymond Uhalde, "Job Displacement and Employment Security: A Workplace Perspective" in Kevin Hollenbeck, Frank C. Pratzner, and Howard Rosen, eds., *Displaced Workers: Implications for Educational and Training Institutions*, (Columbus, OH, The National Center for Research in Vocational Education, Ohio State University, 1984), pp. 24–27. Uhalde refers to research, for example, by Arlene Holen, *Losses to Workers Displaced by Plant Closure or Layoff: A Survey of the Literature* (Alexandria, VA, The Public Research Institute, Center for Naval Analysis, November 1976); Louis Jacobson and Janet Thomason, *Earnings Loss Due to Displacement* (Alexandria, VA, The Public Research Institute, Center for Naval Analysis, August 1979); Glen Jenkins and Claude Montmarquette, "Estimating the Private and Social Opportunity Cost of Displaced Workers," *Review of Economics and Statistics*, August 1979, pp. 342–53; and Robert Crosslin, James Hanna, and David Stevens, *Economic Dislocation: Toward a Practical Conceptual Approach* (Carson City, NV, Employment Security Department, September 1983). Also see "Former Steelworkers' Income Falls by Half," *The New York Times*, Oct. 31, 1984.

[7] Corson, Maynard, and Wichita, *Process and Implementation Issues*, pp. 64, 81, and 83.

[8] Jane Kulik, D. Alton Smith and Ernst W. Stromsdorfer, *The Downriver Community Conference Economic Readjustment Program: Final Evaluation Report* (Abt Associates Inc., Sept. 30, 1984).

[9] L. M. Wright, Jr., *Case Study, Buffalo Worker Reemployment Center, Buffalo, New York* (CSR, Incorporated, under subcontract to Mathematica Policy Research, January 1984), pp. 7, 8, and 50; Marcia C. Jerrett, Robert Jerrett, III, Jane Kulik, John Tilney, and Jeffrey Zornitsky, *Serving the Dislocated Worker: A Report on the Dislocated Worker Demonstration Program* (Abt Associates, Inc., December 31, 1983), pp. 28, 46, and 47; and William Corson, Sharon Long, and Rebecca Maynard, "An Impact Evaluation of the Buffalo Dislocated Worker Program (Mathematica Policy Research, Inc., March 12, 1985), pp. 38 and 116.

[10] Jeanne P. Gordus, Sean P. McAlinden, and Karen Yamakawa, *Labor Force Status, Program Participation and Economic Adjustment of Displaced Auto Workers* (Ann Arbor, MI, Industrial Development Division, Institute of Science and Technology, The University of Michigan, Nov. 15, 1984.)

Commodity price volatility: trends during 1975–84

Analysis of 156 Producer Price Indexes confirms that prices fluctuate most for crude materials and are most stable for finished goods; the volatility index for food consistently exceeds the corresponding index for nonfood items

ANDREW CLEM

It has long been observed that commodity prices exhibit wide ranges of variability. Some prices persistently fluctuate sharply from month to month because of special supply or demand factors (or both) relating to respective commodity markets. In such cases, supply and demand are said to be "price inelastic," meaning that a small shift in supply or in demand results in a large price change. This occurs most frequently in competitive markets for goods which have only limited substitutes. For example, agricultural products and their derivatives are subject to sharp price changes because of the influence of weather on production and marketing. Demand (and hence prices) for basic materials traded internationally may change rapidly because of exchange rate movements, political turmoil, or large purchases by governments.

These are the primary factors which have been cited as causing commodity price instability. (Note that we are discussing microeconomic factors relating to particular products, not macroeconomic factors.) It is believed that these factors affect certain commodities more than others. Likewise, the volatility of prices for these commodities is generally regarded as persistent.

We intend to test these widely held beliefs by analyzing short-term price movements for a broad range of goods over a 10-year period. A judgmental sample of 156 Producer Price Indexes for commodity groupings was chosen for this purpose.[1] For each index series, monthly percent changes were computed from January 1975 to December 1984 (seasonally adjusted data were used if available between 1979 and 1984). Data were excluded for the pre-1975 period, which was marked by a series of major grain- and oil-related "shocks."[2]

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Measurement methods

Our choice of a mathematical tool to measure volatility depends on how we define volatility. If the definition "noting or subject to constant or sharp fluctuation"[3] is used, a logical measure would be the *mean of the absolute values of the monthly percent changes*. Because this measure implicitly assumes a flat price level as a reference standard, we call it the "static volatility index" in this article.

In the context of substantial inflation, however, prices for most goods will show a persistent upward trend. In such a case, the static volatility index is biased because it inappropriately counts the more-or-less regular price increases as though they were irregular deviations. To distinguish the trend of a time series from the truly random movements that characterize its volatility *per se*, we need to modify the above definition to read: "noting or subject to constant or sharp fluctuations that are serially independent."

Accordingly, we will place primary emphasis on an alternative measure of volatility, namely, the *standard deviation of the monthly percent changes*. This measure focuses

on the variability of the rate of price changes, as opposed to the variability of the price level. We call this measure the "dynamic volatility index" to indicate that its magnitude is not affected by any underlying trend in the time series. The dynamic index will be used for making ordinal comparisons between commodities. The static volatility index, although flawed, does convey useful information and plays a subsidiary role in the analysis. The absolute or cardinal magnitude of the static index carries more meaning than does that of the dynamic index; the static index value may be used to judge the significance of a given monthly change for a particular commodity in a historical context.

To produce objective indices of price volatility, the values of the commodities were combined to yield unweighted averages (that is, each commodity counts the same) for various Producer Price Index stage-of-processing categories. There were two major issues to resolve: Which types of commodities tend to be most volatile and what are their patterns of volatility? Does price volatility (or stability) persist for certain commodities over time? To answer the second question, the volatility index for each series was calculated for two subperiods: the 1979–81 period of high inflation and the 1982–84 period when the rate of inflation decelerated.

Volatility indices: the results

Table 1 shows the dynamic and the static indices for the 156 commodity groupings studied for the full 1975–84 period. Commodities are ranked from most to least volatile according to the dynamic index. For the two subperiods 1979–81 and 1982–84, only the dynamic indices are shown. Unless otherwise stated, references to volatility indices in this article are for the dynamic measure for the 1975–84 period.

As expected, the volatility indices vary widely. Over the entire interval studied, 1975–84, the least volatile reading was 0.4 percent; the most volatile was 16.5 percent. The unweighted mean value of all the volatility indices was 2.4. However, when these values are distributed by frequency, we see that a substantial majority of the cases fall below 2.0 percent. (See exhibit 1.) The value associated with the largest number of cases (14), that is, the mode, is 0.8, while the median value is 1.1 percent (that is, just as many cases show readings larger than 1.1 as those showing smaller readings). The reason the mean is much higher than the median is that the frequency distribution is skewed, with several observations showing very high values. An interesting aspect of this distribution is that it conforms roughly to the classical Chi-Square distribution.

For the most part, rankings of commodities according to volatility were similar whether the dynamic or the static indices were used. The dynamic volatility indices were generally larger, but this itself has no significance, given that different quantities are being measured. What is notable is that the correlation coefficient for the two sets of indices is .981, a very high reading. There were only two cases where one index was three times as great as the other: photographic supplies (5.2 dynamic versus 1.5 static) and primary nickel (3.0 versus 0.9). Both these cases were marked by a few isolated months of extreme price change. It would appear, then, that the static index may be useful as far as indicating when volatility in a given series is less "typical," that is, limited to a relatively few periods.

Exhibit 1. Frequency distribution of commodity price volatility indices

Standard deviation of monthly percent changes, 1975–84	Number of cases
0.0 – 0.4	7
0.5 – 0.9	58
1.0 – 1.4	22
1.5 – 1.9	13
2.0 – 2.4	2
2.5 – 2.9	9
3.0 – 3.4	6
3.5 – 3.9	5
4.0 – 4.4	5
4.5 – 4.9	5
5.0 – 5.4	2
5.5 – 5.9	5
6.0 – 6.4	3
6.5 – 6.9	2
7.0 – 7.4	4
7.5 – 7.9	1
8.0 – 8.4	1
8.5 – 8.9	1
9.0 – 9.4	3
9.5 and over	2

It is commonly observed that when many statistical series are aggregated into a single measure, the volatile fluctuations of the components tend to cancel each other out. Other things being equal, the more components a series contains, the more stable the group will be. In this article, the volatility of the three principal stage-of-processing groups and their components were computed in two ways: (1) by simply averaging the volatility measures of the commodities within each stage-of-processing group; and (2) by measuring the volatility of the groups themselves. Because of the statistical phenomenon described earlier, the second method of computation resulted in lower volatility indices, compared with the first method of simple unweighted averaging. Furthermore, the relative differences between these two methods were generally more pronounced in those stage-of-processing categories with many commodities, for example, in the intermediate goods group.

The stabilizing impact of aggregation also has an indeterminate effect on the results shown for many of the commodity price volatility indices. Some "commodities" in this study are more broadly defined than others. For example, both apparel and electronic components include many specific items and are quite stable, as would be expected.

Table 2 shows volatility indices for the three major stage-of-processing categories and their principal components, each calculated under both methods. The results of the second method (shown in parentheses) illustrate how the ag-

gregation process imparts a stabilizing influence. Because the volatility of the stage-of-processing categories as measured by the second method depends so heavily on the number of items they include, the following discussion is based on results of the first method, that is, the average of the component series' volatility. (These average volatility indices for the stage-of-processing categories are shown in table 1.)

Patterns and trends. The results shown in table 2 permit some general inferences. First, prices for crude materials are consistently the most volatile. This was true in all three periods, and in both food and nonfood categories. This result was expected, partly because of the predominance of agricultural products within the crude materials category and partly because demand for basic industrial materials fluctuates relatively sharply in response to real and perceived changes in demand for manufactured goods. Second, prices for finished goods tend to be more stable than those for either intermediate or crude materials. This pattern held for food as well as nonfood categories, and in all periods. Within the finished goods category, prices for capital equipment items were the least volatile. Because purchase orders for most types of machinery are placed several months ahead of delivery, demand does not exhibit as much short-term fluctuation as does demand for consumer goods or materials; therefore, prices change less often. From these two observations, we may conclude that the price volatility of a particular good is likely to be strongly correlated with its level in the production chain; crude goods being the most volatile, and finished goods, the least.

Another pattern confirmed in table 2 is that food prices are consistently more volatile than nonfood goods prices at all stages of processing and during each period. This follows from the earlier observation that weather and marketing peculiarities cause agricultural product prices to fluctuate more than industrial products. The volatility in processed food prices (particularly in meats) simply reflects the relatively high proportion of total manufacturing costs accounted for by the foodstuff inputs.

Table 1. Dynamic and static price volatility indices for selected commodities, by stage of processing

Producer Price Index	1975–84		1979–81	1982–84
	Dynamic	Static	Dynamic	Dynamic
Finished goods[1]	1.7	1.3	1.6	1.5
Finished consumer foods[1]	3.5	2.5	3.2	3.3
Fresh and dried vegetables	9.1	7.4	9.3	10.6
Eggs	7.0	5.2	7.2	7.7
Fresh fruits	6.3	4.9	4.9	7.1
Processed poultry	4.8	3.3	6.4	2.5
Pork	4.4	3.4	4.6	3.9
Beef and veal	4.1	3.1	3.5	2.5
Fish	4.1	2.8	2.7	6.3
Roasted coffee	3.6	2.2	2.8	.8
Shortening and cooking oils	3.0	1.8	1.2	4.0
Confectionery end products	1.3	.7	1.2	1.5
Soft drinks	1.0	.7	1.3	.6
Other cereals	1.0	.6	1.2	.7
Processed fruits and vegetables	.9	.7	.9	.7
Dairy products	.8	.7	.6	.4
Bakery products	.6	.6	.5	.4
Finished consumer goods, excluding foods[1]	1.3	1.0	1.3	1.2
Platinum and karat gold jewelry	5.7	3.7	7.1	3.7
Natural gas	3.7	2.7	1.8	1.8
Fuel oil #2	3.0	2.2	3.4	3.3
Gasoline	2.6	2.0	2.8	2.7
Tobacco products	2.1	1.3	1.3	3.1
Small arms, ammunition	1.4	1.0	1.5	1.8
Cosmetics, and so forth	1.3	1.0	1.6	1.6
Tires and tubes	1.1	.8	1.0	.7
Home electronic equipment	.9	.6	1.0	.7
Sanitary papers, and so forth	.8	.7	.9	.6
Passenger cars	.8	.7	1.0	.8
Soaps, synthetic detergents	.8	.6	1.0	.7
Luggage and small leather goods	.8	.6	.8	1.0
Textile housefurnishings	.8	.6	.8	.6
Footwear	.7	.6	.9	.6
Toys, games, and so forth	.7	.6	.8	.6
Floor coverings	.7	.5	.8	.7
Sporting, athletic goods	.6	.5	.7	.5
Prescription drugs	.5	.7	.6	.7
Over-the-counter drugs	.5	.7	.7	.3
Alcoholic beverages	.5	.5	.6	.5
Household furniture	.4	.5	.4	.3
Household appliances	.4	.4	.4	.3
Apparel	.4	.4	.3	.4

Producer Price Index	1975–84		1979–81	1982–84
	Dynamic	Static	Dynamic	Dynamic
Capital equipment[1]	.8	.7	.8	.7
Heavy trucks	1.7	1.2	1.2	2.0
Light trucks	1.6	1.2	1.6	1.6
Photographic equipment	1.5	.8	.7	2.4
Fixed wing utility aircraft	1.4	1.0	1.9	1.0
Chemical industry machinery	1.1	.7	1.2	.5
Food products machinery	.9	.8	.9	.8
Oilfield and gasfield machinery	.9	.8	.8	.5
Mining machinery and equipment	.9	.8	.7	.4
Printing trades machinery	.8	.7	1.0	.9
Transformers and power regulators	.8	.7	1.0	.6
Woodworking machinery	.8	.6	.9	.5
Metal forming machine tools	.7	.7	.7	.4
Commercial furniture	.7	.6	.7	.5
Railroad equipment	.6	.6	.6	.6
Pumps and compressors	.6	.6	.6	.3
Textile machinery	.6	.5	.7	.5
Metal cutting machine tools	.5	.7	.5	.4
Construction machinery and equipment	.5	.6	.5	.3
Industrial material handling equipment	.5	.5	.5	.2
Agricultural machinery and equipment	.4	.6	.3	.4
Integrating and measuring instruments	.4	.5	.5	.3
Office and store machines	.4	.4	.5	.3
Intermediate goods[1]	2.2	1.5	2.6	1.7
Intermediate foods and feeds[1]	5.4	3.5	5.0	3.6
Crude vegetable oils	9.1	6.4	4.5	9.9
Refined sugar	7.3	3.6	11.1	1.2
Prepared animal feeds	4.4	3.1	3.5	2.6
Confectionery materials	3.2	2.3	3.4	3.3
Flour	2.8	1.9	2.7	1.0
Intermediate goods, excluding foods	2.0	1.4	2.4	1.6
Primary silver	16.5	9.8	26.4	13.3
Primary gold	9.4	5.8	13.6	8.4
Primary lead	7.0	4.8	9.3	6.9
Primary tin	5.7	4.0	3.9	7.2
Inedible fats and oils	5.5	4.1	6.0	4.2

See footnote at end of table.

Table 1. Continued—Dynamic and static price volatility indices for selected commodities, by stage of processing

Producer Price Index	1975–84		1979–81	1982–84
	Dynamic	Static	Dynamic	Dynamic
Intermediate goods, excluding foods—Continued:				
Photographic supplies	5.2	1.5	8.4	.8
Primary copper	4.6	3.3	6.4	4.2
Liquefied petroleum gas	3.8	2.7	3.6	3.7
Residual fuel	3.8	2.6	4.8	2.5
Leather	3.6	2.4	5.6	1.8
Primary zinc	3.4	2.4	3.5	4.0
Primary nickel	3.0	.9	4.3	0
Kerosene	2.8	2.2	3.1	3.2
Diesel fuel	2.8	2.0	3.2	3.1
Softwood lumber	2.5	2.0	3.0	2.2
Plywood	2.5	1.9	3.0	1.6
Commercial jet fuel	2.5	1.7	3.3	.9
Paving mixtures and blocks	2.0	1.2	3.1	.9
Asphalt felts and coatings	1.8	1.4	2.3	1.6
Nonferrous wire and cable	1.8	1.1	2.6	.7
Glass containers	1.8	1.1	1.6	1.1
Woodpulp	1.8	.9	1.9	2.0
Gypsum products	1.7	1.3	1.2	2.0
Plastic construction products	1.6	1.1	1.3	2.3
Motor vehicle parts	1.6	.8	2.6	.5
Coke oven products	1.6	.6	1.5	2.0
Mixed fertilizers	1.5	.9	1.2	.7
Refractories	1.3	.7	1.1	1.1
Plastic resins and materials	1.2	.9	1.5	.8
Paint materials	1.2	.8	.6	.9
Hardwood lumber	1.1	.9	.6	1.0
Synthetic rubber	1.1	.9	1.4	.5
Millwork	1.1	.9	1.2	.9
Nonferrous mill shapes	1.1	.9	1.0	1.2
Metal containers	1.1	.8	.9	.5
Industrial chemicals	1.1	.8	1.1	.9
Plastic parts and components	1.1	.6	1.4	.4
Flat glass	1.1	.6	1.0	1.2
Steel mill products	1.0	.8	.9	.6
Portland cement	.9	.9	.6	1.3
Paperboard	.9	.8	.9	.9
Gray fabrics	.9	.7	.9	.5
Processed yards and threads	.9	.7	1.0	.6
Synthetic fibers	.9	.7	.7	.8
Unsupported plastics	.9	.5	1.4	.7
Electric power	.8	.9	.7	.7
Clay construction products, excluding refractories	.8	.7	.9	.6
Switchgear and switchboards	.8	.6	1.1	.6
Paper boxes and containers	.8	.6	1.0	.5
Prepared paints	.8	.5	1.2	.5
Abrasive products	.7	.7	.7	.7
Motors and generators	.7	.7	.7	.6
Foundry and forge shop products	.7	.6	.6	.3
Plastic packaging	.7	.5	.9	.3
Internal combustion engines	.6	.7	.5	.7
Electronic components and accessories	.6	.6	.6	.4
Wiring devices	.6	.6	.6	.3
Cutting tools and accessories	.6	.6	.8	.3
Plumbing fixtures and brass fittings	.6	.6	.6	.6
Paper	.6	.6	.6	.7
Finished fabrics	.6	.5	.5	.4
Concrete products	.5	.6	.5	.4
Mechanical power transmission equipment	.5	.6	.5	.4
Hardware	.5	.6	.4	.3
Fabricated structural metal products	.5	.5	.5	.3
Air conditioning and refrigeration equipment	.5	.5	.5	.4
Heating equipment	.4	.5	.5	.4
Crude materials[1]	5.0	3.5	5.4	3.5
Crude foodstuffs and feedstuffs[1]	6.1	4.3	6.5	4.0
Raw cane sugar	11.5	7.6	15.9	3.5
Cocoa beans	8.4	6.1	6.0	7.5
Green coffee	7.3	4.2	8.2	1.2
Oilseeds	6.6	4.7	5.2	5.8
Hogs	6.5	4.9	7.6	5.7
Live poultry	6.3	4.7	7.6	5.5
Corn	5.3	4.0	5.5	5.1
Wheat	4.1	3.0	4.8	2.3
Cattle	4.0	3.0	3.6	2.7
Fluid milk	1.1	.8	.9	.4
Crude nonfood materials[1]	4.1	2.9	4.5	3.1
Cattle hides	8.7	5.9	11.3	3.7
Aluminum base scrap	7.7	5.7	7.4	7.1
Raw cotton	6.1	4.8	6.1	4.5
Copper base scrap	5.7	4.1	7.1	4.4
Iron and steel scrap	5.5	4.2	6.1	3.8
Crude natural rubber	4.4	3.1	5.6	3.7
Wastepaper	4.3	2.8	3.8	4.5
Crude petroleum	3.0	1.6	4.2	1.2
Potash	2.9	1.9	1.8	3.7
Leaf tobacco	2.6	1.7	2.2	2.0
Iron ore	1.5	.6	1.8	.6
Coal	1.0	.6	.5	.5
Sand, gravel, and so forth	.5	.6	.5	.4

[1]Unweighted averages of the commodity volatility indexes within each stage-of-processing category.

An additional salient feature discerned in table 2 is the stabilizing trend in prices which occurred between 1979–81 and 1982–84. Except for finished consumer foods, all of the stage-of-processing categories showed reduced average volatility indices in the latter period. (Actually, the differences for the finished goods categories were negligible, compared with the differences among crude and intermediate goods.) These results are consistent with the expectation that a trend toward greater price stability at the aggregate level would be mirrored by a similar trend at the commodity level.

This hints at another statistical pattern: Although most of the stage-of-processing categories showed marked decreases in price volatility between the 1979–81 and 1982–84 periods, they maintained roughly the same relative position in each period. In other words, those categories which were most volatile in the 1979–81 period were also most volatile in the 1982–84 period; the least volatile categories exhibited the same pattern.

Persistent volatility. Is price volatility persistent among particular commodities? A casual examination of the data for 1979–81 and 1982–84 intervals does seem to indicate a strong degree of persistence of volatility. The coefficient of correlation between the two intervals for the volatility indexes for all 156 commodities included in this study was .748, meaning that more than 50 percent (R-squared = .560) of the variation in volatility among commodities in the later period could be explained by relative differences in volatility in the earlier period. This would seem to confirm that price volatility is to a large extent a long-term characteristic of certain commodities.

In many cases, the change in commodity volatility during the 1979–81 and 1982–84 periods was caused by special

market conditions. Nearly all cases of major shifts (that is, when one index was at least three times greater than the other) involved decreases from the earlier period to the latter. For example, prices for both refined sugar and raw cane sugar rose very sharply during 1980 because of poor harvests in Cuba, the Soviet Union, and elsewhere. Likewise, prices for photographic supplies have been fairly stable in recent years, in contrast to the drastic changes that occurred in early 1980 in response to similar convulsions in world silver markets. These and other cases demonstrate that there are always instances where market abnormalities can cause temporary surges in price volatility.

Summary of findings

The category with the highest average volatility (6.1 percent) was crude foodstuffs and feedstuffs. Prices for raw cane sugar, cocoa beans, and green coffee beans (all of which are traded internationally) registered volatility indices of more than 7 percent. In contrast, fluid milk prices showed a volatility of only 1.1 percent, probably reflecting the stabilizing effect of Federal price supports. The indices for all other foodstuffs and feedstuffs range from 4 to 7 percent. At the intermediate level, prices for foods and feeds were somewhat more stable than at the crude level, except for vegetable oils (9.1 percent).

For the finished consumer foods category, price changes registered an average standard deviation of 3.5 percent. Farm produce items (eggs, fresh fruits, and fresh vegetables) showed the most volatility, falling in the 6- to 9-percent range. Meats, poultry, and fish were in the neighborhood of 4 to 5 percent, while roasted coffee and shortening and cooking oils were between 3 and 4 percent. Other consumer foods were much less volatile.

Crude nonfood material prices averaged a 4.1-percent volatility. The commodities which fluctuated the most (more than 5 percent) were cattle hides, raw cotton, and scrap metal. Prices were relatively stable, at 0.5 to 1.5 percent, for coal, iron ore, and sand and gravel.

Price volatility averaged 2.0 percent for intermediate materials other than foods and feeds. The sharpest movements were for silver, gold, lead, tin, inedible fats and oils, and photographic supplies (all at least 5 percent). Volatility indices averaged between 2 and 4 percent for most intermediate energy goods, while coke oven products and electric power were somewhat more stable. In addition, volatility indices were at least 2.5 percent for copper, zinc, nickel, leather, plywood, and softwood lumber.

Table 2. Volatility indices for selected stage-of-processing groupings

Stage of processing	1975–84		1979–81	1982–84
	Dynamic	Static	Dynamic	Dynamic
Finished goods	1.7 (.4)	1.3 (.5)	1.6 (.4)	1.5 (.3)
Finished consumer foods	3.5 (.9)	2.5 (.8)	3.2 (.9)	3.3 (.7)
Finished consumer goods, excluding foods	1.3 (.6)	1.0 (.7)	1.3 (.7)	1.2 (.4)
Capital equipment	.8 (.3)	.7 (.5)	.8 (.3)	.7 (.2)
Intermediate goods	2.2 (.5)	1.5 (.6)	2.6 (.6)	1.7 (.2)
Intermediate foods and feeds	5.4 (2.4)	3.5 (1.7)	5.0 (2.5)	3.6 (1.3)
Intermediate goods, excluding foods	2.0 (.5)	1.4 (.6)	2.4 (.6)	1.6 (.2)
Crude materials	5.0 (1.5)	3.5 (1.3)	5.4 (1.6)	3.5 (.9)
Crude foodstuffs and feedstuffs	6.1 (2.3)	4.3 (1.9)	6.5 (2.5)	4.0 (1.8)
Crude nonfood materials	4.1 (1.4)	2.9 (1.1)	4.5 (1.5)	3.1 (.7)

NOTE: The indices other than those in parentheses are from table 1, and are the unweighted averages of the commodity volatility indices within each stage-of-processing category. Indices in parentheses reflect the volatility of the stage-of-processing groupings themselves.

Price movements for finished consumer goods excluding foods exhibited an average standard deviation of 1.3 percent. The most volatile component was platinum and karat gold jewelry, which averaged 5.7 percent. Natural gas, home heating oil, and gasoline were somewhat less volatile, ranging from 2.6 to 3.7 percent. Tobacco products led the remainder of consumer nonfood goods with an average of 2.1 percent. Many other items in this category were much more stable, such as apparel and household appliances (0.4 percent each).

The most stable category of all was capital equipment, where price fluctuations registered an average 0.8-percent standard deviation. Items within this grouping showed a fairly uniform set of volatility readings, with half recording standard deviations ranging from 0.6 to 0.9 percent. The most volatile components were trucks (light and heavy), photographic equipment, fixed wing utility aircraft, and chemical industry machinery. □

FOOTNOTES

[1] This sample includes nearly all of the indexes shown in table 2 (plus a few others) of the monthly Producer Price Index news release and the detailed report. Items were omitted if they carried negligible weight or if there were fewer than 6 years of historical data.

[2] For comparison purposes, the same calculations were also made for the unadjusted time series. As expected, the unadjusted indexes tended to be more volatile, but the differences were generally minor.

[3] Taken from the *Random House College Dictionary, Revised Edition*, copyright 1980, p. 1474.

Introducing new weights for the Employment Cost Index

Beginning in June 1986, ECI estimates will reflect employment counts from the 1980 census; while the change also involves some redefinition of occupational groups, disruptions to the historical series are expected to be slight

ALBERT E. SCHWENK

The Employment Cost Index (ECI), an employment-weighted Laspeyres index, is a measure of change over time in the cost of employing a fixed set of labor inputs. The weights currently used are employment counts by industry and occupation from the 1970 Census of Population. The weights of most Laspeyres indexes are periodically updated, and the ECI is no exception. Beginning in June 1986, the ECI will be calculated using employment weights from the 1980 census.

This article reviews the ECI and its purposes, explains why the 1970 employment weights are to be replaced with 1980 weights, and discusses how the change in weights will affect what the index is measuring.

The ECI and its uses

The ECI was developed in the early 1970's to meet the needs of economic analysts and policymakers who required a conceptually sound measure of the change in the cost of labor as a factor of production.[1] The ECI was designed:

- To be a timely and comprehensive measure covering all elements of employee compensation (wages, salaries, and benefit costs) and all employees in the U.S. civilian economy;
- To be a fixed-weight index free from the influence of employment shifts among occupations, industries, and establishments with different wage and compensation levels;
- To include internally consistent subseries (for example, occupational and industry groups) that describe the forces contributing to aggregate wage and compensation change.

At the time that the ECI was developed, a number of series prepared by the Bureau provided information on wage or compensation levels or changes, but none had all of the features desired for an economy-wide measure of wage and compensation change. Thus, analysts and policymakers of that inflationary period had to deal with wage and price increases without an adequate measure of labor cost change.[2]

The ECI is a quarterly series that relates to payroll periods including the 12th of March, June, September, and December. ECI estimates, first published for the period September–December 1975, initially covered only wage and salary change for the private nonfarm economy. Changes for broad occupational and industrial groups, as well as changes by union status, geographic region, and area size were also presented. In 1980, rates of compensation change were published for the private nonfarm economy and for a selected number of subindexes. In 1981, wage and compensation indexes for State and local governments were added, as well as indexes for the combined private nonfarm and State and local government work force. A comprehensive list of the ECI subindexes currently published is presented in tables 33–35 of the Current Labor Statistics section of this issue.

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The ECI will continue to expand in the future. The number of indexes available for the service-producing industries will increase over the next 5 years, as part of a government-wide initiative to develop more information on this growing sector of the economy. In 1985, quarterly rates of wage and salary and compensation change for the following industry groups will be published for the first time:

Civilian nonfederal workers:
- Health services

Private industry workers:
- Transportation and public utilities*
  - Transportation
  - Public utilities
- Wholesale and retail trade*
- Finance, insurance, and real estate*
- Service industries*
  - Health services

State and local government workers:
- Health services

*Wage and salary indexes are currently published.

As envisioned by its developers, the ECI is today used in analysis of inflation, in determining monetary policy, and in other studies requiring measures of change in labor cost. The index serves administrative purposes as well, because its clear definition and firm foundation in economic theory make it a valuable tool for such functions as adjusting the labor cost portion of long-term contracts or adjusting wage and compensation rates between labor negotiations.

As more detail for service-sector industries becomes available over the next few years, the ECI can be used to examine issues such as the impact of deregulation on compensation change. Relationships between government subsidies to industries such as health care and education and changes in compensation cost also can be studied.

Introducing the new weights

Fixed weights in the ECI. The ECI measures the change in cost of employing a fixed set of labor inputs by applying fixed employment weights at the level of the occupation within an industry. The industry structure of the ECI is based on the 1972 Standard Industrial Classification (SIC) system, as defined by the U.S. Office of Management and Budget. For the ECI, most industry categories for the private industry sector are specified at the 2-digit SIC level, such as textile manufacturing or personal services. The industry categories for State and local governments vary from specific 3-digit SIC's, such as elementary and secondary schools, to broader major industry divisions, such as public administration.

The current occupational categories for the ECI are based on the structure developed for the 1970 census. This structure defined 442 detailed jobs within 12 major occupational groups. The scope of the ECI is restricted to 414 of those jobs in 9 major groups. Within each industry, the ECI occupational categories may range in detail from one specific census occupation to all occupations in a major group. A sampling procedure is used in each establishment to select a specific job to represent each occupational category defined for the industry. It is for those specific jobs that wage and benefit information is collected in the initial visit to the establishment and updated each quarter. The fixed employment weights, however, apply to the occupational category which the specific jobs represent.

Reasons for reweighting. ECI measures are used in essentially three different types of analysis:

- Measurement of the total change in labor cost from the base period to any subsequent period;
- Comparisons of changes in labor costs over different subperiods (for example, comparison of the change between December 1983 and December 1984 with that between December 1982 and December 1983;
- Measurement of the current rate of labor cost increase.

No single index can be ideal for all three types of analysis. Specifically, an index that is appropriate for analysis of long-run change will not be the best for measuring the current rate of labor cost increases, and vice versa.[3]

If the ECI were used only to measure the long-run change in labor costs, the weights would seldom need to be updated. Similarly, the value of the ECI in comparing changes in labor costs over different subperiods depends on holding the weights fixed for extended periods. The unchanging weights are necessary in these cases to ensure that the same set of labor inputs is being priced over time.

In contrast, if the ECI is to be used to measure the recent rate of labor cost increases, the weights should be as current as possible. With current weights, the index of labor cost would measure the change between December 1984 and March 1985 in the cost of purchasing the set of labor inputs employed in December 1984. The index with current weights differs from the existing ECI Laspeyres index which would estimate current labor cost increases as the change between December 1984 and March 1985 in the cost of purchasing the set of labor inputs employed at the time of the 1970 census. In general, the accuracy of a Laspeyres index as a measure of current labor cost change varies inversely with the magnitude of shifts in employment among industries and occupations since the reference period of the employment counts.

If the ECI's employment weights were changed every quarter to improve the measurement of current rates of labor cost increases, it would be possible to derive a type of Laspeyres index by multiplying together quarter-to-quarter changes (expressed as ratios).[4] Such a "chain" index would provide a better estimate than the present ECI of the rate of labor cost increase for each quarter. The chain index would not, however, provide the change in the cost of a fixed set of workers for periods longer than one quarter, and changes for different subperiods would not be for the same set of labor inputs.

The ECI is a compromise between a pure Laspeyres index

and an index that uses new weights each quarter—that is, the ECI's weights are changed periodically, after remaining fixed for a number of years. Because the ECI's employment weights remain fixed for long periods, there arises the possibility that the index could lose its value as a measure of current change.

Fortunately, a number of price index studies have shown that the period-to-period change in a fixed-weight Laspeyres index is relatively insensitive to the weights used, when the weights vary within the range common to many economic variables. The quarter-to-quarter changes calculated using a Laspeyres index are apt to be quite close to the quarter-to-quarter changes using the previous quarter's employment weights.[5]

For this reason, the ECI has employed one set of weights for a number of years. This preserves the analytical value of the Laspeyres index as a measure of change in labor costs over the long run and over different subperiods. Empirical evidence presented below suggests that the age of the weights has not seriously affected the accuracy of the index as a measure of current rates of change.

As the weights become older, however, the danger grows that current rates of change using the fixed weights could differ from those based on more recent weights by an amount great enough to be important in economic analysis. To ensure that the ECI will continue to provide a good approximation of the current rate of labor cost increase, more recent weights are introduced.

Exhibit 1. Census Major Occupational Groups, 1970 and 1980

1970	1980
Managers and administrators	Executive, administrative, and managerial occupations
Professional and technical workers	Professional specialty and technical occupations
Salesworkers	Sales occupations
Clerical workers	Administrative support occupations, including clerical
Craft and kindred workers	Precision production, craft, and repair occupations
Operatives, except transport	Machine operators, assemblers, and inspectors
Transport operatives	Transportation and material moving occupations
Nonfarm laborers	Handlers, equipment cleaners, helpers, and laborers
Service workers	Service occupations

Consequences of reweighting

Aggregate index. The new weights alter what the ECI is measuring when comparisons are made between estimates based on different sets of employment weights. That is, any change calculated by dividing an ECI index number based on new weights by an index number using earlier weights is not a proper Laspeyres estimate. Reweighting improves the currency of the index, but disrupts historical continuity.

The meaning of a reweighted index as a measure of change can best be explained by a brief example of how the reweighted ECI will be linked to the old index. Assume that in March 1986 the ECI using weights from the 1970 census has a value of 133.0 (June 1981 = 100). Also assume that between March and June 1986 the ECI rises 2 percent, based on weights from the 1980 census. The June 1986 index would be computed as $133.0 \times 1.02 = 135.7$, the product of the March 1986 index value, based on 1970 weights, and the relative increase in labor cost from March 1986 to June 1986, based on 1980 weights.

Thus, the relative difference in the index level between any two periods before March 1986 is the change in the cost of employing the 1970 work force. For any two periods after March 1986, the relative difference will be the change in the cost of employing the 1980 work force. But as indicated earlier, the ratio of an index for a period after March 1986 and one for a period before March 1986 cannot be interpreted in terms of the cost of employing any fixed work force—that is, it is not a Laspeyres index number. The change between June 1981 and June 1990, for example, would simply be the change between June 1981 and March 1986 in the cost of employing the 1970 work force, times the change between March 1986 and June 1990 in the cost of employing the 1980 work force.[6]

Subindexes. Considered separately, the impact of reweighting on each ECI subindex is the same as on the aggregate index. The reweighting will cause the change in cost for the subindex to be closer to the change in current cost, but it will also result in a disruption of the index as a measure of long-run change and of change between periods before and periods after the new weights are introduced. Two additional issues are raised, however, when reweighted subindexes are introduced. One concerns the relationship between the change in the subindexes and the change in the aggregate index, and the other, the occupational composition of each subindex.

The aggregate Laspeyres index can be expressed as a weighted sum of any set of exhaustive and mutually exclusive Laspeyres subindexes, where the weights sum to unity.[7] This is a very desirable property, for two reasons. First, it guarantees that the change in the aggregate index will fall within the range of changes in the subseries; the change in the aggregate index cannot be greater than the largest change among the subindexes, or less than the smallest. Second, the property also makes it possible to assign the increase in the aggregate index to the subseries—that is, one can determine how much of the change in the aggregate was

"caused" by the change in each subseries.

For comparisons spanning the date on which the new weights are introduced, however, the property that the aggregate Laspeyres index can be expressed as the weighted sum of any set of exhaustive and mutually exclusive subindexes is lost. It is possible, for example, that the change in the aggregate index between September 1985 and September 1986 might be larger, or smaller, than the change in any of the subindexes.

The second issue concerned solely with subindexes is the coverage of workers by each occupational subindex. As noted earlier, the 1970-based ECI weights used employment counts for more than 400 individual occupational titles as given by the 1970 Census of Population occupational classification system. The census aggregated these individual occupations within the scope of the ECI into nine major occupational groups, and ECI occupational indexes currently correspond to those occupational groups. There were a number of criteria used by the Census Bureau in deciding which occupational titles to combine in forming the groups, but the most important was the similarity of work performed.

The Standard Occupational Classification (SOC), a new occupational classification system developed during the 1970's, was used for the 1980 census. The 1980 census classification system, like that for the 1970 census, combined individual occupations into aggregate groups. And, again, the most important concern in defining the groups was similarity of work performed. However, there are differences between the two classification systems because some occupations disappeared during the 1970's while new occupations appeared, and because there were changes in the definitions of the groups and in the way occupational classification experts viewed the various jobs.

At the level at which ECI occupational indexes are published, the 1980 census definitions of the major occupational groups are similar to those for the 1970 census (exhibit 1). It is clear that the work performed by the jobs classified in the groups for 1980 is similar to that of jobs classified in the corresponding 1970 groups. Beginning in March 1986, the ECI occupational indexes will reflect the 1980 census definitions. These will be linked to the occupational indexes based on the 1970 definitions in the fashion described earlier for the aggregate index.

It must be noted that some detailed occupations that were defined in both 1970 and 1980 were shifted to a different major occupational group between the two years. For instance, cashiers were included with clerical workers in the 1970 system, but with sales occupations in the 1980 system. Hand packers and packagers were included with operatives, except transport, in 1970 but with handlers, equipment cleaners, helpers, and laborers in 1980. A list of the large categorical shifts is presented in table 1.

To aid in interpreting the table, consider the entry for cashiers. Had they remained in the clerical worker category in 1980, they would have accounted for 11.3 percent of total employment of the group. Instead, they were moved to the sales occupations category, where they accounted for 19.9 percent of the total in that group.

In both 1970 and 1980, the work performed by cashiers had much in common with that done by clericals and by

Table 1. Major changes in occupational classification between the 1970 and 1980 censuses

Occupation	1970 classification		1980 classification	
	Major occupational group	Percent of 1980 employment[1]	Major occupational group	Percent of 1980 employment
Cashiers	Clerical workers	11.3	Sales occupations	19.9
Accountants and auditors	Professional and technical workers	8.2	Executive, administrative, and managerial occupations	10.2
Hand packers and packagers	Operatives, except transport	5.7	Handlers, equipment cleaners, helpers, and laborers	12.6
Licensed practical nurses	Service workers	3.8	Professional specialty and technical occupations	4.1
Garage and service station related occupations	Operatives, except transport	3.1	Handlers, equipment cleaners, helpers, and laborers	6.8
Personnel, training, and labor relations specialists	Professional and technical workers	3.1	Executive, administrative, and managerial occupations	3.7
Butchers and meat cutters	Operatives, except transport	2.9	Precision production, craft, and repair occupations	2.5
Printing machine operators	Craft and kindred workers	2.4	Machine operators, assemblers, and inspectors	2.9
Cranemen, derrickmen, and hoistmen	Craft and kindred workers	1.1	Transportation and material moving occupations	3.2
Excavating, grading, and road machine operators	Craft and kindred workers	0.9	Transportation and material moving occupations	2.7
Locomotive operating occupations	Craft and kindred workers	0.6	Transportation and material moving occupations	1.7

[1]The figures in this column refer to the percentage of 1980 employment the occupation would have accounted for had it remained in the 1980 census equivalent of its 1970 census major occupational group. Thus, for example, had cashiers been classified in administrative support, including clerical, they would have accounted for 11.3 percent of the employment in that group.

NOTE: The percentages shown in this table are only approximate, because in many cases the 1980-census occupation was not identical to the 1970-census occupation.

salesworkers. The reclassification does not necessarily imply that the work performed by cashiers changed over the 1970–80 period so that it became closer to that performed by salesworkers. It is also possible that the tasks of salesworkers or of clerical workers in general changed, so that the work of salesworkers became more like that of cashiers.

Certainly, recent experience in collecting ECI data for retail trade supports the classification of cashiers and salesworkers in the same group. Frequently, employers themselves do not distinguish between the two occupations; their staffs carry out the duties of both salespersons and cashiers.

Thus, the occupational classification system for the 1970 census, based on similarity of work performed at that time, became less appropriate as duties and work covered by individual job titles changed over the decade. The 1980 reweighting provides the opportunity to regroup the individual job titles into aggregates that are more meaningful for economic analysis.

Sources of new weights

In deriving employment weights for the reweighted ECI, two sources of employment data were available—the Bureau's Occupational Employment Statistics (OES) Survey and the 1980 Census of Population. The BLS data are obtained from a periodic mail survey conducted by State employment security agencies of a sample of nonfarm establishments to obtain wage and salary employment by occupation.

For the reweighting, main reliance was placed on a 7-percent sample from the 1980 census, weighted up to represent all workers within scope of the ECI. Census data were used primarily because the occupational categories defined for that survey were based on SOC. (Beginning in 1983, OES also defined occupations on the basis of SOC; because OES is on a 3-year cycle, however, data will not be available on that basis for all industries until 1986.) In some cases it was necessary to supplement census data using OES; for example, because the census grouped all construction industries together, OES data were used to apportion the employment among the three broad construction industries.

Testing the effects of new weights

As noted above, studies have found that Laspeyres price indexes typically are insensitive to moderate changes in the set of weights used. To evaluate the impact on the ECI of using 1980 weights in place of those for 1970, a test was conducted estimating rates of change for 1981–85 using 1980 census weights, and comparing the results with the published figures based on 1970 census weights.

Some effect would be expected because there have been shifts over time in the distribution of employment among occupational categories and among industries, as shown in table 2. For example, the percentage of private industry wage and salary employment that is white-collar rose from 46.1 percent to 51.0 percent between 1970 and 1980, while the percentage that is employed in manufacturing declined from 34.5 percent to 29.8 percent.

Table 2. Distribution of employment within scope of the ECI in private industry, by occupational category and major industry group, 1970 and 1980

[In percent]

Occupational category or industry group	1970	1980
All workers	100.0	100.0
Occupational category		
White-collar workers	46.1	51.0
Blue-collar workers	43.3	37.3
Service workers	10.6	11.6
Industry group		
Mining	1.1	1.4
Construction	6.2	6.1
Manufacturing	34.5	29.8
Transportation and public utilities	7.9	7.6
Wholesale trade	5.3	5.5
Retail trade	19.3	19.9
Finance, insurance, and real estate	6.2	7.5
Service industries	19.5	22.2

SOURCE: 1970 and 1980 Censuses of Population.

How much difference would it make for published rates of change in compensation cost if estimates for 1981–85 had been derived using 1980, rather than 1970, weights? Table 3 presents evidence that, had more current weights been used, the impact for private industry workers would have been slight. For example, the estimated change in compensation cost over the year ended December 1984 based on 1980 weights (4.7 percent) is only 0.2 percentage point lower than the change derived using 1970 weights. The 3-month changes never differ by more than three-tenths of a percentage point, and the index levels as of March 1985 are virtually identical.

The closeness of the percentage changes indicates that there is little, if any, systematic relationship between the

Table 3. Index levels and percent changes in compensation costs for private industry workers, 1970 weights and 1980 weights

[June 1981 = 100]

Quarter	Based on 1970 weights			Based on 1980 weights		
	Index level	3-month change	12-month change	Index level	3-month change	12-month change
June 1981	100.0	—	—	100.0	—	—
September 1981	102.0	2.0	—	102.0	2.0	—
December 1981	104.0	2.0	—	104.1	2.1	—
March 1982	105.8	1.7	—	105.7	1.5	—
June 1982	107.2	1.3	7.2	107.2	1.4	7.2
September 1982	109.3	2.0	7.2	109.3	2.0	7.2
December 1982	110.7	1.3	6.4	110.6	1.2	6.2
March 1983	112.6	1.7	6.4	112.8	2.0	6.7
June 1983	113.9	1.2	6.3	114.2	1.2	6.5
September 1983	115.6	1.5	5.8	115.9	1.5	6.0
December 1983	117.0	1.2	5.7	117.2	1.1	6.0
March 1984	119.0	1.7	5.7	119.1	1.6	5.6
June 1984	120.1	.9	5.4	120.2	.9	5.3
September 1984	121.1	.8	4.8	121.3	.9	4.7
December 1984	122.7	1.3	4.9	122.7	1.2	4.7
March 1985	124.2	1.2	4.4	124.3	1.3	4.4

NOTE: Estimates based on 1980 weights were derived by applying the new weights at the industry and major occupational group level.

change in compensation cost and the change in employment by industry and occupation. In general, the 1980-weighted index will be greater than the 1970-weighted index if compensation costs for those occupations and industries for which employment has risen the most—for example, white-collar workers and service industries—increase more than those in industries and occupations where employment has risen the least. □

———*FOOTNOTES*———

[1] For descriptions of the ECI, see: Victor J. Sheifer, "Employment Cost Index: a measure of change in the 'price of labor'," *Monthly Labor Review*, July 1975, pp. 3–12; Victor J. Sheifer, "How benefits will be incorporated into the Employment Cost Index," *Monthly Labor Review*, January 1978, pp. 18–26; and *BLS Handbook of Methods*, Bulletin 2134–1 (Bureau of Labor Statistics, 1982), pp. 78–85. For a more theoretical discussion of labor cost measurement, see: Jack E. Triplett, "Introduction: an essay on labor cost," in Jack E. Triplett, ed., *The Measurement of Labor Cost* (Chicago, The University of Chicago Press for the National Bureau of Economic Research, 1983).

[2] Comparisons of the ECI with other measures of wage and compensation change since 1975 show that those other series, if used as measures of compensation change, frequently could be very misleading. See G. Donald Wood, "The Employment Cost Index and Related Series on Wage and Compensation Change," in American Statistical Association, *Proceedings of the Section on Survey Research Methods*, 1983, pp. 466–69.

[3] Jack E. Triplett, "Reconciling the CPI and the PCE Deflator," *Monthly Labor Review*, September 1981, pp. 10–11.

[4] An index of this type is called a chain-weight index. The ECI can be considered a Laspeyres chain-weight index, but with the "chaining" occurring every 10 to 15 years, rather than every quarter.

[5] For example, Jack Triplett compared the year-to-year changes in price inflation as measured by the 1972 expenditures-weighted Laspeyres index of personal consumption expenditures with changes in the personal consumption expenditures chain-weight index. The largest difference was for 1980—the 1972 fixed-weighted index gave a change of 11.0 percent, while the chain-weight index gave a change of 10.6 percent. See Triplett, "Reconciling the CPI," p. 8.

[6] In general, the index value for any time t in the future will be the index value of March 1986, based on 1970 weights, times the index value at time t, relative to March 1986, based on 1980 weights.

[7] See G. Donald Wood, "Estimation procedures for the Employment Cost Index," *Monthly Labor Review*, May 1982, pp. 40–42.

Productivity trends in the machine tool accessories industry

During 1963–82, annual productivity increased an average of 1.4 percent, somewhat below manufacturing as a whole; continued improvements have characterized the industry

JAMES D. YORK

As measured by output per employee-hour, productivity in the machine tool accessories industry grew at an average annual rate of 1.4 percent during the 1963–82 period, somewhat below the growth rate of 2.4 percent for all manufacturing.[1] During this period, the annual rate of increase in output was 2.4 percent and the rate of increase in hours was 1.0 percent. (See table 1.) Continued improvements in production machinery and the adoption of numerical control equipment to run the machinery have enabled productivity to improve at a gradual rate for the past two decades.

During the first half of the 1963–82 period, productivity growth rose at an average annual rate of 2.4 percent from 1963 to 1973. Output averaged 2.1 percent a year, while hours *declined* at an average rate of 0.3 percent. During the second half of the period, 1973–82, productivity declined at an average annual rate of 0.7 percent. Output grew at a rate of 0.9 percent, but this growth was exceeded by the 1.7 percent annual average increase in hours.

Year-to-year fluctuations in output per employee-hour have been influenced by cyclical trends in the economy. The output of the machine tools accessories industry is consumed by such producers as automobile and aircraft manufacturers and by individual consumers. Consequently, changes in these markets can affect movements in output and hours. Shifts in industry output have often been quite sharp. However, corresponding adjustments in employee hours have acted to dampen swings in productivity.

As noted earlier, the most rapid productivity growth occurred from 1963 to 1973. Output per employee-hour exhibited sharp fluctuations in individual years as shifts in the economy affected industry markets which, in turn, had an impact in industry output and hours. In 1970, for example, as the economy experienced a downturn, productivity declined 7.8 percent. This drop reflected sharp declines in output (18.8 percent) and hours (11.9 percent). The largest increase was in 1971, when industry productivity rose by 12.7 percent. Industry output actually declined by 8.2 percent, but this was more than offset by a large reduction in employee hours of 18.5 percent. Productivity continued to improve in 1972, rising by 8.3 percent. Underlying this increase in productivity was a large increase in output: 18.2 percent, twice the increase in employee hours.

In the 1972–82 subperiod, average annual growth in output was 1.9 percent, outpacing the earlier years. However, the growth in employee hours exceeded the growth in output, and output per employee-hour declined on an average annual basis. Employee hours declined in 1975, 1981, and 1982. In 1975, the economy was in recession and both industry output and hours posted steep declines. However, the decline in output (16.3 percent) exceeded the decline in hours (13.5 percent), and productivity declined by 3.2 percent. In 1981, the drop in hours of 3.9 percent exceeded the decline in output of 0.7 percent, and productivity rose by 3.4 percent. The largest productivity decrease of the entire study period occurred in 1982, also a year of reces-

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Table 1. Productivity and related indexes for the machine tool accessories industry, 1963–82

[1977 = 100]

Year	Output per employee hour			Output	Employee hours		
	All employees	Production workers	Non-production workers		All employees	Production workers	Non-production workers
1963	80.0	78.2	85.3	62.9	78.6	80.4	73.7
1964	81.2	79.2	86.7	68.5	84.4	86.5	79.0
1965	82.0	78.5	92.8	78.8	96.1	100.4	84.9
1966	82.0	77.1	98.7	90.7	110.6	117.7	91.9
1967	85.2	81.1	97.9	94.7	111.2	116.8	96.7
1968	83.0	81.8	86.6	87.5	105.4	107.0	101.0
1969	88.9	87.4	93.3	91.6	103.0	104.8	98.2
1970	82.0	82.3	81.4	74.4	90.7	90.4	91.4
1971	92.4	96.2	83.7	68.3	73.9	71.0	81.6
1972	100.1	101.0	97.8	80.7	80.6	79.9	82.5
1973	105.7	102.7	115.0	103.0	97.4	100.3	89.6
1974	104.2	101.5	112.4	108.6	104.2	107.0	96.6
1975	100.9	102.8	96.2	90.9	90.1	88.4	94.5
1976	98.8	100.1	95.6	90.7	91.8	90.6	94.9
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.0	103.5	105.5	113.6	109.2	109.8	107.7
1979	101.7	100.3	105.6	120.1	118.1	119.8	113.7
1980	100.3	100.4	100.1	120.3	119.9	119.8	120.2
1981	103.7	105.5	99.4	119.5	115.2	113.3	120.2
1982	91.5	99.8	75.2	86.8	94.9	87.0	115.5
	Average annual rates of change (in percent)						
1963–82	1.4	1.8	0.5	2.4	1.0	0.6	1.9
1977–82	−1.3	0.1	−4.6	−1.6	−0.2	−1.7	3.2

sion. Industry output was hit hard by the economic downturn and dropped by 27.4 percent, more than offsetting a 17.6-percent decline in hours. The resulting drop in productivity was 11.8 percent. The decrease in productivity during 1972–82 appears to reflect, in large part, the effects of the recession years, 1974, 1975, 1980, and 1982 which saw productivity declines of 1.4 (1974), 3.2 (1975), 1.4 (1980), and 11.8 percent (1982).

Employment and plant size

From 1963 to 1982, industry employment grew by 28 percent, from 46,200 to 59,000. The average annual rate of increase was 1.2 percent. The employee hours increased at a rate of 1.0 percent, reflecting a slight decline in average weekly hours. At an average annual rate of 1.7 percent, the number of women employees has been increasing at a faster rate than total employment. As a result, the proportion of women employees increased from 18.0 percent in 1963 to 19.7 percent in 1982. Production workers increased 18 percent during this period, equivalent to an average annual increase of 0.9 percent. Consequently, production workers have declined slightly as a percent of total employment—from 72.9 percent in 1963 to 67.1 percent in 1982. The average weekly hours of production workers decreased during 1963–82, declining at an average annual rate of 0.3 percent.

Employment growth was not steady, and exhibited large year-to-year fluctuations. During the 1968–71 period, employment dropped annually, with the largest decline—16.9 percent—occurring in 1971. These declines caused employment to register average annual reductions during 1963–72. The largest increase, 17.2 percent, occurred in 1973. There was another large increase in 1974, followed by a sharp drop in 1975, a recession year. Increases occurred in 1977–80, however, and during 1972–82, employment rose at an average annual rate of 2.8 percent.

Most of the industry's employment is concentrated in small and mid-sized establishments. About 38 percent of industry employment is in establishments with 100 to 499 employees, despite the fact that they constitute only about 7 percent of the total number of establishments. However, they produce about 35 percent of total industry shipments. Another 30 percent of the employment is concentrated in establishments with 20 to 99 employees. These establishments are more numerous, account for about 27 percent of the industry total, and produce about 30 percent of industry shipments. The largest establishments (500 employees or more) are also important. Even though they represent less than 1 percent of all establishments, they produce 25 percent of industry shipments and employ 21 percent of the work force. There has been a slight trend away from large plants. Establishments employing 500 employees or more constituted 1.3 percent of the total number in 1963, compared with less than 1 percent in 1977. Those employing 100–499 employees declined from 8 percent of the total in 1963 to 7 percent in 1977. The average number of employees per establishment declined from 45 in 1963 to 38 in 1977.

Diverse industry markets

The machine tool accessories industry produces a wide range of products. The industry's largest product group is cutting tools, which accounted for over 60 percent of all product shipments in 1977. Cutting tools include drills, broaches, countersinks and counterbores, reamers, hobs, milling cutters, slitting saws, and taps. In addition to sales to the industrial market, many cutting tools are sold to consumers. Foreign producers have made inroads into the consumer end of the market in such high volume items as twist drills.

The industry's other two product groups are precision measuring tools (which include such instruments as dial indicators, micrometers, and calipers) and attachments and accessories for machine tools and metalworking machinery. The latter group includes such devices as turning tool holders and chucks. No individual segment of the market has been predominant in determining trends in industry output, but some segments do stand out in relative importance such as the motor vehicle industry and the aerospace industry.

The motor vehicle and related industries have been the largest consumers of machine tool accessories. Data for consumption of machine tool cutting tools by individual industry are available back to 1967, and these data indicate that the motor vehicles and equipment industry has been the largest single purchaser of the industry's output over the

years. From 1963 to 1978, the output of the motor vehicles and equipment industry increased fairly rapidly, at an average annual rate of 4.3 percent, and as a consequence helped to promote output growth in the machine tool accessories industry. In 1980, however, the motor vehicle industry felt the effects of both a cyclical downturn and increased foreign competition which have continued to have a depressing effect on this market subsequently.

Another very large market consists of manufacturers of aerospace equipment. This has generally been the second largest market, but it has been growing in relative importance. This group includes manufacturers engaged in the production of aircraft, guided missiles, space vehicles, and related components and parts. Metal cutting tools for this market must often meet very demanding tolerances. The machine tool industry, which manufactures both metal forming and metal cutting equipment, is another major consumer of industry output. This industry uses the various machine tool accessories as parts in the manufacture of complete machine tools. It is a very important market, but its output declined, on an average annual basis, during 1963–82, and its consumption of machine tool accessories has consequently been declining.

A major growth market has been the internal combustion engine industry. Its purchase of machine tool cutting tools increased more than fivefold (in current dollars) during the 1967–77 period. Other industries which have been major purchasers of machine tool accessories include construction machinery and power driven handtools. The oilfield machinery industry is also an important market, and its purchases of metal cutting tools increased by about 160 percent during 1967 to 1977.

Competition from imports has been increasing in recent years. Data for metal cutting tools indicate that imports as a percent of new supply (domestic shipments plus imports) increased considerably during the 1972–82 decade, rising from slightly over 2 percent to nearly 5 percent in 1982. However, the export market has shown some relative improvement during this same period. Exports as a percent of domestic product shipments rose from 3.5 percent in 1972 to about 4.5 percent in 1982.[2]

Capital expenditures

The gradual rate of modernization in this industry is reflected in the modest level of capital expenditures and the trend in those expenditures. Capital expenditures per employee were much lower throughout the 1963–82 period than for all manufacturing. In 1963, such expenditures amounted to only $485 per employee for the industry compared with $700 per employee for all manufacturing. By 1981, the industry's expenditures had risen to $3,130 per employee, but the all-manufacturing total was $4,156 per employee. From 1963 to 1981, the rate of growth of capital expenditures and capital expenditures per employee was faster for all manufacturing than for the machine tool accessories industry. The average annual rate of increase in capital expenditures was 8.8 percent for the industry, and the annual rate of growth of capital expenditures per employee was 7.9 percent. By comparison, the rate of increase for all manufacturing was 10.2 percent for capital expenditures and 9.5 percent for capital expenditures per employee.

Technological improvements

Productivity in the manufacture of machine tool accessories has benefited greatly from advances in controls for certain types of production machinery. Numerical control has provided an important source of improvement in the machine tools used to produce the industry's output. Numerical control provides automatic operation of machine tools by means of electronic devices and coded instructions on tape. This automation reduces downtime for setup and greatly contributes to a reduction in the labor time required to produce the final output.[3] Numerical control also provides important advantages in flexibility where small volume production is involved. Before its advent, changes in the production runs necessitated many changes in hardware. The shift to numerical control meant that the same hardware could, in some cases, be used when changing production runs since tapes with new cutting instructions replace old tapes.

The advantages of numerical control have contributed importantly to productivity growth. Improvements in computer technology have provided a solution to problems associated with tape preparation. Early computers were too slow in their processing speeds and too expensive to be useful in controlling machine tools. Instead, they were used to prepare tapes to operate numerically controlled machine tools. As computer speeds and storage capacity increased (and their costs declined), it became feasible to use them to provide direct control of machine tools, without the intervention of tapes. When the desired parameters are fed into the computer, it can make the necessary computations for operating the machine tools. The adoption of direct computer control for machine tools by some manufacturers has benefited productivity by eliminating tape preparation and by providing greater speed and flexibility of operation.[4]

Multipurpose machine tools, or machining centers, have also aided productivity gains. The machining center is a machine tool that can perform a variety of operations on a part. This contrasts with more conventional techniques where the part is transferred from one machine to another with each performing a specialized function. Machining centers provide more complete machine utilization, since more time is spent cutting metal. They require less skilled operators and reduce operator errors. One machining center can replace a number of specialized machines and their operators, thereby significantly increasing productivity.[5]

Electrochemical and electrical discharge machining have both contributed to productivity gains. Electrochemical ma-

chining uses a reverse electroplating process to remove metal. In grinding a workpiece, an electrolytic solution is squirted on a grinding wheel and allowed to flow between the wheel and the workpiece. The solution conducts electricity, which deplates (strips) the workpiece. Electrochemical machining provides increased speed in metal removal and offers good performance in the grinding of carbide products. Electrical discharge machining utilizes the eroding action of an electrical spark on metal to produce the desired shape. The desired final shape of the product can be put on the electrode. This is particularly advantageous for complex shapes, since the necessary metal removal can take place at once, rather than requiring many different motions as would be the case with more conventional cutting tools. Both electrochemical and electrical discharge machining are useful in situations where a fine tolerance is required, and they are also useful in applications which would be uneconomical or very difficult for conventional machining processes.

Grinding operations have benefited from the substitution of the cubic boron nitride grinding wheel for the aluminum oxide wheel. These wheels are very good for grinding heat treated steel. They cut cleaner, run cooler, and last longer, thus reducing downtime. In the production of drill bits, the substitution of grinding for milling, where feasible, has speeded the production process because grinding can be done faster.

Evolutionary improvements in conventional machines have aided productivity growth. These improvements include increased power and faster operating speeds and reductions in setup time and downtime. The capacity of some machines has been increased. Improvements in some milling machines, for example, permit them to cut more workpieces simultaneously while still maintaining the necessary tolerances. However, the contribution of such improvements has been limited. They have taken place gradually and reflect an improvement in the quality of production machinery rather than any major innovations.

The use of automated materials handling systems, where feasible, has boosted productivity. Productivity has also benefited where the layout of production machinery has been improved to speed the workflow. Mechanical equipment which moves production pieces through the different stages of the heat treatment process—preheating, heating, and quenching—has improved efficiency in this operation.

Outlook for productivity

Productivity should continue to benefit from a trend toward more direct computer control of production machinery. The increasing capability of computers, combined with their declining cost, is making their use for production tasks increasingly affordable. The development of microprocessors, which provide the necessary computer capabilities in a more compact and affordable package, has been an important step in this regard. As computer control of production machinery becomes more widespread, productivity should increase. The integration of computers and machine tools offers the possibility of substantial productivity gains.[6] The continued development and adoption of robot devices appears likely and should further reduce the labor requirements involved in the manufacturing process. Much of the technology for a more automated production operation already exists and may be increasingly adopted in the future.[7] Evolutionary improvements in production machinery should also continue to take place and enhance productivity growth.

Computer-aided design and computer-aided manufacturing (CAD–CAM) systems are already popular in some industries, and should gain increasing acceptance in the machine tool accessories industry as they continue to become cheaper and easier to use. This technology enables designers and engineers to improve their productivity by automating the mechanical aspects of design.[8] Engineers can create and alter designs electronically. These systems will reduce design time and also encourage experimentation since some computer programs can analyze designs to see how they respond to changes in certain variables.[9]

Some producers have been shifting their emphasis from the consumer end to the industrial end of the market, where they can often compete more effectively with foreign producers. Many of these industrial products may involve shorter production runs. Flexible manufacturing systems, which integrate numerically controlled machine tools, computer aided design, and automated materials handling systems, are expected to be adopted in an effort to keep unit production costs down where small volume production is involved. The high cost of such systems is a barrier to their adoption but changing circumstances, for example, increasing competition from foreign producers, make their adoption a real possibility.[10] □

FOOTNOTES

[1] The machine tool accessories industry is composed of establishments primarily engaged in manufacturing cutting tools, machinist's precision measuring tools, and attachments and accessories for machine tools and for other metalworking machinery. The industry is designated as SIC 3545 in the Standard Industrial Classification Manual, 1972. All average annual rates of change are based on the linear least squares trends of the logarithms of the index numbers. Extension of the indexes will appear in the annual BLS Bulletin, *Productivity Measures for Selected Industries*.

[2] *U.S. Industrial Outlook* (U.S. Department of Commerce, 1984), p. 20–9.

[3] See Lloyd T. O'Carroll, "Technology and Manpower in Nonelectrical Machinery," *Monthly Labor Review*, June 1971, pp. 58.

[4] *U.S. Industrial Outlook*, pp. 20–6, 20–7.

[5] O'Carroll, "Technology and Manpower," pp. 58–60.

[6] See Sari Horwitz, "Chalk Embarks on Venture With Computerized Tools," *Washington Business*, Aug. 20, 1984, p. 27.

[7] Gene Bylinsky, "The Race to the Automatic Factory," *Fortune*, Feb. 21, 1983, pp. 52–60.

[8] See "IBM's Grand Design to Become a Force in the Factory," *Business Week*, May 7, 1984, pp. 142 C, F, and J.

[9] See Bob Davis, "Computers Speed the Design of More Workaday Products," *The Wall Street Journal*, Jan. 18, 1985, p. 25.

[10] Bylinsky, "The Race," pp. 52–60. See also *U.S. Industrial Outlook* (U.S. Department of Commerce, 1983), p. 20–5 and 1984, p. 20–5.

APPENDIX: Measurement techniques and limitations

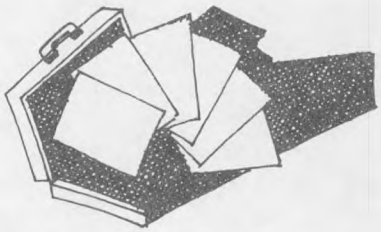
Indexes of output per employee-hour measure changes in the relation between the output of an industry and employee-hours expended on that output. An index of output per employee-hour is derived by dividing an index of output by an index of industry employee-hours.

The preferred output index for manufacturing industries would be obtained from data on quantities of the various goods produced by the industry, each weighted (multiplied) by the employee-hours required to produce one unit of each good in some specified base period. Thus, those goods which require more labor time to produce are given more importance in the index.

In the absence of adequate physical quantity data, the output index for this industry was constructed by a deflated value technique. The value of shipments of the various product classes was adjusted for price changes by appropriate Producer Price Indexes and Industry Sector Price Indexes to derive the real output measures. These, in turn, were combined with employee-hour weights to derive the overall output measure. These procedures result in a final output index that is conceptually close to the preferred output measure.

Employment and employee-hour indexes were derived from BLS data. Employees and employee-hours are each considered homogeneous and additive, and thus do not reflect changes in the qualitative aspects of labor such as skill and experience.

The indexes of output per employee hour do not measure any specific contributions, such as that of labor or capital. Rather, they reflect the joint effect of factors such as changes in technology, capital investment, capacity utilization, plant design and layout, skill and effort of the work force, managerial ability, and labor-management relations.



Conference Papers

The following excerpts, closely related to the work of BLS, are adapted from papers presented at the Thirty-Seventh Annual Meeting of the Industrial Relations Research Association, December 1984, in Dallas.

The full text of the papers appears in the copyrighted IRRA publication, *Proceedings of the Thirty-Seventh Annual Meetings,* available from IRRA, University of Wisconsin, Soicial Science Building, Madison, WI 53706.

Gaps in monitoring wages and industrial relations

DANIEL J. B. MITCHELL

In recent years, academic researchers and other users of Bureau of Labor Statistics' data on wages and industrial relations have become increasingly concerned about the future availability of such information. The Industrial Relations Center Directors—an informal group of more than 60 university research programs—protested impending budget cutbacks at BLS in 1982.[1] Although the worst of the budget problems that befell BLS are past, issues about priorities still remain.

Influence of macro-economics

Following World War II, macro-economic policy came into ascendency. Policy makers needed aggregate indicators of unemployment, productivity, labor costs, and inflation. BLS was able to accommodate these needs, while also expanding its offerings of traditional wage and industrial relations data. In retrospect, the late 1970's were a golden age in which the two needs—macro and micro—both received adequate funding. But when the budget pressures of the early 1980's developed, a "revealed preference" for the macro side became apparent. The traditional price series were protected, a program of import and export price indexes was expanded, and productivity measures were refined. Those wage and industrial relations data which were macro-oriented were preserved and expanded, but micro-level indicators were cut back or eliminated.

The macro-policy influence is clearly illustrated by the development of the Employment Cost Index (ECI) in the mid-1970's. Through the 1960's, hourly and weekly earnings data from the establishment survey were the prime measure of wage costs available from BLS. These data covered only production and nonsupervisory workers and omitted fringe benefits. They were affected by shifts of employment between industries and occupations and by changes in the mix of overtime and regular hours. For econometricians interested in aggregate wage-change equations, these deficiencies were unfortunate.

One solution was to use the more comprehensive measure of hourly compensation which included all occupations and fringe benefits. But this index, too, suffered from employment shift and overtime effects. Initially, the BLS offered its hourly earnings index (HEI) as a partial solution. The HEI controlled for interindustry shift and overtime effects in manufacturing. But the more-refined Employment Cost Index (ECI) paints a different picture of wage trends than any of its predecessors.

The total compensation ECI shows a lower peak wage inflation rate in 1980 than the more volatile compensation per hour index and a higher peak than the indexes which omit fringes. It also shows a higher rate of wage inflation by 1983 (after the economic slump had taken its toll) than the alternative indexes. With the addition of public-sector data in 1982, the ECI is the best macro indicator of wage change available.

Series abandoned

Prior to the ECI, the only time series available with a union/nonunion cut was a series on wage developments in manufacturing (WDM). But this series was seriously flawed. In the nonunion sector, the omission of "merit" pay adjustments was known to bias its estimate of wage inflation downward. But it also apparently underestimated union wage increases. Because the series covered adjustments in small union units as well as the "major" (1,000 workers or more) agreements, it created the impression that "minor" union agreements were not keeping up with their major counterparts. After the ECI became available, this impression was contradicted.

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Given its inaccuracies, it is not surprising that BLS abandoned the wage development series after 1978. But the series did offer information on the dispersion of wage decisions at the micro level not available from the ECI. For the nonunion sector and smaller union bargaining units, lack of dispersion information is an important gap in monitoring wage developments.

The abandonment of the wage development series was based on its deficiencies rather than on budgetary considerations. But other wage series, particularly in the union sector, were dropped because of the budget crunch. And it could not be said for these that superior alternatives had become available. For example, the now-abandoned series on union wage-rate changes in construction can be compared with the still-available series on effective wage adjustments in "major" construction union agreements. During the latter half of the 1970's, construction wage settlements went through a period of comparative moderation after two earlier wage explosions. A comparison of the two series indicates that the wage moderation was more dramatic in the agreements covering relatively small numbers of workers. Construction has been a center of concession bargaining in the 1980's, but now it is impossible to make such comparisons with BLS data.[2]

Also lost during the crunch was the wage chronology series. It provided useful information on wages and other conditions in selected union-employer settlements. As econometricians became more interested in the micro side of wage decisions, the chronologies were used to provide insights not available from aggregate Phillips curves. Without the chronologies, researchers must use the original contracts (not always easy to obtain retroactively) or other less-detailed sources such as *Current Wage Developments*. Research efforts—in short—have been and will be impeded.

As of 1980, almost 8 of 10 private-sector wage earners were not in unions. Thus, if any criticism could be leveled at the wage chronology series, it would be for the neglect of nonunion companies. Research interest in the personnel practices of large, nonunion firms grew in the 1970's. Thus, a widening of the chronologies to include such employers—rather than their abandonment—was indicated.

Further curtailments

Collection of data on strikes dates back to the late 19th century. Regular (annual) surveys of such information began in the World War I period. The data gathered were not limited to aggregate tabulations. Detailed tables were available by industry, issue of the dispute, means of settlement, and so on. In 1982, however, reporting was cut back to disputes involving 1,000 workers or more and detailed analyses were eliminated. Limiting coverage to disputes involving 1,000 workers or more is in keeping with the macro emphasis.

Abandonment of comprehensive strike surveys has caused a loss of information which—unlike the wage chronologies—cannot be retrieved retroactively. Using the Current Population Survey (CPS) as a substitute source is not satisfactory. CPS estimates of individuals not at work, or forced to work part time, due to an industrial dispute, fell well below the prior work stoppage survey's estimates. Moreover, the CPS sample is too thin to provide industrial detail and contains no information on the issue of the dispute or the other information categories previously collected.

Also with the budget crunch, BLS dropped its union membership survey. The Bureau first published union directories in the 1920's, and during the post-World War II period, substantial statistical detail on union membership was added. Because the data were based on *claimed* membership, their accuracy was questioned. In 1980, for example, the CPS estimate of labor organization membership was 20.1 million compared with a claimed membership of 23.9 million. However, the claimed membership data provided the only tabulation of membership by organization.

In addition, no CPS data on union membership have been published since the May 1980 survey. Fortunately, the Bureau of National Affairs has maintained part of the directory, but statistical detail has been lost.[3] Ironically, this loss of information came at a time when union membership fell dramatically. BLS' own estimates of the number of workers under major private union agreements fell from 9.3 million in 1979 to 7.9 million in 1983. Thus, at a critical period for the collective bargaining sector, an important data source was dropped. □

FOOTNOTES

[1] Discussions of the IRRA Executive Board are reported in the *Proceedings* of December 1981 and 1982. The Board considered a resolution urging continued statistical service in industrial relations at BLS and other agencies. Although the Board voted to approve the resolution by 11 to 3, no official action was taken due to opposition by management members. The Industrial Relations Center Directors' letter appears in the May 1982 IRRA *Newsletter*.

[2] Related specialized wage series in other industries were also eliminated.

[3] Courtney D. Gifford, ed., *Directory of U.S. Labor Organizations*, 1984–85 edition (Washington, The Bureau of National Affairs, 1984). Another directory has been advertised by Industrial Relations Data and Information Services but was not available at the time this paper was prepared. (After this paper was given, BLS released CPS-based estimates of union membership for 1983–84.)

Innovative approach to plant closings: the UAW–Ford experience at San Jose

GARY B. HANSEN

A systematic approach to plant closings and worker retraining was developed by the Ford Motor Co. and the United

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Auto Workers union (UAW) in the fall of 1982, when Ford announced the impending shutdown of its San Jose assembly plant. This joint labor-management initiative provided assistance to dislocated workers in the form of orientation sessions, assessment and testing, basic education, vocational exploration courses, in-plant seminars, targeted vocational retraining, prepaid tuition assistance, on-the-job training, job search training and placement, and preferential placement.

The decision to close the San Jose assembly plant was announced on November 18, 1982. Company officials believed it would be unfair to employees to hold out hope for jobs in the future. They promised San Jose workers substantial termination benefits and help with finding new jobs. When possible, Ford would relocate workers to other company plants. The date of the official closing of the plant was set for 6 months later, May 20, 1983.

When the plant closing was announced, the eight-member local Employee Development and Training Program Committee, recently created under the provisions of the UAW–Ford 1982 national agreement, moved into action. Jointly chaired by the plant's industrial relations manager and the UAW local 560 bargaining chairman, the committee worked closely with a representative of the California Economic Adjustment Team, a statewide "rapid response" unit created by the governor in March 1981 to coordinate the responses of State agencies to plant closings. Together, the State's Economic Adjustment Team and the plant's Employee Development and Training Committee convened a community task force. Within a week, plans were under way to mobilize the necessary resources to provide services to San Jose workers.

The local Employee Development and Training Program Committee and Ford management established an Employment and Retraining Center in the plant 4 days after the announcement of the plant closing. Two supervisors and two hourly paid union members were assigned to serve as training coordinators and respond to the needs of the workers. Ford paid the salaries and wages of the Employee Development Training Program Committee members and the Employment and Retraining Center employees. The company also agreed to provide space at the plant to house other public agencies, such as the California Employment Development Department (which provided job service counseling) and Milpitas Adult Education. The delivery of services to the workers began immediately, and some services continued for more than a year after the plant was shut down.

In the 4 weeks following the November 1982 plant shutdown announcement, procedures were established and services organized under the direction of the local Employee Development Training Program Committee with the assistance of the California Employment Development Department and other agencies. In addition to providing four full-time training coordinators, the Committee organized and coordinated a variety of programmatic responses. Most of the services were delivered onsite during and after work hours.

Orientation and benefits. Systematic orientation meetings were held to inform workers what was happening, what services were available, what benefits they could expect to receive, and what procedures were necessary to participate in various programs. In addition, Ford prepared and distributed "personalized" information for each worker about what his or her benefit situation would be at the time of shutdown.

Most of the workers were eligible for 52 to 104 weeks of supplemental unemployment benefits. They also received continuation of company-paid health insurance for up to 25 months, and nearly all were eligible for either immediate retirement or subsequent vested pension benefits upon reaching age 55 or 62.

Assessment and testing. All workers who wished to participate in remedial education courses and targeted vocational retraining programs were required to undergo testing to assess their education and retraining needs. California Employment Development Department counselors explained the test results and channeled workers into adult basic education, vocational training, or job search, as appropriate. During the next 12 months, more than 1,600 Ford workers took the tests and 2,000 had a skills assessment and employability plan prepared by the Employment Development Department counselors.

Adult basic education. The Milpitas Adult Education office provided courses in basic math, reading, english as a second language, and general education development (GED) classes. The classes were taught in the plant after work. The first round of classes lasted 3 weeks, but due to their popularity, five additional sections were offered, each lasting 12 weeks. Several hundred workers participated in each section, with a total attendance of more than 900, representing 531 individuals. GED courses were taken by 183 workers, who subsequently passed the GED examination.

Vocational exploration courses. Beginning in January 1983, courses lasting from 2 days to 2 weeks were taught in-plant by experienced Ford personnel during periods of assembly line downtime to help workers begin thinking about training and decide if they were seriously interested in learning a particular trade. The courses included personal computers, welding, statistical quality control, auto mechanics, upholstery, programmable logic control, forklift operation, metal repair, and basic electricity. If workers were interested in pursuing one of these trades, they could enter formal vocational training courses. More than 2,100 workers enrolled for the vocational exploration courses conducted by plant personnel from January to July 1983.

Seminars and programs. A variety of other in-plant seminars was offered by outside providers from January to June

1983. Some of these had a vocational orientation—small business, real estate, armed security guard—and others were designed to meet personal needs—financial counseling and a loan seminar. These seminars were attended by 691 workers.

Targeted vocational retraining. Area education and technical training institutions were invited to submit proposals for classroom targeted vocational retraining courses. The 140 proposals received were evaluated and considered against criteria related to the availability of job openings in demand occupations. Those which met the criteria and elicited sufficient interest among the workers were offered. The California Employment Development Department staff approved the courses and the applicants' eligibility for unemployment insurance, while the plant's Employment Retraining Center staff helped enroll workers and monitor their progress. Most targeted vocational retraining contracts were performance-based—specifying that the course provider must place a substantial percentage of the workers in jobs in order to receive payment.

More than 500 workers enrolled in over 30 targeted vocational retraining courses, including microwave technician training, machine tool technology, auto service technician, computer repair, welding, machinist, plant maintenance mechanic, computer-aided design drafting, electronic technician, heating and air conditioning, landscaping, and semiconductor mask design. Funds to pay for these courses were provided by the UAW–Ford National Development and Training Center of the "Nickel Fund" (as outlined in the parties' 1982 agreement), Job Training Partnership Act Title III, Trade Adjustment Act, and the California Employment and Training Panel.

Prepaid tuition assistance. A program set up by the UAW and Ford under the 1982 national agreement and called the National Vocational Retraining Assistance Plan provided prepaid tuition assistance for certain laid-off employees. It covered tuition and fees up to $1,000 a year at an approved educational institution and, depending on seniority, up to 4 years for self-selected education and training. Nearly 200 workers took advantage of this program.

On-the-job training program. Through the persistent and coordinated efforts of the company's Employee Development and Training Program committee and its political allies, a $638,000 grant was obtained from the California Employment and Training Panel to fund an on-the-job training program for 360 workers. The Panel was created by the California legislature to divert 0.1 percent of unemployment insurance funds from positive-reserve employers (approximately $55 million per year) for retraining purposes over a 4-year period. All training provided by these funds is directed toward specific jobs, and there must be a commitment by the employer to hire the trainees. Payment is made to the trainer or employer only if the trainees go to work.

At San Jose, the funds were used to hire a team of job developers; determine skill shortages and demand occupations; develop job sites and training opportunities among demand employers; identify, select, and place Ford workers in the on-the-job training slots; and monitor the progress of the trainees in their new jobs. The job developers were experienced Ford production personnel who were able to talk the same language as the laid-off workers, understand the needs of employers, and sell the virtues of the workers to prospective employers. More than 360 Ford workers were placed in training in the first 6 months.

Job search training and job placement. Two-day job search training workshops were conducted by California Employment Development Department staff for workers who were ready to begin the search for new jobs. As the plant closing date approached, additional workshops were offered. A total of 438 employees went through a job search skills workshop.

The plant's Employee Development and Training Program Committee started job development and placement efforts early, and did not rely wholly on the job services offered by the California Employment Development Department. A staff member was assigned to contact area employers, tell them about the skills possessed by Ford workers, and invite them to the plant to see the skills being used. As the closure drew near, these activities were formalized and an expanded job placement center was opened. In addition, a job club, complete with phone banks, was organized.

Preferential placement. Under the 1982 national agreement with the UAW, Ford allows qualified employees to move to other locations where openings are available. Ford assists them in making the transfer and allows them to return to San Jose after a trial period without losing their benefits. A total of 117 San Jose hourly workers elected to relocate to other Ford plants nationwide.

Results of the program

A number of very positive outcomes were achieved by the UAW–Ford program at San Jose. The workers' high participation rates in assessment and testing, basic education and remedial training, targeted vocational retraining, on-the-job training, and job search training all suggest a much higher "take-up rate" than normally occurs in such programs. The 70-percent workers' participation rate in testing and assessment and the 30-percent participation rate in education and training courses were much higher than those reached in other plant closures, according to available data. In fact, the 25-percent participation rate in adult basic education programs is unique. Equally significant is the low rate of dropouts in the targeted vocational retraining programs—fewer than 10 percent—indicating good preparation and high motivation of the students. There was also a lower incidence of social pathologies (drug abuse, alcohol abuse, child and spouse abuse, and suicides) than in similar shutdowns.

Job placement, the ultimate objective of programs of this kind, appears to be quite high. Although final statistics are not yet in, more than 80 percent of the employees who took training courses are now employed. To date, more than 83 percent of those who reentered the labor market have secured employment, many in skilled jobs paying wages approaching their Ford earnings. Twenty-one percent of the San Jose work force are retired or are expected to retire. Considering the high levels of available Ford benefits—which may have delayed the need for reentry into the labor market for some workers—the reemployment rates are impressive. □

Airline union concessions in the wake of deregulation

PETER CAPPELLI AND TIMOTHY H. HARRIS

While most commentators would agree that deregulation has had an important influence on airline industrial relations, close inspection of developments in the industry suggests that the connection between deregulation and recent union concession agreements may not be obvious. The initial changes in the airline industry created by the Airline Deregulation Act of 1978 seem to have increased union bargaining power. The industry's Mutual Aid Pact was banned, and any new strike fund now must meet a much more restrictive set of guidelines. In addition, the end of the Civil Aeronautics Board's control over routes and schedules means that there is now no guarantee that any of a carrier's business will survive a strike; competitors can come into one's markets during a strike and lure those passengers away.[1] At smaller carriers, however, the surfeit of pilots and other skilled personnel during the recession made it possible for carriers to threaten to break strikes by hiring replacements, possibly shifting some bargaining power back to management.[2]

The carriers' increased vulnerability to strikes and the threat they may present to employment has raised the stakes associated with industrial action, and both sides are now extremely reluctant to engage in it. Indeed, one of the main developments in industrial relations since deregulation has been a very sharp drop in strike activity. The most recent data suggest that industrial action is at the lowest level in 16 years;[3] a remarkable statistic given that the industry in general and labor relations in particular are going through the most traumatic changes in their history.

Of course, the most important change created by deregulation is that carriers are now free to compete for markets on the basis of fares and schedules. By itself, competition should not necessarily lead to pressures for concessions; after all, the highest union wages and most stable industrial relations have historically been in industries with competitive product markets, some of which were extremely competitive. John R. Commons argued in 1909 that in order for unions to raise wages above the market level, they must "take wages out of competition" by enforcing uniform contracts across the entire product market so that no competitor will have a labor cost advantage that can be turned into a competitive price advantage.[4] Where the unions were able to do this, wages were protected no matter how competitive the product markets were. In air transport, the unions have historically covered virtually the entire product market. The major and national carriers, all of which are at least partially unionized, still fly more than 90 percent of all revenue passenger miles; the remainder goes to intrastate and "upstart" carriers, many of which are at least partially unionized. The nonunion share of the air transport market is therefore roughly 5 to 7 percent, and these airlines often do not compete with the trunk carriers in the same markets.[5]

It would seem reasonable, therefore, to conclude about deregulation as did Hendricks, Feuille, and Szerszen that "the industry and unionization characteristics that developed over 40 years of regulation have created a bargaining environment that should not change substantially in the future."[6] If unions still cover the product market, then why the pressure for union concessions?

No uniform contracts

Despite their coverage of the product market, unions never *enforced* uniform contracts across the product market and therefore never took wages out of competition through collective bargaining. Civil Aeronautics Board restrictions on routes and fares served that purpose, however, by preventing labor cost advantages from being translated into lower fares and a competitive advantage. Because of this Civil Aeronautics Board protection, there was no pressure forcing the evolution of industrywide bargaining of the sort that had occurred in manufacturing. The unions, therefore, directed their efforts toward other goals—meeting the varying needs of members at the different carriers. They did this by giving the locals almost complete autonomy, especially in collective bargaining. As a result, the bargaining structure in airlines has always been single craft-single employer. This type of bargaining structure was encouraged by the Railway Labor Act's requirement that representation be by craft, leading to a plethora of unions in the industry. Edward B. Shils points out that significant industrial disputes in the industry generally involved only one union, and disputes across carriers were virtually nonexistent.[7] This bargaining structure remains despite the creation of a special coordinating committee of air transport unions within the AFL–CIO.

As soon as the Civil Aeronautics Board regulations ended and fares became competitive, wages also came under com-

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petition. Because bargaining is carrier-specific, there is no mechanism to prevent the different local unions from undercutting each other's labor costs. Financially vulnerable carriers were able to secure concessions and lower labor costs from locals hoping to reduce expected employment losses; their competitors were then placed at a cost disadvantage (one carrier estimated that 78 percent of its controllable costs were labor related), so they also demanded concessions.[8] Soon, the industry's wage structure came apart.[9]

Nevertheless, there are many ways to reduce labor costs, and the contract concessions secured by the carriers span a variety of areas in addition to wage cuts and freezes. The most important concessions in the industry, especially for flight crews and attendants, concern schedules. About 45 percent of contract concessions in 1981–84 dealt with scheduling issues. In contrast to other industries, there have been fewer efforts to broaden job classifications in airlines, presumably because of the resistance generated from rivalries between craft unions.

For many carriers, the issue has been whether contract concessions can achieve the permanent restructuring of labor costs necessary to meet growing competition from nonunion carriers which are currently hiring new employees at roughly half the pay of their more senior colleagues at the trunk carriers. The solution has been to introduce two-tier or "B" wage scales which provide lower pay for new hires. Obviously, two-tier rates reduce average labor costs only as fast as the carrier can hire new workers—expanding the work force or at least generating turnover. For the unions, two-tier scales represent a concession that costs the current membership nothing and which creates incentives to hire new workers. (The existence of two-tier scales raises potential problems for union governance, however.)

Variations by work group

Perhaps the most interesting issue in airline industrial relations is the distribution of contract changes by work group. How interested a work group is in making concessions depends not only on the probability that concessions will save jobs but also on the value of those jobs—how do they compare to alternatives elsewhere? In addition, the ability of local unions to grant concessions may depend on their autonomy from the interests of the international and on the extent of competition from other unions for their members. As Arthur M. Ross argues, unions may feel compelled to take a harder line in bargaining when they face competition from other unions.[10] Together, these arguments provide a good explanation of the pattern of contract concessions outlined below.

Pilots. Taken as a group, pilots have made more concessions than all other work groups combined. In almost every case, they have been the first group to make concessions and have given up the most. The reason for this seems clearly to be because pilots have the most to lose from layoffs. First, alternative employment with other carriers would result in a sharp pay cut. Pilots who switch carriers lose their seniority and move to the bottom of the seniority pay scale at their new carrier. During the most recent recession, as many as 5,000 pilots were laid off, suggesting that the ability to move to a new carrier was remote. Second, there are almost no employment prospects outside of the airline industry that would make use of their skills. With respect to union characteristics, many argue that pilots identify with management and have more understanding of their problems than do other work groups. In addition, the tremendous autonomy that the locals have in bargaining implies that they are free from pressure to maintain some industry pattern. Further, the fact that the Air Line Pilots Association faces almost no competition from other unions seeking to represent pilots makes it easier to take sometimes unpopular decisions such as granting concessions.

Flight attendants. The situation facing flight attendants is, perhaps surprisingly, quite different from that of pilots. While there is no market outside of air transport for these specific skills, flight attendants have less to lose from layoffs than pilots because their wages are considerably less and seniority-based pay scales are less steep, making it easier to move to a different carrier.[11] Perhaps most importantly, flight attendants have historically had less attachment to their jobs than pilots; if one is expecting to move to a different job, there is less interest in making sacrifices to save the current one. The characteristics of flight attendant unions also differ from the pilots. There are as many as 11 unions representing flight attendants, and the rivalry among them is intense. Mark L. Kahn noted, for example, that between 1976 and 1979, flight attendants at six carriers changed their representation.[12] As a result, the flight attendant unions have taken much tougher lines in bargaining across the carriers and have agreed to fewer, less significant concessions (18 percent of the total) than have the pilots.

Mechanics. Mechanics have been the work group the least inclined to agree to concessions. Only 11 percent of all concessions in the industry were granted by mechanics, and these were typically far less significant changes than for other groups. From the employers' point of view, the labor cost differential associated with mechanics is not great relative to the nonunion competition because the mechanical work for the latter is typically done under contract by the larger unionized carriers. Further, alternative employment is much more available at other carriers and outside air transport (in manufacturing, for example) at wages comparable to those paid by the trunk carriers. Perhaps most importantly, the structure of the International Association of Machinists which represents the vast majority of airline mechanics works to limit concessions.[13] The international has the ability to nullify local agreements and has used that power to prevent concessions at individual carriers.[14] The

International Association of Machinists has a strong incentive to avoid concessions altogether in order to prevent them from spreading to its negotiations outside of air transport where similar settlement patterns are followed.

In many cases unions are able to secure improvements in some aspects of employment relations in return for granting concessions. These *quid pro quos* typically are secured in areas which do not raise current labor costs, often expanding negotiations into new areas outside of the current contract. Whether unions are able to secure these improvements depends on how badly management needs union cooperation; in short, whether the unions have bargaining power.[15] As argued above, the airline unions still have considerable bargaining power, and it is therefore not surprising to find that they have secured an important array of improvements.

The pressures generated by carrier-specific bargaining in competitive product markets tie the interests and prospects of union members to the performance of the carrier, and the *quid pro quos* strengthen that relationship. In addition to the fact that employment prospects are closely linked to carrier performance, participation in corporate decisionmaking helps create commitment on the part of the work force to the goals of the airline; profit-sharing, stock ownership, and other arrangements provide financial incentives to pursue those goals. Together, these arrangements will further the attachment of airline employees to their employers, perhaps making it more difficult for their unions to achieve the industry-wide structure that manufacturing unions have historically used to counter wage-cutting pressures. □

———*FOOTNOTES*———

ACKNOWLEDGMENT: Thanks to Jim Conway and Jerry Glass of the Airline Industrial Relations Conference (AIRCon) for providing the contract data analyzed in this study.

[1] For example, United's markets were apparently so severely damaged by its 58-day machinist strike in 1979 that it initiated half-fare coupons to try and win some of its business back; this move sparked the industry's first major fare war which had disasterous consequences for all participants. See "Fare Wars," *Forbes*, Sept. 1, 1981, p. 36.

[2] Continental replaced some striking mechanics and pilots in 1983 and unilaterally imposed lower pay rates as part of its bankruptcy reorganization plan. Mark L. Kahn notes that Century Airlines took somewhat similar action in 1931. It took advantage of the surplus of pilots and the need to cut costs and prices by forcing its pilots to resign and reapply for their jobs at half pay. This action led to ALPA's first strike. See Mark L. Kahn and Gerald Somers, eds., "Airlines," *Collective Bargaining: Contemporary American Experience* (Madison, WI, Industrial Relations Research Association, 1980).

[3] *Forty-Ninth Annual Report* (Washington, National Mediation Board, 1983).

[4] John R. Commons, "American Shoemakers, 1648–1895: A Sketch of Industrial Evolution," *Quarterly Journal of Economics*, November 1919.

[5] These calculations are based on statistics on carrier market shares from the Civil Aeronautics Board, 1982. Richard B. Freeman and James L. Medoff's 1979 estimates suggest that 89 percent of air transport production workers were covered by collective bargaining agreements in 1969–72. Coverage of the product market was virtually complete because the organized carriers flew far more flights and typically did not compete with the nonunion carriers, who were concentrated on intrastate routes.

[6] Wallace Hendricks, Peter Feuille, and Carol Szerszen, "Regulation, Deregulation and Collective Bargaining in the Airlines," *Industrial and Labor Relations Review*, October 1980, pp. 67–81.

[7] Edward B. Shils, "Union Fragmentation: A Major Cause of Transportation Labor Crises," *Industrial and Labor Relations Review*, October 1971, pp. 32–52.

[8] "As Continental Takes Bankruptcy Step, Rivals Plan to Move In," *The Wall Street Journal*, July 29, 1983.

[9] The great irony now is that during the early years of the industry, the carriers had pushed for industry-wide bargaining that would have taken wages out of competition but were rebuffed in these efforts by the unions. Brief experiments in multicarrier bargaining with the International Association of Machinists in the 1960's were abandoned. See Mark Kahn, "Wage Determination for Airline Pilots," *Industrial and Labor Relations Review*, April 1953, pp. 317–36; and Mark L. Kahn "Airlines."

[10] Arthur M. Ross, *Trade Union Wage Policy*, (Berkeley, CA, University of California Press, 1948).

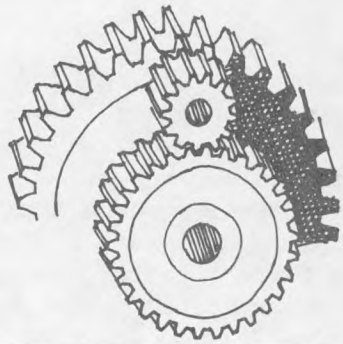
[11] "Competition and the Airlines: An Evaluation of Deregulation" (Washington, Civil Aeronautics Board, December 1982).

[12] Mark L. Kahn, "Airlines."

[13] For example, the International Association of Machinists took one of its locals to court recently in an effort to prevent a concession agreement from being approved at Braniff. See "Machinists' Concessions at Braniff Held Binding," *Daily Labor Report*, Sept. 11, 1984, p. 1.

[14] "Airline Wages are Set for a Long Slide," *Business Week*, Apr. 9, 1984, p. 127.

[15] Peter Cappelli, "Union Gains Under Concession Bargaining," *Proceedings of the Industrial Relations Research Association 36th Annual Meeting* (Madison, WI, Industrial Relations Research Association, 1984), pp. 297–305.



Productivity Reports

Productivity and costs in 1984

LAWRENCE J. FULCO

The strongest productivity advances in some years were registered by major Bureau of Labor Statistics measures during 1984.[1] Output per hour of all persons—labor productivity—reflected the continuation of the economic expansion that began during the first quarter of 1983. Although output, hours, and employment grew strongly in major sectors, continued moderation in the advance of hourly compensation contributed to slow growth of unit labor costs. Prices for the goods and services which make up the output of these sectors reflected this slow growth, as well as dampened rates of increase in other costs and in unit profits. The expansion has been predictably uneven, with employment advancing fastest in goods-producing industries during the last year.

The following tabulation shows the changes during 1984 in productivity and related measures. Additional information appears in tables 29–32 of the Current Labor Statistics section of this issue.

Sector	*Productivity*	*Output*	*Hours*
Business	3.2	8.8	5.4
Nonfarm business	2.7	8.5	5.7
Manufacturing	3.5	10.5	6.7
Durable	4.8	14.4	9.1
Nondurable	1.5	4.9	3.3
Nonfinancial corporations	2.3	9.0	6.6

Business sector

Business, the most comprehensive sector for which BLS prepares quarterly productivity measures, accounted for 79 percent of gross national product in 1984.[2] Annual changes in productivity are generally thought to reflect two components: short-run effects of the business cycle and other transitory influences, and long-run, or secular, effects of shifts in the underlying composition of output, the labor force, and the stage of economic development. Productivity growth usually accelerates in the recovery-expansion phase of the business cycle, and 1984 encompassed the fifth through eighth quarters of the current expansion.

Table 1 presents the annual rates of growth in productivity and related measures during the recovery periods that followed the troughs of postwar business cycles. This table shows that productivity advances over the 2-year recovery-expansion from the 1982 business cycle trough have been lower than average. However, the gains in output, hours, and employment have been very high by historical standards. In addition, the rate of growth of compensation per hour has been a good deal slower than has been typical of like recovery periods, and has contributed to much smaller increases in unit labor costs. In fact, unit labor costs in manufacturing have actually declined in the current recovery.

The 1984 productivity gains probably reflected the cyclical rebound. However, it is possible that some of these gains reflect a movement back to the higher secular growth rate in productivity noted before 1973. Whether this is so will not be evident until data for additional years can be analyzed. Chart 1 shows the relationship between productivity, hourly compensation, and unit labor costs since 1973.

Productivity increased 3.2 percent in the business sector in 1984, as output increased 8.8 percent and hours rose 5.4 percent. The increase in productivity was the largest since 1976 and the gain in hours—which reflects changes in both employment and average weekly hours—was the largest ever recorded for that series.

Most of these gains took place in the first two quarters; productivity, output, and hours all grew more slowly during the second half of the year. Output increased at an 11.3-percent annual rate during the first two quarters but grew at only a 3.4-percent rate during the remaining quarters. The rate of increase in hours and productivity similarly slowed during the last half of 1984. Because very high growth rates such as those experienced during the first half of the year are not likely to be sustainable for an extended period, growth in future quarters may not be as vigorous.

Gains in hourly compensation during the current recovery have been smaller than the recent trend, and smaller than the gains observed during similar recovery-expansion periods. These outlays, which include employer expenditures for wages, salaries, supplements, and all other employee

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benefit plans, posted gains during 1983 and 1984 which were the smallest in nearly two decades. Real hourly compensation, which is adjusted for changes in the Consumer Price Index for All Urban Consumers (CPI-U), was unchanged in 1984.

Unit labor costs—compensation per unit of output—respond to changes in both productivity and hourly compensation. During 1984, these costs registered their smallest annual increase since 1965. In both 1983 and 1984, prices of the goods and services which comprise the output of the business sector posted the smallest gains since 1967.

Business payrolls numbered about 84.3 million positions in 1984, compared with 80.6 million in 1983.

Nonfarm business

Nonfarm business is nearly as large as the business sector, because farm employment accounts for only 3.5 percent of the business total.[4] However, the weather and changes in foreign supplies of and demand for agricultural commodities often lead to wide swings in farm productivity and related measures. By focusing on the nonfarm portion of the business sector, analysts can study data which are unaffected by these external influences, but which are nearly as comprehensive as the business measures. In 1984, nonfarm business productivity increased 2.7 percent, as output grew 8.5 percent and hours of all persons engaged in the sector increased 5.7 percent. As in the more comprehensive business sector, growth was much stronger during the first two quarters.

Hourly compensation increased 4.1 percent, and real hourly compensation declined 0.1 percent over the year. Unit labor costs were 1.4 percent higher in 1984 than in 1983. As in the more comprehensive business sector, this gain was modest by historical standards; the increases in unit labor costs during 1983 and 1984 were the smallest since 1961–65, when gains were less than 0.6 percent each year. Prices of nonfarm output increased 3.1 percent in 1984, compared with a 3.2-percent advance in 1983. These were the smallest increases since 1972.

The nonfarm business sector provided 81.3 million jobs in 1984, compared with 77.6 million during the previous year.

Table 1. Changes in productivity and related measures eight quarters after the trough of postwar recessions

[Percent change at compound annual rate]

Trough quarter	Change over eight posttrough quarters					
	Productivity	Output	Hours	Employment	Hourly compensation	Unit labor costs
	Business					
1949 IV	5.6	8.8	3.1	3.0	8.7	2.9
1954 II	2.8	5.9	3.0	3.1	4.2	1.4
1958 II	2.7	5.7	2.9	2.6	4.6	1.8
1961 I	4.4	5.2	0.8	0.7	4.6	0.2
1970 IV	4.0	6.7	2.5	2.7	6.5	2.4
1975 I	3.8	6.4	2.5	2.6	8.1	4.0
1980 III[1]	2.7	4.5	1.7	1.9	9.3	6.4
Average	3.9	6.5	2.5	2.5	6.1	2.1
1982 IV	3.1	7.9	4.6	3.9	3.9	0.8
	Nonfarm business					
1949 IV	4.7	9.4	4.5	4.1	8.3	3.4
1954 II	2.6	6.2	3.6	3.3	4.7	2.0
1958 II	2.3	6.0	3.6	3.2	4.3	1.9
1961 I	3.8	5.5	1.6	1.4	3.9	0.0
1970 IV	4.3	7.0	2.6	2.6	6.6	2.3
1975 I	3.7	6.6	2.8	2.9	7.7	3.9
1980 III[1]	2.0	3.8	1.8	2.0	9.5	7.4
Average	3.6	6.8	3.1	2.9	5.9	2.3
1982 IV	3.1	8.0	4.7	4.0	4.1	1.0
	Manufacturing					
1949 IV	4.8	13.8	8.5	7.4	9.1	4.1
1954 II	2.3	6.0	3.6	2.8	4.7	2.4
1958 II	3.4	8.4	4.9	3.9	4.2	0.9
1961 I	6.2	9.7	3.3	2.3	3.3	−2.7
1970 IV	6.2	10.0	3.6	2.3	5.6	−0.5
1975 I	5.8	9.5	3.4	2.4	8.1	2.2
1980 III[1]	5.5	7.9	2.3	2.0	8.4	2.8
Average	4.8	9.6	4.6	3.5	5.8	1.1
1982 IV	3.8	9.8	5.7	4.2	3.4	−0.5

[1]Percent change over four posttrough quarters.

Table 2. Hours by industry, fourth-quarter 1982 and fourth-quarter 1984

Industry	Hours (billions)		Annualized rate of growth 1982 IV–1984 IV (percent)
	1982 IV	1984 IV	
Total	170.452	185.004	4.2
Goods producing	52.641	58.680	5.6
Farm	6.293	6.537	1.9
Mining	2.221	2.260	0.9
Construction	7.288	8.627	8.8
Manufacturing	36.839	41.256	5.8
Non-goods producing	117.811	126.324	3.6
Transportation, communications, and public utilities	10.160	10.711	2.7
Trade	33.997	37.094	4.5
Finance, insurance, and real estate	10.101	10.899	3.9
Services	32.849	36.236	5.0
Government enterprises	30.704	31.384	1.1

Manufacturing

Productivity increased 3.5 percent in manufacturing in 1984, as output rose 10.5 percent and hours, 6.7 percent. The gains were the largest since the 1950's. Unlike the more comprehensive business sectors, manufacturing showed vigorous growth in productivity and output through the third quarter of 1984, but in the fourth quarter both measures declined.

Hourly compensation increased 3.6 percent, compared with a 3.4-percent rise in 1983. These were the two smallest annual increases in hourly compensation since 1965. Coupled with the strong productivity gains, the modest increases in hourly compensation held unit labor costs in both years below those recorded in 1982; it was the first period of such decline since 1962–65. Real hourly compensation declined 0.6 percent in 1984.

Durable goods manufacturing, which accounts for about 60 percent of all manufacturing employment, tends to be more volatile during periods of economic change. In 1984, output and employee hours in durables industries grew almost three times as fast as in nondurables. Productivity also

increased faster in durable goods manufacturing, and unit labor costs fell more than 1.5 percent. The decline in these costs during 1983 and 1984 were the first such drops since the mid-1960's.

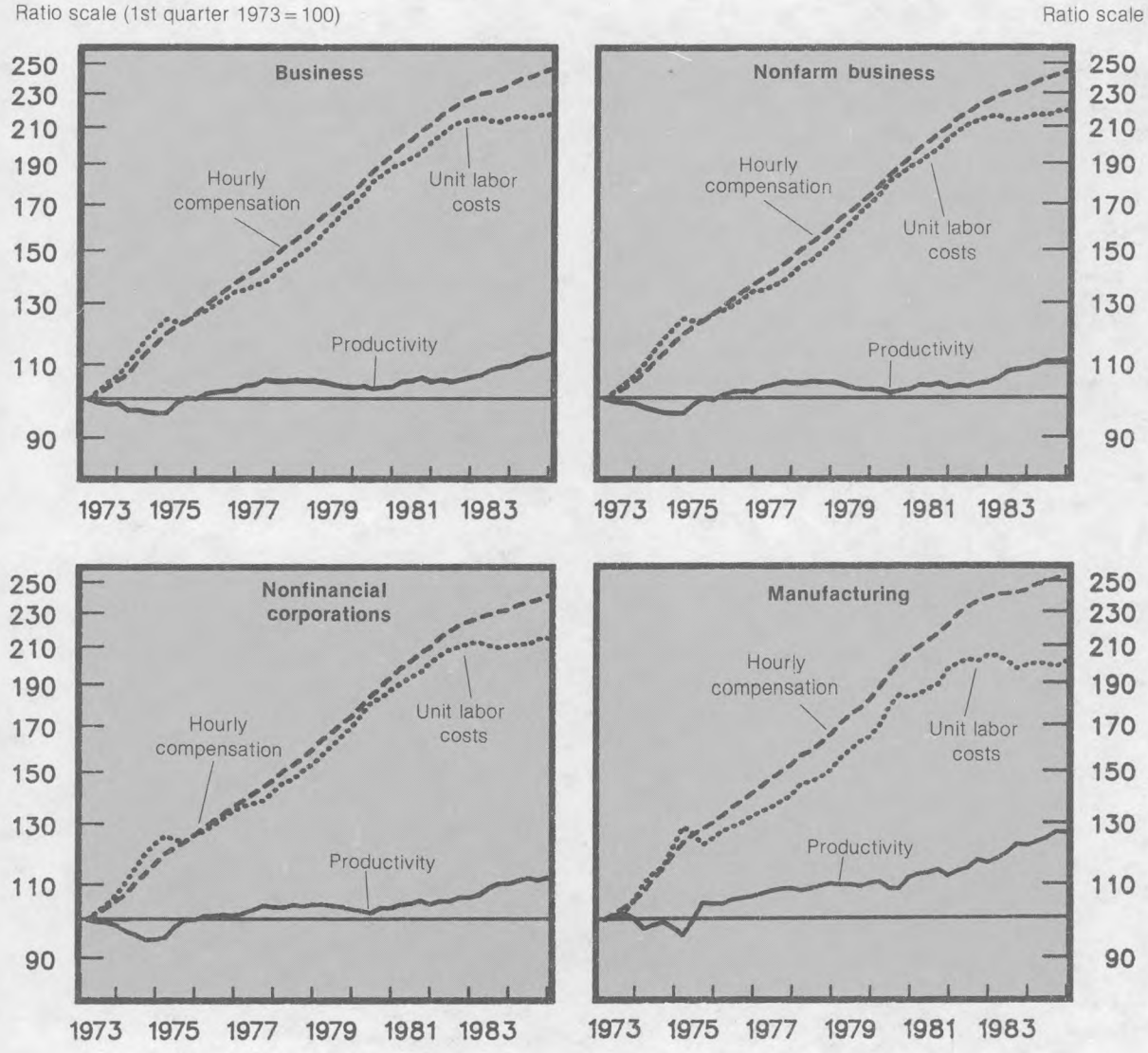
Total manufacturing employment averaged 20 million in 1984, down slightly from the 21.4 million peak in 1979.

Nonfinancial corporations

Productivity increased 2.3 percent in nonfinancial corporations in 1984, compared with a 3.3-percent rise during 1983. These concerns, which employ 70 percent of the business work force, include all corporations doing business in the United States with the exception of banks, brokers, and insurance companies. Output and hours grew strongly during 1984, while hourly compensation advanced modestly. Since 1980, nonfinancial corporations have registered progressively smaller annual increases in hourly compensation; in 1984, such outlays rose 3.5 percent. Again, the slowing of advances in hourly compensation has been reflected in unit labor costs, which rose 1.1 percent in 1984 and 0.8 percent in 1983. These were the smallest increases since 1961–65.

Profits rose 37.3 percent in 1984, and profit per unit of output increased 25.9 percent. Prices rose a modest 3.0

Chart 1. Productivity and related measures in four sectors of the economy, first-quarter 1973 to fourth-quarter 1984



percent in the nonfinancial corporate sector, reflecting the dampened increases in unit labor costs, nonlabor costs, and profits. This advance and the 3.1-percent rise in 1983 were the smallest price gains for the sector since 1972. There were about 59 million employees of nonfinancial corporations in 1984.

Increase in hours

The rebound from the trough of the recession has been felt in every segment of the economy. Hours of all persons (employment multiplied by average weekly hours) grew at a 4.2-percent annual rate over the eight-quarter period. The most rapid growth occurred in the construction industry, which is part of the goods-producing sector. Hours in these businesses increased at a 5.6-percent annual rate during the recovery, compared with a 3.6-percent rate of growth among non-goods producers. The smallest gains were reported in mining (0.9 percent) and government enterprises (1.1 percent). Table 2 shows hours by industry for the fourth quarters of 1982 and 1984, as well as the compound annual rate of growth over the eight-quarter span. □

FOOTNOTES

[1] Annual changes in this article refer to movements in the average of the four quarterly values from one year to the next. This is not the same as comparing yearend (fourth-quarter) values from year to year. Both annual changes and changes from the same quarter of the preceding year can be found in tables 32 and 34 (respectively) of the Current Labor Statistics section of the *Review*.

[2] Business sector output is equal to gross national product, less the rest-of-the-world sector, general government, output of paid employees of private households and nonprofit institutions, and the statistical discrepancy in computing the national income accounts. Corresponding exclusions are also made in labor input.

[3] Nonfarm business productivity growth averaged 2.0 percent from 1947 to 1981; before 1973, growth averaged 2.5 percent annually, but subsequently fell to only 0.6 percent a year. The slowdown in labor productivity growth has been long studied and discussed; see, for example, Jerome A. Mark and William H. Waldorf, "Multifactor productivity: a new BLS measure," *Monthly Labor Review*, December 1983, pp. 3–15.

[4] Employment continued to shift away from agriculture after World War II, and this movement of workers to highly productive industrial jobs contributed to rapid productivity growth. The percentage of business employment in farms was 11.8 percent in 1954, 7.8 percent in 1964, 4.6 percent in 1974, and 3.5 percent in 1984.

Research Summaries

Hours at work increase relative to hours paid

KENT KUNZE

The ratio of hours at work to hours paid in nonagricultural establishments increased slightly in 1983, according to the latest Bureau of Labor Statistics' survey of hours at work completed for production and nonsupervisory workers. (See table 1.) Output per hour (labor productivity) of all persons in nonfarm businesses increased 3.5 percent during 1983 based on hours paid.[1] When this measure is adjusted for the change in the ratio of hours at work to hours paid, it shows an annual increase of 3.1 percent.[2]

Initiated by BLS in 1982, the Hours at Work Study now contains annual and quarterly data for the 1981–83 period. The ratio of hours at work to hours paid measures the time workers are actually on the job site or at the workplace compared with the hours for which they are paid. Paid hours include the paid leave time employees use: this comprises vacation time, sick leave, holidays, and other personal leave. Hours at work include rest periods and coffee breaks. For workers who received, say, 2 weeks of paid vacation, no paid sick leave, and 10 paid holidays the hours at work to hours paid ratio would be .923.

The purpose of the survey is to compare differences in the trends and cyclical movements of total hours of labor input based on both an *hours at work* definition and an *hours paid* definition. The hours at work definition is more appropriate for measuring labor input as a factor of production and hence, more appropriate for inclusion in a measure of productivity change. On the one hand, the hours at work definition is often inaccurate if the data are collected based on a survey week (as in the case of the measures from the Current Establishment Statistics (CES) Survey), because holidays and other paid leave time may not be evenly distributed over the month. Hours paid measures, on the other hand, which are not as sensitive to the survey week, provide more consistent measures when the data are collected in this manner.

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Nonagricultural establishments

During 1983, the ratio of hours at work to hours paid in nonagricultural establishments increased from .926 to .930 (table 1). This increase reflects two different effects. One is the increase in overall employment (from 68.9 million in 1982 to 69.4 million in 1983) which generally means a larger proportion of junior employees who do not receive as much paid leave time.[3] Consequently, the average hours at work as a percent of all hours paid per employee rose.

The other effect—what is called a composition change—resulted from employment increasing faster in those industries which have higher than average ratios of hours at work to hours paid. From 1982 to 1983 there was a shift from employment in manufacturing to nonmanufacturing. In manufacturing, which has a ratio of .914, employment actually decreased in 1983 by about 300,000 workers, while for nonmanufacturing industries, with a ratio of .936, employment increased by about 800,000 workers.

Table 2 presents the quarterly changes in the ratio of hours at work to hours paid. While these ratios are of interest with respect to productivity measures, quarter-to-quarter changes are highly sensitive to seasonal patterns and therefore require seasonal adjustment. At present, as there are only 3 years of data, it is not possible to compute seasonal factors for the ratios.

Manufacturing

In manufacturing establishments, the ratio of hours at work to hours paid increased from .909 in 1982 to .914 in 1983. However, the 1981 level was .912; thus, the 1983 level was only slightly higher than the pre-1982 recession level. There was a similar pattern for both durable and nondurable manufacturing establishments. In durable manufacturing establishments, the ratio was .905 in 1982 and .911 in 1983; it was .907 in 1981. In nondurable manufacturing establishments, the 1983 ratio was .918, compared with .916 in 1982; it was .920 in 1981.

The largest absolute increase in the ratio of hours at work to hours paid among manufacturing industries in 1983 occurred in primary metals, which rose from .879 to .901. The largest absolute decrease was in instruments, which declined from .904 to .886. Of the 29 industry divisions in the survey, 11 experienced decreases in the ratio of hours

Table 1. Ratio of hours at work to hours paid for production and nonsupervisory employees, by industry, 1981–83

Industry	1981	1982	1981–82 change	1983	1982–83 change
Nonagricultural business	.924	.926	.002	.930	.004
Mining	.937	.925	−.012	.916	−.009
Construction	.978	.982	.004	.980	−.002
Manufacturing	.912	.909	−.003	.914	.005
Durable	.907	.905	−.002	.911	.006
Lumber	.935	.929	−.006	.944	.015
Furniture and fixtures	.941	.931	−.010	.936	.005
Stone, clay, glass	.906	.903	−.003	.910	.007
Primary metals	.891	.879	−.012	.901	.022
Fabricated metals	.919	.912	−.007	.919	.007
Machinery (except electrical)	.900	.906	.006	.902	−.004
Electrical equipment	.906	.899	−.007	.909	.010
Transportation equipment	.893	.898	.005	.908	.010
Instruments	.907	.904	−.003	.886	−.018
Miscellaneous manufacturing	.927	.921	−.006	.919	−.002
Nondurable	.920	.916	−.004	.918	.002
Food and kindred products	.927	.924	−.003	.921	−.003
Tobacco	.892	.853	−.039	.865	.012
Textile mills	.943	.937	−.006	.944	.007
Apparel	.948	.939	−.009	.937	−.002
Paper	.883	.890	.007	.897	.007
Printing and publishing	.905	.915	.010	.919	.004
Chemical	.895	.882	−.013	.886	.004
Petroleum and coal products	.899	.892	−.007	.878	−.014
Rubber and plastic products	.918	.906	−.012	.916	.010
Leather	.931	.930	−.001	.936	.006
Transportation	.875	.871	−.004	.879	.008
Communications	.887	.883	−.004	.881	−.002
Electric, gas, water	.876	.873	−.003	.882	.009
Wholesale trade	.934	.936	.002	.928	−.008
Retail trade	.947	.959	.012	.960	.001
Finance, insurance, real estate	.914	.905	−.009	.901	−.004
Services	.920	.936	.016	.948	.012

Table 2. Ratio of hours at work to hours paid for production and nonsupervisory workers, by quarter and industry, 1982 and 1983

Industry	1982				1983				Change, 1982–83			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Nonagricultural business	.941	.930	.908	.921	.944	.934	.914	.927	.003	.004	.006	.006
Mining	.947	.919	.904	.923	.933	.905	.911	.913	−.014	−.014	.007	−.010
Construction	.989	.990	.981	.981	.983	.982	.976	.979	−.006	−.008	−.005	−.002
Manufacturing	.934	.912	.888	.900	.936	.919	.898	.908	.002	.007	.010	.008
Durable	.929	.907	.880	.896	.932	.914	.894	.906	.003	.007	.014	.010
Lumber	.955	.931	.914	.928	.957	.936	.937	.940	.002	.005	.023	.012
Furniture and fixtures	.957	.930	.914	.921	.957	.940	.920	.929	.0	.010	.006	.008
Stone, clay, glass	.924	.899	.881	.894	.925	.911	.905	.899	.001	.012	.024	.005
Primary metals	.906	.875	.852	.864	.904	.906	.884	.909	−.002	.031	.032	.045
Fabricated metals	.942	.904	.893	.908	.942	.927	.904	.909	.000	.023	.011	.001
Machinery (except electrical)	.936	.924	.861	.894	.930	.905	.877	.904	−.006	−.019	.016	.010
Electrical equipment	.918	.900	.872	.892	.937	.912	.883	.902	.019	.012	.011	.010
Transportation equipment	.915	.896	.890	.886	.930	.909	.904	.893	.015	.013	.014	.007
Instruments	.928	.918	.867	.894	.908	.904	.870	.890	−.020	−.014	.003	−.004
Miscellaneous manufacturing	.949	.916	.896	.920	.950	.931	.883	.914	.001	.015	−.013	−.006
Nondurable	.941	.920	.900	.904	.941	.924	.904	.912	.0	.004	.004	.008
Food and kindred products	.940	.927	.918	.905	.944	.932	.919	.919	.004	.005	.001	.014
Tobacco	.933	.832	.844	.818	.931	.836	.873	.824	−.002	.004	.029	.006
Textile mills	.967	.936	.918	.929	.970	.948	.922	.937	.003	.012	.004	.008
Apparel	.970	.956	.920	.932	.955	.952	.915	.925	−.015	−.004	−.005	−.007
Paper	.921	.892	.867	.878	.924	.892	.880	.895	.003	.0	.013	.017
Printing and publishing	.938	.924	.901	.906	.938	.930	.904	.913	.0	.006	.003	.007
Chemicals	.907	.881	.862	.877	.910	.888	.870	.880	.003	.007	.008	.003
Petroleum and coal products	.905	.901	.884	.871	.894	.882	.866	.869	−.011	−.019	−.018	−.002
Rubber and plastic products	.937	.909	.886	.888	.941	.916	.898	.913	.004	.007	.012	.025
Leather	.959	.928	.907	.927	.966	.940	.918	.921	.007	.012	.011	−.006
Transportation	.861	.847	.839	.846	.891	.876	.859	.870	.030	.029	.020	.024
Communications	.888	.885	.858	.864	.904	.896	.864	.881	.016	.011	.006	.017
Electric, gas, water	.893	.889	.860	.852	.899	.893	.870	.867	.006	.004	.010	.015
Wholesale trade	.959	.944	.922	.931	.938	.935	.915	.918	−.021	−.009	−.007	−.013
Retail trade	.974	.967	.951	.966	.969	.961	.940	.965	−.005	−.006	−.011	−.001
Finance, insurance, real estate	.915	.910	.870	.901	.926	.913	.869	.898	.011	.003	−.001	−.003
Services	.947	.941	.915	.931	.956	.952	.935	.944	.009	.011	.020	.013

Table 3. Output per hour for nonfarm business and manufacturing based on hours paid and hours at work, 1983[1]

Industry	Percent change from same quarter a year ago								Percent change	
	I		II		III		IV		1982–83	
	Hours paid	Hours at work	Hours paid	Hours at work	Hours paid	Hours at work	Hours paid	Hours at work	Hours paid	Hours at work
Nonfarm business	1.8	1.5	4.3	3.8	3.9	3.2	3.9	3.3	3.5	3.1
Manufacturing	3.4	3.2	4.3	3.6	4.3	3.2	4.9	4.0	4.3	3.8
Durable	4.7	4.4	5.7	4.9	5.5	3.8	6.1	5.1	5.6	4.9
Nondurable	1.4	1.5	2.2	1.8	2.7	2.3	3.3	2.4	2.4	2.1

[1]Changes in ratio of hours at work to hours paid are based on survey of production and nonsupervisory employees. Adjustment is applied to all the hours of all persons which includes supervisors, nonproduction workers, and proprietors.

of work to hours paid; 18 had increases between 1982 and 1983 as opposed to 21 decreases and 8 increases from 1981 to 1982. Again these changes mostly reflect the cyclical nature of different industries caused by employers responding to the changing economic conditions.

Productivity measures

As previously noted, the annual change in output per hour (labor productivity) in nonfarm business between 1982 and 1983 was 3.5 percent by using the hours paid method and 3.3 percent based on hours at work. (See table 3.) Similarly, for manufacturing, productivity based on hours paid increased 4.3 percent from 1982 to 1983; after adjusting for the change in hours at work to hours paid, the increase in output per hour at work was 3.8 percent. These comparisons indicate that seemingly small changes in the ratio translate into significant adjustments in productivity growth rates.

As mentioned earlier, it is not possible to adjust quarterly changes in output per hour for the changes in the ratio of hours at work to hours paid because there are no seasonal factors presently available. However, changes from the same quarter a year ago will not be affected by seasonal fluctuations unless there is a change in seasonal patterns. Table 3 shows there are differences between output per hour based on hours paid and hours at work compared with the same quarter a year ago. This is so for nonfarm business, total manufacturing, and durable and nondurable goods manufacturing. The largest percent changes were generally in the third quarter and the smallest were in the first quarter. The largest single quarterly difference was for durable manufacturing in the third quarter of 1983, when the hours at work labor productivity measure was 1.7 percentage points lower than the hours paid measure. The smallest difference was for nondurable manufacturing in the first quarter. □

FOOTNOTES

[1]The difference between nonfarm and nonagricultural establishments is that the latter does not include agricultural services.

[2]The adjustment to the BLS measure of multifactor productivity would be smaller. The annual growth rate in multifactor productivity resulting from the change in the ratio of hours at work to hours paid is equal to the percentage share of labor compensation in output (about 65 percent) times the change in the ratio.

[3]Similarly, during a recession junior employees are usually the first to be laid off and consequently the ratio of hours at work to hours paid goes up. See Kent Kunze "A new BLS survey measures the ratio of hours worked to hours paid," *Monthly Labor Review*, June 1984, pp. 3–7.

Occupational earnings and benefits in making nonelectrical machinery

Occupational earnings in nonelectrical machinery manufacturing industries varied considerably among 23 metropolitan areas surveyed by the Bureau of Labor Statistics in November 1983.[1] This was due, in part, to the diversity of skills required to manufacture a variety of products, ranging from hedge trimmers and meat grinders to large, complex engines, turbines, construction equipment, and oil drilling rigs. Occupations selected as representative of production jobs in these industries accounted for one-half of the 252,900 production and related workers covered by the study.

Among the jobs surveyed, tool and die makers usually had the highest hourly earnings in an area. Average pay in this occupation ranged from $10.40 an hour in Atlanta to $14.38 in Los Angeles–Long Beach, but typically was between $11 and $13 an hour. In 6 of the 11 areas that could be compared, workers producing tools and dies for internal use (those employed in other than jobbing shops) averaged more than workers producing tools and dies for sale (those employed in jobbing shops). The differential was usually 5 percent or less.

Machine-tool operators on production work were the largest occupational group studied. They performed their work on conventional equipment or numerically controlled (N/C) machines, which use coded instructions to direct the machine through a sequence of operations. Conventional operators were classified into three groups for wage study purposes. Operators who set up their own machines and perform a variety of operations to close tolerances (class A) averaged from $8.39 per hour in Atlanta to $13.24 in San Francisco–Oakland. Average earnings for the intermediate group of operators (class B) ranged from $7.31 in Atlanta to $11.37 in Milwaukee; and for operators who do routine and repetitive work but do not set up machines (class C),

the averages ranged from $5.31 in Newark to $10.22 in Milwaukee.

Average pay for operators of N/C machines who set up work and operate machines ranged from $7.13 in Atlanta to $14.72 in Los Angeles–Long Beach. In 9 of 20 areas for which comparisons could be made, these N/C operators averaged more per hour than class A conventional machine-tool operators, and in eight other areas, their pay levels fell between the averages for class A and class B operators.

Assemblers, the second largest employee group, usually accounted for between one-tenth and one-fourth of the production work force in an area. Average earnings for work requiring fitting of parts and decisions regarding proper performance of parts or units (class A) typically ranged between $9 and $11 an hour. Workers assembling in accordance with standard and prescribed procedures (class B) typically averaged between $7 and $9, while those performing short-cycle, repetitive assembling operations (class C) generally averaged between $6 and $8.

Janitors, among the lowest paid occupations in the survey, averaged between $5.57 in New York and $10.08 in Detroit. They averaged less than $8 in 15 of the 22 areas for which data could be presented.

Except in Milwaukee, nearly nine-tenths or more of the production workers were paid on a time-rated basis, usually under formal plans that provided a range of rates for specific occupations. In most areas, progression within individual ranges usually was based on length of service or a combination of length of service and merit review. Incentive plans applied to two-fifths of the workers in Milwaukee, and to approximately one-tenth in Baltimore, Boston, Chicago, and Hartford.

Pay levels rose 14.8 percent, or 5.0 percent a year, between January 1981 and November 1983, according to an index developed for this survey series.[2] This contrasted sharply to the 10.2-percent annual rate recorded for the preceding 3 years. The wage and salary component of the Bureau's Employment Cost Index for durable goods manufacturing also showed a similar pattern—6.2 percent annually between December 1980 and December 1983 and 9.1 percent between December 1977 and December 1980.

As pay levels in nonelectrical machinery manufacturing increased at a slower pace, surveywide employment dropped 36 percent—from 393,000 production workers in January 1981 to 252,900 in November 1983. Proportionally, the declines were largest (50 to 59 percent) in Cleveland, Houston, Milwaukee, Pittsburgh, and Portland, and ranged from 20 to 40 percent in 15 other areas. The only area reporting increased employment was Atlanta—up 19 percent to 2,827 workers.

Virtually all production workers covered by the survey were provided paid holidays, vacations, and several types of insurance plans. Most workers had provisions for 9 to 12 holidays annually, and 1 or 2 weeks of vacation pay after 1 year of service, 2 or 3 weeks after 5 years, 3 weeks after 10 years, and 4 weeks or more after 20 years. In most of the areas, life, hospitalization, surgical, and basic medical insurance applied to nearly all production workers; while major medical, accidental death and dismemberment, and sickness and accident insurance covered at least a large majority. Retirement pension plans were available to four-fifths or more of the production workers in 16 areas, and to between one-half and three-fourths in the remaining seven areas. Employers typically paid the entire cost of the health, insurance, and pension plans.

One-half of the production workers were in establishments with collective bargaining agreements covering a majority of such workers. Most of the contracts were with the International Association of Machinists, the United Auto Workers, or the United Steelworkers of America. At least two-thirds of the production workers in Buffalo, Cleveland, Milwaukee, New York, San Francisco–Oakland, and St. Louis were covered by union contracts, compared with less than one-fifth of the workers in Denver–Boulder and Worcester.

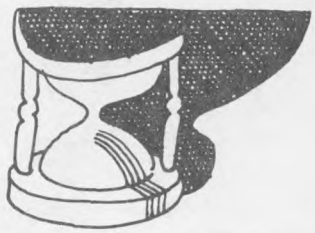
A comprehensive report on the survey—*Industry Wage Survey: Nonelectrical Machinery, November 1983* (BLS Bulletin 2229)—may be purchased from any of the Bureau's regional sales offices or the Superintendent of Documents, U.S. Government Printing Office, Washington 20402. □

———*FOOTNOTES*———

[1] The 23 areas for which data have been developed are Standard Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through October 1979. They are: *Northeast*—Boston, Buffalo, Hartford–New Britain–Bristol, Newark, New York, Philadelphia, Pittsburgh, and Worcester; *South*—Atlanta, Baltimore, Dallas–Fort Worth, Houston, and Tulsa; *North Central*—Chicago, Cleveland, Detroit, Milwaukee, Minneapolis–St. Paul, and St. Louis; and *West*—Denver–Boulder, Los Angeles–Long Beach, Portland, and San Francisco–Oakland. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts.

[2] Earnings trend data are limited to the 21 machinery centers surveyed since 1955. Tulsa was first studied in the winter 1970–71 and Atlanta in the 1973 study. The index is based on the straight-time hourly earnings of production workers in the following occupations: Assemblers (classes A, B, and C); maintenance electricians; inspectors (classes A, B, and C); janitors, porters, and cleaners; material handling laborers; production machine-tool operators (classes A, B, and C); production machinists; tool and die makers (other than jobbing); and class A hand welders. For accounts of the two previous studies, see *Industry Wage Survey: Machinery Manufacturing, January 1981*, and *January 1978*, Bulletins 2124 and 2027, respectively (Bureau of Labor Statistics, 1982 and 1979). See also, "Area pay levels vary widely in machinery manufacturing," *Monthly Labor Review*, November 1979, pp. 51–52.

Major Agreements Expiring Next Month



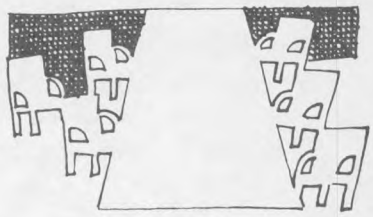
This list of selected collective bargaining agreements expiring in July is based on information from the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more. Private industry is arranged in order of Standard Industrial Classification.

Employer and location	Private industry	Labor organization[1]	Number of workers
Associated General Contractors of America, Inc. (Saginaw, MI)	Construction	Carpenters	1,300
Missouri River Basin agreement (Interstate)	Construction	Boilermakers	2,300
Mechanical Contractors Association (Utah)	Construction	Plumbers	1,000
Agripac, Inc. (Oregon)	Food products	Teamsters (Ind.)	3,500
Armstrong Rubber Co. (Interstate)	Rubber	Rubber Workers	2,700
Babcock and Wilcox Co. (Interstate)	Fabricated metal products	Boilermakers	4,000
Mirro Corp. (Manitowoc, WI)	Fabricated metal products	Steelworkers	1,500
Eltra Corp., Prestolite Division (Interstate)	Electrical products	Auto Workers	2,000
Westinghouse Electric Corp., salaried employees (Interstate)	Electrical products	Westinghouse Independent Salaried Unions (Ind.)	11,100
Westinghouse Electric Corp. (Interstate)	Electrical products	Various	39,700
Whirlpool Corp. (St. Paul, MN)	Electrical products	Teamsters (Ind.)	1,100
Hughes Helicopter Corp. (Los Angeles, CA)	Electrical products	Carpenters	1,500
Rockwell International, Automotive Group (Interstate)	Transportation equipment	Auto Workers	5,200
Jacksonville Shipyards, Inc. (Jacksonville, FL)	Transportation equipment	Boilermakers	2,500
Fairchild Republic Co. (Farmingdale, NY)	Transportation equipment	Machinists	3,500
Freightliner Corp. (Portland, OR)	Transportation equipment	Machinists	1,700
Western Union Telegraph Co. (Interstate)	Communication	Telegraph Workers	8,800
New York State Electric and Gas Corp. (New York)	Utilities	Electrical Workers (IBEW)	2,900
Pennsylvania Power and Light Co. (Pennsylvania)	Utilities	Electrical Workers (IBEW)	4,800
Columbus and Southern Ohio Electric Co. (Ohio)	Utilities	Electrical Workers (IBEW)	1,500
Jewel, A&P, Dominick's, Eagle Discount, Kohl's (Chicago, IL)	Retail trade	Food and Commercial Workers	2,700
East Bay Restaurant Association, Inc. (San Francisco, CA)	Restaurants	Hotel Employees and Restaurant Employees	3,000

	Government activity	Labor organization[1]	Number of workers
Arizona: Phoenix Police Department	Police protection	Phoenix Law Enforcement Association (Ind.)	1,200
California: Riverside County, support services	General government	Supporting Services Unit	2,050
Orange County, supervisory management unit	General government	Orange County Employees Association	1,200
Orange County, clerical unit	General government	Orange County Employees Association	3,050
Orange County, general unit	General government	Orange County Employees Association	2,850
Kansas: Wichita Board of Education, teachers and professionals	Education	Education Association (Ind.)	2,950
Ohio: Cleveland Regional Transit Authority, operators	Transportation	Transit Union	2,500

[1]Affiliated with AFL–CIO except where noted as independent (Ind.).

Developments in Industrial Relations



Pan Am accords

In talks involving four unions, Pan American Airways won some contract changes designed to reverse its unprofitable operation. The company has lost more than $750 million since 1980, which it attributed primarily to the growth of lower cost foreign and domestic competitors as a result of the deregulation of the industry.

The first settlement involved 1,500 members of the Air Line Pilots Association. The 32-month agreement, running to August 31, 1987, provided for payment of the scheduled 26-percent pay increase the pilots had forgone in 1982 to aid Pan Am. This will be accomplished in stages, over the term.

Later, 6,000 members of the Transport Workers Union struck after rejecting a Pan Am offer that included a 20-percent pay increase over 3 years, including the 14.5-percent in scheduled wage increases that had been deferred from 1982. The stoppage lost some effect when the pilots immediately crossed the picket lines and continued flying. Afterward, the 800-member Flight Engineers International Association returned to work, leaving only the 6,000-member International Association of Flight Attendants and 6,200-member Teamsters units off the job in support of the Transport Workers. However, an increasing number of the flight attendants returned to work after Pan Am began hiring replacements for the attendants and fired 157 of them for refusing to resume work. This led the leaders of the flight attendants' union to order all the attendants to return to work, and a few days later, the Transport Workers agreed on a contract.

A factor in the union's decision to settle was the dwindling support from the other unions. Another factor was concern over the possibility of permanent cuts in employment. Early in the strike, Pan Am had sold commissary operations in several cities, ending employment for 700 members of the Transport Workers union. Chief union negotiator John Kerrigan said, "The issue is whether continuation of the strike is in the interest of our members. We believe it is not." He explained that a prolonged strike would inflict "heavy losses" to both sides and could result in the "total destruction of both."

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

The accord provided for:

- Wage increases of 5 percent on January 1 and November 1 of 1985 and in November of 1986 and 1987. The 20-percent total increase included the 1982 deferred amount of 14.5 percent, which the union had contended should have been restored in total on January 1, 1985.
- One-time bonuses of $1,000 for mechanics, dispatchers, and flight simulators and $600 for other workers, payable in November 1985.
- A new pay progression schedule requiring new workers to serve for 7 years before attaining the maximum rate for their grade. Previously, they waited 3 or 4 years.
- Broadening of job assignments to permit greater utilization of employee skills.
- Adoption of a new pension plan financed by company payments equal to 3.5 percent of employee earnings plus company stock equal to 2 percent of the earnings. Addition of $5,000 or $10,000 bonuses to induce employees to retire early.
- New jobs, as they open, for the 700 former commissary workers or optional severance payments ranging from $10,000 to $30,000. All of these employees on the payroll on January 1, 1986, will be guaranteed permanent employment.
- Cuts in health insurance benefits, and a new requirement that workers pay part of premium costs.
- Permission for Pan Am to hire workers for a 5-day workweek of 5 hours per day, at reduced pay rates, to help with operating peaks. These part-timers cannot exceed 15 percent of the workers in the Transport Workers' bargaining unit.

Following the Transport Workers settlement, the Flight Attendants agreed to a 3-year contract that included:

- A 21.5-percent pay increase over the term, including a 12-percent pay increase scheduled under prior agreements but deferred to aid the company.
- A new "B scale" pay progression schedule for new employees under which they will start at $784 a month (compared with the previous $1,236 starting rate) and remain below the rates for workers already on the payroll.
- A new provision permitting Pan Am to hire up to 150 foreign nationals for flights beginning and ending outside the United States. These attendants, who would not be

members of the union, would be paid $225 to $773 a month, compared with a range of $1,900 to $2,250 for union members already on the payroll, according to a union official.

Bargaining was continuing with the 6,000 reservations, fuel haulers, and other types of workers represented by the Teamsters.

Kaiser employees accept concession contract

In a move to aid Kaiser Aluminum and Chemical Corp. in overcoming operating losses, 6,500 members of the United Steelworkers union agreed to a new 3-year contract that reduced their compensation by an average of $4.50 an hour. Kaiser, which lost $53.9 million in 1984, attributed its financial difficulties to depressed conditions in the world aluminum market, poor results from aluminum futures, and high energy costs. According to the company, it was losing 15 cents on every pound of aluminum produced at its Mead, WA, smelter.

The contract was effective April 1, superseding the balance of a 3-year accord that had been scheduled to expire in May 1986. It established a plan to give the employees shares of a new issue of Kaiser Aluminum stock that will be held in trust and redeemable at $50 a share upon retirement or termination. Employees also may choose to keep the shares and receive annual dividends of $5 a share. The shares are nonvoting, but the union was given one seat on Kaiser's board of directors. According to a union official, the value of the shares will equal 85 percent of the wage and benefit cuts.

The $4.50 an hour concession consisted of a cut in hourly wages averaging $1.84, cuts in paid vacations and health benefits, and elimination of three paid holidays. The provision for automatic quarterly cost-of-living pay adjustments was revised to provide 1 cent an hour for each 0.3-point rise in the Consumer Price Index (was 0.26 point) and the money will be applied to stock purchases. At the time of settlement, pay at Kaiser's 12 facilities ranged from $11.40 to $14.76 an hour and averaged $13.11.

At plants in the Northwest, Kaiser was continuing efforts to minimize energy costs by negotiating with the Bonneville Power Administration on long-term credits against electricity bills in return for extensive conservation measures. The 12 facilities are located in Washington, Louisiana, West Virginia, and Ohio.

Steel workers forgo increases for profit sharing

About 2,900 employees of Bethlehem Steel Corp.'s unprofitable bar, rod, and wire plants in Johnstown, PA, and Lackawanna, NY, have agreed to wage and benefit concessions in exchange for preferred stock and a profit-sharing plan. According to the president of United Steelworkers Local 2632 in Lackawanna, the company would probably have closed the operations if the workers had not accepted the modifications of the current agreement, which runs to July 31, 1986.

Under the accord, the workers will no longer receive incentive pay. Instead, they could receive the "first dollar" of daily incentive earnings from a profit-sharing plan and they will receive shares of preferred Bethlehem stock equivalent to the balance of daily incentive earnings.

They also will receive preferred stock (which will be given to them at age 62) equivalent to the other concessions, which include:

- Elimination of 2 weeks of paid vacation, beginning in 1986.
- Termination of dental and vision care insurance, effective July 1, 1985.
- Elimination of an earnings protection plan, under which employees bumped into lower paying jobs received temporary pay supplements.
- Reduction of Sunday work pay to time and one-quarter (from time and one-half) and holiday work pay to double time (from double time and one-half).
- Reduction of shift premium pay.
- Broadened job assignments to permit better utilization of the work force.
- Elimination of a provision of the 1983 contract calling for restoration in 1986 of a $1.20 an hour cut in wages and benefits.

The accord also provided for lump-sum payments to induce older employees to retire by July 31, 1985. The payments range from $4,800 for workers age 61 years and 1 month to $400 for those age 62 or over.

Despite the concessions, more than 500 of the 2,900 workers were expected to lose their jobs as part of the effort to reduce costs. More than 400 of the 800 nonunion salaried employees also were expected to be terminated.

In the legal area, Bethlehem settled a lawsuit by agreeing to make no postretirement changes in life insurance programs for retired supervisory employees and to establish a new health care plan for the retirees and their dependents. The settlement, which covered nearly 20,000 retirees, was initiated by a retiree (later joined by 3,000 others) who contended that Bethlehem had broken a pledge to continue the health benefits after they retired. The settlement does require retirees to begin paying a premium, fixed for life, toward the cost of the coverage.

Steel producer seeks protection under Chapter 11

Wheeling-Pittsburgh Steel Corp., the industry's seventh largest producer, filed for protection under Chapter 11 of the Federal Bankruptcy Code. The move to continue operating under court protection from creditors came after the United Steelworkers union refused to accept a debt restructuring plan. The union had apparently agreed to accept cuts in wages and benefits to aid the ailing company, but objected to a lenders' demand for a lien on Wheeling-Pittsburgh's

$300 million of current assets. The union leaders apparently believed that the stretch-out of principal payments and some reduction in interest payments to the lending institutions were not enough to save the company, which would leave the union in an untenable position if the company were subsequently liquidated.

After the filing, Wheeling-Pittsburgh announced that it would start bargaining soon with the Steelworkers on reducing wage and benefit costs, which average about $21.40 an hour. (Under the proposed debt restructuring plan, these costs would have been cut to about $19.) If the required bargaining is unsuccessful, the parties will move into largely untested areas of the 1984 amendments to the Bankruptcy Code. One is a provision requiring that a company may only propose contract modifications that are "necessary to assure that all creditors, debtors and other affected parties are treated fairly and equitably." Another allows the bankruptcy court to terminate a labor agreement if it finds that the union has rejected concessions "without good cause."

A complicating factor was the possibility that Wheeling-Pittsburgh would terminate its pension plan, which might require the Federal Pension Benefit Guarantee Corporation to assume payments to the 10,000 retirees. A company official said that Wheeling-Pittsburgh would be unable to make a scheduled $60 million payment to its pension fund in the fourth quarter.

The company employs about 8,200 workers at nine mills in Pennsylvania, West Virginia, and Ohio.

Union uses apprentices as organizers

In an effort to help reverse the general decline in union membership, the Sheet Metal Workers union is experimenting with using apprentices as organizers. Union president Edward J. Carlough said prospects for success were good because apprentices are in the same young age group as the employees targeted for organizing, and "unions haven't been speaking the language of the young."

Under the national 3-month pilot program, financed by the Sheet Metal and Air Conditioning Contractors' National Association and the union, 200 fourth-year apprentices will work full time on organizing. The goal is to extend the apprentice program to 5 years, with the entire third year devoted to organizing. This would put an estimated 2,000 apprentice-organizers in the field.

The new organizing approach was initiated in Atlanta, GA, where some apprentices volunteered to recruit new members on their own time after attending an organizing seminar.

Tuna cannery moves against foreign competitors

A tuna fish canning company and the United Industrial Workers Union and the Seafarers International Union agreed on a plan for competing with foreign firms, which have won control of the domestic tuna market. The first part of the plan came when the 1,400 workers of the cannery, located in Terminal Island, CA, agreed to wage and benefit reductions to narrow the cost advantage of overseas competitors. The cannery is owned by Pan Pacific, a division of C.H.B. Foods, Inc., which indicated that it would open a cannery closed for 3 years if the plan is successful, providing jobs for 1,000 workers.

The second part of the plan is a joint advertising campaign emphasizing that Pan Pacific is the only tuna canned exclusively in the United States. Reportedly, employment in the domestic tuna industry has declined from 15,000 to 3,000 workers in California and Puerto Rico, which union and industry officials attribute to the lower costs of foreign processors stemming, in part, from subsidies from their governments.

Budd workers get lump-sum payments

More than 6,000 employees of the Budd Co. were covered by a settlement that provided lump-sum payments rather than the wage increases they had received under past agreements. The first payment was a flat $180 per employee, to be followed by annual payments each April equal to 2 percent of the individual's earnings during the preceding 12 months. In another change, the provision for automatic quarterly cost-of-living pay adjustments was revised to provide for the accrued amounts to be paid in lump sums at the end of each quarter. Previously, the allowance was included in regular weekly paychecks. Also, the entire payment for the third quarter and 2 cents per hour from each of the other quarterly payments will be diverted to help meet the cost of benefits.

Other terms negotiated by the Auto Workers included an additional paid holiday, a $2.05 increase in future retirees' monthly pension rate for each year of credited service and a 50-cent increase for current retirees and two $125 lump-sum payments to current retirees.

The accord also broadened the number of health insurance coverage options and added cost control provisions similar to the General Motors Corp. settlement with the union (see *Monthly Labor Review*, November 1984, pp. 46–49). The six Budd plants, which produce equipment for the auto industry, are located in Michigan, Pennsylvania, and Ohio.

California Nurses Association settles

A threatened strike by 5,100 nurses in Northern California was averted when Kaiser Permanente, which provides health care services, and the California Nurses Association agreed on a contract. Kaiser had been seeking several concessions, including a 20-percent pay cut, but the accord only provided for one—elimination of one of two premium pay options for nurses who work on a holiday.

The contract which runs to December 1, 1987, provides for an initial pay increase of 4 percent, followed by increases of 5 percent in January 1986 and 4 percent a year later. Other terms included a new annuity plan permitting em-

ployees to defer up to 20 percent of their income, thus sheltering the income from taxes; a requirement that retired nurses must now have 15 years of service to be eligible for supplemental medicare coverage; and elimination of the 90-day limit on carryover of sick leave from year to year.

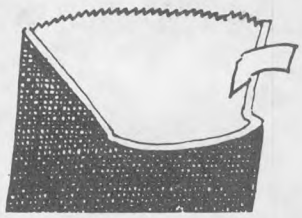
DuPont's 'early out' offer successful

Nearly twice the expected number of DuPont Co. employees have accepted an early retirement offer, posing some difficulties for the company. DuPont had expected 6,500 workers to accept the offer, which was made to streamline operations (see *Monthly Labor Review*, April 1985, p. 61).

DuPont vice president John R. Mallory called the program a "huge success," but admitted that the company will lose some people it wanted to keep. Company officials said that the unexpectedly large number of departures would force DuPont to hire employees in certain areas and that some key employees had been induced to stay through bonuses and raises. □

A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.



Book Reviews

Labor transformation in one industry

The Electrical Workers: A History of Labor at General Electric and Westinghouse, 1923–1960. By Ronald W. Schatz. Champaign, IL, The University of Illinois Press, 1983. 279 pp. $22.95.

Ronald W. Schatz's book is a fascinating history of 37 years of labor relations in the two largest electrical companies in the United States. This history not only details the organization of the unions but also discusses the philosophical ideology of the unions' leaders.

In many ways electrical workers are a group apart from other American workers. In the early 1920's, they were involved in creating products that were on the leading edge of technology. Their skills were many and varied—from the molding of huge electrical turbines to the winding of gossamer wires into electrical coils; from sheet metal crafting of generator housings to assembly-line work on electrical appliances. Men performed the heavier tasks, women, much of the delicate work.

Early in the period studied, electrical workers turned to labor organizations to represent them in their quest for a better working life. Interestingly, General Electric (GE) and Westinghouse did not discourage union representation. Electrical company managers adopted a "corporatist" philosophy of managing—that management should strike a balance between the interests of the stockholders and the workers and not subjugate one to the benefit of the other. Thus, GE and Westinghouse "fashioned a set of labor policies intended to achieve the unity of labor and capital . . . "

Paradoxically, the labor organization that resulted from the benevolent management policies was heavily influenced by Communist and Socialist officers. That organization, the United Electrical, Radio and Machine Workers of America (UE), got its start at GE plants in Schenectady, NY, and Lynn, MA, and Westinghouse factories in East Pittsburgh and Philadelphia, PA, in the early 1930's. The founders were men like James Matles, head of the metals branch of the Communist-led Steel and Metal Workers Industrial Union; Horace Hunt, a member of the Communist party in Erie, PA; Frederick Steele, who represented the Communist-led Trade Union Unity League; and George Bush, a veteran Socialist community leader in East Pittsburgh.

Another founder, James Carey, had been a leader in a Philco Corp. local union in Philadelphia. Carey was a staunch anti-Communist, but acquiesced in the political beliefs of the others at the formation of the union. He became president of the United Electrical Workers, with Matles as director of organizing, and several other avowed Communists in leadership positions in the union.

Initially, the United Electrical Workers unsuccessfully sought a charter from the American Federation of Labor. The AFL told Carey to enroll his members with the International Brotherhood of Electrical Workers (IBEW). But when the IBEW offered nonvoting "Class B" membership to Carey, he refused. The United Electrical Workers later became an affiliate of the Congress of Industrial Organizations (CIO).

In the book's preface, Schatz points out that his research showed that the Communist-led unions did not slow down war production during World War II. This "revelation" is well-documented with statements of the "change of heart" of the Communist union leaders after Nazi Germany invaded the Soviet Union. Prior to the invasion, when Germany and the Soviet Union had a "nonaggression" pact in force, Communist union leaders obstructed war production intended for Britain on the grounds that the United States was supporting an "imperialist war."

After World War II, and with the advent of the cold war, Communist union leaders began to have problems. A provision of the Taft–Hartley Act required union officers to sign an affidavit stating that they were not members of the Communist party. Many UE officers refused to sign the affidavits. Opposition to Communist presence in unions also came from the Catholic church and from anti-Communists within the unions.

In 1949, James Carey formed a rival union, the International Union of Electrical, Radio, and Machine Workers (IUE) which was chartered by the CIO, while the UE was expelled from the Federation because of alleged Communist domination. The IUE and UE then embarked on certification campaigns to gain control of the local unions. The resulting strife left the two unions in command of fewer workers than the UE had represented before the split. Other unions such as the Machinists (IAM), the Auto Workers (UAW), the Electrical Workers (IBEW), and the Teamsters (IBT) gained representation rights over some of the former UE locals. The fractionation of the union allowed the electrical companies

to redesign jobs and manufacturing facilities and ultimately to disperse their facilities around the Nation, rather than concentrating them in the Northeast. Another result of the unions' weakness emerged as "Boulwareism," a bargaining strategy in which an employer attempts to persuade the employees that his or her initial offer is in their best interests, thus bypassing the union, and changes this offer only if he or she receives new information or persuasive arguments from the union.

Author Schatz has developed many other themes in his presentation, such as the role of women in the unions, seniority, and incentive pay. A criticism of the Industrial Relations Research Association's book of 1980, *Collective Bargaining: Contemporary American Experience*, was that the day-to-day life in the workplace and practices in the work settings were virtually ignored. That should not be a criticism of this book.

—JAMES K. MCCOLLUM
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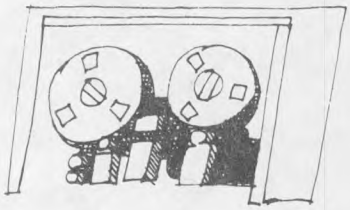
Current Labor Statistics



NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. A brief introduction to each group of tables provides definitions, notes on the data, sources, and other material usually found in footnotes.

Readers who need additional information are invited to consult the BLS regional offices listed on the inside front cover of this issue of the *Review*. Some general notes applicable to several series are given below.

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "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 labor force data in tables 3–8 were revised in the February 1985 issue of the *Review*, to reflect experience through 1984.

Beginning in January 1980, the BLS introduced two major modifications in the seasonal adjustment methodology for labor force data. First, the data are being seasonally adjusted with a new procedure called X–11/ARIMA, which was developed at Statistics Canada as an extension of the standard X–11 method. 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). The second change is that seasonal factors are now being calculated for use during the first 6 months of the year, rather than for the entire year, and then are calculated at mid-year for the July–December period. Revisions of historical data continue to be made only at the end of each calendar year.

Annual revision of the seasonally adjusted payroll data shown in tables 11, 13, 15, and 17 were made in July 1984 using the X–11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 29 and 30 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from 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 are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is $2 ($3/150 × 100 = $2). The resulting values are described as "real," "constant," or "1967" dollars.

Availability of information. Data that supplement the tables in this section are published by the Bureau of Labor Statistics in a variety of sources. Press releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule given below. More information from household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau. Comparable household information is published in a two-volume data book—*Labor Force Statistics Derived From the Current Population Survey*, Bulletin 2096. Comparable establishment information appears in two data books—*Employment and Earnings, United States*, and *Employment and Earnings, States and Areas*, and their annual supplements. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*.

Symbols

p = preliminary. To improve 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.

n.e.c. = not elsewhere classified.

Schedule of release dates for BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	June 7	May	July 5	June	August 2	July	1–11
Producer Price Index	June 14	May	July 12	June	August 9	July	23–27
Consumer Price Index	June 20	May	July 23	June	August 22	July	19–22
Real earnings	June 20	May	July 23	June	August 22	July	12–16
Productivity and costs:							
Nonfinancial corporations	.....	.....	.....	.....	August 27	2nd quarter	29–32
Nonfarm business and manufacturing	.....	.....	July 25	2nd quarter	.....	.....	29–32
Major collective bargaining settlements	.....	.....	July 25	1st half	.....	.....	36–37
Employment Cost Index	.....	.....	July 30	2nd quarter	.....	.....	33–35

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

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 59,500 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 civilians 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. Members of the Armed Forces stationed in the United States are also included in the employed total. 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 or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **overall unemployment rate** represents the number unemployed as a percent of the labor force, including the resident Armed Forces. The **unemployment rate** for all civilian workers represents the number unemployed as a percent of the civilian labor force.

The **labor force** consists of all employed or unemployed civilians plus members of the Armed Forces stationed in the United States. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons who are retired, those engaged in their own housework, those not working while attending school, those unable to work because of long-term illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **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, and members of the Armed Forces stationed in the United States. The **labor force participation rate** is the proportion of the noninstitutional population that is in the labor force. The **employment-population ratio** is total employment (including the resident Armed Forces) as a percent of the 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 preceding years. These adjustments affect the comparability of historical data presented in table 1. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings*.

Data in tables 2–8 are seasonally adjusted, based on the seasonal experience through December 1984.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–84

[Numbers in thousands]

Year	Noninstitutional population	Labor force										Not in labor force
				Employed						Unemployed		
		Number	Percent of population	Total	Percent of population	Resident Armed Forces	Civilian			Number	Percent of labor force	
							Total	Agriculture	Nonagricultural industries			
1950	106,164	63,377	59.7	60,087	56.6	1,169	58,918	7,160	51,758	3,288	5.2	42,787
1955	111,747	67,087	60.0	64,234	57.5	2,064	62,170	6,450	55,722	2,852	4.3	44,660
1960	119,106	71,489	60.0	67,639	56.8	1,861	65,778	5,458	60,318	3,852	5.4	46,617
1965	128,459	76,401	59.5	73,034	56.9	1,946	71,088	4,361	66,726	3,366	4.4	52,058
1966	130,180	77,892	59.8	75,017	57.6	2,122	72,895	3,979	68,915	2,875	3.7	52,288
1967	132,092	79,565	60.2	76,590	58.0	2,218	74,372	3,844	70,527	2,975	3.7	52,527
1968	134,281	80,990	60.3	78,173	58.2	2,253	75,920	3,817	72,103	2,817	3.5	53,291
1969	136,573	82,972	60.8	80,140	58.7	2,238	77,902	3,606	74,296	2,832	3.4	53,602
1970	139,203	84,889	61.0	80,796	58.0	2,118	78,678	3,463	75,215	4,093	4.8	54,315
1971	142,189	86,355	60.7	81,340	57.2	1,973	79,367	3,394	75,972	5,016	5.8	55,834
1972	145,939	88,847	60.9	83,966	57.5	1,813	82,153	3,484	78,669	4,882	5.5	57,091
1973	148,870	91,203	61.3	86,838	58.3	1,774	85,064	3,470	81,594	4,355	4.8	57,667
1974	151,841	93,670	61.7	88,515	58.3	1,721	86,794	3,515	83,279	5,156	5.5	58,171
1975	154,831	95,453	61.6	87,524	56.5	1,678	85,845	3,408	82,438	7,929	8.3	59,377
1976	157,818	97,826	62.0	90,420	57.3	1,668	88,752	3,331	85,421	7,406	7.6	59,991
1977	160,689	100,665	62.6	93,673	58.3	1,656	92,017	3,283	88,734	6,991	6.9	60,025
1978	163,541	103,882	63.5	97,679	59.7	1,631	96,048	3,387	92,661	6,202	6.0	59,659
1979	166,460	106,559	64.0	100,421	60.3	1,597	98,824	3,347	95,477	6,137	5.8	59,900
1980	169,349	108,544	64.1	100,907	59.6	1,604	99,303	3,364	95,938	7,637	7.0	60,806
1981	171,775	110,315	c64.2	102,042	59.4	1,645	100,397	3,368	97,030	8,273	7.5	61,460
1982	173,939	111,872	64.3	101,194	58.2	1,668	99,526	3,401	96,125	10,578	9.5	62,067
1983	175,891	113,226	64.4	102,510	58.3	1,676	100,834	3,383	97,450	10,717	9.5	62,665
1984	178,080	115,241	64.7	106,702	59.9	1,697	105,005	3,321	101,685	8,539	7.4	62,839

c = corrected.

2. Employment status of the population, including Armed Forces in the United States, by sex, seasonally adjusted

[Numbers in thousands]

Employment status and sex	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
TOTAL															
Noninstitutional population[1,2]	175,891	178,080	177,662	177,813	177,974	178,138	178,295	178,483	178,661	178,834	179,004	179,081	179,219	179,368	179,501
Labor force[2]	113,226	115,241	114,895	115,412	115,309	115,566	115,341	115,484	115,721	115,773	116,162	116,572	116,787	117,215	117,073
Participation rate[3]	64.4	64.7	64.7	64.9	64.8	64.9	64.7	64.7	64.8	64.7	64.9	65.1	65.2	65.3	65.2
Total employed[2]	102,510	106,702	106,095	106,852	107,081	107,075	106,860	107,114	107,354	107,631	107,971	108,088	108,388	108,820	108,647
Employment-population rate[4]	58.3	59.9	59.7	60.1	60.2	60.1	59.9	60.0	60.1	60.2	60.3	60.4	60.5	60.7	60.5
Resident Armed Forces[1]	1,676	1,697	1,693	1,690	1,690	1,698	1,712	1,720	1,705	1,699	1,698	1,697	1,703	1,701	1,702
Civilian employed	100,834	105,005	104,402	105,162	105,391	105,377	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945
Agriculture	3,383	3,321	3,379	3,367	3,368	3,333	3,264	3,319	3,169	3,334	3,385	3,320	3,340	3,362	3,428
Nonagricultural industries	97,450	101,685	101,023	101,795	102,023	102,044	101,884	102,075	102,480	102,598	102,888	103,071	103,345	103,757	103,517
Unemployed	10,717	8,539	8,800	8,560	8,228	8,491	8,481	8,370	8,367	8,142	8,191	8,484	8,399	8,396	8,426
Unemployment rate[5]	9.5	7.4	7.7	7.4	7.1	7.3	7.4	7.2	7.2	7.0	7.1	7.3	7.2	7.2	7.2
Not in labor force	62,665	62,839	62,767	62,401	62,665	62,572	62,954	62,999	62,940	63,061	62,842	62,509	62,432	62,153	62,428
Men, 16 years and over															
Noninstitutional population[1,2]	84,064	85,156	84,953	85,024	85,101	85,179	85,257	85,352	85,439	85,523	85,607	85,629	85,692	85,764	85,827
Labor force[2]	64,580	65,386	65,200	65,304	65,348	65,412	65,357	65,589	65,558	65,657	65,814	65,822	65,818	65,923	65,986
Participation rate[3]	76.8	76.8	76.7	76.8	76.8	76.8	76.7	76.8	76.7	76.8	76.9	76.9	76.8	76.9	76.9
Total employed[2]	58,320	60,642	60,289	60,578	60,758	60,687	60,766	60,959	61,018	61,155	61,252	61,213	61,226	61,427	61,405
Employment-population rate[4]	69.4	71.2	71.0	71.2	71.4	71.2	71.3	71.4	71.4	71.5	71.6	71.5	71.4	71.6	71.5
Resident Armed Forces[1]	1,533	1,551	1,548	1,545	1,545	1,551	1,563	1,571	1,557	1,552	1,550	1,549	1,554	1,553	1,553
Civilian employed	56,787	59,091	58,741	59,033	59,213	59,136	59,203	59,388	59,461	59,603	59,702	59,664	59,672	59,874	59,852
Unemployed	6,260	4,744	4,911	4,726	4,590	4,725	4,591	4,630	4,540	4,502	4,562	4,609	4,592	4,495	4,582
Unemployment rate[5]	9.7	7.3	7.5	7.2	7.0	7.2	7.0	7.1	6.9	6.9	6.9	7.0	7.0	6.8	6.9
Women, 16 years and over															
Noninstitutional population[1,2]	91,827	92,924	92,709	92,789	92,873	92,958	93,039	93,132	93,222	93,311	93,397	93,452	93,527	93,603	93,674
Labor force[2]	48,646	49,855	49,695	50,108	49,961	50,154	49,984	49,895	50,163	50,116	50,348	50,750	50,970	51,293	51,086
Participation rate[3]	53.0	53.7	53.6	54.0	53.8	54.0	53.7	53.6	53.8	53.7	53.9	54.3	54.5	54.8	54.5
Total employed[2]	44,190	46,061	45,806	46,274	46,323	46,388	46,094	46,155	46,336	46,476	46,719	46,875	47,162	47,392	47,242
Employment-population rate[4]	48.1	49.6	49.4	49.9	49.9	49.9	49.5	49.6	49.7	49.8	50.0	50.2	50.4	50.6	50.4
Resident Armed Forces[1]	143	146	145	145	145	147	149	149	148	147	148	148	149	148	149
Civilian employed	44,047	45,915	45,661	46,129	46,178	46,241	45,945	46,006	46,188	46,329	46,571	46,727	47,013	47,244	47,093
Unemployed	4,457	3,794	3,889	3,834	3,638	3,766	3,890	3,740	3,827	3,640	3,629	3,875	3,807	3,900	3,844
Unemployment rate[5]	9.2	7.6	7.8	7.7	7.3	7.5	7.8	7.5	7.6	7.3	7.2	7.6	7.5	7.6	7.5

[1] The population and Armed Forces figures are not adjusted for seasonal variation.
[2] Includes members of the Armed Forces stationed in the United States.
[3] Labor force as a percent of the noninstitutional population.
[4] Total employed as a percent of the noninstitutional population.
[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

3. Employment status of the civilian population by sex, age, race, and Hispanic origin, seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
TOTAL															
Civilian noninstitutional population[1]	174,215	176,383	175,969	176,123	176,284	176,440	176,583	176,763	176,956	177,135	177,306	177,384	177,516	177,667	177,799
Civilian labor force	111,550	113,544	113,302	113,722	113,619	113,868	113,629	113,764	114,016	114,074	114,464	114,875	115,084	115,514	115,371
Participation rate	64.0	64.4	64.3	64.6	64.5	64.5	64.3	64.4	64.4	64.4	64.6	64.8	64.8	65.0	64.9
Employed	100,834	105,005	104,402	105,162	105,391	105,377	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945
Employment-population ratio[2]	57.9	59.5	59.3	59.7	59.8	59.7	59.5	59.6	59.7	59.8	59.9	60.0	60.1	60.3	60.1
Unemployed	10,717	8,539	8,800	8,560	8,228	8,491	8,481	8,370	8,367	8,142	8,191	8,484	8,399	8,396	8,426
Unemployment rate	9.6	7.5	7.8	7.5	7.2	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3
Not in labor force	62,665	62,839	62,667	62,401	62,665	62,572	62,954	62,999	62,940	63,061	62,842	62,509	62,432	62,153	62,428
Men, 20 years and over															
Civilian noninstitutional population[1]	74,872	76,219	75,973	76,073	76,176	76,269	76,350	76,451	76,565	76,663	76,753	76,760	76,829	76,904	76,988
Civilian labor force	58,744	59,701	59,474	59,572	59,668	59,730	59,771	59,892	59,913	59,994	60,131	60,033	60,061	60,152	60,177
Participation rate	78.5	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.2
Employed	53,487	55,769	55,387	55,663	55,861	55,846	55,935	56,075	56,182	56,269	56,372	56,234	56,287	56,421	56,370
Employment-population ratio[2]	71.4	73.2	72.9	73.2	73.3	73.2	73.3	78.3	73.4	73.4	73.4	73.3	73.3	73.4	73.2
Agriculture	2,429	2,418	2,446	2,443	2,448	2,444	2,406	2,414	2,334	2,434	2,494	2,417	2,362	2,326	2,390
Nonagricultural industries	51,058	53,351	52,941	53,220	53,413	53,402	53,529	53,661	53,848	53,835	53,878	53,817	53,926	54,095	53,980
Unemployed	5,257	3,932	4,087	3,909	3,807	3,884	3,836	3,817	3,731	3,725	3,759	3,798	3,774	3,731	3,807
Unemployment rate	8.9	6.6	6.9	6.6	6.4	6.5	6.4	6.4	6.2	6.2	6.3	6.3	6.3	6.2	6.3
Women, 20 years and over															
Civilian noninstitutional population[1]	84,069	85,429	85,168	85,272	85,380	85,488	85,581	85,688	85,793	85,897	85,995	86,015	86,086	86,181	86,274
Civilian labor force	44,636	45,900	45,685	46,130	45,958	46,131	46,092	45,950	46,264	46,279	46,463	46,771	46,894	47,193	47,155
Participation rate	53.1	53.7	53.6	54.1	53.8	54.0	53.9	53.6	53.9	53.9	54.0	54.4	54.5	54.8	54.7
Employed	41,004	42,793	42,524	43,003	42,986	43,001	42,878	42,906	43,091	43,252	43,511	43,610	43,768	44,014	43,958
Employment-population ratio[2]	48.8	50.1	49.9	50.4	50.3	50.3	50.1	50.1	50.2	50.4	50.6	50.7	50.8	51.1	51.0
Agriculture	620	595	613	603	611	580	573	590	569	580	595	592	614	659	651
Nonagricultural industries	40,384	42,198	41,911	42,400	42,375	42,421	42,305	42,316	42,522	42,672	42,916	43,018	43,153	43,355	43,307
Unemployed	3,632	3,107	3,161	3,127	2,972	3,130	3,214	3,044	3,173	3,027	2,952	3,161	3,126	3,179	3,197
Unemployment rate	8.1	6.8	6.9	6.8	6.5	6.8	7.0	6.6	6.9	6.5	6.4	6.8	6.7	6.7	6.8
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,274	14,735	14,828	14,778	14,728	14,683	14,653	14,624	14,598	14,575	14,557	14,610	14,600	14,582	14,538
Civilian labor force	8,171	7,943	8,043	8,020	7,993	8,007	7,766	7,922	7,839	7,801	7,870	8,072	8,129	8,169	8,039
Participation rate	53.5	53.9	54.2	54.3	54.3	54.5	53.0	54.2	53.7	53.5	54.1	55.2	55.7	56.0	55.3
Employed	6,342	6,444	6,491	6,496	6,544	6,530	6,335	6,413	6,376	6,411	6,390	6,547	6,630	6,684	6,617
Employment-population ratio[2]	41.5	43.7	43.8	44.0	44.4	44.5	43.2	43.9	43.7	44.0	43.9	44.8	45.4	45.8	45.5
Agriculture	334	309	320	321	309	309	285	315	266	320	296	311	364	377	387
Nonagricultural industries	6,008	6,135	6,171	6,175	6,235	6,221	6,050	6,098	6,110	6,091	6,094	6,236	6,266	6,307	6,230
Unemployed	1,829	1,499	1,552	1,524	1,449	1,477	1,431	1,509	1,463	1,390	1,480	1,525	1,499	1,485	1,422
Unemployment rate	22.4	18.9	19.3	19.0	18.1	18.4	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7
White															
Civilian noninstitutional population[1]	150,805	152,347	152,178	152,229	152,295	152,286	152,402	152,471	152,605	152,659	152,734	153,103	153,191	153,296	153,388
Civilian labor force	97,021	98,492	98,419	98,749	98,690	98,627	98,223	98,426	98,631	98,630	99,005	99,496	99,711	100,035	99,805
Participation rate	64.3	64.6	64.7	64.9	64.8	64.8	64.4	64.6	64.6	64.6	64.8	65.0	65.1	65.3	65.1
Employed	88,893	92,120	91,852	92,330	92,516	92,389	91,951	92,177	92,407	92,587	92,884	93,124	93,552	93,785	93,544
Employment-population ratio[2]	58.9	60.5	60.4	60.7	60.7	60.7	60.3	60.5	60.6	60.6	60.8	60.8	61.1	61.2	61.0
Unemployed	8,128	6,372	6,567	6,419	6,174	6,238	6,272	6,249	6,224	6,043	6,121	6,372	6,159	6,250	6,262
Unemployment rate	8.4	6.5	6.7	6.5	6.3	6.3	6.4	6.3	6.3	6.1	6.2	6.4	6.2	6.2	6.3
Black															
Civilian noninstitutional population[1]	18,925	19,348	19,274	19,302	19,330	19,360	19,386	19,416	19,449	19,481	19,513	19,518	19,542	19,569	19,594
Civilian labor force	11,647	12,033	11,898	11,968	11,959	12,083	12,142	12,082	12,208	12,276	12,306	12,315	12,309	12,280	12,403
Participation rate	61.5	62.2	61.7	62.0	61.9	62.4	62.6	62.2	62.8	63.0	63.1	63.1	63.0	62.8	63.3
Employed	9,375	10,119	9,913	10,053	10,138	10,079	10,222	10,260	10,340	10,426	10,462	10,475	10,301	10,412	10,508
Employment-population ratio[2]	49.5	52.3	51.4	52.1	52.4	52.1	52.7	52.8	53.2	53.5	53.6	53.7	52.7	53.2	53.6
Unemployed	2,272	1,914	1,985	1,915	1,821	2,004	1,920	1,822	1,868	1,850	1,844	1,840	2,008	1,869	1,894
Unemployment rate	19.5	15.9	16.7	16.0	15.2	16.6	15.8	15.1	15.3	15.1	15.0	14.9	16.3	15.2	15.3
Hispanic origin															
Civilian noninstitutional population[1]	10,795	11,164	11,088	11,118	11,148	11,180	11,209	11,240	11,270	11,301	11,332	11,363	11,394	11,425	11,457
Civilian labor force	6,884	7,247	7,113	7,170	7,267	7,264	7,299	7,353	7,384	7,394	7,472	7,255	7,330	7,365	7,336
Participation rate	63.8	64.9	64.2	64.5	65.2	65.0	65.1	65.4	65.5	65.4	65.9	63.8	64.3	64.5	64.0
Employed	5,943	6,469	6,294	6,402	6,519	6,503	6,521	6,573	6,574	6,636	6,698	6,487	6,621	6,615	6,577
Employment-population ratio[2]	55.1	57.9	56.8	57.6	58.5	58.2	58.2	58.5	58.3	58.7	59.1	57.1	58.1	57.9	57.4
Unemployed	940	778	819	768	748	761	778	780	810	758	774	768	709	750	759
Unemployment rate	13.7	10.7	11.5	10.7	10.3	10.5	10.7	10.6	11.0	10.3	10.4	10.6	9.7	10.2	10.3

[1] The population figures are not seasonally adjusted.

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

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

4. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
CHARACTERISTIC															
Civilian employed, 16 years and over	100,834	105,005	104,402	105,162	105,391	105,377	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945
Men	56,787	59,091	58,741	59,033	59,213	59,136	59,203	59,388	59,461	59,603	59,702	59,644	59,672	59,874	59,852
Women	44,047	45,915	45,661	46,129	46,178	46,241	45,945	46,006	46,188	46,329	46,571	46,727	47,013	47,244	47,093
Married men, spouse present	37,967	39,056	39,012	39,060	39,060	39,123	39,073	39,071	39,054	39,337	39,443	39,441	39,357	39,531	39,434
Married women, spouse present	24,603	25,636	25,468	25,658	25,734	25,719	25,772	25,715	25,897	25,995	26,122	25,912	26,108	26,195	26,058
Women who maintain families	5,091	5,465	5,482	5,606	5,622	5,626	5,496	5,429	5,378	5,396	5,396	5,584	5,525	5,631	5,622
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,579	1,555	1,627	1,580	1,578	1,519	1,453	1,565	1,511	1,593	1,733	1,596	1,611	1,610	1,705
Self-employed workers	1,565	1,553	1,545	1,549	1,566	1,557	1,562	1,555	1,487	1,555	1,485	1,531	1,503	1,502	1,491
Unpaid family workers	240	213	215	239	211	220	209	195	187	204	212	227	242	263	231
Nonagricultural industries:															
Wage and salary workers	89,500	93,565	92,908	93,780	93,845	93,768	93,680	94,140	94,415	94,442	94,725	95,068	95,348	95,756	95,617
Government	15,537	15,770	15,765	15,744	15,713	15,639	15,758	15,881	15,997	15,785	15,858	15,738	16,009	16,004	15,968
Private industries	73,963	77,794	77,143	78,036	78,132	78,129	77,922	78,259	78,418	78,657	78,867	79,330	79,339	79,752	79,649
Private households	1,247	1,238	1,280	1,327	1,297	1,238	1,199	1,198	1,213	1,228	1,257	1,374	1,304	1,210	1,208
Other	72,716	76,556	75,863	76,709	76,835	76,891	76,723	77,061	77,205	77,429	77,610	77,956	78,035	78,542	78,441
Self-employed workers	7,575	7,785	7,812	7,745	7,815	7,744	7,807	7,752	7,782	7,731	7,786	7,783	7,673	7,809	7,696
Unpaid family workers	376	335	341	323	347	318	321	318	314	357	357	343	340	320	304
PERSONS AT WORK PART TIME[1]															
All industries:															
Part time for economic reasons	6,266	5,744	5,758	5,625	5,831	5,759	5,582	5,690	5,710	5,623	5,814	5,628	5,335	5,664	5,664
Slack work	2,833	2,430	2,390	2,286	2,326	2,373	2,371	2,461	2,514	2,449	2,596	2,431	2,212	2,599	2,580
Could only find part-time work	3,099	2,948	3,085	3,042	2,984	2,832	2,743	2,943	2,879	2,855	2,873	2,848	2,835	2,744	2,755
Voluntary part time	12,911	13,169	13,326	13,250	13,090	13,248	13,210	13,144	13,126	13,142	13,239	13,355	13,647	13,624	13,278
Nonagricultural industries:															
Part time for economic reasons	5,997	5,512	5,520	5,377	5,549	5,482	5,384	5,449	5,483	5,413	5,596	5,389	5,077	5,400	5,374
Slack work	2,684	2,291	2,255	2,153	2,160	2,214	2,254	2,306	2,364	2,319	2,473	2,287	2,040	2,405	2,390
Could only find part-time work	2,993	2,866	2,982	2,949	2,911	2,756	2,675	2,847	2,821	2,782	2,793	2,749	2,751	2,649	2,668
Voluntary part time	12,417	12,704	12,924	12,799	12,621	12,786	12,747	12,669	12,679	12,670	12,778	12,861	13,157	13,137	12,834

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

5. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
CHARACTERISTIC															
Total, all civilian workers	9.6	7.5	7.8	7.5	7.2	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3
Both sexes, 16 to 19 years	22.4	18.9	19.3	19.0	18.1	18.4	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7
Men, 20 years and over	8.9	6.6	6.9	6.6	6.4	6.5	6.4	6.4	6.2	6.2	6.3	6.3	6.3	6.2	6.3
Women, 20 years and over	8.1	6.8	6.9	6.8	6.5	6.8	7.0	6.6	6.9	6.5	6.4	6.8	6.7	6.7	6.8
White, total	8.4	6.5	6.7	6.5	6.3	6.3	6.4	6.3	6.3	6.1	6.2	6.4	6.2	6.2	6.3
Both sexes, 16 to 19 years	19.3	16.0	16.2	16.2	15.8	15.2	16.0	16.3	15.9	15.1	15.9	15.8	15.2	15.1	14.9
Men, 16 to 19 years	20.2	16.8	16.8	16.9	16.6	17.4	16.7	17.0	16.6	16.2	16.2	15.9	17.0	15.2	15.3
Women, 16 to 19 years	18.3	15.2	15.7	15.5	15.1	12.9	15.4	15.5	15.2	13.9	15.5	15.8	13.4	14.9	14.3
Men, 20 years and over	7.9	5.7	5.9	5.7	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.5	5.4	5.4	5.5
Women, 20 years and over	6.9	5.8	6.0	5.8	5.6	5.8	5.9	5.7	5.8	5.5	5.5	5.9	5.6	5.9	5.8
Black, total	19.5	15.9	16.7	16.0	15.2	16.6	15.8	15.1	15.3	15.1	15.0	14.9	16.3	15.2	15.3
Both sexes, 16 to 19 years	48.5	42.7	44.3	44.4	37.1	42.3	41.3	41.9	40.2	41.2	42.1	42.1	43.1	41.9	39.0
Men, 16 to 19 years	48.8	42.7	42.9	41.4	38.2	42.3	40.5	41.0	43.8	42.0	43.8	45.3	41.1	40.9	38.5
Women, 16 to 19 years	48.2	42.6	45.9	48.1	35.8	42.2	42.2	43.0	36.2	40.2	40.1	38.5	45.3	43.1	39.5
Men, 20 years and over	18.1	14.3	15.6	14.3	14.6	15.5	14.1	13.5	13.4	12.8	13.3	12.7	14.4	13.3	13.6
Women, 20 years and over	16.5	13.5	13.6	13.7	12.6	13.8	13.8	12.6	13.4	13.5	12.7	12.8	13.9	12.9	13.2
Hispanic origin, total	13.7	10.7	10.7	10.3	10.5	10.7	10.6	11.0	10.3	10.4	10.6	9.7	9.7	10.2	10.3
Married men, spouse present	6.5	4.6	4.7	4.6	4.6	4.5	4.5	4.6	4.5	4.4	4.4	4.6	4.4	4.2	4.3
Married women, spouse present	7.0	5.7	5.8	5.8	5.7	5.8	5.8	5.7	5.7	5.4	5.4	5.7	5.4	5.9	5.9
Women who maintain families	12.2	10.3	10.5	10.0	9.8	9.8	10.3	10.1	10.4	10.8	9.6	10.0	11.0	10.2	10.8
Full-time workers	9.5	7.2	7.5	7.2	6.7	7.2	7.1	7.1	7.1	6.9	6.9	7.1	7.1	6.9	6.9
Part-time workers	10.4	9.3	9.3	9.4	10.0	9.6	9.6	9.3	9.1	8.6	8.8	9.3	8.7	9.6	9.7
Unemployed 15 weeks and over	3.8	2.4	2.5	2.5	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.1	2.1	2.1
Labor force time lost[1]	10.9	8.6	8.8	8.6	8.4	8.5	8.5	8.5	8.4	8.2	8.3	8.2	8.2	8.2	8.2
INDUSTRY															
Nonagricultural private wage and salary workers	9.9	7.4	7.7	7.3	7.0	7.4	7.4	7.3	7.2	7.2	7.2	7.3	7.3	7.2	7.3
Mining	17.0	10.0	10.1	8.8	7.5	7.7	10.2	8.6	10.5	11.7	10.7	10.1	10.9	11.0	10.9
Construction	18.4	14.3	14.4	14.7	14.6	14.6	14.1	13.9	13.7	14.2	13.7	13.4	13.4	13.3	13.3
Manufacturing	11.2	7.5	7.7	7.2	7.3	7.5	7.4	7.4	7.3	7.2	7.2	7.6	7.5	7.7	8.0
Durable goods	12.1	7.2	7.5	7.1	7.2	6.9	6.9	6.9	6.9	7.0	7.1	7.2	7.1	7.4	7.8
Nondurable goods	10.0	7.8	8.0	7.3	7.5	8.5	8.1	8.1	7.8	7.4	7.2	8.1	8.2	8.1	8.3
Transportation and public utilities	7.4	5.5	5.5	5.7	5.3	5.9	5.9	5.9	5.3	5.2	5.0	4.9	5.5	4.6	5.4
Wholesale and retail trade	10.0	8.0	8.7	8.0	7.3	7.8	7.7	8.0	7.9	7.6	7.5	7.7	7.7	7.5	7.3
Finance and service industries	7.2	5.9	6.1	5.7	5.5	5.9	6.0	5.6	5.7	5.8	5.9	5.9	5.7	5.7	5.7
Government workers	5.3	4.5	4.4	4.7	4.2	4.5	4.4	4.5	4.4	4.3	4.4	4.1	3.9	3.9	3.7
Agricultural wage and salary workers	16.0	13.5	12.7	13.8	12.3	14.3	13.1	14.7	13.7	11.2	12.2	15.5	13.6	12.2	13.1

[1] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

6. Unemployment rates by sex and age, seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total, 16 years and over	9.6	7.5	7.8	7.5	7.2	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3
16 to 24 years	17.2	13.9	14.5	14.1	13.2	13.6	13.9	13.9	13.5	13.2	13.5	13.6	13.7	13.5	13.3
16 to 19 years	22.4	18.9	19.3	19.0	18.1	18.4	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7
16 to 17 years	24.5	21.2	22.1	20.6	20.1	20.7	21.2	20.9	20.2	20.0	21.0	21.2	20.0	20.9	20.7
18 to 19 years	21.1	17.4	17.6	17.9	16.8	16.7	16.7	17.7	17.8	16.8	17.7	17.4	17.4	16.5	15.8
20 to 24 years	14.5	11.5	12.1	11.6	10.8	11.2	11.7	11.4	11.0	10.9	10.9	10.9	11.2	11.1	11.0
25 years and over	7.5	5.8	6.0	5.8	5.7	5.8	5.7	5.6	5.7	5.5	5.5	5.8	5.6	5.6	5.7
25 to 54 years	8.0	6.1	6.3	6.0	5.8	6.1	6.0	5.9	5.9	5.8	5.8	6.1	5.9	5.9	6.1
55 years and over	5.3	4.5	4.3	4.5	4.5	4.5	4.5	4.5	4.7	4.4	4.1	4.2	3.9	4.0	4.0
Men, 16 years and over	9.9	7.4	7.7	7.4	7.2	7.4	7.2	7.2	7.1	7.0	7.1	7.2	7.1	7.0	7.1
16 to 24 years	18.4	14.4	14.9	14.3	13.9	14.5	14.3	14.6	13.8	13.7	14.1	13.8	14.4	13.9	13.6
16 to 19 years	23.3	19.6	19.7	19.5	18.9	20.4	18.8	19.7	19.8	18.9	19.4	19.1	19.5	18.1	18.2
16 to 17 years	25.2	21.9	23.3	21.7	22.4	22.6	22.2	21.0	21.3	20.3	19.8	21.2	20.7	22.2	21.5
18 to 19 years	22.2	18.3	17.7	18.1	17.0	18.5	16.6	18.7	18.9	18.3	19.3	18.0	18.6	15.7	16.2
20 to 24 years	15.9	11.9	12.6	11.7	11.5	11.6	12.1	12.2	10.9	11.2	11.5	11.2	11.8	11.7	11.3
25 years and over	7.8	5.7	5.9	5.7	5.5	5.6	5.5	5.5	5.4	5.4	5.4	5.5	5.4	5.3	5.5
25 to 54 years	8.2	5.9	6.2	5.9	5.7	5.8	5.7	5.6	5.6	5.6	5.6	5.8	5.6	5.6	5.8
55 years and over	5.6	4.6	4.5	4.6	4.5	4.6	4.6	4.8	4.7	4.7	4.4	4.3	4.0	3.8	3.9
Women, 16 years and over	9.2	7.6	7.8	7.7	7.3	7.5	7.8	7.5	7.7	7.3	7.2	7.7	7.5	7.6	7.5
16 to 24 years	15.8	13.3	14.0	13.9	12.5	12.7	13.5	13.2	13.2	12.6	12.8	13.3	12.9	13.2	12.9
16 to 19 years	21.3	18.0	18.8	18.4	17.3	16.4	18.1	18.3	17.4	16.6	18.1	18.6	17.3	18.2	17.1
16 to 17 years	23.7	20.4	20.8	19.4	17.6	18.7	20.3	20.9	19.0	19.7	22.3	21.2	19.4	19.5	19.8
18 to 19 years	19.9	16.6	17.6	17.7	16.5	14.7	16.7	16.6	16.5	15.1	16.0	16.7	16.2	17.4	15.5
20 to 24 years	12.9	10.9	11.4	11.5	10.0	10.8	11.1	10.5	11.1	10.7	10.2	10.5	10.6	10.5	10.7
25 years and over	7.2	6.0	6.0	5.9	5.9	6.0	6.1	5.9	6.0	5.7	5.6	6.1	5.9	6.0	6.0
25 to 54 years	7.7	6.3	6.4	6.2	6.0	6.4	6.5	6.2	6.2	6.1	6.0	6.4	6.3	6.4	6.3
55 years and over	4.7	4.2	4.0	4.3	4.5	4.2	4.3	4.0	4.8	3.9	3.7	4.2	3.8	4.2	4.2

7. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Job losers	6,258	4,421	4,531	4,373	4,271	4,475	4,227	4,188	4,261	4,141	4,176	4,313	4,251	4,158	4,228
On layoff	1,780	1,171	1,117	1,187	1,162	1,165	1,146	1,110	1,151	1,068	1,070	1,229	1,240	1,163	1,208
Other job losers	4,478	3,250	3,414	3,186	3,109	3,310	3,081	3,078	3,110	3,073	3,106	3,084	3,011	2,995	3,019
Job leavers	830	823	792	812	809	850	833	841	829	869	858	884	865	848	838
Reentrants	2,412	2,184	2,301	2,184	1,989	2,111	2,294	2,254	2,150	2,161	2,218	2,244	2,233	2,341	2,312
New entrants	1,216	1,110	1,197	1,170	1,134	1,092	1,088	1,057	1,060	1,024	1,011	1,049	1,035	1,090	1,072
PERCENT DISTRIBUTION															
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	58.4	51.8	51.4	51.2	52.1	52.5	50.1	50.2	51.3	50.5	50.5	50.8	50.7	49.3	50.0
On layoff	16.6	13.7	12.7	13.9	14.2	13.7	13.6	13.3	13.9	13.0	12.9	14.5	14.8	13.8	14.3
Other job losers	41.8	38.1	38.7	37.3	37.9	38.8	36.5	36.9	37.5	37.5	37.6	36.3	35.9	35.5	35.7
Job leavers	7.7	9.6	9.0	9.5	9.9	10.0	9.9	10.1	10.0	10.6	10.4	10.4	10.3	10.0	9.9
Reentrants	22.5	25.6	26.1	25.6	24.2	24.8	27.2	27.0	25.9	26.4	26.8	26.4	26.6	27.7	27.4
New entrants	11.3	13.0	13.6	13.7	13.8	12.8	12.9	12.7	12.8	12.5	12.2	12.4	12.3	12.9	12.7
PERCENT OF CIVILIAN LABOR FORCE															
Job losers	5.6	3.9	4.0	3.8	3.8	3.9	3.7	3.7	3.7	3.6	3.6	3.8	3.7	3.6	3.7
Job leavers	.7	.7	.7	.7	.7	.7	.7	.7	.7	.8	.7	.8	.8	.7	.7
Reentrants	2.2	1.9	2.0	1.9	1.8	1.9	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0
New entrants	1.1	1.0	1.1	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.9	.9	.9	.9

8. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Less than 5 weeks	3,570	3,350	3,407	3,275	3,229	3,409	3,513	3,313	3,395	3,352	3,282	3,662	3,524	3,590	3,558
5 to 14 weeks	2,937	2,451	2,485	2,440	2,303	2,449	2,406	2,533	2,406	2,324	2,516	2,552	2,469	2,478	2,525
15 weeks and over	4,210	2,737	2,842	2,833	2,630	2,672	2,621	2,605	2,527	2,428	2,374	2,243	2,416	2,400	2,377
15 to 26 weeks	1,652	1,104	1,102	1,173	1,012	1,088	1,116	1,106	1,092	990	972	941	1,076	1,065	1,022
27 weeks and over	2,559	1,634	1,740	1,660	1,618	1,584	1,505	1,499	1,435	1,438	1,402	1,302	1,340	1,335	1,354
Mean duration in weeks	20.0	18.2	18.7	18.5	18.1	18.0	17.6	17.3	16.7	17.4	17.3	15.3	15.9	15.9	16.1
Median duration in weeks	10.1	7.9	8.1	8.3	7.5	7.6	7.6	7.6	7.3	7.3	7.4	6.7	7.2	7.1	6.7

EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

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 over 200,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th 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 blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 12–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities; in wholesale and retail trade; in finance, insurance, and real estate; and in services industries. 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). The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries.

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 gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

The Diffusion Index, introduced in table 17 of the May 1983 issue, represents the percent of 185 nonagricultural industries in which employment was rising over the indicated period. One-half of the industries with unchanged employment are counted as rising. In line with Bureau practice, data for the 3-, 6-, and 9-month spans are seasonally adjusted, while that for the 12-month span is unadjusted. The diffusion index is useful for measuring the dispersion of economic gains or losses and is also an economic indicator.

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of May 1984 data, published in the July 1984 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Unadjusted data have been revised back to April 1982; seasonally adjusted data have been revised back to January 1979. Unadjusted data from April 1983 forward, and seasonally adjusted data from January 1980 forward are subject to revision in future benchmarks. Earlier comparable unadjusted and seasonally adjusted data are published in a *Supplement to Employment and Earnings* (unadjusted data from April 1977 through February 1984 and seasonally adjusted data from January 1974 through February 1984) and in *Employment, Hours, and Earnings, United States, 1909–84,* BLS Bulletin 1312–12 (for prior periods).

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. See also BLS *Handbook of Methods,* Bulletin 2134–1 (Bureau of Labor Statistics, 1982).

9. Employment, by industry, selected years, 1950–84

[Nonagricultural payroll data, in thousands]

Year	Total	Private sector	Goods-producing				Service-producing						Government			
			Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Total	Federal	State	Local
1950	45,197	39,170	18,506	901	2,364	15,241	26,691	4,034	2,635	6,751	1,888	5,357	6,026	1,928	[1]	[1]
1955	50,641	43,727	20,513	792	2,839	16,882	30,128	4,141	2,926	7,610	2,298	6,240	6,914	2,187	1,168	3,558
1960[2]	54,189	45,836	20,434	712	2,926	16,796	33,755	4,004	3,143	8,248	2,629	7,378	8,353	2,270	1,536	4,547
1964	58,283	48,686	21,005	634	3,097	17,274	37,278	3,951	3,337	8,823	2,911	8,660	9,596	2,348	1,856	5,392
1965	60,765	50,689	21,926	632	3,232	18,062	38,839	4,036	3,466	9,250	2,977	9,036	10,074	2,378	1,996	5,700
1966	63,901	53,116	23,158	627	3,317	19,214	40,743	4,158	3,597	9,648	3,058	9,498	10,784	2,564	2,141	6,080
1967	65,803	54,413	23,308	613	3,248	19,447	42,495	4,268	3,689	9,917	3,185	10,045	11,391	2,719	2,302	6,371
1968	67,897	56,058	23,737	606	3,350	19,781	44,160	4,318	3,779	10,320	3,337	10,567	11,839	2,737	2,442	6,660
1969	70,384	58,189	24,361	619	3,575	20,167	46,023	4,442	3,907	10,798	3,512	11,169	12,195	2,758	2,533	6,904
1970	70,880	58,325	23,578	623	3,588	19,367	47,302	4,515	3,993	11,047	3,645	11,548	12,554	2,731	2,664	7,158
1971	71,214	58,331	22,935	609	3,704	18,623	48,278	4,476	4,001	11,351	3,772	11,797	12,881	2,696	2,747	7,437
1972	73,675	60,341	23,668	628	3,889	19,151	50,007	4,541	4,113	11,836	3,908	12,276	13,334	2,684	2,859	7,790
1973	76,790	63,058	24,893	642	4,097	20,154	51,897	4,656	4,277	12,329	4,046	12,857	13,732	2,663	2,923	8,146
1974	78,265	64,095	24,794	697	4,020	20,077	53,471	4,725	4,433	12,554	4,148	13,441	14,170	2,724	3,039	8,407
1975	76,945	62,259	22,600	752	3,525	18,323	54,345	4,542	4,415	12,645	4,165	13,892	14,686	2,748	3,179	8,758
1976	79,382	64,511	23,352	779	3,576	18,997	56,030	4,582	4,546	13,209	4,271	14,551	14,871	2,733	3,273	8,865
1977	82,471	67,344	24,346	813	3,851	19,682	58,125	4,713	4,708	13,808	4,467	15,303	15,127	2,727	3,377	9,023
1978	86,697	71,026	25,585	851	4,229	20,505	61,113	4,923	4,969	14,573	4,724	16,252	15,672	2,753	3,474	9,446
1979	89,823	73,876	26,461	958	4,463	21,040	63,363	5,136	5,204	14,989	4,975	17,112	15,947	2,773	3,541	9,633
1980	90,406	74,166	25,658	1,027	4,346	20,285	64,748	5,146	5,275	15,035	5,160	17,890	16,241	2,866	3,610	9,765
1981	91,156	75,126	25,497	1,139	4,188	20,170	65,659	5,165	5,358	15,189	5,298	18,619	16,031	2,772	3,640	9,619
1982	89,566	73,729	23,813	1,128	3,905	18,781	65,753	5,082	5,278	15,179	5,341	19,036	15,837	2,739	3,640	9,458
1983	90,138	74,288	23,394	957	3,940	18,497	66,744	4,958	5,259	15,545	5,467	19,665	15,851	2,752	3,660	9,439
1984	94,156	78,187	24,904	998	4,316	19,590	69,254	5,170	5,526	16,261	5,665	20,662	15,969	2,783	3,702	9,483

[1] Not available.

[2] Data include Alaska and Hawaii beginning in 1959.

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

10. Employment, by State

[Nonagricultural payroll data, in thousands]

State	March 1984	February 1985	March 1985[p]	State	March 1984	February 1985	March 1985[p]
Alabama	1,362.1	1,384.5	1,382.6	Montana	272.7	279.0	279.6
Alaska	211.9	218.7	221.5	Nebraska	615.3	631.9	637.3
Arizona	1,161.2	1,240.1	1,254.7	Nevada	415.4	437.5	441.9
Arkansas	769.6	782.3	789.2	New Hampshire	423.8	449.8	456.2
California	10,405.8	10,709.6	10,769.0	New Jersey	3,236.0	3,339.9	3,363.0
Colorado	1,371.9	1,390.0	1,404.0	New Mexico	493.2	507.3	509.6
Connecticut	1,487.7	1,533.2	1,543.2	New York	7,430.4	7,547.2	7,579.3
Delaware	270.6	282.1	284.6	North Carolina	2,528.5	2,585.8	2,598.4
District of Columbia	603.0	613.2	616.1	North Dakota	246.6	249.5	249.8
Florida	4,187.8	4,400.0	4,418.2	Ohio	4,150.5	4,242.3	4,272.7
Georgia	2,385.3	2,536.7	2,560.5	Oklahoma	1,181.1	1,175.9	1,183.9
Hawaii	413.5	419.7	421.2	Oregon	985.8	1,002.9	1,011.1
Idaho	320.3	323.7	324.5	Pennsylvania	4,564.6	4,627.0	4,661.2
Illinois	4,587.8	4,603.9	4,633.3	Rhode Island	403.4	410.2	412.0
Indiana	2,072.9	2,131.7	2,151.3	South Carolina	1,240.8	1,299.5	1,312.8
Iowa	1,053.7	1,048.4	1,052.6	South Dakota	238.7	237.7	240.3
Kansas	947.6	960.6	971.3	Tennessee	1,775.5	1,806.1	1,827.5
Kentucky	1,179.9	1,215.5	1,229.7	Texas	6,382.3	6,517.1	6,539.7
Louisiana	1,578.3	1,584.7	1,584.1	Utah	587.2	611.4	616.2
Maine	426.8	436.9	437.5	Vermont	211.7	218.7	218.9
Maryland	1,759.3	1,818.2	1,845.2	Virginia	2,268.3	2,351.8	2,374.4
Massachusetts	2,780.9	2,888.3	2,920.0	Washington	1,612.6	1,641.9	1,659.6
Michigan	3,311.4	3,354.2	3,381.0	West Virginia	583.7	577.9	584.2
Minnesota	1,759.8	1,832.9	1,839.7	Wisconsin	1,887.8	1,933.8	1,940.8
Mississippi	812.4	834.9	838.3	Wyoming	194.6	188.2	[1]
Missouri	1,988.3	1,996.5	2,019.5	Virgin Islands	37.6	36.6	36.9

[1] Not available.

p = preliminary.

11. Employment, by industry, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
TOTAL	90,138	94,156	93,449	93,768	94,135	94,350	94,523	94,807	95,157	95,497	95,681	96,045	96,161	96,514	96,731
PRIVATE SECTOR	74,288	78,187	77,546	77,864	78,241	78,422	78,566	78,698	79,054	79,371	79,618	79,971	80,073	80,411	80,635
GOODS-PRODUCING	23,394	24,904	24,760	24,851	24,974	25,059	25,098	25,010	25,080	25,123	25,258	25,338	25,235	25,326	25,361
Mining	957	998	984	995	1,002	1,007	1,017	1,020	1,012	1,009	1,000	1,000	1,001	1,000	1,009
Oil and gas extraction	600	627	612	619	623	629	636	642	643	648	646	641	636	634	638
Construction	3,940	4,316	4,246	4,286	4,343	4,356	4,356	4,374	4,382	4,396	4,457	4,530	4,492	4,606	4,676
General building contractors	1,015	1,128	1,110	1,126	1,135	1,133	1,132	1,140	1,140	1,146	1,159	1,186	1,171	1,206	1,217
Manufacturing	18,497	19,590	19,530	19,570	19,629	19,696	19,725	19,616	19,686	19,718	19,801	19,808	19,742	19,720	19,676
Production workers	12,581	13,455	13,443	13,465	13,492	13,541	13,558	13,448	13,497	13,505	13,571	13,569	13,491	13,463	13,445
Durable goods	10,774	11,635	11,551	11,598	11,652	11,702	11,758	11,696	11,752	11,776	11,834	11,844	11,797	11,778	11,738
Production workers	7,151	7,846	7,799	7,826	7,860	7,899	7,945	7,876	7,915	7,925	7,969	7,965	7,902	7,880	7,855
Lumber and wood products	658	710	714	711	712	708	706	703	710	713	717	715	708	709	702
Furniture and fixtures	447	484	482	482	485	485	484	481	487	492	495	497	497	500	493
Stone, clay, and glass products	573	605	604	605	605	606	603	603	606	606	612	614	608	613	611
Primary metal industries	838	874	879	887	884	880	879	865	866	865	859	860	855	848	840
Blast furnaces and basic steel products	343	337	345	347	345	342	334	324	320	320	318	319	316	315	310
Fabricated metal products	1,374	1,476	1,459	1,469	1,479	1,490	1,491	1,485	1,495	1,498	1,502	1,498	1,494	1,488	1,484
Machinery, except electrical	2,038	2,214	2,189	2,203	2,226	2,242	2,252	2,243	2,255	2,251	2,253	2,248	2,241	2,236	2,236
Electrical and electronic equipment	2,024	2,234	2,212	2,228	2,237	2,252	2,267	2,263	2,269	2,274	2,281	2,282	2,276	2,271	2,254
Transportation equipment	1,756	1,928	1,905	1,906	1,917	1,926	1,961	1,939	1,945	1,957	1,993	2,010	2,001	1,995	2,004
Motor vehicles and equipment	758	867	857	848	855	858	894	864	865	877	904	912	891	877	882
Instruments and related products	695	723	719	722	723	727	726	726	729	731	732	731	733	734	733
Miscellaneous manufacturing	371	387	388	385	384	386	389	388	390	389	390	389	384	384	381
Nondurable goods	7,724	7,954	7,979	7,972	7,977	7,994	7,967	7,920	7,934	7,942	7,967	7,964	7,945	7,942	7,938
Production workers	5,430	5,610	5,644	5,639	5,632	5,642	5,613	5,572	5,582	5,580	5,602	5,604	5,589	5,583	5,590
Food and kindred products	1,622	1,643	1,648	1,643	1,644	1,655	1,642	1,630	1,640	1,644	1,658	1,660	1,656	1,661	1,656
Tobacco manufactures	69	67	67	67	67	66	65	69	69	67	69	69	69	68	69
Textile mill products	744	753	766	762	759	755	751	744	735	731	727	728	720	715	718
Apparel and other textile products	1,164	1,202	1,226	1,217	1,209	1,206	1,200	1,181	1,178	1,178	1,186	1,185	1,179	1,176	1,171
Paper and allied products	662	682	680	681	685	687	686	680	684	683	684	684	684	683	682
Printing and publishing	1,296	1,361	1,348	1,356	1,362	1,368	1,371	1,375	1,380	1,386	1,386	1,390	1,392	1,396	1,400
Chemicals and allied products	1,047	1,061	1,057	1,057	1,062	1,064	1,067	1,063	1,065	1,066	1,068	1,065	1,064	1,065	1,067
Petroleum and coal products	195	188	189	188	188	187	187	186	185	185	184	184	183	182	182
Rubber and miscellaneous plastics products	718	796	790	795	797	801	800	798	805	810	814	812	813	811	809
Leather and leather products	208	202	208	206	204	205	198	194	193	192	191	187	185	185	184
SERVICE-PRODUCING	66,744	69,254	68,689	68,917	69,161	69,291	69,425	69,797	70,077	70,374	70,423	70,707	70,926	71,188	71,370
Transportation and public utilities	4,958	5,170	5,129	5,144	5,163	5,175	5,202	5,213	5,225	5,226	5,249	5,266	5,281	5,255	5,272
Transportation	2,739	2,895	2,862	2,871	2,883	2,896	2,924	2,937	2,951	2,953	2,974	2,984	3,002	2,983	3,003
Communication and public utilities	2,219	2,276	2,267	2,273	2,280	2,279	2,278	2,276	2,274	2,273	2,275	2,282	2,279	2,272	2,269
Wholesale trade	5,259	5,526	5,473	5,492	5,502	5,528	5,544	5,588	5,612	5,623	5,641	5,665	5,672	5,691	5,715
Durable goods[1]	3,064	3,254	3,215	3,235	3,249	3,268	3,278	3,293	3,301	3,317	3,328	3,340	3,348	3,357	3,376
Nondurable goods[1]	2,195	2,271	2,258	2,257	2,253	2,260	2,266	2,295	2,311	2,306	2,313	2,325	2,324	2,334	2,339
Retail trade	15,545	16,261	16,095	16,166	16,245	16,283	16,295	16,342	16,468	16,644	16,626	16,707	16,754	16,836	16,859
General merchandise stores	2,161	2,289	2,251	2,273	2,295	2,301	2,303	2,318	2,334	2,391	2,331	2,368	2,365	2,380	2,370
Food stores	2,560	2,649	2,635	2,630	2,641	2,648	2,640	2,648	2,677	2,696	2,710	2,714	2,726	2,747	2,743
Automotive dealers and service stations	1,667	1,754	1,743	1,751	1,751	1,762	1,758	1,755	1,763	1,772	1,777	1,780	1,796	1,805	1,808
Eating and drinking places	5,007	5,212	5,154	5,183	5,199	5,211	5,238	5,255	5,280	5,303	5,327	5,390	5,390	5,414	5,435
Finance, insurance, and real estate	5,467	5,665	5,640	5,662	5,676	5,676	5,679	5,684	5,705	5,725	5,749	5,764	5,796	5,825	5,858
Finance	2,740	2,850	2,851	2,863	2,854	2,854	2,850	2,856	2,865	2,874	2,886	2,900	2,919	2,936	2,957
Insurance	1,721	1,757	1,742	1,746	1,752	1,759	1,763	1,766	1,774	1,778	1,785	1,786	1,793	1,796	1,800
Real estate	1,005	1,058	1,047	1,053	1,066	1,063	1,066	1,062	1,066	1,073	1,078	1,078	1,084	1,093	1,101
Services	19,665	20,662	20,449	20,549	20,681	20,701	20,748	20,861	20,964	21,030	21,095	21,231	21,335	21,478	21,570
Business services	3,539	4,003	3,912	3,979	4,014	4,035	4,069	4,085	4,110	4,142	4,151	4,193	4,225	4,268	4,294
Health services	5,973	6,068	6,062	6,073	6,064	6,079	6,034	6,085	6,087	6,104	6,115	6,140	6,162	6,178	6,197
Government	15,851	15,969	15,903	15,904	15,894	15,928	15,957	16,109	16,103	16,126	16,063	16,074	16,088	16,103	16,096
Federal	2,752	2,783	2,771	2,767	2,777	2,779	2,785	2,804	2,793	2,809	2,809	2,807	2,805	2,811	2,813
State	3,660	3,702	3,693	3,699	3,699	3,697	3,714	3,725	3,719	3,724	3,711	3,713	3,721	3,728	3,739
Local	9,439	9,483	9,439	9,438	9,418	9,452	9,458	9,580	9,591	9,598	9,543	9,554	9,562	9,564	9,544

[1]Under Wholesale trade, data for Durable goods and Nondurable goods have been corrected in this table as of the April 1985 issue of the *Monthly Labor Review*.

p = preliminary.

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

12. Average hours and earnings, by industry, 1968–84

[Production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings
	Private sector			Mining			Construction		
1968	37.8	$2.85	$107.73	42.6	$3.35	$142.71	37.3	$4.41	$164.49
1969	37.7	3.04	114.61	43.0	3.60	154.80	37.9	4.79	181.54
1970	37.1	3.23	119.83	42.7	3.85	164.40	37.3	5.24	195.45
1971	36.9	3.45	127.31	42.4	4.06	172.14	37.2	5.69	211.67
1972	37.0	3.70	136.90	42.6	4.44	189.14	36.5	6.06	221.19
1973	36.9	3.94	145.39	42.4	4.75	201.40	36.8	6.41	235.89
1974	36.5	4.24	154.76	41.9	5.23	219.14	36.6	6.81	249.25
1975	36.1	4.53	163.53	41.9	5.95	249.31	36.4	7.31	266.08
1976	36.1	4.86	175.45	42.4	6.46	273.90	36.8	7.71	283.73
1977	36.0	5.25	189.00	43.4	6.94	301.20	36.5	8.10	295.65
1978	35.8	5.69	203.70	43.4	7.67	332.88	36.8	8.66	318.69
1979	35.7	6.16	219.91	43.0	8.49	365.07	37.0	9.27	342.99
1980	35.3	6.66	235.10	43.3	9.17	397.06	37.0	9.94	367.78
1981	35.2	7.25	255.20	43.7	10.04	438.75	36.9	10.82	399.26
1982	34.8	7.68	267.26	42.7	10.77	459.88	36.7	11.63	426.82
1983	35.0	8.02	280.70	42.5	11.27	478.98	37.2	11.92	443.42
1984	35.3	8.33	294.05	43.4	11.58	502.57	37.8	12.03	454.73
	Manufacturing			Transportation and public utilities			Wholesale trade		
1968	40.7	$3.01	$122.51	40.6	$3.42	$138.85	40.1	$3.05	$122.31
1969	40.6	3.19	129.51	40.7	3.63	147.74	40.2	3.23	129.85
1970	39.8	3.35	133.33	40.5	3.85	155.93	39.9	3.44	137.26
1971	39.9	3.57	142.44	40.1	4.21	168.82	39.5	3.65	129.85
1972	40.5	3.82	154.71	40.4	4.65	187.86	39.4	3.85	144.18
1973	40.7	4.09	166.46	40.5	5.02	203.31	39.3	4.08	151.69
1974	40.0	4.42	176.80	40.2	5.41	217.48	38.8	4.39	160.34
1975	39.5	4.83	190.79	39.7	5.88	233.44	38.7	4.73	183.05
1976	40.1	5.22	209.32	39.8	6.45	256.71	38.7	5.03	194.66
1977	40.3	5.68	228.90	39.9	6.99	278.90	38.8	5.39	209.13
1978	40.4	6.17	249.27	40.0	7.57	302.80	38.8	5.88	228.14
1979	40.2	6.70	269.34	39.9	8.16	325.58	38.8	6.39	247.93
1980	39.7	7.27	288.62	39.6	8.87	351.25	38.5	6.96	267.96
1981	39.8	7.99	318.00	39.4	9.70	382.18	38.5	7.56	291.06
1982	38.9	8.49	330.26	39.0	10.32	402.48	38.3	8.09	309.85
1983	40.1	8.83	354.08	39.0	10.80	421.20	38.5	8.54	328.79
1984	40.7	9.17	373.22	39.4	11.15	439.31	38.6	8.94	345.08
	Retail trade			Finance, insurance, and real estate			Services		
1968	34.7	$2.16	$74.95	37.0	$2.75	$101.75	34.7	$2.42	$83.97
1969	34.2	2.30	78.66	37.1	2.93	108.70	34.7	2.61	90.57
1970	33.8	2.44	82.47	36.7	3.07	112.67	34.4	2.81	96.66
1971	33.7	2.60	87.62	36.6	3.22	117.85	33.9	3.04	103.06
1972	33.4	2.75	91.85	36.6	3.36	122.98	33.9	3.27	110.85
1973	33.1	2.91	96.32	36.6	3.53	129.20	33.8	3.47	117.29
1974	32.7	3.14	102.68	36.5	3.77	137.61	33.6	3.75	126.00
1975	32.4	3.36	108.86	36.5	4.06	148.19	33.5	4.02	134.67
1976	32.1	3.57	114.60	36.4	4.27	155.43	33.3	4.31	143.52
1977	31.6	3.85	121.66	36.4	4.54	165.26	33.0	4.65	153.45
1978	31.0	4.20	130.20	36.4	4.89	178.00	32.8	4.99	163.67
1979	30.6	4.53	138.62	36.2	5.27	190.77	32.7	5.36	175.27
1980	30.2	4.88	147.38	36.2	5.79	209.60	32.6	5.85	190.71
1981	30.1	5.25	158.03	36.3	6.31	229.05	32.6	6.41	208.97
1982	29.9	5.48	163.85	36.2	6.78	245.44	32.6	6.92	225.59
1983	29.8	5.74	171.05	36.2	7.29	263.90	32.7	7.30	238.71
1984	30.0	5.89	176.70	36.5	7.62	278.13	32.8	7.62	249.94

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

13. Average weekly hours, by industry, seasonally adjusted

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
PRIVATE SECTOR	35.0	35.3	35.4	35.3	35.3	35.2	35.2	35.4	35.1	35.2	35.3	35.2	35.0	35.2	35.1
MANUFACTURING	40.1	40.7	41.1	40.6	40.6	40.5	40.5	40.6	40.4	40.5	40.7	40.6	40.0	40.4	40.3
Overtime hours	3.0	3.4	3.7	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.3	3.3	3.3	3.4
Durable goods	40.7	41.4	41.8	41.3	41.2	41.2	41.2	41.5	41.3	41.2	41.4	41.4	40.6	41.1	41.0
Overtime hours	3.0	3.6	4.0	3.5	3.5	3.5	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5	3.5
Lumber and wood products	40.1	39.9	40.4	39.6	39.4	39.3	39.4	40.2	39.7	39.5	40.0	40.0	38.8	39.5	39.5
Furniture and fixtures	39.4	39.7	39.7	39.7	39.1	39.8	39.1	39.9	39.6	39.8	39.6	40.5	39.4	39.4	39.0
Stone, clay, and glass products	41.5	42.0	42.3	42.1	41.8	41.9	41.7	42.0	41.8	41.8	41.7	41.6	41.4	42.1	42.1
Primary metal industries	40.5	41.6	42.2	42.1	41.7	41.5	41.0	41.3	41.3	41.5	41.2	41.0	40.8	41.1	41.1
Blast furnaces and basic steel products	39.5	40.6	41.0	41.6	41.1	39.9	39.6	40.0	40.1	40.8	39.7	39.7	40.6	40.8	40.5
Fabricated metal products	40.6	41.4	41.8	41.4	41.3	41.3	41.1	41.5	40.3	41.1	41.4	41.4	40.6	41.2	41.3
Machinery, except electrical	40.5	41.9	42.3	41.9	42.0	41.8	42.0	42.0	41.9	41.7	41.8	41.7	41.0	41.6	41.2
Electrical and electronic equipment	40.5	41.0	41.3	41.0	40.8	40.8	40.9	41.2	40.9	41.0	41.0	40.8	40.1	40.7	40.3
Transportation equipment	42.1	42.7	43.5	42.4	42.3	42.2	42.4	42.8	42.4	42.4	43.0	43.3	41.7	42.4	42.7
Motor vehicles and equipment	43.3	43.7	44.8	42.9	43.1	42.4	43.3	43.9	43.3	43.4	44.4	44.6	42.2	43.4	43.7
Instruments and related products	40.4	41.3	41.4	40.7	41.3	41.3	41.1	41.5	41.2	41.5	41.8	41.2	40.6	41.0	40.9
Nondurable goods	39.4	39.6	40.2	39.6	39.6	39.4	39.5	39.4	39.3	39.4	39.6	39.5	39.2	39.5	39.4
Overtime hours	3.0	3.1	3.4	3.1	3.2	3.1	3.1	3.0	2.9	3.2	3.1	2.9	2.9	3.0	3.1
Food and kindred products	39.5	39.8	40.1	39.7	39.8	39.5	39.7	39.6	39.6	39.7	40.1	39.8	39.6	39.8	39.7
Textile mill products	40.5	39.9	41.2	40.0	40.0	39.8	39.4	39.2	38.7	39.0	39.2	39.3	38.8	39.1	39.3
Apparel and other textile products	36.2	36.4	37.4	36.5	36.4	35.8	36.0	35.9	35.9	36.0	36.4	36.2	35.7	36.2	35.9
Paper and allied products	42.6	43.1	43.2	43.1	42.9	43.3	43.1	43.1	43.0	43.2	43.1	43.1	42.8	43.1	42.9
Printing and publishing	37.6	37.9	38.2	38.0	37.7	37.7	37.8	37.9	37.8	37.9	37.7	37.9	37.6	37.6	37.6
Chemicals and allied products	41.6	41.9	42.0	41.8	41.9	41.9	42.0	41.8	41.6	41.7	41.9	42.0	41.9	42.2	41.9
Petroleum and coal products	43.9	43.7	43.7	43.5	43.1	43.2	43.9	43.1	43.5	43.5	42.9	43.4	43.5	43.6	44.0
Leather and leather products	36.8	36.8	37.5	36.5	36.7	37.0	36.0	36.5	36.4	36.4	36.9	37.0	36.2	36.9	37.1
TRANSPORTATION AND PUBLIC UTILITIES	39.0	39.4	39.5	39.4	39.6	39.8	39.4	39.8	39.1	39.4	39.2	39.2	39.4	39.5	39.4
WHOLESALE TRADE	38.5	38.6	38.7	38.6	38.6	38.6	38.7	38.8	38.6	38.6	38.6	38.6	38.5	38.7	38.7
RETAIL TRADE	29.8	30.0	30.0	30.1	30.2	29.9	29.9	30.0	29.8	29.9	30.1	29.8	29.7	29.8	29.6
SERVICES	32.7	32.8	32.8	32.7	32.7	32.7	32.6	32.8	32.7	32.7	32.8	32.7	32.7	32.8	32.7

p = preliminary.

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

14. Average hourly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
PRIVATE SECTOR	$8.02	$8.33	$8.29	$8.28	$8.29	$8.32	$8.30	$8.43	$8.40	$8.43	$8.46	$8.50	$8.53	$8.52	$8.55
Seasonally adjusted	(1)	(1)	8.31	8.29	8.33	8.35	8.34	8.40	8.38	8.42	8.47	8.45	8.51	8.53	8.57
MINING	11.27	11.58	11.62	11.56	11.57	11.57	11.57	11.66	11.52	11.57	11.64	11.79	11.83	11.81	11.73
CONSTRUCTION	11.92	12.03	11.95	11.99	11.94	11.97	12.01	12.15	12.14	12.01	12.17	12.22	12.26	12.17	12.18
MANUFACTURING	8.83	9.17	9.11	9.11	9.14	9.18	9.14	9.23	9.22	9.30	9.38	9.42	9.42	9.43	9.48
Durable goods	9.38	9.72	9.67	9.66	9.69	9.70	9.68	9.77	9.76	9.82	9.94	9.97	9.97	9.98	10.01
Lumber and wood products	7.79	7.99	7.89	7.92	8.04	8.01	8.05	8.15	8.06	8.01	8.04	8.05	8.05	8.02	8.00
Furniture and fixtures	6.62	6.86	6.76	6.80	6.84	6.88	6.90	6.95	6.95	6.96	7.01	7.03	7.03	7.06	7.10
Stone, clay, and glass products	9.27	9.56	9.51	9.54	9.58	9.64	9.62	9.64	9.63	9.66	9.67	9.69	9.72	9.72	9.79
Primary metal industries	11.34	11.43	11.51	11.49	11.46	11.45	11.34	11.39	11.31	11.44	11.44	11.50	11.65	11.62	11.62
Blast furnaces and basic steel products	12.89	12.99	13.12	13.09	13.02	13.02	12.90	13.01	12.86	12.99	12.95	13.07	13.42	13.27	13.34
Fabricated metal products	9.11	9.36	9.34	9.33	9.33	9.33	9.30	9.41	9.38	9.42	9.55	9.57	9.56	9.60	9.64
Machinery, except electrical	9.55	9.96	9.91	9.90	9.93	9.96	9.92	10.01	10.01	10.06	10.16	10.12	10.13	10.16	10.18
Electrical and electronic equipment	8.65	8.99	8.89	8.89	8.91	8.95	9.00	9.08	9.09	9.15	9.27	9.28	9.28	9.34	9.33
Transportation equipment	11.66	12.19	12.06	12.04	12.14	12.13	12.13	12.23	12.29	12.42	12.59	12.64	12.59	12.56	12.59
Motor vehicles and equipment	12.12	12.69	12.56	12.51	12.67	12.61	12.59	12.69	12.81	12.96	13.21	13.35	13.29	13.23	13.33
Instruments and related products	8.46	8.81	8.73	8.71	8.78	8.83	8.85	8.92	8.89	8.91	8.99	8.96	9.07	9.05	9.07
Miscellaneous manufacturing	6.80	7.00	6.97	6.99	6.98	7.02	6.97	7.01	7.02	7.03	7.12	7.19	7.15	7.15	7.13
Nondurable goods	8.08	8.37	8.29	8.30	8.33	8.41	8.37	8.44	8.44	8.52	8.55	8.60	8.60	8.61	8.68
Food and kindred products	8.20	8.41	8.43	8.43	8.44	8.41	8.36	8.37	8.33	8.46	8.48	8.50	8.54	8.56	8.62
Tobacco manufactures	10.35	11.12	11.43	11.55	11.92	11.67	10.75	10.31	10.35	11.76	10.97	11.20	11.63	11.83	11.71
Textile mill products	6.18	6.46	6.43	6.42	6.43	6.43	6.46	6.49	6.49	6.55	6.57	6.59	6.60	6.64	6.68
Apparel and other textile products	5.37	5.53	5.49	5.48	5.50	5.51	5.53	5.61	5.59	5.59	5.65	5.70	5.67	5.70	5.73
Paper and allied products	9.94	10.44	10.29	10.34	10.42	10.56	10.50	10.55	10.56	10.67	10.69	10.67	10.68	10.67	10.76
Printing and publishing	9.11	9.39	9.29	9.31	9.30	9.36	9.42	9.51	9.48	9.54	9.56	9.57	9.59	9.60	9.59
Chemicals and allied products	10.59	11.11	10.97	11.02	11.03	11.12	11.13	11.23	11.32	11.35	11.37	11.42	11.42	11.40	11.50
Petroleum and coal products	13.29	13.45	13.44	13.32	13.33	13.27	13.32	13.54	13.52	13.67	13.63	13.97	14.01	13.90	14.10
Rubber and miscellaneous plastics products	7.99	8.27	8.25	8.20	8.23	8.30	8.28	8.31	8.31	8.39	8.43	8.50	8.47	8.45	8.51
Leather and leather products	5.54	5.70	5.68	5.68	5.67	5.70	5.67	5.72	5.72	5.76	5.80	5.82	5.79	5.81	5.82
TRANSPORTATION AND PUBLIC UTILITIES	10.80	11.15	11.07	11.03	11.07	11.18	11.17	11.27	11.23	11.29	11.32	11.31	11.31	11.28	11.31
WHOLESALE TRADE	8.54	8.94	8.89	8.86	8.90	8.97	8.95	9.05	8.99	9.06	9.18	9.14	9.21	9.19	9.22
RETAIL TRADE	5.74	5.89	5.90	5.88	5.88	5.87	5.84	5.89	5.88	5.94	5.89	5.99	6.01	6.00	6.00
FINANCE, INSURANCE, AND REAL ESTATE	7.29	7.62	7.62	7.55	7.58	7.60	7.57	7.76	7.67	7.71	7.78	7.77	7.87	7.87	7.91
SERVICES	7.30	7.62	7.60	7.55	7.53	7.56	7.53	7.69	7.69	7.74	7.82	7.82	7.85	7.84	7.85

[1] Not available.

p = preliminary.

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

15. The Hourly Earnings Index, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls; 1977 = 100]

Industry	Not seasonally adjusted					Seasonally adjusted						
	Apr. 1984	Feb. 1985	Mar. 1985p	Apr. 1985p	Percent change from: Apr. 1984 to Apr. 1985	Apr. 1984	Dec. 1984	Jan. 1985	Feb. 1985	Mar. 1985p	Apr. 1985p	Percent change from: Mar. 1985 to Apr. 1985
PRIVATE SECTOR (in current dollars)	159.8	164.1	164.1	164.4	2.9	159.9	163.1	162.8	163.8	164.2	164.4	0.1
Mining	172.9	178.2	177.1	177.2	2.5	(1)	(1)	(1)	(1)	(1)	(1)	(2)
Construction	145.5	148.9	148.1	147.8	1.6	146.6	147.5	148.0	149.6	149.1	149.0	−.1
Manufacturing	161.6	166.7	167.0	167.7	3.8	161.6	165.1	165.9	166.6	167.1	167.7	.3
Transportation and public utilities	160.9	164.9	164.3	164.4	2.2	161.3	164.3	163.4	164.4	164.9	164.8	−.1
Wholesale trade	164.6	170.0	169.7	169.7	3.1	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Retail trade	154.2	156.2	156.2	156.4	1.5	153.7	155.4	154.8	155.8	156.1	156.0	−.1
Finance, insurance, and real estate	165.8	170.2	170.3	170.7	2.9	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Services	162.3	167.0	167.0	167.3	3.1	162.3	166.6	164.8	166.0	167.0	167.3	.2
PRIVATE SECTOR (in constant dollars)	95.4	94.9	94.5	(2)	(2)	95.3	94.7	94.4	94.6	94.4	(2)	(2)

[1] This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle, irregular components, or both, and consequently cannot be separated with sufficient precision.

[2] Not available.

p = preliminary.

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

16. Average weekly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984									1985			
	1983	1984	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
PRIVATE SECTOR															
Current dollars	$280.70	$294.05	$292.64	$291.46	$294.30	$296.19	$294.65	$299.27	$295.68	$295.89	$300.33	$295.80	$295.99	$298.20	$298.40
Seasonally adjusted	(1)	(1)	294.17	292.64	294.05	293.92	293.57	297.36	294.14	296.38	298.99	297.44	297.85	300.26	300.81
Constant (1977) dollars	171.37	173.48	174.71	173.18	174.45	174.85	172.31	173.99	171.91	172.23	174.61	171.78	171.19	171.68	(1)
MINING	478.98	502.57	499.66	499.39	505.61	497.51	503.30	513.04	497.66	503.30	514.49	506.97	511.06	514.92	510.26
CONSTRUCTION	443.42	454.73	448.13	458.02	460.88	462.04	462.39	467.78	461.32	449.17	457.97	444.81	448.72	457.59	459.19
MANUFACTURING															
Current dollars	354.08	373.22	372.60	369.87	372.91	369.95	369.26	375.66	373.41	378.51	386.46	379.63	373.97	380.97	380.15
Constant (1977) dollars	216.17	220.19	222.45	219.77	221.05	218.39	215.94	218.41	217.10	220.32	224.69	220.46	216.29	219.33	(1)
Durable goods	381.77	402.41	402.27	399.92	402.14	396.73	396.88	405.46	403.09	406.55	418.47	409.77	401.79	411.18	408.41
Lumber and wood products	312.38	318.80	317.18	317.59	324.01	316.40	322.00	329.26	320.79	313.99	319.99	313.15	308.32	315.19	314.40
Furniture and fixtures	260.83	272.34	267.02	268.60	270.86	269.70	273.24	278.70	279.39	279.10	284.61	276.98	271.36	277.46	275.48
Stone, clay, and glass products	384.71	401.52	401.32	404.50	407.15	406.81	405.96	408.74	405.42	405.72	403.24	392.45	392.69	404.35	411.18
Primary metal industries	459.27	475.49	488.02	481.43	480.17	472.89	462.67	472.69	462.58	473.62	475.90	471.50	475.32	479.91	479.91
Blast furnaces and basic steel products	509.16	527.39	549.73	540.62	536.42	524.71	506.97	524.30	506.68	524.80	516.71	517.57	544.85	540.09	550.94
Fabricated metal products	369.87	387.50	387.61	386.26	388.13	380.66	381.30	389.57	387.39	389.05	403.01	394.28	386.22	395.52	395.24
Machinery except electrical	386.78	417.32	417.21	413.82	417.06	411.35	411.68	420.42	417.42	422.52	434.85	422.00	415.33	423.67	417.38
Electrical and electronic equipment	350.33	368.59	364.49	363.60	365.31	361.58	366.30	374.10	371.78	376.98	387.49	377.70	371.20	380.14	373.20
Transportation equipment	490.89	520.51	523.40	514.11	519.59	508.25	504.61	517.33	521.10	530.33	552.70	543.52	522.49	535.06	536.33
Motor vehicles and equipment	524.80	554.55	563.94	546.69	557.48	537.19	532.56	548.21	554.67	562.46	593.13	590.07	556.85	574.18	583.85
Instruments and related products	341.78	363.85	358.80	354.50	362.61	361.15	362.85	371.07	365.38	371.55	380.28	367.36	368.24	371.96	368.24
Miscellaneous manufacturing	265.88	275.80	275.32	274.71	273.62	273.08	272.53	277.60	278.69	279.09	284.09	277.53	275.28	280.28	276.64
Nondurable goods	318.35	331.45	329.94	328.68	331.53	331.35	331.45	335.07	332.54	337.39	341.15	337.12	333.68	338.37	338.52
Food and kindred products	323.90	334.72	332.99	333.83	337.60	333.04	335.24	336.47	331.53	338.40	343.44	335.75	333.06	336.41	337.04
Tobacco manufactures	387.09	432.57	451.49	457.38	482.76	437.63	421.40	408.28	412.97	471.58	425.64	417.76	434.96	444.81	404.00
Textile mill products	250.29	257.75	260.42	257.44	259.77	252.70	256.46	255.71	253.11	257.42	258.86	257.01	254.76	258.30	257.85
Apparel and other textile products	194.39	201.29	202.03	200.02	202.40	198.36	200.74	201.96	201.80	201.80	205.66	203.49	201.29	205.77	202.27
Paper and allied products	423.44	449.96	442.47	443.59	449.10	456.19	451.50	457.87	455.14	462.01	468.22	457.74	453.90	456.68	459.45
Printing and publishing	342.54	355.88	353.02	351.92	349.68	351.94	357.02	362.33	358.34	363.47	367.10	358.88	357.71	361.92	358.67
Chemicals and allied products	440.54	465.51	460.74	460.64	463.26	463.70	464.12	471.66	470.91	475.57	482.09	478.50	477.36	479.94	481.85
Petroleum and coat products	583.43	587.77	590.02	580.75	579.86	579.90	584.75	598.47	590.82	597.38	584.73	597.92	595.43	592.14	623.22
Rubber and miscellaneous plastics products	329.19	344.86	347.33	341.94	344.84	341.96	342.79	344.87	344.03	349.02	354.06	351.90	343.04	347.30	348.06
Leather and leather products	203.87	209.76	210.16	209.59	213.76	212.61	206.39	208.21	207.64	210.82	215.18	211.85	207.28	210.90	213.01
TRANSPORTATION AND PUBLIC UTILITIES	421.20	439.31	435.05	432.38	440.59	447.20	443.45	449.67	440.22	445.96	447.14	439.96	442.22	443.30	443.35
WHOLESALE TRADE	328.79	345.08	342.27	342.00	344.43	348.04	347.26	351.14	347.91	350.62	357.10	350.98	351.82	353.82	354.97
RETAIL TRADE	171.05	176.70	175.82	176.40	178.75	180.21	178.70	177.29	174.64	176.42	180.23	174.31	174.89	176.40	176.40
FINANCE, INSURANCE, AND REAL ESTATE	263.90	278.13	278.13	274.07	275.15	278.92	275.55	284.02	279.96	280.64	285.53	283.61	286.47	286.47	288.72
SERVICES	238.71	249.94	248.52	246.13	247.74	250.24	248.49	252.23	250.69	252.32	256.50	254.15	255.13	255.58	255.91

[1] Not available.

p = preliminary.

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

17. Indexes of diffusion: industries in which employment increased, seasonally adjusted

[In percent]

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1983	54.3	46.5	60.8	68.9	69.5	64.6	74.3	68.6	69.5	75.4	69.7	73.8
	1984	71.1	73.2	67.0	63.8	64.1	63.0	62.4	57.6	40.8	65.7	51.9	63.5
	1985	58.4	47.3	p54.6	p51.9	....	....	....	....	....	....	....	....
Over 3-month span	1983	46.8	57.3	64.1	75.1	75.7	77.8	74.1	81.6	80.8	78.9	79.5	77.6
	1984	82.2	80.5	76.5	71.1	68.4	68.9	63.5	58.1	58.6	53.5	64.9	61.9
	1985	57.6	p51.6	p48.1	....	....	....	....	....	....	....	....	....
Over 6-month span	1983	50.8	63.0	69.2	75.1	80.0	82.4	84.1	82.4	84.6	85.9	86.8	83.8
	1984	81.9	82.7	79.7	75.4	69.2	63.2	62.4	62.7	63.5	60.5	55.1	p59.7
	1985	p53.2	....	....	....	....	....	....	....	....	....	....	....
Over 12-month span	1983	49.5	54.3	61.9	71.1	77.3	79.5	83.8	88.1	86.8	87.3	85.4	87.3
	1984	86.5	81.9	78.9	76.8	74.3	73.8	71.1	63.2	p64.1	p60.3	....	....

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

UNEMPLOYMENT INSURANCE DATA

NATIONAL UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from monthly reports of unemployment insurance activity prepared by State agencies. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under State programs, Unemployment Compensation for Ex-Servicemen, and Unemployment Compensation for Federal Employees, and the Railroad Insurance Act. The total may include persons receiving Federal–State Extended Benefits.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed. Persons not covered by unemployment insurance (about 10 percent of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

Average weekly seasonally adjusted insured unemployment data are computed by BLS' Weekly Seasonal Adjustment program. This procedure incorporated the X–11 Variant of the Census Method II Seasonal Adjustment program.

An **application** for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year. **Number of payments** are payments made in 14-day registration periods. The **average amount of benefit payment** is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments. However, **total benefits** paid have been adjusted.

18. Unemployment insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1984										1985		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.r	Jan.r	Feb.p	Mar.p
All programs:													
Insured unemployment	2,958	2,613	2,290	2,166	2,327	2,184	2,083	2,149	2,441	2,778	3,361	3,339	....
State unemployment insurance program:[1]													
Initial claims[2]	1,424	1,429	1,368	1,387	1,767	1,459	1,260	1,758	1,825	2,074	2,610	1,662	....
Insured unemployment (average weekly volume)	2,843	2,515	2,215	2,111	2,270	2,129	2,023	2,072	2,355	2,691	3,264	3,239	....
Rate of insured unemployment	3.3	2.9	2.6	2.5	2.6	2.5	2.3	2.4	2.7	3.1	3.7	3.6	....
Weeks of unemployment compensated	11,339	9,695	9,304	8,053	8,380	8,716	7,209	8,092	8,421	9,211	12,382	11,759	....
Average weekly benefit amount for total unemployment	$124.67	$125.26	$123.69	$121.96	$119.83	$120.24	$122.49	$123.19	$123.95	$125.36	$126.68	$127.28	....
Total benefits paid	$1,369,536	$1,173,601	$1,109,268	$948,381	$974,135	$1,017,804	$853,424	$962,856	$1,005,727	$1,114,781	$1,505,278	$1,450,239	....
State unemployment insurance program:[1] (Seasonally adjusted data)													
Initial claims[2]	1,570	1,569	1,614	1,559	1,661	1,618	1,707	1,746	1,765	1,602	1,766	1,814	....
Insured unemployment (average weekly volume)	2,470	2,507	2,300	2,356	2,457	2,355	2,567	2,461	2,551	2,541	2,532	2,585	....
Rate of insured unemployment	2.9	2.9	2.7	2.7	2.8	2.7	3.0	2.8	2.9	2.9	2.8	2.9	....
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	13	12	12	12	13	14	13	15	13	12	14	12	....
Insured unemployment (average weekly volume)	22	20	18	18	18	19	20	21	22	23	24	22	....
Weeks of unemployment compensated	89	78	79	71	71	79	72	86	87	88	102	86	....
Total benefits paid	$11,813	$10,349	$10,577	$9,467	$9,573	$10,715	$9,820	$11,766	$11,984	$11,930	$13,901	$11,720	....
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	9	13	9	11	12	10	9	15	12	11	14	9	....
Insured unemployment (average weekly volume)	28	23	20	19	20	19	19	21	23	24	27	26	....
Weeks of unemployment compensated	122	98	88	76	80	83	69	85	89	94	113	101	....
Total benefits paid	$14,778	$11,844	$10,529	$8,994	$9,489	$9,776	$8,198	$10,088	$10,830	$11,386	$14,017	$12,847	....
Railroad unemployment insurance:													
Applications	3	2	2	11	25	7	6	9	10	11	13	4	3
Insured unemployment (average weekly volume)	41	27	19	16	16	17	18	21	26	29	31	34	34
Number of payments	99	70	54	38	35	37	34	46	52	61	94	74	75
Average amount of benefit payment	$208.96	$196.32	$188.45	$187.37	$189.06	$197.85	$196.15	$195.20	$198.85	$205.26	$206.99	$209.76	$209.66
Total benefits paid	$20,112	$13,356	$10,233	$7,039	$6,691	$6,695	$6,349	$8,596	....	....	....	....	....
Employment service:[5]													
New applications and renewals	8,231	....	....	9,517	....	....	r4,803	....	....	6,728	....	....	....
Nonfarm placements	1,469	....	....	1,810	....	....	r1,182	....	....	1,577	....	....	....

[1] Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

[2] Excludes transition claims under State programs.

[3] Excludes data on claims and payments made jointly with other programs.

[4] Excludes data or claims and payments made jointly with State programs.

[5] Cumulative total for fiscal year (October 1–September 30). Data computed quarterly.

r = revised.

p = preliminary.

NOTE: Data for Puerto Rico and the Virgin Islands included. Dashes indicate data not available.

PRICE DATA

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 (1967 = 100, unless otherwise noted).

Definitions

The Consumer Price Index is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. It introduced a CPI for All Urban Consumers, covering 80 percent of the total noninstitutional population, and revised the CPI for Urban Wage Earners and Clerical Workers, covering about half the new index population. The All Urban Consumers index covers in addition to wage earners and clerical workers, 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 is kept essentially unchanged between major revisions so that only price changes will be measured. Data are collected from more than 24,000 retail establishments and 24,000 tenants in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972–73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

Though the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. Area indexes do not measure differences in the level of prices among cities. They only measure the average change in prices for each area since the base period.

Producer Price Indexes measure average changes in prices received in primary markets of the United States by producers of commodities in all stages of processing. The sample used for calculating these indexes contains about 2,800 commodities and about 10,000 quotations per month selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (that is, finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use or material composition.

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

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. 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 groupings.

Price indexes for the output of selected SIC industries measure average price changes in commodities produced by particular industries, as defined in the *Standard Industrial Classification Manual 1972* (Washington, U.S. Office of Management and Budget, 1972). These indexes are derived from several price series, combined to match the economic activity of the specified industry and weighted by the value of shipments in the industry. They use data from comprehensive industrial censuses conducted by the U.S. Bureau of the Census and the U.S. Department of Agriculture.

Notes on the data

Regional CPI's cross classified by population size were introduced in the May 1978 *Review*. These indexes enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes are published bimonthly. (See table 20.)

For details concerning the 1978 revision of the CPI, see *The Consumer Price Index: Concepts and Content Over the Years,* Report 517, revised edition (Bureau of Labor Statistics, May 1978).

As of January 1976, the Producer Price Index incorporated a revised weighting structure reflecting 1972 values of shipments.

Additional data and analyses of price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes,* both monthly publications of the Bureau.

For a discussion of the general method of computing producer, and industry price indexes, see *BLS Handbook of Methods,* Bulletin 2134–1 (Bureau of Labor Statistics, 1982), chapter 7. For consumer prices, see *BLS Handbook of Methods for Surveys and Studies* (1976), chapter 13. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review,* April 1978. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review,* August 1965.

19. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–84

[1967 = 100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	. . .	100.0	. . .	100.0	. . .	100.0	. . .	100.0	. . .	100.0	. . .	100.0	. . .	100.0	. . .
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4.1	112.7	5.1	120.6	6.3	116.7	5.1	115.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.3	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128.1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	8.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4
1979	217.7	11.5	228.7	10.9	227.5	12.3	166.4	4.3	212.8	14.5	240.1	9.4	187.6	6.5	196.3	7.2
1980	247.0	13.5	248.7	8.7	263.2	15.7	177.4	6.6	250.5	17.7	287.2	11.3	203.7	8.5	213.6	8.8
1981	272.3	10.2	267.8	7.7	293.2	11.4	186.6	5.2	281.3	12.3	295.1	10.4	219.0	7.5	233.3	9.2
1982	288.6	6.0	278.5	4.0	314.7	7.3	190.9	2.3	293.1	4.2	326.9	10.8	232.4	6.1	257.0	10.2
1983	297.4	3.0	284.7	2.2	322.0	2.3	195.6	2.5	300.0	2.4	355.1	8.6	242.4	4.3	286.3	11.4
1984	307.6	3.4	295.2	3.7	329.2	2.2	199.1	1.8	313.9	4.6	377.7	6.4	251.2	3.6	304.9	6.5

20. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
All items	307.3	315.3	315.3	315.5	316.1	317.4	318.8	303.3	312.2	311.9	312.2	312.6	313.9	315.3
Food and beverages	294.3	296.6	296.3	297.2	299.3	301.4	301.6	294.5	296.5	296.2	297.1	299.1	301.2	301.6
Housing	331.5	341.2	340.9	341.2	342.0	343.3	344.7	322.9	335.5	334.4	335.0	335.7	337.2	338.2
Apparel and upkeep	198.8	205.7	205.2	203.2	199.8	201.8	205.3	198.0	204.8	204.2	202.1	198.5	200.7	204.2
Transportation	306.9	315.5	316.1	315.8	314.7	314.3	316.7	308.9	317.8	318.3	317.9	316.7	316.3	318.7
Medical care	374.5	385.5	387.5	388.5	391.1	393.8	396.5	372.6	383.7	385.6	386.7	389.3	392.0	394.6
Entertainment	251.7	258.3	259.0	260.1	261.0	261.3	262.2	248.6	254.2	254.8	255.8	256.6	256.9	257.3
Other goods and services	302.1	315.8	316.5	316.7	319.1	320.5	321.1	299.7	311.9	312.6	312.8	315.6	317.1	317.6
Commodities	278.7	283.1	283.0	282.8	282.7	284.0	285.3	278.1	283.1	282.8	282.7	282.5	283.5	285.2
Commodities less food and beverages	266.6	272.1	272.2	271.4	270.0	270.7	272.8	266.4	272.5	272.3	271.8	270.3	271.1	273.1
Nondurables less food and beverages	274.2	278.6	278.2	277.0	274.4	274.7	277.9	276.1	280.3	279.9	278.7	275.8	276.2	279.4
Durables	262.2	269.3	270.0	269.8	270.2	271.4	271.9	257.1	264.6	264.5	264.6	264.9	266.2	266.7
Services	356.5	369.7	369.9	370.6	372.1	373.5	375.0	349.9	366.3	365.9	366.8	368.3	369.6	371.0
Rent, residential	244.8	253.8	254.8	256.1	257.1	258.4	259.2	244.1	253.1	254.0	255.3	256.3	257.5	258.4
Household services less rent of shelter (12/82 = 100)	105.8	109.9	108.8	108.5	108.9	108.9	111.5	. . . .	. . . .	. . . .	. . . .	100.4	100.4	101.1
Transportation services	315.4	327.5	328.9	330.1	331.8	332.2	333.2	311.6	323.7	325.1	326.1	327.7	328.1	328.8
Medical care services	405.3	416.5	418.5	419.3	422.4	425.3	428.1	402.7	414.1	416.1	417.0	420.1	423.1	425.7
Other services	290.4	304.2	305.2	306.1	307.1	307.8	308.6	287.6	300.6	301.5	302.3	303.5	304.2	304.9
Special indexes:														
All items less food	306.8	316.1	316.2	316.2	316.3	317.4	319.1	302.4	312.9	312.6	312.7	312.7	313.7	315.4
All items less homeowners' costs	105.1	107.6	107.6	107.6	107.8	108.2	108.7	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
All items less mortgage interest costs	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	291.3	298.4	298.2	298.3	. . . .	. . . .	. . . .
Commodities less food	264.4	269.8	269.9	269.2	267.8	268.6	270.6	264.3	270.3	270.1	269.6	268.2	269.0	271.0
Nondurables less food	269.3	273.6	273.3	272.2	269.7	270.2	273.2	271.3	275.4	275.0	273.9	271.2	271.7	274.7
Nondurables less food and apparel	310.3	313.5	313.4	312.8	310.9	310.8	313.5	311.6	314.8	314.5	313.8	311.8	311.5	314.4
Nondurables	285.5	288.8	288.5	288.3	288.0	289.6	291.0	286.4	289.5	289.2	289.0	288.6	289.8	291.6
Services less rent of shelter (12/82 = 100)	106.5	110.6	110.5	110.6	111.1	111.3	111.9	. . . .	. . . .	. . . .	. . . .	100.5	100.7	101.2
Services less medical care	349.0	362.3	362.3	363.0	364.3	365.5	366.9	342.1	358.9	358.2	359.2	360.4	361.6	362.8
Domestically produced farm foods	279.9	279.7	278.8	279.9	282.1	284.8	284.2	278.6	278.0	277.2	278.2	280.4	282.9	282.5
Selected beef cuts	279.7	271.0	271.6	276.0	276.2	275.2	275.0	281.3	272.2	273.0	277.4	277.5	276.5	276.6
Energy	418.1	426.7	421.8	418.9	414.5	411.4	416.6	418.2	426.1	421.5	418.5	413.8	410.6	416.0
Energy commodities	410.7	408.2	407.2	404.1	395.7	391.3	398.3	411.3	408.9	407.8	404.7	396.2	391.8	399.0
All items less energy	299.2	307.1	307.7	308.2	309.2	310.9	312.0	294.0	303.1	303.2	303.8	304.7	306.4	307.4
All items less food and energy	296.7	306.1	306.9	307.3	307.9	309.5	310.8	290.7	301.5	301.6	302.1	302.7	304.3	305.5
Commodities less food and energy	249.9	256.8	257.0	256.7	256.5	258.1	259.3	247.2	254.3	254.2	254.0	253.8	255.5	256.6
Services less energy	350.7	362.7	364.0	365.0	366.4	368.0	369.4	343.3	358.9	359.4	360.7	362.0	363.6	364.9
Purchasing power of the consumer dollar, 1967 = $1	$0.325	$0.317	$0.317	$0.317	$0.316	$0.315	$0.314	$0.330	$0.320	$0.321	$0.320	$0.320	$0.319	$0.317

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
FOOD AND BEVERAGES	294.3	296.6	296.3	297.2	299.3	301.4	301.6	294.5	296.5	296.2	297.1	299.1	301.2	301.6
Food	302.2	304.4	304.1	305.1	307.3	309.5	309.7	302.1	304.0	303.7	304.7	306.9	309.0	309.3
Food at home	293.1	293.4	292.4	293.2	296.1	298.6	298.4	291.9	291.8	290.9	291.7	294.5	297.0	296.9
Cereals and bakery products	301.5	308.7	309.0	310.7	312.4	313.7	314.4	300.0	307.1	307.4	309.0	310.7	311.9	312.7
Cereals and cereal products (12/77 = 100)	161.9	163.6	163.8	164.2	165.6	167.0	168.1	162.6	164.3	164.4	164.7	166.2	167.5	168.7
Flour and prepared flour mixes (12/77 = 100)	144.6	145.2	143.9	143.4	146.6	148.2	148.9	145.1	145.6	144.4	143.6	146.8	148.4	149.1
Cereal (12/77 = 100)	182.3	186.2	186.7	187.6	189.4	191.9	193.0	184.4	188.4	189.0	189.8	191.7	194.1	195.2
Rice, pasta, and cornmeal (12/77 = 100)	148.8	148.5	149.3	149.9	149.3	149.0	150.5	150.0	149.7	150.5	151.0	150.3	150.2	151.7
Bakery products (12/77 = 100)	158.8	163.3	163.4	164.5	165.2	165.6	165.7	157.5	161.9	162.1	163.1	163.8	164.2	164.4
White bread	258.9	264.3	265.8	265.4	267.2	267.1	266.8	254.6	260.1	261.3	261.0	263.0	262.8	262.5
Other breads (12/77 = 100)	153.0	155.7	155.4	156.2	156.0	158.1	158.6	155.2	158.0	157.6	158.4	158.1	160.5	161.0
Fresh biscuits, rolls, and muffins (12/77 = 100)	158.8	160.7	161.1	161.9	161.8	164.1	163.3	154.9	156.4	157.0	157.5	157.6	159.7	158.8
Fresh cakes and cupcakes (12/77 = 100)	160.0	167.4	166.4	169.6	169.6	168.9	169.4	158.1	165.0	164.1	167.3	167.3	166.8	167.4
Cookies (12/77 = 100)	162.9	168.3	168.5	170.9	171.3	171.5	171.9	163.7	169.5	169.6	171.9	172.3	172.5	172.9
Crackers, bread, and cracker products (12/77 = 100)	153.9	162.7	160.9	164.3	166.3	167.9	168.6	155.2	164.2	162.4	166.0	167.8	169.2	170.2
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	160.5	163.8	163.9	164.1	164.9	165.0	163.8	163.3	166.6	166.7	166.9	167.7	167.7	166.9
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	163.8	170.0	171.1	171.7	172.9	172.4	174.2	157.0	162.7	163.8	164.3	165.5	164.9	166.8
Meats, poultry, fish, and eggs	269.6	263.5	262.4	265.9	266.6	267.0	266.1	269.0	262.9	261.8	265.3	266.0	266.3	265.6
Meats, poultry, and fish	272.6	270.4	269.4	272.5	275.0	274.8	273.7	272.0	269.7	268.7	271.7	274.2	274.0	273.0
Meats	268.8	267.1	266.1	269.6	270.8	270.6	269.5	268.3	266.6	265.5	268.9	270.2	270.0	268.9
Beef and veal	279.9	271.3	271.9	276.2	276.4	275.6	275.3	280.8	271.9	272.5	276.9	277.0	276.2	276.2
Ground beef other than canned	260.9	252.4	254.3	257.2	256.0	256.5	256.4	262.1	253.5	255.7	258.2	257.0	257.7	257.7
Chuck roast	286.6	276.6	280.9	286.1	281.5	284.7	280.0	295.8	285.1	289.9	294.7	290.6	293.9	288.9
Round roast	251.2	236.5	234.1	239.0	240.7	239.2	240.2	254.5	240.3	237.9	242.3	244.3	242.2	244.2
Round steak	261.6	251.3	248.4	255.7	258.8	258.4	257.1	261.3	248.3	246.4	253.6	256.3	256.4	254.5
Sirloin steak	278.7	273.9	271.6	276.2	272.7	272.6	274.7	280.9	275.3	273.6	279.1	274.5	273.7	276.3
Other beef and veal (12/77 = 100)	172.2	168.5	168.8	171.2	172.6	170.9	171.1	171.0	167.2	167.3	170.0	171.2	169.5	170.0
Pork	248.6	255.0	251.2	254.6	258.5	258.9	256.5	248.0	254.3	250.3	253.7	257.6	258.0	255.8
Bacon	258.9	271.1	266.5	270.5	276.9	278.9	278.6	262.7	275.0	270.4	274.1	280.9	282.6	282.2
Chops	229.6	235.9	232.7	234.1	236.3	240.5	233.7	227.8	234.0	230.4	232.1	234.2	238.5	232.1
Ham other than canned (12/77 = 100)	112.2	117.2	115.6	120.9	120.0	118.0	119.5	109.1	113.8	112.5	117.7	116.7	114.9	116.5
Sausage	315.2	319.0	315.3	316.6	324.5	321.9	320.2	315.6	319.6	315.5	316.7	325.0	322.1	320.3
Canned ham	251.5	252.6	246.8	248.8	255.3	258.2	257.4	256.3	258.4	250.4	253.9	259.2	262.9	261.9
Other pork (12/77 = 100)	137.8	139.0	137.0	137.3	140.4	139.8	137.3	137.1	138.5	136.4	136.7	139.8	139.1	136.6
Other meats	265.1	270.0	269.4	270.2	269.8	270.5	268.6	264.6	269.5	268.6	269.4	269.2	269.6	267.8
Frankfurters	264.2	269.6	265.0	266.6	267.6	269.2	266.9	263.0	268.0	263.3	265.1	266.6	268.0	265.7
Bologna, liverwurst, and salami (12/77 = 100)	153.1	156.2	155.8	156.2	155.6	156.8	156.4	152.9	156.0	155.7	156.1	155.6	156.6	156.4
Other lunchmeats (12/77 = 100)	136.3	139.4	138.6	139.2	138.2	138.2	137.0	134.3	137.5	136.7	137.3	136.2	136.2	134.9
Lamb and organ meats (12/77 = 100)	137.2	138.2	141.1	140.8	141.5	141.1	140.2	140.5	141.0	143.9	143.4	144.4	143.6	142.7
Poultry	223.2	214.0	213.1	213.8	217.4	219.5	217.3	221.2	211.6	210.9	211.3	215.1	217.0	214.8
Fresh whole chicken	232.6	213.8	215.4	210.4	214.3	216.5	215.7	229.8	211.4	213.0	208.0	212.0	214.0	213.2
Fresh and frozen chicken parts (12/77 = 100)	150.7	141.4	140.4	140.4	141.7	143.3	140.9	148.7	139.2	138.4	138.2	139.5	141.3	138.8
Other poultry (12/77 = 100)	127.9	135.1	132.6	138.9	142.4	143.2	141.6	127.6	134.3	131.9	138.0	141.8	142.3	140.7
Fish and seafood	385.3	390.6	389.2	392.2	406.1	401.4	403.3	383.9	389.1	388.2	391.4	405.3	401.2	403.1
Canned fish and seafood	132.1	132.9	133.0	133.4	134.4	133.5	133.7	131.7	132.5	132.5	132.9	134.0	133.2	133.3
Fresh and frozen fish and seafood (12/77 = 100)	155.4	158.2	157.3	158.9	166.7	164.3	165.4	155.2	157.9	157.3	159.1	166.9	164.9	166.0
Eggs	237.2	177.8	175.6	185.7	161.3	169.7	172.1	238.7	178.7	176.4	186.5	162.0	170.2	172.7
Dairy products	250.8	256.1	257.2	258.4	258.8	259.2	258.9	249.8	255.1	256.2	257.3	257.8	258.3	257.8
Fresh milk and cream (12/77 = 100)	136.5	138.7	139.8	140.4	140.4	140.7	140.6	135.8	137.9	139.1	139.6	139.7	140.0	139.8
Fresh whole milk	222.9	226.8	228.7	229.6	229.6	229.8	229.7	221.9	225.6	227.5	228.4	228.4	228.7	228.5
Other fresh milk and cream (12/77 = 100)	137.3	139.0	140.0	140.7	141.0	141.5	141.2	136.7	138.3	139.3	139.9	140.3	140.8	140.5
Processed dairy products	149.2	153.3	153.3	154.1	154.5	154.8	154.4	149.4	153.7	153.6	154.4	154.8	155.1	154.7
Butter	254.4	268.8	268.7	269.4	266.4	264.9	263.9	256.9	271.4	271.5	272.3	269.1	267.6	266.6
Cheese (12/77 = 100)	146.3	149.5	150.1	150.1	150.3	150.8	150.5	146.6	149.9	150.5	150.5	150.6	151.3	150.9
Ice cream and related products (12/77 = 100)	155.3	160.0	158.1	160.1	162.3	162.6	162.1	154.3	159.0	157.1	159.0	161.3	161.7	161.1
Other dairy products (12/77 = 100)	146.9	150.0	150.9	152.5	153.0	153.0	152.8	147.4	150.4	151.3	152.8	153.3	153.4	153.2
Fruits and vegetables	323.2	318.4	314.8	309.7	320.8	333.0	332.1	319.4	312.3	308.9	303.9	314.9	327.1	326.8
Fresh fruits and vegetables	344.3	329.3	323.4	312.6	332.7	354.1	352.1	339.0	319.9	314.6	303.9	323.6	344.9	344.2
Fresh fruits	300.5	354.3	343.9	331.6	341.5	362.6	362.9	290.8	337.4	329.3	317.6	326.1	347.0	348.3
Apples	298.6	298.0	302.8	297.5	304.1	318.5	321.4	298.7	299.9	304.5	299.3	304.9	319.5	322.4
Bananas	264.1	242.1	234.9	225.2	248.6	268.9	281.6	262.2	240.6	232.7	224.0	246.7	267.9	281.0
Oranges	309.6	538.4	473.6	428.0	429.7	448.6	437.4	284.2	489.1	434.1	390.2	388.9	408.7	399.0
Other fresh fruits (12/77 = 100)	159.1	172.7	175.3	174.3	180.0	193.0	193.2	153.4	165.2	168.1	167.0	172.0	184.6	185.4
Fresh vegetables	385.4	306.0	304.4	294.8	324.5	346.3	342.0	382.7	304.2	301.5	291.6	321.5	343.2	340.7
Potatoes	363.5	324.3	313.1	327.3	331.5	335.7	338.3	357.7	318.4	305.1	320.4	323.5	327.5	331.0
Lettuce	290.5	363.6	350.5	276.0	385.6	339.7	306.7	292.6	365.1	349.2	274.4	386.6	341.7	311.9
Tomatoes	318.5	255.1	245.3	232.4	238.0	282.4	322.4	322.7	259.9	249.7	236.0	240.6	285.6	326.0
Other fresh vegetables (12/77 = 100)	249.4	158.7	164.3	167.4	177.3	205.0	199.5	247.0	157.0	162.6	165.2	175.2	202.8	198.0
Processed fruits and vegetables	302.8	309.2	308.0	309.3	310.6	312.7	313.0	300.2	306.5	305.2	306.5	307.9	309.9	310.0
Processed fruits (12/77 = 100)	159.5	164.5	163.5	164.5	165.2	166.9	167.6	159.0	164.0	162.9	164.0	164.7	166.4	166.9
Frozen fruit and fruit juices (12/77 = 100)	159.4	166.3	165.0	166.6	167.4	170.0	172.3	158.6	165.6	164.2	166.0	166.7	169.3	171.4
Fruit juices other than frozen (12/77 = 100)	160.8	168.0	166.8	168.3	168.1	170.1	169.9	159.7	167.1	165.7	167.3	167.1	169.1	168.7
Canned and dried fruits (12/77 = 100)	144.9	159.2	158.7	158.7	160.3	160.9	161.3	143.6	159.3	158.8	158.7	160.5	161.1	161.3

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Fruits and vegetables—Continued														
Processed vegetables (12/77 = 100)	144.9	146.5	146.1	146.5	147.1	147.5	147.1	143.6	145.3	145.0	145.3	146.0	146.4	146.0
Frozen vegetables (12/77 = 100)	153.5	157.1	156.9	156.9	158.9	159.6	159.0	155.2	158.9	158.7	158.7	160.9	161.6	160.9
Cut corn and canned beans except lima (12/77 = 100)	148.2	149.8	149.7	150.8	150.7	150.0	150.2	145.5	147.2	147.1	148.0	148.0	147.4	147.5
Other canned and dried vegetables (12/77 = 100)	138.8	139.4	138.9	139.0	139.3	140.1	139.6	137.1	137.8	137.3	137.4	137.8	138.5	138.1
Other foods at home	349.7	356.1	355.0	354.6	358.0	359.8	360.5	350.2	356.5	355.3	354.9	358.3	360.2	361.0
Sugar and sweets	384.8	393.3	390.9	391.7	394.5	394.8	394.8	384.5	392.8	390.5	391.4	394.0	394.4	394.2
Candy and chewing gum (12/77 = 100)	156.0	161.3	161.6	162.3	162.8	162.9	163.4	155.9	161.2	161.5	162.2	162.6	162.7	163.2
Sugar and artificial sweeteners (12/77 = 100)	172.5	172.5	170.3	169.4	171.9	171.5	170.8	173.7	173.7	171.7	170.7	173.2	172.8	172.0
Other sweets (12/77 = 100)	156.5	160.2	158.0	159.1	160.0	160.9	160.6	154.2	157.7	155.5	156.7	157.5	158.4	158.1
Fats and oils (12/77 = 100)	280.7	294.9	293.0	293.7	295.9	295.1	294.9	280.2	294.4	292.5	293.1	295.3	294.7	294.3
Margarine	280.1	297.5	292.9	295.6	298.2	296.8	297.6	278.1	295.0	290.6	292.6	295.5	294.0	294.5
Nondairy substitutes and peanut butter (12/77 = 100)	153.7	157.5	157.3	158.7	160.2	159.7	159.9	151.6	155.3	155.3	156.6	158.1	157.6	157.7
Other fats, oils, and salad dressings (12/77 = 100)	145.2	153.3	152.7	152.1	153.1	152.8	152.3	145.6	153.8	153.2	152.8	153.6	153.5	153.0
Nonalcoholic beverages	443.5	446.8	445.5	443.4	449.4	452.7	454.0	444.9	448.2	446.7	444.7	450.9	454.2	455.5
Cola drinks, excluding diet cola	319.1	319.8	317.3	316.4	324.3	325.9	326.4	316.1	317.0	314.4	313.9	321.6	323.2	323.6
Carbonated drinks, including diet cola (12/77 = 100)	153.2	149.9	148.8	146.8	147.9	149.8	149.7	150.7	147.7	146.6	144.3	145.4	147.4	147.4
Roasted coffee	367.6	377.7	376.0	376.7	376.2	379.5	381.4	362.0	371.5	369.8	370.3	369.9	373.3	375.2
Freeze dried and instant coffee	359.8	371.9	372.7	373.8	373.7	375.5	376.5	359.1	371.2	371.9	372.9	372.9	374.5	375.6
Other noncarbonated drinks (12/77 = 100)	144.9	148.9	150.5	149.7	151.3	152.4	153.6	145.2	149.3	150.8	150.1	151.5	152.7	154.0
Other prepared foods	282.1	287.8	287.5	287.7	289.6	291.5	292.2	283.7	289.3	288.8	289.1	290.9	292.9	293.7
Canned and packaged soup (12/77 = 100)	143.6	146.5	148.1	148.7	149.9	150.7	149.8	145.5	148.3	149.8	150.4	151.6	152.5	151.7
Frozen prepared foods (12/77 = 100)	156.0	162.9	162.6	162.2	163.6	165.3	165.7	155.1	162.0	161.5	160.9	162.2	164.0	164.4
Snacks (12/77 = 100)	163.3	167.8	167.4	166.4	167.6	169.5	169.5	165.4	170.0	169.7	168.7	169.9	172.0	171.9
Seasonings, olives, pickles, and relish (12/77 = 100)	162.9	166.2	164.9	165.9	167.6	168.1	168.0	161.9	165.2	164.0	164.8	166.6	167.1	167.1
Other condiments (12/77 = 100)	156.6	159.3	158.8	159.9	160.9	161.1	161.6	158.4	161.2	160.7	161.8	162.8	162.9	163.4
Miscellaneous prepared foods (12/77 = 100)	155.0	155.9	155.6	155.4	156.3	157.1	159.6	155.1	156.0	155.6	155.4	156.3	157.1	159.7
Other canned and packaged prepared foods (12/77 = 100)	151.6	151.9	152.1	152.7	152.8	153.6	153.6	152.8	153.0	153.1	153.8	154.0	154.9	154.9
Food away from home	329.8	336.6	337.7	339.2	339.9	341.4	342.6	333.0	339.8	340.9	342.3	343.0	344.6	345.8
Lunch (12/77 = 100)	159.0	162.8	163.2	163.8	164.4	164.9	165.5	160.6	164.3	164.7	165.3	165.8	166.5	167.0
Dinner (12/77 = 100)	158.9	162.2	162.8	163.6	163.8	164.7	165.3	160.5	163.9	164.6	165.4	165.6	166.6	167.2
Other meals and snacks (12/77 = 100)	163.4	166.0	166.5	167.3	167.5	168.1	168.8	163.9	166.6	167.1	167.8	168.0	168.6	169.3
Alcoholic beverages	220.7	224.2	223.8	223.9	224.3	225.8	226.5	223.8	227.5	227.1	227.2	227.6	229.1	229.9
Alcoholic beverages at home (12/77 = 100)	142.0	143.7	143.2	143.2	143.5	144.3	144.8	144.1	145.8	145.4	145.4	145.7	146.5	147.1
Beer and ale	228.7	232.7	231.9	232.5	232.9	234.5	235.9	227.8	231.7	230.7	231.6	232.0	233.4	234.7
Whiskey	153.6	154.6	154.3	154.0	154.1	154.8	154.9	153.8	154.9	154.6	154.1	154.1	154.7	154.9
Wine	233.6	234.8	233.0	232.2	233.3	234.4	234.2	241.5	242.5	241.3	239.7	241.0	242.0	241.8
Other alcoholic beverages (12/77 = 100)	122.8	123.2	123.5	122.8	123.2	124.3	124.5	122.8	122.9	123.3	122.5	122.9	123.7	124.2
Alcoholic beverages away from home (12/77 = 100)	152.6	157.7	158.2	158.5	158.6	160.2	160.4	153.9	159.1	159.5	159.8	159.9	161.5	161.8
HOUSING	331.5	341.2	340.9	341.2	342.0	343.6	344.7	322.9	335.5	334.4	335.0	335.7	337.2	338.2
Shelter (CPI–U)	355.5	367.8	368.9	370.1	371.2	373.3	374.3	....	....	....	....	....	....	....
Renters' costs	106.5	110.7	110.9	111.3	111.8	112.4	112.9	....	....	....	....	....	....	....
Rent, residential	244.8	253.8	254.8	256.1	257.1	258.4	259.2	....	....	....	....	....	....	....
Other renters' costs	364.5	382.6	379.1	375.1	378.5	381.9	386.1	....	....	....	....	....	....	....
Homeowners' costs	105.6	109.1	109.4	109.8	110.0	110.7	110.8	....	....	....	....	....	....	....
Owners' equivalent rent	105.5	109.1	109.4	109.8	110.0	110.7	110.9	....	....	....	....	....	....	....
Household insurance	107.1	108.7	108.8	108.9	109.0	109.5	110.4	....	....	....	....	....	....	....
Maintenance and repairs	355.3	361.6	362.9	364.4	366.0	366.8	370.0	....	....	....	....	....	....	....
Maintenance and repair services	405.9	414.4	412.6	414.2	414.7	415.8	422.2	....	....	....	....	....	....	....
Maintenance and repair commodities	259.3	262.9	266.5	267.7	269.9	270.5	270.6	....	....	....	....	....	....	....
Shelter (CPI–W)	....	....	....	....	....	....	....	342.0	358.3	357.7	359.0	360.0	362.0	363.0
Rent, residential	....	....	....	....	....	....	....	244.1	253.1	254.0	255.3	256.3	257.5	258.4
Other renters' costs	....	....	....	....	....	....	....	363.0	381.9	378.7	374.6	377.8	380.8	385.3
Lodging while out of town	....	....	....	....	....	....	....	381.3	399.8	394.8	388.3	393.4	397.8	404.3
Tenants' insurance (12/77 = 100)	....	....	....	....	....	....	....	161.1	163.4	163.3	163.5	163.5	164.2	166.2
Homeownership	....	....	....	....	....	....	....	376.6	395.5	394.4	395.9	....	....	....
Home purchase	....	....	....	....	....	....	....	292.5	302.4	301.0	301.4	....	....	....
Financing, taxes, and insurance	....	....	....	....	....	....	....	484.8	520.5	519.5	522.4	....	....	....
Property insurance	....	....	....	....	....	....	....	439.9	443.2	446.6	447.6	....	....	....
Property taxes	....	....	....	....	....	....	....	244.1	252.2	252.9	254.4	....	....	....
Contracted mortgage interest costs	....	....	....	....	....	....	....	607.9	659.3	657.1	661.0	....	....	....
Mortgage interest rates	....	....	....	....	....	....	....	205.4	216.8	216.9	217.6	....	....	....
Maintenance and repairs	....	....	....	....	....	....	....	353.8	358.9	358.5	359.8	360.9	361.5	364.3
Maintenance and repair services	....	....	....	....	....	....	....	400.3	408.1	406.6	407.7	407.8	408.8	414.8
Maintenance and repair commodities	....	....	....	....	....	....	....	256.3	256.2	257.8	259.3	260.8	261.1	261.6
Paint and wallpaper, supplies, tools, and equipment (12/77 = 100)	....	....	....	....	....	....	....	147.3	147.0	149.1	151.0	152.5	152.2	152.1
Lumber, awnings, glass, and masonry (12/77 = 100)	....	....	....	....	....	....	....	124.3	123.1	122.4	122.5	128.4	127.8	128.3
Plumbing, electrical, heating, and cooling supplies (12/77 = 100)	....	....	....	....	....	....	....	138.6	141.5	142.0	142.0	141.0	143.5	146.1
Miscellaneous supplies and equipment (12/77 = 100)	....	....	....	....	....	....	....	144.0	144.0	145.5	145.2	144.8	145.2	145.5

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Fuel and other utilities	380.1	392.4	387.5	386.0	387.2	386.5	388.2	381.3	393.6	388.7	387.1	388.3	387.5	389.2
Fuels	475.2	492.1	482.6	480.2	481.2	480.8	482.2	474.7	491.4	482.1	479.7	480.7	480.3	481.6
Fuel oil, coal, and bottled gas	660.0	626.8	626.9	625.9	621.6	623.4	620.8	662.4	629.4	629.3	628.4	623.9	625.7	623.1
Fuel oil	671.6	633.6	633.0	631.5	626.5	628.4	626.3	673.9	636.9	635.6	634.0	628.8	631.3	628.7
Other fuels (6/78 = 100)	196.4	193.7	194.9	195.6	195.6	194.9	194.2	197.1	194.3	195.4	196.2	196.1	195.5	194.7
Gas (piped) and electricity	429.5	456.0	444.7	442.2	444.1	443.3	445.5	428.4	454.7	443.7	441.0	443.2	442.3	444.4
Electricity	335.8	361.0	350.9	348.2	351.0	352.6	354.2	335.1	360.8	350.5	347.3	350.1	351.7	353.2
Utility (piped) gas	571.4	597.1	584.9	583.0	582.9	576.8	580.1	567.9	592.1	580.9	579.7	580.2	574.3	577.2
Other utilities and public services	227.4	232.9	234.4	234.1	235.3	234.3	236.3	228.5	233.9	235.3	235.0	236.3	235.1	237.2
Telephone services	185.9	190.0	191.1	190.4	190.8	189.1	191.3	186.6	190.5	191.6	190.9	191.3	189.5	191.2
Local charges (12/77 = 100)	157.7	165.5	166.9	166.5	167.1	164.6	167.7	158.4	166.1	167.4	167.0	167.6	164.9	168.2
Interstate toll calls (12/77 = 100)	122.4	116.3	116.2	116.2	116.2	116.2	116.2	122.8	116.6	116.6	116.5	116.5	16.6	116.6
Intrastate toll calls (12/77 = 100)	122.0	124.8	125.4	124.1	124.0	123.9	124.3	122.0	124.6	125.2	124.0	123.9	123.9	124.2
Water and sewerage maintenance	369.5	380.5	382.8	384.4	389.6	391.3	391.4	373.9	384.8	386.8	388.3	393.3	395.0	395.1
Household furnishings and operations	241.2	244.3	244.2	244.2	244.2	246.2	246.9	238.0	240.7	240.6	240.5	240.4	242.6	243.2
Housefurnishings	198.3	200.5	200.2	199.7	198.8	200.7	200.6	196.7	198.2	197.6	197.3	196.3	198.3	198.2
Textile housefurnishings	236.1	242.7	240.5	239.9	237.1	244.5	241.4	240.0	247.1	244.6	244.1	240.5	247.9	245.2
Household linens (12/77 = 100)	140.1	147.1	145.2	141.6	138.9	146.6	142.2	141.2	148.8	146.6	143.0	140.2	147.9	143.5
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	154.6	155.8	154.9	158.0	157.3	158.6	159.3	159.5	160.2	159.4	162.9	161.3	162.3	163.8
Furniture and bedding	218.4	228.2	227.4	225.6	224.1	225.0	226.7	215.3	224.5	223.4	222.5	220.4	221.5	223.1
Bedroom furniture (12/77 = 100)	149.1	160.2	160.7	160.1	154.1	154.7	156.5	145.9	155.9	156.3	156.4	150.5	151.2	152.1
Sofas (12/77 = 100)	119.8	121.6	122.2	122.3	121.6	121.3	121.4	119.7	121.8	122.0	121.9	121.2	120.7	121.0
Living room chairs and tables (12/77 = 100)	124.5	128.1	127.5	125.8	125.7	125.9	126.7	125.7	129.0	127.9	126.4	126.2	126.9	128.1
Other furniture (12/77 = 100)	142.1	148.1	145.9	143.9	147.2	148.5	149.8	137.9	143.5	141.4	140.4	142.9	144.6	145.2
Appliances including TV and sound equipment	150.5	147.1	146.0	145.2	145.2	145.8	145.4	151.9	148.8	148.0	147.3	147.1	147.9	147.6
Television and sound equipment	103.6	100.4	99.9	99.2	99.1	99.7	99.5	102.5	99.5	98.9	98.2	98.1	98.6	98.5
Television	97.9	92.5	92.1	92.5	92.0	91.9	92.3	96.5	91.1	90.7	91.3	90.7	90.5	91.0
Sound equipment (12/77 = 100)	109.7	108.4	107.7	106.1	106.4	107.6	106.9	108.6	107.4	106.6	105.0	105.2	106.4	105.7
Household appliances	191.0	188.4	186.7	185.9	186.0	186.5	185.7	192.8	190.2	189.2	188.6	188.5	189.2	188.8
Refrigerators and home freezers	197.2	197.6	197.3	197.5	197.1	197.2	195.2	203.1	203.5	203.2	203.8	203.5	203.3	201.0
Laundry equipment	147.4	147.7	148.1	147.6	146.8	147.1	148.4	148.6	148.0	149.1	148.9	147.8	147.9	149.3
Other household appliances (12/77 = 100)	126.2	123.5	121.8	121.0	121.3	121.8	121.2	125.2	121.7	119.9	118.9	119.1	119.8	119.7
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	127.1	124.4	122.4	121.8	121.5	122.4	122.7	126.4	122.6	120.6	120.2	119.5	120.7	121.2
Office machines, small electric appliances, and air conditioners (12/77 = 100)	125.8	122.9	121.5	120.5	121.4	121.4	120.0	123.8	122.3	119.0	117.4	118.4	118.7	117.9
Other household equipment (12/77 = 100)	141.6	141.2	142.8	143.9	143.6	145.1	144.9	139.2	138.5	139.8	140.7	141.0	142.6	142.1
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	145.4	147.9	148.4	152.0	150.9	153.0	152.2	137.0	138.2	137.8	141.9	140.5	142.4	142.4
Clocks, lamps, and decor items (12/77 = 100)	132.8	135.6	137.4	137.2	135.2	137.3	135.8	128.5	130.8	132.6	132.5	131.0	133.2	131.6
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	148.2	143.5	147.6	145.5	146.0	147.0	148.3	144.2	139.8	143.4	140.9	142.8	142.4	144.8
Lawn equipment, power tools, and other hardware (12/77 = 100)	135.3	135.5	134.8	139.1	140.0	141.2	140.4	140.1	141.1	140.2	144.3	144.6	146.0	144.9
Housekeeping supplies	300.6	305.4	306.2	307.5	309.9	311.5	311.8	297.1	302.5	303.5	304.6	306.9	308.5	308.9
Soaps and detergents	296.1	299.9	302.3	305.7	308.0	309.1	308.6	291.7	295.4	297.6	301.1	303.3	304.3	303.9
Other laundry and cleaning products (12/77 = 100)	153.7	156.6	157.1	157.1	158.4	158.8	159.1	152.4	155.1	155.7	155.7	156.9	157.2	157.6
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	149.3	156.5	156.1	155.8	156.6	158.7	160.0	149.4	156.4	155.8	155.6	156.4	158.4	159.7
Stationery, stationery supplies, and gift wrap (12/77 = 100)	141.7	144.8	145.5	145.2	145.4	145.3	146.0	144.7	148.4	149.1	148.8	149.1	149.0	149.8
Miscellaneous household products (12/77 = 100)	159.5	161.7	162.1	161.5	163.5	163.9	163.9	154.0	156.2	156.7	156.0	158.0	158.4	158.6
Lawn and garden supplies (12/77 = 100)	146.6	143.5	143.4	146.3	147.9	149.8	148.6	138.9	137.1	137.5	140.3	141.6	143.9	142.4
Housekeeping services	326.1	330.2	330.3	330.6	331.3	333.9	337.4	326.0	330.8	330.9	331.1	331.8	334.9	338.5
Postage	337.5	337.5	337.5	337.5	337.5	349.4	371.9	337.5	337.5	337.5	337.5	337.5	349.8	372.7
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	171.7	176.3	176.0	176.6	177.9	180.2	181.4	172.0	176.8	176.4	176.9	178.2	180.9	182.0
Appliance and furniture repair (12/77 = 100)	148.8	154.7	155.4	155.3	155.0	155.8	156.4	146.9	152.2	152.9	152.8	152.6	153.4	154.0
APPAREL AND UPKEEP	198.8	205.7	205.2	203.2	199.8	201.8	205.3	198.0	204.8	204.2	202.1	198.5	200.7	204.2
Apparel commodities	185.9	192.6	191.9	189.6	185.7	187.5	191.3	185.8	192.3	191.6	189.2	185.1	187.2	190.9
Apparel commodities less footwear	182.3	189.2	188.3	185.9	181.9	183.7	187.6	181.9	188.7	187.8	185.3	180.9	183.1	187.0
Men's and boys'	189.9	197.6	197.8	196.0	193.2	192.8	195.2	190.5	198.1	198.6	196.8	193.6	193.1	195.7
Men's (12/77 = 100)	119.4	124.3	124.5	123.2	121.7	121.6	123.2	120.1	125.0	125.4	124.1	122.5	122.2	123.8
Suits, sport coats, and jackets (12/77 = 100)	110.6	116.4	115.7	113.3	112.3	112.2	113.5	104.1	109.7	109.2	106.8	105.6	105.5	106.5
Coats and jackets	98.1	107.9	106.6	105.6	101.5	100.9	100.7	101.4	111.1	109.9	108.8	104.4	103.3	103.0
Furnishings and special clothing (12/77 = 100)	146.1	151.8	152.0	151.7	149.1	149.0	150.6	142.1	147.7	147.8	147.6	145.2	144.8	146.0
Shirts (12/77 = 100)	127.0	129.5	129.4	128.3	127.4	128.0	130.6	130.0	132.1	132.2	130.7	129.9	130.5	133.7
Dungarees, jeans, and trousers (12/77 = 100)	112.4	115.5	117.6	116.6	116.0	115.4	117.3	118.3	122.0	124.3	123.1	122.4	121.6	123.8
Boys' (12/77 = 100)	124.1	128.6	128.5	128.1	125.0	124.4	125.9	122.8	127.2	127.1	126.5	123.2	122.8	124.5
Coats, jackets, sweaters, and shirts (12/77 = 100)	119.7	126.8	125.9	123.9	117.1	116.2	120.0	122.0	129.2	128.3	125.6	118.0	117.3	122.0
Furnishings (12/77 = 100)	137.9	136.8	138.9	139.2	138.1	138.9	138.2	133.4	132.7	134.4	134.7	133.9	134.5	133.8
Suits, trousers, sport coats, and jackets (12/77 = 100)	122.1	126.7	126.4	126.9	126.0	125.1	125.6	119.6	123.8	123.7	124.2	123.4	122.8	123.2

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Women's and girls'	163.3	172.2	170.4	167.2	161.3	164.1	169.9	165.3	173.8	171.9	168.6	162.1	165.8	171.5
Women's (12/77 = 100)	108.7	115.0	113.4	111.3	107.3	109.3	113.4	110.5	116.4	114.9	112.6	108.3	110.9	114.9
Coats and jackets	167.2	181.7	181.9	175.0	161.7	161.0	164.8	172.8	186.3	186.0	178.2	164.6	166.3	169.8
Dresses	175.9	179.9	175.8	174.3	168.1	172.3	182.5	162.9	165.8	162.4	160.7	154.8	159.7	168.7
Separates and sportswear (12/77 = 100)	92.5	104.3	103.6	100.8	96.1	98.6	102.4	93.0	104.7	104.1	101.5	96.5	98.7	102.7
Underwear, nightwear, and hosiery (12/77 = 100)	136.8	138.5	138.5	138.8	137.9	139.0	140.4	136.3	138.0	138.1	138.3	137.3	138.5	139.8
Suits (12/77 = 100)	85.0	94.1	87.6	81.6	76.8	80.9	88.7	106.4	114.0	106.6	99.9	93.0	100.2	109.8
Girls' (12/77 = 100)	108.0	112.3	112.7	110.9	106.9	108.3	110.7	107.4	112.0	111.8	109.9	105.9	107.7	110.6
Coats, jackets, dresses, and suits (12/77 = 100)	100.6	106.2	106.8	104.0	96.2	100.3	105.1	98.3	105.0	105.8	101.8	94.8	100.1	104.9
Separates and sportswear (12/77 = 100)	103.9	108.2	107.7	106.2	104.1	103.4	105.0	104.6	108.9	106.9	106.3	103.1	102.3	104.9
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	128.0	130.0	131.6	130.9	129.8	130.5	130.7	126.9	128.7	130.2	129.6	128.6	129.5	129.7
Infants' and toddlers'	288.0	291.6	290.2	291.9	290.3	298.8	302.1	298.6	302.5	302.1	302.9	299.7	310.1	314.5
Other apparel commodities	217.2	216.0	215.4	213.3	212.2	215.5	216.9	205.3	204.0	203.1	201.0	199.9	203.0	204.2
Sewing materials and notions (12/77 = 100)	120.8	120.6	120.1	121.9	120.9	122.0	122.9	119.7	119.0	118.4	120.5	119.1	119.5	120.5
Jewelry and luggage (12/77 = 100)	148.8	147.7	147.4	144.7	144.1	146.6	147.6	138.7	137.8	137.2	134.3	133.9	136.7	137.4
Footwear	207.7	212.9	212.9	211.4	208.6	210.1	213.1	208.3	213.2	213.1	211.7	209.5	210.8	213.4
Men's (12/77 = 100)	135.2	138.3	138.4	137.1	136.5	136.5	139.1	137.1	140.1	140.2	138.9	138.5	138.5	140.9
Boys' and girls' (12/77 = 100)	131.2	136.0	136.3	135.3	135.3	136.9	137.1	133.8	138.7	139.0	138.3	138.4	139.7	139.5
Women's (12/77 = 100)	125.5	128.0	127.6	127.0	123.2	124.6	127.0	122.3	124.1	123.6	122.9	119.5	120.8	123.1
Apparel services	300.8	309.5	310.8	311.5	312.5	316.0	317.1	298.8	307.4	308.8	309.3	310.2	313.6	314.7
Laundry and drycleaning other than coin operated (12/77 = 100)	180.7	185.5	186.3	186.9	187.2	189.3	190.2	179.1	183.8	184.4	184.9	185.3	187.3	188.2
Other apparel services (12/77 = 100)	155.3	160.4	161.1	161.2	162.3	163.9	164.3	156.5	161.7	162.5	162.6	163.5	165.2	165.5
TRANSPORTATION	306.9	315.5	316.1	315.8	314.7	314.3	316.7	308.9	317.8	318.3	317.9	316.7	316.3	318.7
Private	301.9	310.2	310.8	310.4	309.1	308.7	311.0	305.2	313.9	314.4	313.9	312.6	312.2	314.6
New cars	207.2	209.6	211.4	212.0	213.1	213.9	214.1	206.7	209.0	210.8	211.3	212.0	213.1	213.4
Used cars	362.2	384.6	383.6	382.7	382.8	384.6	386.1	362.2	384.6	383.6	382.6	382.8	384.6	386.2
Gasoline	368.6	370.3	369.2	365.7	356.8	351.6	351.6	370.5	371.7	370.5	367.1	358.2	353.2	353.2
Automobile maintenance and repair	338.3	345.3	345.8	346.2	346.9	348.2	348.5	339.0	346.2	346.7	347.1	347.9	349.2	349.6
Body work (12/77 = 100)	170.7	175.6	175.8	176.1	176.9	178.4	178.3	169.3	174.1	174.3	174.7	175.5	177.0	177.1
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	165.1	169.2	169.6	169.7	170.0	170.2	170.6	169.1	173.4	173.8	174.0	174.2	174.5	175.1
Maintenance and servicing (12/77 = 100)	153.9	156.5	156.8	157.0	157.1	157.4	157.2	153.1	155.8	156.1	156.3	156.6	156.8	156.5
Power plant repair (12/77 = 100)	162.1	164.9	164.9	165.1	165.7	166.6	167.0	161.6	164.6	164.6	164.8	165.4	166.4	166.8
Other private transportation	268.3	278.7	280.7	282.3	283.9	284.4	284.5	269.1	279.8	281.9	283.3	284.7	285.2	285.1
Other private transportation commodities	201.3	199.0	201.0	202.2	202.0	203.8	201.9	203.5	201.0	203.5	204.7	204.2	206.1	204.2
Motor oil, coolant, and other products (12/77 = 100)	152.5	153.2	155.3	156.2	155.7	156.0	156.4	152.3	152.6	154.4	155.2	154.5	155.2	155.4
Automobile parts and equipment (12/77 = 100)	126.9	125.1	126.4	127.1	127.0	128.3	126.8	128.5	126.5	128.1	128.9	128.6	129.9	128.5
Tires	171.8	168.3	170.2	171.4	171.4	174.0	171.4	175.1	171.5	174.0	175.1	174.9	177.7	175.0
Other parts and equipment (12/77 = 100)	133.2	133.2	134.1	134.5	134.2	133.9	133.5	132.7	132.5	133.5	134.0	133.6	133.2	132.8
Other private transportation services	288.7	302.5	304.6	306.2	308.3	308.5	309.1	289.0	303.3	305.3	306.7	308.6	308.7	309.2
Automobile insurance	322.3	332.3	335.9	340.0	345.1	346.3	348.3	321.5	331.3	334.9	338.9	343.9	345.2	347.2
Automobile finance charges (12/77 = 100)	159.2	172.0	172.2	170.9	169.6	168.1	166.6	158.7	171.7	171.9	170.5	169.2	167.7	166.2
Automobile rental, registration, and other fees (12/77 = 100)	149.1	157.6	158.0	158.4	158.5	159.1	159.6	150.1	158.9	159.2	159.6	159.8	160.4	161.0
State registration	197.8	213.5	213.5	213.5	213.6	213.6	214.6	198.0	212.9	212.9	212.9	213.1	213.1	214.1
Drivers' licenses (12/77 = 100)	158.0	163.7	163.7	163.7	164.6	164.6	164.6	158.3	164.1	164.1	164.1	164.9	164.9	164.9
Vehicle inspection (12/77 = 100)	139.2	140.0	142.2	142.2	142.2	142.2	142.4	139.9	140.5	142.3	142.3	142.3	142.3	142.5
Other vehicle-related fees (12/77 = 100)	163.5	168.3	169.1	170.1	170.3	171.8	172.2	170.7	176.0	176.7	177.8	178.0	180.0	180.5
Public	377.4	391.1	391.8	392.8	394.5	394.4	397.3	370.2	381.6	382.4	382.8	384.2	384.2	386.7
Airline fare	429.0	453.5	455.4	456.2	458.9	468.7	464.3	424.9	448.8	450.6	451.1	454.1	453.8	459.9
Intercity bus fare	427.6	445.3	447.0	455.4	459.6	456.5	454.4	426.8	445.4	447.8	455.4	459.3	455.2	452.2
Intracity mass transit	342.0	346.6	345.9	346.7	347.0	347.0	347.7	341.8	346.6	345.9	346.5	346.7	346.8	347.5
Taxi fare	308.5	311.1	311.3	311.3	313.4	315.0	317.4	317.7	320.0	320.1	320.3	322.4	324.1	326.7
Intercity train fare	373.4	382.0	383.5	388.2	390.2	390.3	390.3	373.7	382.2	383.8	388.7	390.7	390.7	390.7
MEDICAL CARE	374.5	385.5	387.5	388.5	391.1	393.8	396.5	372.6	383.7	385.6	386.7	389.3	392.0	394.6
Medical care commodities	235.0	244.1	245.6	247.3	248.2	249.8	251.9	235.3	244.1	245.6	247.2	248.0	249.6	251.5
Prescription drugs	228.2	240.2	242.2	244.4	245.4	247.6	250.9	229.7	241.7	243.8	245.9	247.0	249.2	252.4
Anti-infective drugs (12/77 = 100)	163.9	170.5	171.0	171.8	171.5	171.9	174.0	166.3	173.3	173.8	174.6	174.3	174.7	176.7
Tranquilizers and sedatives (12/77 = 100)	195.5	212.7	216.2	218.8	220.1	223.2	227.9	195.4	212.7	216.3	218.9	220.2	223.1	227.8
Circulatories and diuretics (12/77 = 100)	164.7	172.8	174.4	174.9	176.0	178.5	180.9	164.3	172.1	173.7	174.2	175.3	177.8	180.1
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	209.7	222.3	223.8	228.3	228.9	229.6	230.8	211.9	224.7	226.1	230.7	231.2	232.2	233.2
Pain and symptom control drugs (12/77 = 100)	185.5	192.7	194.4	198.2	196.6	198.1	200.9	187.7	194.7	196.3	197.2	198.7	200.3	203.0
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	171.4	176.9	178.3	179.1	180.6	183.2	185.7	172.0	177.7	179.0	179.7	181.2	184.0	186.4
Nonprescription drugs and medical supplies (12/77 = 100)	161.2	165.4	166.0	166.8	167.3	168.0	168.6	162.1	166.3	166.9	167.8	168.2	168.9	169.5
Eyeglasses (12/77 = 100)	138.4	141.9	142.2	141.9	142.5	144.0	144.5	137.3	140.8	141.2	140.9	141.4	143.0	143.4
Internal and respiratory over-the-counter drugs	263.1	271.3	271.5	273.7	274.7	275.1	276.6	264.4	272.4	272.7	275.0	275.8	276.2	277.6
Nonprescription medical equipment and supplies (12/77 = 100)	155.8	157.7	159.8	160.3	160.2	161.2	161.1	157.5	159.1	161.5	161.9	161.6	162.8	162.6

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Medical care services	405.3	416.5	418.5	419.3	422.4	425.3	428.1	402.7	414.1	416.1	417.0	420.1	423.1	425.7
Professional services	341.1	351.8	353.1	354.0	356.8	359.3	361.9	341.6	352.1	353.4	354.4	357.2	359.7	362.4
Physicians' services	372.2	382.2	383.0	383.8	386.1	389.6	392.6	376.1	386.2	387.0	387.9	390.2	393.9	397.0
Dental services	321.1	334.8	336.6	337.7	339.7	340.4	343.3	319.0	332.4	334.3	335.3	337.2	338.0	340.7
Other professional services (12/77 = 100)	158.8	160.8	161.5	166.1	165.9	168.0	168.4	155.0	157.1	157.8	158.4	162.3	164.3	164.7
Other medical care services	482.8	494.7	497.7	498.2	501.7	505.2	508.0	479.3	491.7	494.6	495.3	498.8	502.3	505.0
Hospital and other medical services (12/77 = 100)	207.0	215.0	217.2	217.6	219.4	220.6	221.6	204.9	212.9	214.7	215.1	216.9	218.1	215.8
Hospital room	659.4	687.1	691.3	690.8	697.7	700.7	703.6	651.7	677.3	680.8	680.9	687.0	690.3	692.2
Other hospital and medical care services (12/77 = 100)	203.3	210.7	213.6	214.4	216.0	217.3	218.4	201.5	209.3	211.7	212.5	214.2	215.5	216.3
ENTERTAINMENT	251.7	258.3	259.0	260.1	261.0	266.3	262.2	248.0	254.2	254.8	255.8	256.6	256.9	257.3
Entertainment commodities	250.6	255.9	256.0	256.8	257.1	257.9	258.7	245.3	249.6	250.2	250.9	251.1	251.9	252.2
Reading materials (12/77 = 100)	162.4	167.7	167.8	168.8	169.6	171.5	173.3	161.9	167.0	167.2	168.2	168.8	170.7	172.4
Newspapers	311.8	317.5	319.2	320.1	320.7	323.2	324.3	312.0	317.7	319.4	320.4	321.0	323.5	324.5
Magazines, periodicals, and books (12/77 = 100)	166.6	174.7	174.1	175.6	176.9	179.6	182.8	166.5	174.6	173.7	175.4	176.6	179.4	182.2
Sporting goods and equipment (12/77 = 100)	136.1	138.8	140.0	139.6	140.2	139.9	140.2	130.0	132.2	133.6	133.0	133.9	133.7	133.4
Sport vehicles (12/77 = 100)	139.9	144.5	146.0	145.9	146.9	146.7	147.0	130.4	133.9	135.8	135.4	136.8	136.6	136.0
Indoor and warm weather sport equipment (12/77 = 100)	117.1	117.2	118.2	118.0	117.3	117.6	118.1	115.1	115.3	116.4	116.1	115.5	115.8	116.3
Bicycles	201.5	198.8	198.1	198.4	198.4	199.5	200.0	202.5	200.0	199.1	199.5	199.8	200.9	201.6
Other sporting goods and equipment (12/77 = 100)	134.0	135.6	137.3	134.4	135.1	133.2	132.6	133.8	135.1	136.5	134.0	134.3	132.9	132.3
Toys, hobbies, and other entertainment (12/77 = 100)	140.5	141.9	141.8	142.5	142.1	142.2	142.0	139.5	263.4	140.9	141.5	141.0	141.1	141.0
Toys, hobbies, and music equipment (12/77 = 100)	138.6	138.2	138.1	139.1	137.7	137.8	137.3	135.2	165.0	134.8	135.6	134.1	134.3	133.8
Photographic supplies and equipment (12/77 = 100)	132.6	135.1	134.9	135.1	134.9	135.1	136.0	133.8	156.1	136.2	136.4	136.1	136.3	137.2
Pet supplies and expenses (12/77 = 100)	149.7	153.5	153.4	154.0	155.2	155.2	154.9	150.8	154.7	154.5	155.3	156.3	156.3	156.0
Entertainment services	253.8	262.8	263.8	265.5	267.0	266.7	267.6	253.9	263.4	264.0	265.6	267.4	266.8	267.4
Fees for participant sports (12/77 = 100)	158.5	163.6	165.1	165.9	166.5	166.5	166.9	159.2	165.0	166.2	166.8	167.6	167.5	167.4
Admissions (12/77 = 100)	148.9	157.2	156.8	158.2	160.3	159.4	159.4	147.8	156.1	155.6	156.9	159.1	158.1	158.4
Other entertainment services (12/77 = 100)	134.5	137.0	136.7	138.0	137.9	138.2	139.8	135.7	137.6	137.0	138.5	138.4	138.6	140.3
OTHER GOODS AND SERVICES	302.1	315.8	316.5	316.7	319.1	320.5	321.1	299.7	311.9	312.6	312.8	315.6	317.1	317.6
Tobacco products	305.6	314.6	314.7	314.6	321.0	323.2	323.7	305.2	314.2	314.3	314.2	320.8	323.0	323.4
Cigarettes	313.8	323.3	323.4	323.2	330.3	332.5	332.8	312.8	322.2	322.2	322.1	329.2	331.4	331.7
Other tobacco products and smoking accessories (12/77 = 100)	157.0	160.0	160.6	161.0	161.6	163.1	164.7	157.0	160.1	160.6	161.0	161.5	163.0	164.8
Personal care	267.8	274.7	276.3	276.6	277.2	278.2	278.7	265.7	272.4	274.0	274.4	274.9	275.9	276.3
Toilet goods and personal care appliances	265.9	272.0	273.4	273.5	274.0	275.4	276.0	266.6	272.6	274.0	274.2	274.6	275.9	276.5
Products for the hair, hairpieces, and wigs (12/77 = 100)	154.1	155.9	156.9	156.5	156.4	152.0	157.2	153.3	155.0	156.2	155.8	155.6	156.1	156.3
Dental and shaving products (12/77 = 100)	164.6	168.2	170.9	172.1	173.5	175.8	174.5	162.9	166.0	168.9	170.0	171.4	173.5	172.3
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	150.0	154.9	154.9	155.3	155.3	155.6	155.8	150.8	155.9	155.8	156.3	156.3	156.8	156.8
Other toilet goods and small personal care appliances (12/77 = 100)	151.8	155.4	155.5	154.7	154.8	155.3	157.5	155.4	159.0	159.1	158.3	158.5	158.9	161.1
Personal care services	270.4	278.0	279.9	280.4	281.1	281.7	282.0	265.3	272.6	274.4	275.0	275.7	276.3	276.5
Beauty parlor services for women	273.4	281.2	283.1	283.8	283.9	284.3	285.1	266.6	274.0	275.8	276.6	276.7	277.1	277.8
Haircuts and other barber shop services for men (12/77 = 100)	149.9	154.0	155.0	155.1	156.2	156.8	156.3	148.6	152.8	153.8	153.8	154.9	155.5	155.1
Personal and educational expenses	356.4	384.0	384.1	384.3	385.6	386.9	387.6	359.2	386.0	386.2	386.4	387.9	389.3	390.1
Schoolbooks and supplies	317.1	333.7	333.8	334.0	340.7	343.8	343.9	321.6	338.6	338.7	338.9	345.5	348.7	348.8
Personal and educational services	365.7	295.2	395.4	395.5	395.9	396.9	397.9	368.6	397.4	397.6	397.8	398.3	399.4	400.3
Tuition and other school fees	184.3	201.3	201.3	201.3	201.2	201.4	201.4	185.2	202.3	202.3	202.3	202.3	202.5	202.5
College tuition (12/77 = 100)	184.5	201.4	201.4	201.3	201.3	201.5	201.5	185.4	202.3	202.3	202.2	202.2	202.5	202.5
Elementary and high school tuition (12/77 = 100)	183.9	201.3	201.3	201.4	201.4	206.4	201.4	184.9	202.8	202.8	202.9	202.9	202.9	202.9
Personal expenses (12/77 = 100)	201.2	208.5	208.9	209.5	210.7	212.6	214.9	202.1	208.8	209.2	209.7	211.0	212.7	214.8
Special indexes:														
Gasoline, motor oil, coolant, and other products	364.7	366.6	365.6	362.3	353.8	348.7	356.7	366.5	367.9	366.8	363.6	355.0	350.2	358.1
Insurance and finance	....	....	....	....	....	....	....	412.6	440.3	440.4	442.8	....	....	....
Utilities and public transportation	346.5	362.8	358.5	357.5	359.1	358.3	360.6	345.5	361.5	357.1	355.9	357.6	356.7	358.9
Housekeeping and home maintenance services	368.7	373.7	373.7	374.1	374.9	377.6	381.8	376.1	382.7	381.9	382.7	383.3	386.6	390.9

21. Consumer Price Index for All Urban Consumers: Cross classification of region and population size class by expenditure category and commodity and service group

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000–1,250 million)			Size class C (75,000–385,000)			Size class D (75,000 or less)		
	1984			1984			1984			1984		
	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.
	Northeast											
EXPENDITURE CATEGORY												
All items	163.5	164.3	165.5	170.0	169.9	171.5	175.3	174.4	175.8	169.8	169.7	170.3
Food and beverages	153.7	154.1	157.0	152.6	152.3	156.0	156.1	155.8	158.3	152.0	151.4	153.6
Housing	168.2	169.7	170.5	180.9	181.2	184.3	190.1	187.5	189.9	177.4	176.9	177.4
Apparel and upkeep	128.2	125.5	124.9	129.0	126.7	121.3	139.0	138.2	134.2	141.4	138.7	137.7
Transportation	172.0	173.0	173.0	176.9	176.8	176.4	176.3	176.3	176.3	176.2	176.9	175.5
Medical care	178.3	181.4	184.5	182.7	183.5	185.2	182.7	184.1	185.5	188.7	192.8	194.0
Entertainment	150.9	151.3	151.8	149.9	149.8	146.8	155.3	155.4	157.1	154.8	156.5	158.2
Other goods and services	178.1	178.9	180.7	177.4	177.4	179.8	180.7	181.5	184.5	181.1	180.9	182.7
COMMODITY AND SERVICE GROUP												
Commodities	155.3	155.1	156.7	161.0	161.0	161.7	160.9	160.6	161.3	159.1	159.0	159.6
Commodities less food and beverages	156.1	155.4	156.0	164.7	164.9	163.6	162.8	162.7	162.2	162.2	162.3	161.9
Services	173.4	175.3	176.2	183.3	183.1	186.1	198.0	196.1	198.7	185.2	185.3	185.8
	North Central Region											
EXPENDITURE CATEGORY												
All items	173.4	173.2	174.3	168.9	169.2	169.7	167.2	166.4	166.7	167.5	167.6	168.2
Food and beverages	150.0	150.4	152.5	149.2	149.6	151.3	150.2	149.9	151.7	157.8	158.5	158.9
Housing	192.2	191.8	193.6	178.1	178.3	178.5	175.8	174.0	173.3	171.3	171.0	172.1
Apparel and upkeep	122.9	120.8	120.1	134.4	132.5	132.9	132.0	129.3	131.3	128.7	128.0	126.5
Transportation	174.0	173.7	172.8	173.9	174.3	172.7	176.7	176.7	175.6	175.1	174.9	173.7
Medical care	181.5	182.1	184.6	183.0	184.6	188.2	175.6	176.3	178.3	185.6	186.2	189.4
Entertainment	148.3	148.4	150.2	140.3	139.9	142.2	153.4	154.2	155.6	143.3	146.4	147.3
Other goods and services	172.9	173.0	175.7	184.7	186.1	188.7	169.4	169.6	170.8	181.4	181.8	184.9
COMMODITY AND SERVICE GROUP												
Commodities	159.4	159.0	159.7	157.7	157.8	158.1	156.4	155.9	156.1	156.4	156.7	156.2
Commodities less food and beverages	164.0	163.1	162.8	161.1	161.0	160.6	159.1	158.5	157.9	155.7	155.8	154.8
Services	193.7	193.7	195.5	186.7	187.2	188.0	184.3	183.1	183.4	184.7	184.8	186.8
	South											
EXPENDITURE CATEGORY												
All items	170.2	170.3	171.0	171.9	172.0	173.0	169.5	170.2	171.2	170.1	170.4	170.1
Food and beverages	157.2	157.8	160.0	157.5	157.4	159.5	153.9	153.8	156.3	158.3	158.1	160.0
Housing	176.9	176.1	177.2	177.0	177.2	178.2	174.2	175.6	177.1	177.1	178.2	176.7
Apparel and upkeep	137.6	137.0	135.3	132.8	132.0	130.8	131.5	130.7	129.5	117.4	117.8	114.9
Transportation	176.7	176.8	175.5	180.2	180.7	180.2	179.0	179.0	178.2	174.8	174.1	173.1
Medical care	182.2	184.2	185.6	184.9	185.3	187.9	191.0	193.1	195.8	197.7	199.0	199.9
Entertainment	148.7	151.8	153.1	162.7	162.6	163.8	154.1	156.2	154.9	152.8	152.7	153.4
Other goods and services	176.7	177.2	178.4	179.9	180.6	182.5	177.6	178.7	181.1	174.5	173.9	176.0
COMMODITY AND SERVICE GROUP												
Commodities	160.7	160.8	160.9	162.6	162.3	163.0	160.0	160.0	160.6	159.8	159.3	159.6
Commodities less food and beverages	162.2	162.0	160.8	164.5	164.1	163.8	162.9	162.8	162.3	160.2	159.5	158.9
Services	183.1	183.1	184.5	185.5	186.2	187.5	184.2	185.9	187.5	185.6	186.9	185.7
	West											
EXPENDITURE CATEGORY												
All items	172.2	172.1	173.5	170.6	170.9	172.0	162.7	162.9	164.2	170.1	170.1	170.0
Food and beverages	156.8	157.6	158.9	159.7	161.5	163.1	155.8	155.2	158.2	164.2	164.3	166.2
Housing	180.5	179.8	182.2	175.0	174.1	176.2	161.1	160.9	161.9	172.2	171.2	171.6
Apparel and upkeep	129.3	126.7	127.8	131.2	131.8	131.0	127.7	125.6	126.8	147.1	146.1	146.6
Transportation	181.0	181.2	180.1	181.2	181.8	180.3	176.3	177.0	176.0	172.7	173.4	172.5
Medical care	188.0	187.9	191.8	183.6	184.5	186.8	190.5	193.5	196.0	188.7	189.9	192.5
Entertainment	145.7	146.9	147.9	152.6	154.6	155.5	154.0	158.0	162.6	165.9	169.3	157.1
Other goods and services	182.7	183.0	185.7	179.3	179.8	181.7	174.4	175.0	176.9	179.3	180.3	182.0
COMMODITY AND SERVICE GROUP												
Commodities	158.0	157.8	158.3	160.3	161.4	161.8	158.2	157.9	158.5	158.7	159.0	158.6
Commodities less food and beverages	158.7	157.9	157.8	160.4	161.0	160.7	158.6	158.6	157.8	155.8	156.3	154.5
Services	190.1	190.0	192.4	184.2	183.7	185.4	168.0	168.7	170.8	186.7	186.3	186.5

22. Consumer Price Index—U.S. city average, and selected areas

[1967 = 100 unless otherwise specified]

Area[1]	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984				1985			1984				1985		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
U.S. city average[2]	307.3	315.3	315.3	315.5	316.1	317.4	318.8	303.3	312.2	311.9	312.2	312.6	313.9	315.3
Anchorage, Alaska (10/67 = 100)	274.4	. . .	303.2	. . .	278.3	. . .	280.0	265.9	. . .	270.9	. . .	271.7	. . .	273.1
Atlanta, Ga.	. . .	317.8	. . .	318.2	. . .	322.6	. . .	. . .	318.2	. . .	316.0	. . .	320.3	. . .
Baltimore, Md.	310.4	. . .	315.3	. . .	315.2	. . .	320.7	307.2	. . .	315.1	. . .	315.1	. . .	320.2
Boston, Mass.	302.0	. . .	307.8	. . .	309.4	. . .	314.4	298.2	. . .	306.5	. . .	307.8	. . .	312.3
Buffalo, N.Y.	. . .	296.1	. . .	303.4	. . .	301.3	. . .	. . .	292.0	. . .	289.8	. . .	288.1	. . .
Chicago, Ill.–Northwestern Ind.	305.7	314.1	313.9	314.0	315.1	316.7	317.4	296.3	301.8	302.6	301.7	302.5	304.0	304.7
Cincinnati, Ohio—Ky.—Ind.	320.0	. . .	325.4	. . .	325.1	. . .	328.4	313.8	. . .	319.3	. . .	318.9	. . .	322.2
Cleveland, Ohio	. . .	340.1	. . .	339.7	. . .	340.4	. . .	. . .	324.4	. . .	318.6	. . .	319.8	. . .
Dallas–Ft. Worth, Tex.	. . .	333.7	. . .	330.7	. . .	333.2	. . .	. . .	328.2	. . .	325.0	. . .	329.9	. . .
Denver–Boulder, Colo.	345.1	. . .	349.4	. . .	350.6	. . .	355.1	342.0	. . .	345.1	. . .	346.2	. . .	350.7
Detroit, Mich.	304.1	311.9	308.7	309.1	310.9	313.7	315.5	302.9	302.9	299.8	300.0	301.2	304.0	306.0
Honolulu, Hawaii	. . .	287.4	. . .	289.8	. . .	292.6	. . .	. . .	294.5	. . .	297.6	. . .	300.3	. . .
Houston, Tex.	. . .	334.4	. . .	333.4	. . .	333.6	. . .	. . .	334.4	. . .	330.9	. . .	331.1	. . .
Kansas City, Mo.—Kansas	. . .	314.1	. . .	313.7	. . .	314.6	. . .	. . .	307.7	. . .	304.0	. . .	304.4	. . .
Los Angeles–Long Beach, Anaheim, Calif.	300.7	311.9	311.8	311.1	313.0	314.1	314.7	297.9	302.6	304.3	306.5	308.1	309.1	309.8
Miami, Fla. (11/77 = 100)	165.6	. . .	168.3	. . .	168.6	. . .	170.1	166.3	. . .	169.6	. . .	169.8	. . .	171.3
Milwaukee, Wis.	316.8	. . .	324.3	. . .	324.6	. . .	327.8	335.3	. . .	342.7	. . .	343.4	. . .	346.9
Minneapolis–St. Paul, Minn.—Wis.	. . .	328.0	. . .	327.9	. . .	330.4	. . .	. . .	327.0	. . .	323.8	. . .	306.0	. . .
New York, N.Y.–Northeastern N.J.	299.9	306.6	308.0	308.0	308.4	310.2	310.9	289.9	300.4	301.2	301.6	302.0	303.6	304.2
Northeast, Pa. (Scranton)	293.0	. . .	301.1	. . .	301.5	. . .	304.9	294.0	. . .	300.6	. . .	301.0	. . .	304.2
Philadelphia, Pa.—N.J.	296.7	303.7	306.0	305.1	306.3	309.2	310.4	298.8	308.7	309.2	307.9	309.4	312.4	313.5
Pittsburgh, Pa.	. . .	321.1	. . .	322.1	. . .	323.8	. . .	. . .	304.2	. . .	304.6	. . .	306.0	. . .
Portland, Oreg.—Wash.	298.0	. . .	304.8	. . .	306.8	. . .	309.0	292.2	. . .	295.7	. . .	297.4	. . .	299.8
St. Louis, Mo.—Ill.	302.7	. . .	309.1	. . .	313.3	. . .	314.3	297.3	. . .	307.1	. . .	310.4	. . .	311.0
San Diego, Calif.	349.3	. . .	363.7	. . .	364.1	. . .	369.2	326.2	. . .	328.8	. . .	329.1	. . .	333.7
San Francisco–Oakland, Calif.	. . .	327.5	. . .	325.8	. . .	328.7	. . .	. . .	319.3	. . .	321.5	. . .	324.2	. . .
Seattle–Everett, Wash.	310.2	. . .	318.1	. . .	319.5	. . .	321.4	299.9	. . .	305.5	. . .	306.7	. . .	309.0
Washington, D.C.—Md.—Va.	305.1	. . .	315.8	. . .	314.6	. . .	319.2	308.2	. . .	319.8	. . .	317.7	. . .	322.3

[1]The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated Area is used for New York and Chicago.

[2]Average of 85 cities.

23. Producer Price Indexes, by stage of processing

[1967 = 100]

Commodity grouping	Annual average 1984	1984									1985			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
FINISHED GOODS														
Finished goods	291.2	291.2	291.1	290.9	292.3	291.3	289.5	291.5	292.3	r292.0	292.7	292.5	292.4	293.1
Finished consumer goods	290.4	290.3	290.3	290.1	291.6	290.4	288.7	290.3	291.2	r290.9	291.1	290.7	290.4	291.2
Finished consumer foods	273.5	274.3	271.7	270.8	275.3	274.0	273.0	271.1	272.0	r273.6	279.2	275.5	274.2	272.4
Crude	283.9	299.0	270.7	258.9	270.8	274.6	270.3	269.5	257.6	r263.0	263.1	287.1	283.9	286.9
Processed	270.3	269.9	269.6	269.7	273.4	271.7	271.1	269.1	271.0	r272.3	273.0	272.2	271.1	268.9
Nondurable goods less foods	337.4	336.4	338.9	339.2	339.2	336.9	336.2	337.8	338.9	r336.7	335.6	332.8	333.4	336.9
Durable goods	236.6	236.7	236.6	236.4	236.6	236.7	233.0	238.3	239.0	r239.2	240.5	241.1	240.8	241.1
Consumer nondurable goods less food and energy	239.1	237.9	238.7	238.7	240.1	240.1	240.8	240.6	241.1	r240.7	243.3	243.7	244.1	244.6
Capital equipment	294.1	294.5	293.9	293.9	294.6	294.6	292.5	295.9	296.5	r295.6	298.1	299.1	299.5	300.0
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	320.0	320.3	320.9	321.6	321.7	321.1	320.3	320.1	320.4	r319.9	319.6	318.6	318.6	319.4
Materials and components for manufacturing	301.8	302.9	303.3	303.4	303.2	302.5	301.9	301.4	301.7	301.1	300.7	300.5	300.1	300.7
Materials for food manufacturing	271.7	271.4	276.0	275.2	276.4	272.4	270.0	267.6	269.5	r268.2	264.9	264.1	263.5	263.3
Materials for nondurable manufacturing	290.5	291.8	292.8	292.8	292.7	291.3	290.9	290.4	289.8	r289.2	289.2	288.2	287.3	287.2
Materials for durable manufacturing	325.1	329.1	327.2	326.9	325.4	325.1	323.5	322.3	323.1	r321.9	320.5	320.9	320.2	322.5
Components for manufacturing	287.5	286.2	287.0	287.5	287.9	288.4	288.9	289.4	289.7	r289.9	290.5	290.6	291.0	291.1
Materials and components for construction	310.3	310.5	309.8	310.3	310.9	312.0	311.7	311.8	311.8	r312.4	313.2	313.0	313.1	313.8
Processed fuels and lubricants	566.3	562.9	567.2	575.2	576.6	569.2	565.3	564.1	566.6	r561.3	556.9	546.5	548.2	552.5
Manufacturing industries	483.8	480.6	485.5	490.4	491.4	484.7	481.8	483.4	486.1	r483.0	479.7	470.2	472.3	474.8
Nonmanufacturing industries	638.2	634.5	638.2	649.1	650.9	643.0	638.1	634.3	636.5	r629.2	623.8	612.6	614.0	619.8
Containers	302.1	299.4	300.9	301.8	303.0	304.1	305.2	308.8	310.1	r310.4	309.9	311.9	312.4	312.1
Supplies	283.3	284.2	284.3	283.9	283.2	284.1	283.6	283.2	282.9	283.1	284.0	283.8	283.8	283.9
Manufacturing industries	279.0	277.8	278.4	279.0	279.2	280.9	280.7	281.5	281.7	282.2	283.3	283.8	284.2	285.0
Nonmanufacturing industries	285.9	287.8	287.6	286.7	285.6	286.0	285.3	284.4	283.8	283.8	284.6	284.1	283.8	283.6
Feeds	215.8	233.5	229.2	221.6	211.7	208.3	203.0	195.4	192.4	191.1	189.9	185.6	180.4	176.3
Other supplies	300.6	299.5	300.0	300.5	301.0	302.2	302.3	302.7	302.6	302.8	304.0	304.2	304.8	305.4
CRUDE MATERIALS														
Crude materials for further processing	331.0	339.4	338.0	333.0	334.1	328.9	326.2	319.6	323.2	r322.4	319.4	318.3	312.9	311.3
Foodstuffs and feedstuffs	259.7	269.7	266.4	260.3	263.6	256.5	252.7	244.9	252.8	r253.0	251.3	250.7	243.6	240.5
Nonfood materials	484.7	490.1	492.3	489.6	486.4	485.0	484.6	480.3	475.2	r472.0	466.1	464.2	462.2	464.0
Nonfood materials except fuel	380.6	388.8	389.9	386.1	380.9	376.8	379.3	374.7	369.2	r366.4	361.7	356.9	358.3	360.5
Manufacturing industries	390.2	399.5	400.2	395.7	390.1	386.1	388.5	383.9	377.6	r374.4	368.8	362.7	364.1	366.3
Construction	278.7	279.2	282.7	283.5	282.0	277.6	279.9	276.3	276.3	r276.4	278.6	283.6	284.4	287.0
Crude fuel	931.4	920.8	928.4	932.6	940.2	953.1	937.6	935.9	934.0	r929.8	918.6	931.7	913.0	911.8
Manufacturing industries	1,092.4	1,079.6	1,088.1	1,094.5	1,103.5	1,120.1	1,100.0	1,097.6	r1,095.1	r1,089.7	1,074.2	1,091.8	1,067.3	1,065.8
Nonmanufacturing industries	818.1	809.1	816.1	818.4	825.1	835.1	823.3	822.1	820.7	r817.3	809.6	819.2	804.9	804.1
SPECIAL GROUPINGS														
Finished goods excluding foods	294.8	294.6	295.3	295.4	295.7	294.8	292.7	296.1	296.9	r295.8	296.6	295.9	296.2	297.8
Finished consumer goods excluding foods	294.1	293.5	294.9	294.9	295.0	293.8	291.7	295.0	295.9	r294.8	294.8	293.6	293.7	295.8
Finished consumer goods less energy	257.9	257.8	257.1	256.7	258.9	258.5	257.2	258.2	258.9	r259.3	261.0	261.7	261.3	261.0
Intermediate materials less foods and feeds	325.0	325.0	325.4	326.4	326.7	326.3	325.7	325.8	326.1	r325.6	325.4	324.6	324.7	325.6
Intermediate materials less energy	303.7	304.4	304.6	304.7	304.7	304.7	304.2	304.1	304.3	r304.1	304.2	304.1	303.9	304.4
Intermediate foods and feeds	253.1	259.1	260.8	257.8	255.3	251.4	248.1	244.0	244.3	r243.0	240.4	238.4	236.3	234.8
Crude materials less agricultural products	547.2	553.0	554.0	552.5	549.8	548.8	546.6	542.4	535.9	r532.3	525.6	525.8	521.6	523.0
Crude materials less energy	255.6	265.4	263.3	257.6	258.5	251.9	249.9	242.6	248.0	r247.8	246.6	245.9	240.9	239.1

[1]Data for December 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

24. Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1984	1984									1985			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
	All commodities	310.3	311.3	311.5	311.3	311.9	310.7	309.3	309.4	310.3	r309.8	r309.8	309.2	308.7	309.3
	All commodities (1957–59 = 100)	329.3	330.3	330.5	330.3	330.9	329.7	328.2	328.3	329.2	r328.7	r328.7	328.1	327.5	328.2
	Farm products and processed foods and feeds	262.6	267.3	265.8	262.8	264.9	261.4	259.4	255.3	258.1	r258.6	258.0	257.8	255.0	253.3
	Industrial commodities	322.6	322.6	323.2	323.8	323.9	323.3	322.3	323.4	323.8	323.0	323.2	322.5	322.6	323.8
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	255.7	265.4	260.8	257.1	258.7	253.3	249.8	240.2	245.7	245.7	243.2	244.6	238.7	236.9
01–1	Fresh and dried fruits and vegetables	278.0	263.8	251.9	273.7	281.9	293.7	290.1	267.3	251.2	r252.0	258.6	289.2	277.7	277.8
01–2	Grains	239.7	262.1	256.2	257.8	248.9	236.9	231.4	219.0	219.7	212.5	217.5	217.2	216.1	220.6
01–3	Livestock	251.8	260.8	254.8	250.0	260.1	253.7	244.9	233.9	247.7	252.3	247.4	249.7	236.6	231.3
01–4	Live poultry	240.6	240.8	240.6	227.7	259.2	218.6	239.7	219.2	247.1	231.7	232.7	222.4	215.5	202.3
01–5	Plant and animal fibers	228.4	252.3	259.1	252.7	235.8	211.3	210.3	202.8	201.4	203.0	204.5	200.6	200.4	211.3
01–6	Fluid milk	278.3	272.7	271.7	271.8	273.9	276.8	282.1	286.7	287.6	287.5	284.6	281.0	278.4	271.1
01–7	Eggs	210.8	264.4	201.0	177.9	184.9	181.2	177.6	179.9	176.0	187.5	141.9	161.5	167.6	175.1
01–8	Hay, hayseeds, and oilseeds	256.3	282.1	297.0	272.4	245.8	242.6	228.4	219.1	227.3	227.4	226.2	214.6	212.0	213.8
01–9	Other farm products	285.4	279.7	288.2	279.1	277.4	284.3	296.5	294.0	297.9	293.8	289.4	275.0	285.8	285.3
02	Processed foods and feeds	265.3	267.2	267.5	264.8	267.3	264.8	263.6	262.6	263.8	r264.5	265.1	263.9	262.9	261.2
02–1	Cereal and bakery products	270.4	268.3	268.7	271.4	272.3	271.7	271.9	272.7	273.7	r273.6	276.1	278.2	277.8	278.2
02–2	Meats, poultry, and fish	255.1	261.7	257.1	247.4	258.7	252.2	249.5	245.5	250.4	r255.9	259.1	255.9	252.1	246.3
02–3	Dairy products	251.7	248.9	248.9	249.6	251.4	251.2	255.0	256.4	257.3	r255.8	255.4	254.1	253.4	251.4
02–4	Processed fruits and vegetables	294.2	295.1	297.7	298.2	296.2	295.7	291.8	295.8	292.3	r293.5	296.7	295.4	300.2	298.7
02–5	Sugar and confectionery	301.4	301.9	303.8	304.1	305.0	303.7	302.4	299.8	297.0	r295.7	293.1	290.4	291.6	292.8
02–6	Beverages and beverage materials	273.2	271.4	273.5	272.8	273.9	274.6	274.6	276.1	276.0	r275.6	276.2	277.6	277.6	277.2
02–7	Fats and oils	301.2	293.4	328.5	328.1	312.7	305.9	298.5	301.6	311.9	297.6	280.4	286.0	290.7	303.2
02–8	Miscellaneous processed foods	278.2	276.3	276.2	279.9	281.3	280.4	281.1	281.2	280.9	r281.0	281.9	280.7	281.0	281.7
02–9	Prepared animal feeds	220.5	236.3	232.3	225.5	216.7	213.9	209.2	202.4	199.7	198.8	197.8	193.7	189.3	185.7
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	209.9	209.9	210.5	210.2	210.5	210.1	210.7	210.4	210.2	r210.0	210.4	210.6	210.4	210.5
03–1	Synthetic fibers (12/75 = 100)	159.6	160.7	160.6	160.5	160.1	159.9	159.2	158.2	157.5	r157.7	157.6	157.7	156.6	156.8
03–2	Processed yarns and threads (12/75 = 100)	142.7	143.6	144.3	143.8	143.7	142.1	142.2	141.4	140.8	r140.8	141.2	141.9	141.4	141.1
03–3	Gray fabrics (12/75 = 100)	153.7	153.0	153.7	154.3	154.5	154.4	154.6	154.8	153.7	r154.0	153.2	153.1	152.5	151.8
03–4	Finished fabrics (12/75 = 100)	126.5	126.9	127.3	127.1	126.9	127.1	127.3	126.9	126.6	r126.6	126.5	126.9	127.1	127.0
03–81	Apparel	201.1	200.7	201.3	200.8	201.6	201.0	202.2	201.9	202.2	r202.1	202.6	202.8	203.2	203.6
03–82	Textile housefurnishings	239.2	238.1	238.8	239.0	239.1	240.0	240.5	241.3	241.4	r238.3	242.2	243.1	240.6	241.0
04	Hides, skins, leather, and related products	286.5	286.8	288.5	290.1	288.9	298.7	288.7	287.7	283.8	r283.6	284.3	284.8	283.1	285.5
04–2	Leather	372.3	386.7	390.7	387.8	383.2	378.1	371.4	369.3	359.8	r354.5	357.7	351.9	348.5	351.6
04–3	Footwear	251.2	251.6	251.5	250.5	250.1	250.9	252.0	252.1	252.4	r252.6	252.4	256.6	255.5	255.3
04–4	Other leather and related products	265.0	258.1	259.8	267.9	267.2	267.7	267.6	268.1	267.9	r266.9	273.3	273.5	274.5	275.2
05	Fuels and related products and power	657.0	654.7	660.6	665.9	665.0	657.9	652.3	654.4	655.3	r648.5	637.6	625.9	625.8	633.6
05–1	Coal	546.0	542.0	547.4	544.3	548.1	550.0	549.1	548.9	548.6	r547.7	550.5	550.1	549.3	548.2
05–2	Coke	436.4	442.8	441.6	442.9	441.9	437.3	435.7	432.4	432.8	r435.1	439.7	439.8	433.6	430.1
05–3	Gas fuels[3]	1,109.9	1,102.1	1,104.1	1,109.1	1,110.8	1,116.9	1,104.6	1,112.5	1,113.4	r1,103.1	1,075.5	1,068.7	1,046.8	1,045.0
05–4	Electric power	440.0	431.5	433.1	446.7	453.5	456.7	456.4	445.4	443.0	r440.8	446.4	446.4	448.0	449.4
05–61	Crude petroleum[4]	670.5	673.9	673.9	673.3	672.6	671.1	670.6	669.8	655.8	r649.4	631.1	616.0	615.4	618.3
05–7	Petroleum products, refined[5]	665.3	667.0	677.6	679.7	673.3	654.8	646.5	655.5	661.5	r652.3	636.2	615.9	620.7	636.5
06	Chemicals and allied products	300.9	302.0	302.7	302.2	302.6	301.1	300.9	301.3	301.6	r300.7	301.7	302.2	302.8	303.6
06–1	Industrial chemicals[6]	341.4	345.4	345.3	345.4	345.6	340.9	337.7	335.9	334.7	r334.8	337.7	336.4	336.8	335.8
06–21	Prepared paint	272.5	268.7	270.0	270.9	274.0	276.4	277.0	277.8	277.1	r277.8	278.2	279.0	279.7	280.4
06–22	Paint materials	329.7	328.7	337.6	337.4	334.8	334.3	333.0	332.5	334.3	r334.7	332.0	332.9	334.2	336.0
06–3	Drugs and pharmaceuticals	240.4	239.8	240.1	237.3	240.5	240.7	239.7	244.7	246.9	r245.0	248.0	251.5	253.2	254.7
06–4	Fats and oils, inedible	371.3	383.2	399.2	414.3	378.8	350.1	359.4	365.1	380.1	r376.7	356.6	342.5	343.1	348.9
06–5	Agricultural chemicals and chemical products	284.7	288.4	286.8	286.5	285.0	283.0	285.0	285.5	282.5	r282.5	282.3	281.6	282.6	283.0
06–6	Plastic resins and materials	308.6	307.8	310.6	311.1	310.6	310.3	311.8	309.4	309.0	r306.2	302.9	306.8	305.5	308.1
06–7	Other chemicals and allied products	277.3	277.0	277.2	275.9	277.3	278.3	279.6	279.7	281.3	r280.1	281.7	282.0	282.4	283.4
07	Rubber plastic products	247.2	247.3	247.5	247.6	247.5	247.7	248.3	246.6	246.1	r245.9	248.4	246.7	246.6	246.8
07–1	Rubber and rubber products	266.9	267.2	266.3	266.5	266.5	267.6	268.1	264.8	263.9	r263.7	268.0	265.7	265.7	265.1
07–11	Crude rubber	276.8	282.3	277.7	277.2	275.6	273.0	273.9	271.2	270.4	r272.1	275.5	273.4	270.7	270.4
07–12	Tires and tubes	243.7	243.5	243.2	243.0	243.5	243.7	244.2	239.2	238.3	r237.1	245.1	240.8	241.2	239.1
07–13	Miscellaneous rubber products	290.5	289.8	289.3	290.5	290.0	293.7	294.0	292.9	291.8	r292.5	292.1	292.3	292.6	294.1
07–2	Plastic products (6/78 = 100)	139.5	139.4	140.2	140.2	140.2	139.7	140.1	140.1	140.0	139.8	140.4	139.6	139.5	140.1
08	Lumber and wood products	307.5	315.1	308.5	307.1	304.4	304.7	303.3	300.3	301.0	r303.0	304.3	303.3	303.4	301.7
08–1	Lumber	349.8	369.4	355.6	350.5	342.6	342.3	338.2	334.3	336.6	r339.5	343.2	342.9	345.0	340.5
08–2	Millwork	307.8	307.2	304.2	305.3	306.8	307.2	307.4	307.0	309.5	r311.6	312.4	311.5	309.9	309.5
08–3	Plywood	241.6	243.6	235.4	236.3	237.2	245.9	243.4	240.1	234.9	235.8	234.0	226.6	223.7	222.7
08–4	Other wood products	234.6	233.3	234.7	235.0	235.2	236.5	235.9	236.6	236.5	r238.0	238.2	236.6	238.8	239.1

See footnotes at end of table.

24. Continued—Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1984	1984									1985			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	318.3	316.3	317.7	318.4	319.8	321.3	322.0	323.1	324.1	r324.1	326.6	326.9	327.0	327.3
09–1	Pulp, paper,and products,excluding building paper and board	293.1	291.5	292.7	293.3	295.7	296.3	297.5	299.3	299.7	r298.9	297.8	297.4	295.4	294.3
09–11	Woodpulp	396.6	401.1	407.9	410.3	410.6	410.2	409.1	408.2	397.3	r392.1	383.5	368.4	353.9	347.9
09–12	Wastepaper	240.1	258.8	259.3	257.3	254.7	254.5	249.6	235.6	221.4	206.0	190.8	192.6	170.2	154.4
09–13	Paper	303.2	300.4	301.3	301.6	307.7	307.0	306.7	306.7	306.9	r305.7	307.0	304.7	303.7	303.6
09–14	Paperboard	281.1	277.1	277.8	279.1	279.1	285.1	288.6	293.7	294.3	r293.4	288.9	287.8	285.7	284.0
09–15	Converted paper and paperboard products	280.9	279.1	280.1	280.6	282.1	282.4	284.4	286.9	289.0	r289.3	289.0	291.0	290.4	290.0
09–2	Building paper and board	258.9	263.8	265.2	265.1	262.9	259.8	259.4	257.7	253.7	r253.4	255.2	256.2	256.3	257.6
10	Metals and metal products	316.0	317.9	317.4	317.3	316.1	316.2	315.6	316.0	316.4	r315.5	314.8	315.6	315.4	316.9
10–1	Iron and steel	357.0	356.5	357.3	357.0	357.4	357.4	357.9	358.4	357.7	r357.1	357.4	357.7	358.2	357.8
10–17	Steel mill products	366.0	364.2	364.7	365.4	367.6	368.1	368.1	368.6	368.0	r367.9	367.4	367.2	367.1	367.5
10–2	Nonferrous metals	277.0	289.1	284.1	282.8	277.0	275.3	271.8	266.8	269.4	r266.0	262.8	265.2	262.9	268.6
10–3	Metal containers	350.1	345.3	348.0	348.0	348.0	352.0	352.3	357.4	357.4	r357.2	357.6	358.3	357.5	358.0
10–4	Hardware	296.5	294.6	295.3	296.2	297.1	298.0	299.0	299.9	299.9	r300.9	301.9	302.5	304.0	305.0
10–5	Plumbing fixtures and brass fittings	300.6	301.5	301.6	302.4	302.8	304.6	304.4	306.2	309.2	r309.3	306.4	307.1	307.9	311.3
10–6	Heating equipment	253.2	250.3	252.4	252.7	255.2	255.5	255.7	256.1	256.0	256.4	256.6	257.4	257.3	257.8
10–7	Fabricated structural metal products	310.8	309.3	310.6	311.2	311.7	312.3	312.1	313.8	312.7	313.2	312.8	313.3	314.3	314.3
10–8	Miscellaneous metal products	295.0	293.1	293.4	294.3	294.1	295.0	295.8	301.5	301.6	r301.8	301.8	301.9	301.9	302.1
11	Machinery and equipment	293.1	292.2	292.6	293.1	294.0	294.1	294.3	294.8	295.3	295.6	296.7	297.4	298.0	298.3
11–1	Agricultural machinery and equipment	336.2	335.5	338.2	337.8	338.6	338.8	337.2	337.3	337.0	337.6	338.5	338.3	339.0	339.0
11–2	Construction machinery and equipment	357.5	357.5	357.8	358.1	358.3	356.9	357.2	357.5	357.6	r357.8	360.4	361.7	361.8	361.2
11–3	Metalworking machinery and equipment	333.8	332.6	333.5	333.4	334.2	334.7	335.6	337.1	338.1	r338.7	338.0	339.4	340.6	340.8
11–4	General purpose machinery and equipment	314.1	313.1	313.2	314.0	315.2	315.5	315.9	316.0	316.5	r316.9	318.0	318.5	319.9	320.5
11–6	Special industry machinery and equipment	348.5	346.8	348.2	348.6	351.9	352.8	351.1	351.5	351.8	r352.4	355.6	356.9	357.2	358.4
11–7	Electrical machinery and equipment	248.6	247.7	248.1	249.1	249.4	249.4	249.8	250.8	251.5	r251.7	252.2	253.0	253.3	253.2
11–9	Miscellaneous machinery	275.0	274.6	273.7	273.9	274.2	274.1	274.5	274.4	274.8	r274.5	276.2	276.7	277.0	278.0
12	Furniture and household durables	218.6	218.2	219.1	219.1	219.2	219.2	219.0	219.2	220.0	r220.1	220.3	220.7	221.1	221.4
12–1	Household furniture	242.0	240.8	241.5	242.3	242.2	242.7	243.4	244.3	245.1	r245.5	247.1	247.4	247.7	248.2
12–2	Commercial furniture	297.3	296.1	297.4	297.0	298.1	298.4	297.5	297.3	300.7	r299.6	300.1	302.3	303.5	305.0
12–3	Floor coverings	190.5	188.2	191.7	192.7	192.7	192.6	192.5	193.0	192.9	r193.2	192.7	191.1	192.1	192.4
12–4	Household appliances	211.3	210.9	210.8	211.1	211.5	211.9	211.6	211.1	210.9	r211.3	211.3	211.2	211.1	212.3
12–5	Home electronic equipment	83.7	84.9	84.5	83.9	84.2	83.8	83.1	83.1	83.1	82.7	80.9	81.8	81.9	80.9
12–6	Other household durable goods	318.3	319.1	321.6	319.9	318.6	316.8	316.8	317.7	320.5	r320.7	323.1	323.6	324.5	323.6
13	Nonmetallic mineral products	337.3	335.8	337.6	338.3	339.8	340.8	340.5	340.0	339.6	r340.1	342.3	342.7	343.6	344.8
13–11	Flat glass	224.0	230.2	226.1	226.3	226.3	219.6	219.7	219.9	218.5	r218.6	221.0	220.9	221.2	220.5
13–2	Concrete ingredients	325.8	324.3	328.0	326.7	327.1	328.4	328.2	327.6	328.5	r329.6	331.4	334.1	335.8	336.7
13–3	Concrete products	309.5	308.8	309.4	310.0	310.6	311.3	311.7	312.0	311.8	r312.2	314.8	314.3	315.0	316.9
13–4	Structural clay products, excluding refractories	286.6	285.0	285.6	286.2	286.4	288.2	289.4	289.5	289.6	r289.7	290.7	291.0	291.8	291.7
13–5	Refractories	361.5	361.8	361.8	361.8	361.8	361.6	361.6	361.6	365.6	r365.6	367.0	367.0	368.0	370.0
13–6	Asphalt roofing	399.5	396.2	398.7	394.2	394.5	408.4	408.0	409.1	410.1	r412.1	409.9	408.3	404.6	414.3
13–7	Gypsum products	346.5	353.0	360.9	360.3	359.7	359.5	355.4	339.0	334.4	r330.6	328.5	330.2	320.9	317.8
13–8	Glass containers	360.7	358.0	361.9	365.0	366.3	366.1	364.6	364.9	364.2	r364.2	363.7	364.2	370.7	371.4
13–9	Other nonmetallic minerals	500.0	491.3	494.9	499.2	507.1	511.4	509.8	508.9	505.8	r507.3	513.3	513.3	513.9	518.3
14	Transportation equipment (12/68 = 100)	262.6	263.4	262.5	262.2	262.5	262.3	257.8	265.0	265.7	r265.0	267.9	268.1	268.0	268.5
14–1	Motor vehicles and equipment	261.3	261.9	261.5	261.1	261.4	261.1	255.2	263.8	264.3	r263.5	266.6	266.7	266.6	266.6
14–4	Railroad equipment	356.6	380.8	354.4	354.4	356.5	357.7	357.6	358.8	358.9	r358.9	358.9	361.7	362.7	364.0
15	Miscellaneous products	296.0	294.6	294.3	295.7	297.3	298.2	296.7	296.5	296.5	r296.7	299.9	300.7	300.5	301.7
15–1	Toys, sporting goods, small arms, ammunition	227.1	226.5	226.8	226.5	226.5	226.5	227.0	227.4	227.6	r227.7	228.8	231.8	231.3	231.2
15–2	Tobacco products	399.5	390.4	390.6	400.2	408.7	406.7	406.7	402.3	402.7	r402.9	423.8	420.4	420.6	420.7
15–3	Notions	283.2	283.0	283.9	283.9	283.9	283.9	283.9	283.5	283.5	283.6	283.6	284.1	284.1	285.6
15–4	Photographic equipment and supplies	214.5	213.6	213.6	213.6	213.8	215.5	215.5	215.6	212.9	r213.2	213.8	213.9	215.9	215.8
15–5	Mobile homes (12/74 = 100)	163.3	163.8	163.7	162.7	162.9	163.2	163.6	163.6	164.4	r164.3	164.7	164.4	164.4	164.5
15–9	Other miscellaneous products	350.4	351.9	350.4	350.0	350.1	353.2	346.9	348.5	349.6	r350.1	346.5	350.0	347.7	352.2

[1] Data for December 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Not available.

[3] Prices for natural gas are lagged 1 month.

[4] Includes only domestic production.

[5] Most prices for refined petroleum products are lagged 1 month.

[6] Some prices for industrial chemicals are lagged 1 month.

r = revised.

25. Producer Price Indexes, for special commodity groupings

[1967 = 100 unless otherwise specified]

Commodity grouping	Annual average 1984	1984									1985			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
All commodities—less farm products	313.8	314.2	314.7	314.8	315.3	314.4	313.3	314.2	314.7	r314.1	314.4	313.6	313.5	314.3
All foods	269.4	270.6	268.9	267.5	271.7	269.6	268.6	266.6	267.3	r268.5	268.5	269.6	268.4	267.1
Processed foods	270.0	270.9	271.4	269.0	272.8	270.0	269.1	268.3	270.3	r271.2	272.0	270.7	269.9	268.4
Industrial commodities less fuels	287.6	287.8	287.8	288.0	288.2	288.3	287.6	288.7	289.1	288.9	290.2	290.6	290.7	291.3
Selected textile mill products (Dec. 1975 = 100)	142.0	141.7	142.7	142.7	142.7	142.9	143.0	142.9	142.8	r142.3	142.7	143.0	142.6	142.5
Hosiery	147.6	147.4	147.4	147.4	147.9	148.0	148.0	148.1	148.1	r148.0	148.4	148.6	148.6	148.7
Underwear and nightwear	229.9	229.8	230.9	228.8	230.2	230.3	230.6	230.6	230.5	r230.3	232.6	231.9	232.3	234.7
Chemicals and allied products, including synthetic rubber and fibers and yarns	289.7	290.6	291.1	290.5	291.3	290.2	289.9	290.0	290.0	r289.4	290.6	291.2	291.5	292.2
Pharmaceutical preparations	243.3	241.5	241.9	240.6	244.6	245.1	243.9	249.7	251.9	r250.0	254.0	257.3	259.5	260.6
Lumber and wood products, excluding millwork	318.5	332.5	320.4	317.2	312.2	315.0	311.4	307.6	307.4	r309.6	311.5	308.8	309.2	305.8
Steel mill products, including fabricated wire products	363.7	361.8	362.4	363.1	365.2	365.8	365.9	366.5	365.9	365.8	365.3	365.1	365.1	365.5
Finished steel mill products, excluding fabricated wire products	365.5	363.6	364.1	364.8	367.0	367.5	367.5	368.1	367.5	367.4	366.9	366.7	366.6	367.0
Finished steel mill products, including fabricated wire products	363.0	361.0	361.6	362.4	364.4	365.0	365.1	365.7	365.2	365.1	364.6	364.4	364.3	364.8
Special metals and metal products	299.9	301.2	300.8	300.6	300.0	299.9	297.2	301.0	301.3	r300.5	301.4	301.9	301.8	302.7
Fabricated metal products	303.9	301.9	302.9	303.6	303.9	305.0	305.4	308.7	308.5	r308.9	308.8	309.2	309.6	310.0
Copper and copper products	185.8	199.4	191.8	189.5	184.4	183.3	182.5	178.1	183.0	r180.1	178.4	184.9	182.2	189.0
Machinery and motive products	286.3	286.2	285.9	286.1	286.8	286.8	284.8	288.4	289.0	r288.8	290.8	291.3	291.6	292.0
Machinery and equipment, except electrical	319.4	318.5	318.8	319.2	320.3	320.6	320.6	320.9	321.3	r321.6	323.0	323.8	324.5	325.0
Agricultural machinery, including tractors	353.8	352.9	357.0	356.5	357.2	357.5	355.2	354.8	354.0	r354.8	356.1	355.5	356.5	356.6
Metalworking machinery	364.9	363.0	363.2	363.3	364.6	365.1	366.6	368.8	370.4	371.4	370.1	371.9	374.9	374.6
Total tractors	382.4	384.1	386.8	386.7	386.9	385.7	382.6	381.0	379.5	379.7	384.7	383.8	384.2	384.4
Agricultural machinery and equipment less parts	341.1	340.4	343.6	343.0	344.0	344.3	342.3	342.0	341.5	r342.3	343.4	343.1	343.9	343.9
Farm and garden tractors less parts	361.0	362.1	365.8	365.7	366.0	367.0	362.3	359.9	357.6	358.0	360.5	359.0	359.6	360.0
Agricultural machinery, excluding tractors less parts	348.2	345.7	350.1	349.2	350.4	350.1	349.8	350.8	351.3	r352.5	352.8	353.0	354.2	354.0
Construction materials	306.3	307.1	306.2	306.3	306.7	307.6	307.2	307.2	307.0	r307.7	308.5	308.1	308.1	308.6

[1]Data for December 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

26. Producer Price Indexes, by durability of product

[1967 = 100]

Commodity grouping	Annual average 1984	1984									1985			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
Total durable goods	293.5	294.2	293.8	293.8	293.8	293.9	292.7	294.4	294.9	294.8	295.7	296.3	296.4	297.1
Total nondurable goods	323.3	324.7	325.3	324.9	326.0	323.7	322.3	320.9	322.1	r321.3	320.5	318.9	317.9	318.4
Total manufactures	302.9	303.2	303.8	303.9	304.3	303.3	302.2	303.2	303.9	303.5	303.9	303.2	303.3	304.1
Durable	293.9	294.3	293.9	294.0	294.2	294.5	293.2	295.1	295.6	295.5	296.4	296.9	297.0	297.7
Nondurable	312.3	312.5	314.1	314.2	314.8	312.6	311.7	311.6	312.5	r311.7	311.6	309.6	309.8	310.7
Total raw or slightly processed goods	347.0	352.4	350.1	348.0	349.6	346.9	344.4	339.1	341.0	r339.8	337.7	337.4	333.3	332.7
Durable	266.7	280.6	277.9	273.3	264.5	259.6	260.6	255.9	254.2	r252.2	255.8	259.6	261.1	262.2
Nondurable	351.7	356.5	354.3	352.3	354.7	352.2	349.4	344.2	346.3	r345.1	342.6	342.0	337.5	336.8

[1]Data for December 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

27. Producer Price Indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1984	1984									1985			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
	MINING														
1092	Mercury ores (12/75 = 100)	264.3	267.9	273.7	271.6	264.6	249.1	257.1	271.6	276.6	267.9	264.1	262.1	262.1	260.0
1311	Crude petroleum and natural gas	914.3	909.2	914.1	918.4	921.6	928.3	918.2	916.2	906.2	r901.6	880.8	879.2	866.8	868.6
	MANUFACTURING														
2074	Cottonseed oil mills	209.2	222.6	245.3	243.1	223.2	210.2	205.0	172.9	166.9	177.7	166.4	169.1	163.2	164.8
2083	Malt	240.4	241.6	241.6	241.6	241.6	241.6	241.6	241.6	234.5	234.5	226.5	226.5	226.5	226.5
2098	Macaroni and spaghetti	261.6	261.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9	258.6	258.6	258.6	261.9	258.6
2298	Cordage and twine (12/77 = 100)	138.7	139.3	139.4	139.4	138.6	138.5	138.5	138.5	138.5	r138.5	138.5	138.5	138.5	138.5
2381	Fabric dress and work gloves	310.5	304.8	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	313.5	314.9	314.9	314.9
2394	Canvas and related products (12/77 = 100)	151.4	150.6	150.6	150.6	150.6	150.6	152.1	152.1	152.1	r152.1	152.9	152.9	152.9	152.5
2448	Wood pallets and skids (12/75 = 100)	163.9	161.6	165.1	165.4	168.6	168.6	168.7	168.3	168.2	168.5	169.0	169.3	169.4	170.1
2521	Wood office furniture	290.8	289.2	289.2	289.2	289.1	289.2	291.1	291.2	295.1	r298.6	301.0	301.0	301.0	303.1
2654	Sanitary food containers	279.7	280.6	280.6	280.7	280.6	280.7	281.3	281.4	281.5	r281.4	285.6	288.3	289.7	289.8
2655	Fiber cans, drums, and similar products (12/75 = 100)	193.7	193.1	193.1	193.1	194.7	194.7	194.7	194.8	197.8	r197.8	199.1	200.0	200.0	200.0
2911	Petroleum refining (6/76 = 100)	244.2	244.9	248.1	248.8	246.5	240.1	237.5	240.9	242.7	239.4	233.4	225.4	226.7	232.7
3253	Ceramic wall and floor tile (12/75 = 100)	150.2	149.6	149.6	149.6	149.6	153.4	153.4	153.4	153.4	r153.4	150.5	150.5	150.5	150.5
3255	Clay refractories	372.5	371.5	371.5	371.7	371.6	371.4	371.4	371.4	378.8	r378.8	381.4	381.5	383.3	387.3
3259	Structural clay products, n.e.c.	232.8	232.4	232.4	232.4	232.4	232.3	232.4	232.4	232.4	r232.5	237.7	237.6	237.5	237.6
3261	Vitreous plumbing fixtures	292.7	290.4	290.8	292.5	293.1	293.9	295.6	297.7	297.6	r298.1	297.9	298.8	298.1	299.3
3263	Fine earthenware food utensils	377.1	382.6	376.5	372.1	373.3	374.0	374.8	375.9	378.2	r379.4	391.7	395.2	385.5	369.5
3269	Pottery products, n.e.c. (12/75 = 100)	191.4	192.2	192.2	186.3	187.6	187.6	197.7	195.2	195.3	r195.3	199.2	199.4	199.4	198.9
3274	Lime (12/75 = 100)	183.0	184.1	184.2	183.3	180.3	179.6	187.2	180.5	182.1	r183.0	187.5	185.2	185.2	182.3
3297	Nonclay refractories (12/74 = 100)	219.2	220.1	220.1	220.1	219.9	219.9	220.3	219.9	220.2	r220.2	220.5	220.4	220.4	220.4
3482	Small arms ammunition (12/75 = 100)	192.4	190.3	190.3	190.3	190.3	190.3	190.3	190.3	190.3	r190.3	202.5	205.5	205.5	205.5
3648	Lighting equipment, n.e.c. (12/75 = 100)	186.6	185.0	185.6	185.7	186.3	188.1	188.2	194.4	196.9	196.9	196.9	197.4	196.1	195.5
3671	Electron tubes, receiving type	497.2	490.9	490.9	491.3	491.6	491.6	491.8	492.0	527.2	527.2	546.7	547.0	547.0	547.0
3942	Dolls (12/75 = 100)	134.3	131.6	133.4	133.6	133.6	133.6	133.6	133.6	133.6	r133.6	134.3	134.4	134.5	134.5
3944	Games, toys, and children's vehicles	238.0	239.7	239.1	239.2	239.2	239.1	239.3	239.4	239.4	r239.4	236.7	241.6	243.1	242.9
3955	Carbon paper and inked ribbons (12/75 = 100)	145.7	149.1	149.1	149.1	146.7	146.7	146.7	139.7	139.7	139.7	139.7	139.4	129.5	128.6
3996	Hard surface floor coverings (12/75 = 100)	167.5	166.3	166.4	166.4	168.7	168.8	168.8	169.7	169.7	169.7	171.4	171.4	172.1	172.1

[1]Data for December 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

PRODUCTIVITY DATA

PRODUCTIVITY DATA are compiled by the Bureau of Labor Statistics from establishment data and from measures of compensation and output supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definitions

Output is the constant dollar gross product produced by the particular sector. **Output per hour of all persons** (labor productivity) measures the value of goods and services in constant prices produced per hour of labor. **Output per unit of capital services** (capital productivity) measures the value of goods and services in constant dollars per unit of capital services input.

Multifactor productivity measures the output per unit of combined labor and capital input. The traditional measure of output per hour reflects changes in capital per hour and a combination of other factors—such as, changes in technology, shifts in the composition of the labor force, changes in capacity utilization, research and development, skill and efforts of the work force, management, and so forth. The multifactor productivity measure differs from the familiar BLS measure of output per hour of all persons in that it excludes the effects of the substitution of capital for labor.

Compensation per hour includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

Unit labor costs measure the labor compensation costs required to produce a unit of output and is 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 gross product and dividing by output. **Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and the value of inventory adjustments per unit of output.

The **implicit price deflator** is the price index for the gross product of the sector reported. It is derived by dividing the current dollar gross product by the constant dollar figures.

Hours of all persons measures the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all employee hour** describes labor productivity in nonfinancial corporations where there are no self-employed. The **capital services** input index used in the multifactor productivity computation is developed by BLS 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 input** are computed by combining changes in labor and capital inputs 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

In the business sector and the nonfarm business sector, the output measure employed in the computation of output per hour is constructed from Gross Domestic Product rather than Gross National Product. Multifactor productivity measures (table 28) for the *private* business and *private* nonfarm business sectors differ from the business and nonfarm business sector measures used in the traditional labor productivity indexes (tables 29–32) in that they exclude the activities of government enterprises. There is no difference in the sector definition for manufacturing.

Output measures for the business sectors are derived from data supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hours data are from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

The productivity and associated cost measures in the tables 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 a more complete description of the methodology underlying the multifactor productivity measures, see Bulletin 2178, "Trends in Multifactor Productivity, 1948–81" (September 1983).

28. Annual indexes of multifactor productivity and related measures, selected years, 1950–83

[1977 = 100]

Item	1950	1960	1970	1973	1974	1975	1976	1978	1979	1980	1981	1982	1983
PRIVATE BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	49.7	64.8	86.1	94.8	92.5	94.5	97.6	100.5	99.3	98.7	100.6	100.8	103.7
Output per unit of capital services	98.6	98.5	98.5	103.0	96.5	92.0	96.1	101.8	100.3	95.6	94.1	89.6	92.3
Multifactor productivity	63.6	75.4	90.2	97.5	93.8	93.6	97.1	101.0	99.7	97.6	98.3	96.8	99.6
Output	39.5	53.3	78.3	91.8	89.9	88.0	93.7	105.5	107.9	106.4	109.2	106.3	111.1
Inputs:													
Hours of all persons	79.4	82.2	90.8	96.8	97.2	93.1	95.9	105.0	108.6	107.8	108.5	105.4	107.2
Capital services	40.1	54.1	79.4	89.1	93.1	95.7	97.5	103.6	107.5	111.4	116.0	118.7	120.3
Combined units of labor and capital input	62.1	70.7	86.7	94.1	95.8	94.0	96.5	104.5	108.2	109.0	111.0	109.8	111.5
Capital per hour of all persons	50.4	65.8	87.4	92.0	95.9	102.8	101.6	98.7	98.9	103.3	106.9	112.6	112.3
PRIVATE NONFARM BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	55.6	68.0	86.8	95.3	92.9	94.8	97.8	100.6	99.0	98.2	99.6	99.9	103.5
Output per unit of capital services	98.2	98.4	98.6	103.2	96.5	91.7	96.1	101.9	100.1	95.2	93.2	88.7	91.9
Multifactor productivity	68.1	77.6	90.7	97.9	94.1	93.6	97.2	101.0	99.4	97.2	97.4	95.9	99.3
Output	38.3	52.3	77.8	91.7	89.7	87.6	93.6	105.7	108.0	106.4	108.7	105.9	111.3
Inputs:													
Hours of all persons	69.0	77.0	89.7	96.2	96.5	92.4	95.7	105.1	109.1	108.4	109.1	106.0	107.6
Capital services	39.0	53.2	78.9	88.8	93.0	95.6	97.4	103.7	107.9	111.7	116.6	119.4	121.2
Combined units of labor and capital input	56.2	67.4	85.9	93.6	95.3	93.5	96.3	104.6	108.7	109.5	111.6	110.4	112.0
Capital per hour of all persons	56.6	69.1	88.0	92.4	96.3	103.4	101.8	98.7	98.9	103.1	106.8	112.6	112.6
MANUFACTURING													
Productivity:													
Output per hour of all persons	49.4	60.0	79.2	93.0	90.8	93.4	97.6	100.9	101.6	101.7	104.9	107.1	111.6
Output per unit of capital services	94.5	88.0	91.8	108.2	99.6	89.4	96.1	101.5	99.5	90.7	89.9	82.9	87.6
Multifactor productivity	59.9	67.0	82.3	96.8	93.1	92.2	97.1	101.1	101.0	98.8	100.8	100.3	104.9
Output	38.6	50.7	77.0	95.9	91.9	85.4	93.6	105.3	108.2	103.5	106.1	99.3	104.4
Inputs:													
Hours of all persons	78.2	84.4	97.3	103.1	101.2	91.4	95.9	104.4	106.5	101.7	101.1	92.7	93.5
Capital services	40.9	57.5	83.9	88.6	92.2	95.5	97.4	103.8	108.8	114.1	118.0	119.8	119.2
Combined units of labor and capital input	64.5	75.6	93.5	99.0	98.7	92.6	96.3	104.2	107.1	104.8	105.2	99.0	99.5
Capital per hour of all persons	52.3	68.2	86.2	85.9	91.1	104.5	101.6	99.4	102.1	112.2	116.7	129.2	127.5

29. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–84

[1977 = 100]

Item	1950	1955	1960	1965	1970	1975	1978	1979	1980	1981	1982	1983	1984
Business sector:													
Output per hour of all persons	50.4	58.3	65.2	78.3	86.2	94.6	100.5	99.3	98.8	100.7	100.9	103.7	107.0
Compensation per hour	20.0	26.4	33.9	41.7	58.2	85.6	108.5	118.7	131.1	143.4	155.0	161.7	168.6
Real compensation per hour	50.5	59.7	69.5	80.1	90.8	96.4	100.8	99.1	96.4	95.5	97.3	98.4	98.4
Unit labor costs	39.8	45.2	52.1	53.3	67.5	90.5	108.0	119.5	132.6	142.4	153.6	156.0	r157.6
Unit nonlabor payments	43.4	47.6	50.6	57.6	63.2	90.4	106.7	112.8	119.3	136.7	136.8	145.5	r157.0
Implicit price deflator	41.0	46.0	51.6	54.7	66.0	90.4	107.5	117.2	128.1	140.4	147.9	152.4	157.4
Nonfarm business sector:													
Output per hour of all persons	56.3	62.8	68.3	80.5	86.8	94.8	100.6	99.0	98.3	99.8	100.0	103.4	r106.2
Compensation per hour	21.9	28.3	35.7	42.8	58.7	86.1	108.6	118.4	130.6	143.1	154.5	162.0	168.7
Real compensation per hour	55.1	64.0	73.1	82.3	91.5	96.9	100.8	98.8	96.0	95.3	97.0	98.6	98.4
Unit labor costs	38.8	45.1	52.3	53.2	67.6	90.8	108.0	119.5	132.8	143.5	154.5	156.6	158.8
Unit nonlabor payments	42.7	47.8	50.4	58.0	63.8	88.5	105.3	110.4	118.6	135.0	136.9	147.0	r156.9
Implicit price deflator	40.1	46.0	51.6	54.8	66.3	90.0	107.1	116.5	128.1	140.6	148.6	153.4	158.2
Nonfinancial corporations:													
Output per hour of all persons	(1)	(1)	68.0	82.0	87.4	95.5	100.8	100.6	99.7	101.6	102.6	106.1	108.5
Compensation per hour	(1)	(1)	37.0	43.9	59.4	86.1	108.4	118.6	130.8	143.1	154.6	161.0	166.6
Real compensation per hour	(1)	(1)	75.8	84.3	92.7	97.0	100.7	99.0	96.2	95.3	97.0	97.9	97.2
Unit labor costs	(1)	(1)	54.4	53.5	68.0	90.2	107.5	117.8	131.2	140.9	150.6	151.8	153.6
Unit nonlabor payments	(1)	(1)	54.6	60.8	63.1	90.8	104.2	106.9	117.4	135.1	138.1	149.1	r158.8
Implicit price deflator	(1)	(1)	54.5	56.1	66.3	90.4	106.4	114.1	126.4	138.9	146.3	150.9	155.4
Manufacturing:													
Output per hour of all persons	49.4	56.4	60.0	74.6	79.2	93.4	100.9	101.6	101.7	104.9	107.1	111.6	r115.6
Compensation per hour	21.5	28.8	36.7	42.8	57.6	85.5	108.3	118.8	132.7	145.2	158.0	163.4	169.4
Real compensation per hour	54.0	65.1	75.1	82.3	89.8	96.2	100.6	99.2	97.6	96.8	99.2	99.4	98.8
Unit labor costs	43.4	51.0	61.1	57.5	72.7	91.5	107.3	117.0	130.5	138.4	147.6	146.4	r146.5
Unit nonlabor payments	54.3	58.6	61.1	69.4	65.1	87.3	102.7	99.9	97.9	111.6	110.5	128.8	(1)
Implicit price deflator	46.6	53.2	61.1	61.0	70.5	90.3	106.0	112.0	120.9	130.6	136.7	141.2	(1)

[1] Not available.

r = revised.

30. Annual changes in productivity, hourly compensation, unit costs, and prices, 1974–84

Item	Year											Annual rate of change	
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1950–84	1974–84
Business sector:													
Output per hour of all persons	−2.4	2.2	3.3	2.4	0.5	−1.2	−0.5	1.9	0.2	2.7	3.2	2.2	1.5
Compensation per hour	9.4	9.6	8.5	7.7	8.5	9.4	10.4	9.4	8.1	4.3	4.2	6.5	r8.0
Real compensation per hour	−1.4	0.5	2.6	1.2	0.8	−1.7	−2.7	−0.9	1.9	1.1	0.0	2.0	0.3
Unit labor costs	12.1	7.3	5.1	5.1	8.0	10.7	11.0	7.3	7.9	1.6	1.0	4.1	6.4
Unit nonlabor payments	4.4	15.1	4.0	6.4	6.7	5.8	5.7	14.6	0.1	6.3	r7.2	3.9	7.2
Implicit price deflator	9.5	9.8	4.7	5.6	7.5	9.0	9.3	9.6	5.3	3.0	3.2	4.0	6.7
Nonfarm business sector:													
Output per hour of all persons	−2.5	2.0	3.2	2.2	0.6	−1.5	−0.7	1.5	0.2	3.5	2.7	1.9	r1.3
Compensation per hour	9.4	9.6	8.1	7.5	8.6	9.0	10.3	9.6	8.0	4.9	4.1	6.2	8.0
Real compensation per hour	−1.4	0.4	2.2	1.0	0.8	−2.0	−2.8	−0.7	1.7	1.6	−0.1	1.7	0.2
Unit labor costs	12.2	7.5	4.7	5.2	8.0	10.7	11.1	8.0	7.7	1.4	1.4	4.2	6.5
Unit nonlabor payments	5.9	16.7	5.7	6.9	5.3	4.8	7.4	13.8	1.4	7.4	r6.7	3.9	r7.5
Implicit price deflator	10.2	10.3	5.1	5.7	7.1	8.8	10.0	9.8	5.7	3.2	3.1	4.1	6.8
Nonfinancial corporations:													
Output per hour of all employees	−3.7	2.9	2.9	1.8	0.8	−0.2	−0.9	1.9	1.0	3.3	2.3	(1)	1.5
Compensation per hour	9.4	9.6	7.9	7.6	8.4	9.4	10.3	9.4	8.0	4.2	r3.5	(1)	r8.3
Real compensation per hour	−1.5	0.4	2.0	1.1	0.7	−1.7	−2.8	−0.9	1.8	0.9	−0.8	(1)	0.2
Unit labor costs	13.6	6.5	4.9	5.7	7.5	9.6	11.3	7.4	6.9	0.8	1.1	(1)	6.7
Unit nonlabor payments	7.1	20.1	4.6	5.3	4.2	2.6	9.8	15.1	2.3	7.9	r6.5	(1)	7.8
Implicit price deflator	11.4	10.9	4.8	5.6	6.4	7.2	10.8	9.8	5.3	3.1	3.0	(1)	7.1
Manufacturing:													
Output per hour of all persons	−2.4	2.9	4.5	2.5	0.9	0.7	0.2	3.1	2.1	4.3	r3.5	r2.5	r2.4
Compensation per hour	10.6	11.9	8.0	8.3	8.3	9.7	11.7	9.4	8.8	3.4	3.6	6.3	8.3
Real compensation per hour	−0.3	2.5	2.1	1.8	0.6	−1.4	−1.6	−0.9	2.5	0.2	−0.6	1.8	r0.3
Unit labor costs	13.3	8.8	3.4	5.7	7.3	9.0	11.5	6.1	6.6	−0.8	r−0.1	3.6	r5.7
Unit nonlabor payments	−1.8	25.9	7.5	6.5	2.7	−2.6	−2.1	14.1	−1.0	16.5	p8.9	r2.8	r7.3
Implicit price deflator	9.0	13.1	4.6	6.0	6.0	5.7	7.9	8.0	4.7	3.3	p2.5	3.4	r6.1

[1] Not available.

p = preliminary.

r = revised.

31. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted

[1977 = 100]

Item	Annual average		Quarterly indexes										
			1982		1983				1984				1985
	1983	1984	III	IV	I	II	III	IV	I	II	III	IV	I
Business sector:													
Output per hour of all persons	103.7	107.0	100.9	101.6	102.2	103.6	104.3	104.7	105.7	107.0	107.2	r108.0	p107.5
Compensation per hour	161.7	168.6	156.7	158.4	160.2	161.0	161.8	164.2	166.7	167.5	169.3	171.1	p173.5
Real compensation per hour	98.4	98.4	97.3	98.0	99.0	98.5	r97.9	98.4	98.6	98.2	98.3	98.5	p99.1
Unit labor costs	156.0	r157.6	155.3	155.9	156.8	155.4	155.1	156.8	157.7	156.5	158.0	r158.4	p161.4
Unit nonlabor payments	145.5	r157.0	135.8	136.5	139.8	144.6	147.9	149.1	151.6	157.2	158.5	r160.2	p159.9
Implicit price deflator	152.4	157.4	148.7	149.3	151.0	151.7	152.7	154.2	155.6	156.7	158.1	159.0	p160.9
Nonfarm business sector:													
Output per hour of all persons	103.4	r106.2	100.3	100.5	101.6	103.6	104.1	104.4	105.2	106.6	106.3	r106.9	p106.5
Compensation per hour	162.0	168.7	156.0	157.9	160.1	161.5	162.4	164.0	166.5	168.0	169.5	171.0	p173.5
Real compensation per hour	98.6	98.4	r96.8	97.7	99.0	98.8	98.3	98.3	r98.4	98.4	98.4	98.5	p99.1
Unit labor costs	156.6	158.8	155.6	157.1	157.6	155.9	155.9	157.1	158.3	157.6	159.5	r160.0	p162.9
Unit nonlabor payments	147.0	r156.9	136.8	136.4	140.6	146.4	149.4	151.4	152.2	156.8	158.0	r160.3	p161.0
Implicit price deflator	153.4	158.2	149.3	150.2	151.9	152.7	153.8	155.2	156.3	157.3	159.0	160.1	p162.3
Nonfinancial corporations:													
Output per hour of all employees	106.1	108.5	103.3	103.2	104.0	105.8	107.2	107.2	108.1	108.9	108.2	p108.8	(1)
Compensation per hour	161.0	166.6	156.2	157.7	159.2	160.6	161.8	162.6	164.8	165.8	167.1	p168.7	(1)
Real compensation per hour	97.9	97.2	97.0	97.5	98.4	98.2	97.9	97.4	97.5	97.2	97.1	p97.1	(1)
Total unit costs	155.2	156.4	154.7	157.0	156.7	155.2	154.4	154.7	155.0	155.0	157.5	p158.0	(1)
Unit labor costs	151.8	153.6	151.3	152.9	153.1	151.7	150.9	151.7	152.5	152.3	154.5	p155.0	(1)
Unit nonlabor costs	164.9	r164.3	164.4	168.8	167.0	165.1	164.4	163.3	162.0	162.8	165.9	p166.4	(1)
Unit profits	117.2	r147.6	86.6	75.6	92.5	111.8	126.6	135.9	143.2	151.1	145.3	p147.6	(1)
Implicit price deflator	150.9	155.4	146.9	147.7	149.4	150.2	151.2	152.6	153.6	154.6	156.1	p157.1	(1)
Manufacturing:													
Output per hour of all persons	111.6	r115.6	108.8	r107.9	r109.2	r110.9	113.4	r113.0	r114.0	r115.0	r117.0	r116.3	p116.8
Compensation per hour	163.4	169.4	159.8	161.0	162.7	163.0	163.5	164.6	167.1	168.3	169.9	172.1	p174.9
Real compensation per hour	99.4	98.8	99.2	99.6	100.6	99.6	98.9	98.6	98.8	98.6	r98.7	99.1	p99.9
Unit labor costs	146.4	r146.5	146.9	149.3	r149.0	147.0	144.1	r145.7	r146.6	r146.4	r145.2	r147.9	p149.8

[1] Not available.

p = preliminary.

r = revised.

32. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, seasonally adjusted at annual rate

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	III 1983 to IV 1983	IV 1983 to I 1984	I 1984 to II 1984	II 1984 to III 1984	III 1984 to IV 1984	IV 1984 to I 1985	IV 1982 to IV 1983	I 1983 to I 1984	II 1983 to II 1984	III 1983 to III 1984	IV 1983 to IV 1984	I 1984 to I 1985
Business sector:												
Output per hour of all persons	1.4	4.0	4.9	0.6	r3.1	p−1.9	3.1	3.5	3.3	2.7	r3.2	p1.6
Compensation per hour	6.1	6.2	1.9	4.4	4.4	p5.7	3.7	4.1	4.0	4.6	4.2	p4.1
Real compensation per hour	1.9	0.8	−1.8	0.7	0.8	p2.3	0.4	−0.4	−0.3	0.4	0.1	p0.5
Unit labor costs	4.6	2.1	−2.9	3.7	r1.2	p7.8	0.6	0.6	0.7	1.9	r1.0	p2.4
Unit nonlabor payments	3.1	7.0	15.4	3.4	r4.3	p−0.7	9.2	8.4	8.7	7.1	r7.4	p5.4
Implicit price deflator	4.1	3.7	2.9	3.6	2.2	p4.8	3.3	3.0	3.3	3.6	3.1	p3.4
Nonfarm business sector:												
Output per hour of all persons	1.0	2.9	5.5	−1.1	r2.2	p−1.2	3.9	3.5	2.9	2.1	r2.4	p1.3
Compensation per hour	4.1	6.1	3.7	3.6	3.7	p6.0	3.9	4.0	4.0	4.4	4.3	p4.2
Real compensation per hour	−0.0	0.7	0.0	0.1	r0.1	p2.6	0.6	−0.5	−0.3	0.2	0.2	p0.7
Unit labor costs	3.0	3.1	−1.7	4.7	r1.4	p7.3	0.0	0.4	1.1	2.3	r1.9	p2.9
Unit nonlabor payments	5.3	2.3	12.5	3.1	r5.9	p1.9	10.9	8.3	7.1	5.7	r5.9	p5.8
Implicit price deflator	3.7	2.8	2.8	4.2	2.9	p5.5	3.3	2.9	3.0	3.4	3.2	p3.8
Nonfinancial corporations:												
Output per hour of all employees	−0.2	3.6	2.8	−2.5	p2.5	(1)	3.9	4.0	2.9	0.9	p1.6	(1)
Compensation per hour	2.0	5.7	2.4	3.2	p3.7	(1)	3.1	3.6	3.3	3.3	p3.8	(1)
Real compensation per hour	−2.1	0.4	−1.3	−0.4	p0.2	(1)	−0.1	−0.9	−1.0	−0.9	p−0.3	(1)
Total units costs	0.8	0.6	0.2	6.5	p1.2	(1)	−1.5	−1.1	−0.1	2.0	p2.1	(1)
Unit labor costs	2.1	2.0	−0.4	5.9	p1.2	(1)	−0.8	−0.4	0.4	2.4	p2.2	(1)
Unit nonlabor costs	−2.6	−3.2	2.0	8.0	p1.1	(1)	−3.2	−3.0	−1.4	0.9	p1.9	(1)
Unit profits	32.6	23.4	23.8	−14.5	p16.0	(1)	79.8	54.8	35.2	14.7	p10.9	(1)
Implicit price deflator	3.6	2.7	2.6	3.9	p2.7	(1)	3.3	2.8	2.9	3.2	p3.0	(1)
Manufacturing:												
Output per hour of all persons	r−1.4	r3.5	r3.6	r7.1	r−2.2	p1.6	r4.8	r4.4	r3.7	r3.1	r2.9	p2.5
Compensation per hour	2.9	6.2	r6.2	3.7	5.2	p6.8	2.2	2.7	3.3	3.9	4.5	p4.7
Real compensation per hour	−1.2	0.8	−0.8	0.1	1.6	p3.4	−1.0	−1.7	−1.0	−0.3	0.4	p1.1
Unit labor costs	r4.3	r2.6	r−0.6	r−3.1	r7.6	p5.1	r−2.4	r−1.6	r−0.4	r0.8	r1.5	p2.1

[1]Not available.

r = revised.

p = preliminary.

WAGE AND COMPENSATION DATA

DATA FOR THE EMPLOYMENT COST INDEX are reported to the Bureau of Labor Statistics by a sample of 2,000 private nonfarm establishments and 750 State and local government units selected to represent total employment in those sectors. On average, each reporting unit provides wage and compensation information on five well-specified occupations.

Data on negotiated wage and benefit changes are obtained from contracts on file at the Bureau, direct contact with the parties, and secondary sources.

Definitions

The **Employment Cost Index** (ECI) is a quarterly measure of the average change in the cost of employing labor. The rate of total compensation, which comprises wages, salaries, and employer costs for employee benefits, is collected for workers performing specified tasks. Employment in each occupation is held constant over time for all series produced in the ECI, except those by region, bargaining status, and area. As a consequence, only changes in compensation are measured. Industry and occupational employment data from the 1970 Census of Population are used in deriving constant weights for the ECI. While holding total industry and occupational employment fixed, in the estimation of indexes by region, bargaining status, and area, the employment in those measures is allowed to vary over time in accord with changes in the sample. The rate of change (in percent) is available for wages and salaries, as well as for total compensation. Data are collected for the pay period including the 12th day of the survey months of March, June, September, and December. The statistics are neither annualized nor adjusted for seasonal influence.

Wages and salaries consist of earnings before payroll deductions, excluding premium pay for overtime, work on weekends and holidays, and shift differentials. Production bonuses, incentive earnings, commissions, and cost-of-living adjustments are included; nonproduction bonuses are included with other supplemental pay items in the benefits category; and payments-in-kind, free room and board, and tips are excluded. *Benefits* include supplemental pay, insurance, retirement and savings plans, and hours-related and legally required benefits.

Data on negotiated wage changes apply to private nonfarm industry collective bargaining agreements covering 1,000 workers or more. Data on compensation changes apply only to those agreements covering 5,000 workers or more. *First-year* wage or compensation changes refer to average negotiated changes for workers covered by settlements reached in the period and implemented within the first 12 months after the effective date of the agreement. *Changes over the life of the agreement* refer to all adjustments specified in the contract, expressed as an average annual rate. These measures exclude wage changes that may occur under cost-of-living adjustment clauses, that are triggered by movements in the Consumer Price Index. *Wage-rate changes* are expressed as a percent of straight-time hourly earnings; *compensation changes* are expressed as a percent of total wages and benefits.

Effective wage adjustments reflect all negotiated changes implemented in the reference period, regardless of the settlement date. They include changes from settlements reached during the period, changes deferred from contracts negotiated in an earlier period, and cost-of-living adjustments. The data also reflect contracts providing for no wage adjustment in the period. Effective adjustments and each of their components are prorated over all workers in bargaining units with at least 1,000 workers.

Notes on the data

The Employment Cost Index data series began in the fourth quarter of 1975, with the quarterly percent change in wages and salaries in the private nonfarm sector. Data on employer costs for employee benefits were included in 1980, to produce a measure of the percent change in employers' cost for employees' total compensation. State and local government units were added to the ECI coverage in 1981, providing a measure of total compensation change in the civilian nonfarm economy.

Data for the broad white-collar, blue-collar, and service worker groups, and the manufacturing, nonmanufacturing, and service industry groups are presented in the ECI. Additional occupation and industry detail are provided for the wages and salaries component of total compensation in the private nonfarm sector. For State and local government units, additional industry detail is shown for both total compensation and its wages and salaries component.

Historical indexes (June 1981 = 100) of the quarterly rates of changes presented in the ECI are also available.

For a more detailed discussion of the ECI, see chapter 11, "The Employment Cost Index," of the *BLS Handbook of Methods* (Bulletin 2134–1), and the *Monthly Labor Review* articles: "Employment Cost Index: a measure of change in the 'price of labor,'" July 1975; "How benefits will be incorporated into the Employment Cost Index," January 1978; and "The Employment Cost Index: recent trends and expansion," May 1982.

Additional data for the ECI and other measures of wage and compensation changes appear in *Current Wage Developments*, a monthly publication of the Bureau.

33. Employment Cost Index, by occupation and industry group

[June 1981 = 100]

Series	1983				1984				1985	Percent change	
										3 months ended	12 months ended
	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	March 1985	
Civilian workers[1]	113.2	114.5	116.5	117.8	119.8	120.8	122.4	123.9	125.5	1.3	4.8
Workers, by occupational group											
White-collar workers	113.7	114.9	117.6	118.9	120.9	122.1	124.0	125.5	127.3	1.4	5.3
Blue-collar workers	112.3	113.6	114.8	115.8	117.7	118.6	119.6	120.9	122.2	1.1	3.8
Service workers	114.3	115.1	116.7	119.1	122.0	122.1	124.6	126.8	127.8	0.8	4.8
Workers, by industry division											
Manufacturing	112.5	113.5	115.0	116.0	117.9	119.1	120.4	122.0	123.9	1.6	5.1
Nonmanufacturing	113.5	114.9	117.2	118.6	120.7	121.6	123.3	124.8	126.2	1.1	4.6
Services	116.6	117.1	121.1	122.6	125.0	125.5	128.8	130.9	131.9	.8	5.5
Public administration[2]	116.2	117.0	119.8	121.4	122.9	123.7	126.9	128.6	130.1	1.2	5.9
Private industry workers	112.6	113.9	115.6	117.0	119.0	120.1	121.1	122.7	124.2	1.2	4.4
Workers, by occupational group											
White-collar workers	112.8	114.2	116.5	117.9	119.9	121.4	122.4	123.9	125.8	1.5	4.9
Blue-collar workers	112.1	113.5	114.6	115.7	117.5	118.4	119.3	120.6	121.9	1.1	3.7
Service workers	113.8	114.6	115.1	117.9	121.5	121.2	123.2	125.7	126.3	.5	4.0
Workers, by industry division											
Manufacturing	112.5	113.5	115.0	116.0	117.9	119.1	120.4	122.0	123.9	1.6	5.1
Nonmanufacturing	112.6	114.2	116.0	117.5	119.6	120.7	121.6	123.1	124.4	1.1	4.0
State and local government workers	116.5	117.1	120.8	122.0	123.9	124.4	128.8	130.1	131.7	1.2	6.3
Workers, by occupational group											
White-collar workers	117.0	117.5	121.5	122.6	124.5	125.0	129.7	131.1	132.5	1.1	6.4
Blue-collar workers	114.9	115.8	118.0	119.2	121.9	122.3	125.0	125.9	128.1	1.7	5.1
Workers, by industry division											
Services	116.8	117.4	121.7	122.6	124.5	125.0	129.9	131.3	132.8	1.1	6.7
Schools	116.6	116.9	121.9	122.6	124.5	124.7	130.6	132.0	133.4	1.1	7.1
Elementary and secondary	117.2	117.4	123.3	123.9	125.4	125.7	132.1	133.5	134.4	.7	7.2
Hospitals and other services[3]	117.5	118.8	121.1	122.6	124.4	125.7	127.9	129.2	131.1	1.5	5.4
Public administration[2]	116.2	117.0	119.8	121.4	122.9	123.7	126.9	128.6	130.1	1.2	5.9

[1] Excludes farm, household, and Federal workers.

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

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

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

[June 1981 = 100]

Series	1983				1984				1985	Percent change	
	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	3 months ended	12 months ended
										March 1985	
Civilian workers[1]	112.2	113.4	115.3	116.5	117.9	118.8	120.3	121.7	123.1	1.2	4.4
Workers, by occupational group											
White-collar workers	113.0	114.2	116.7	117.9	119.3	120.4	122.2	123.5	125.2	1.4	4.9
Blue-collar workers	110.8	112.0	113.1	114.0	115.3	116.1	117.0	118.2	119.3	0.9	3.5
Service workers	113.2	113.9	115.1	117.4	120.0	119.8	122.3	124.3	124.8	.4	4.0
Workers, by industry division											
Manufacturing	111.0	112.0	113.3	114.5	115.7	116.8	118.0	119.5	121.0	1.3	4.6
Nonmanufacturing	112.7	114.0	116.1	117.4	118.9	119.7	121.3	122.6	123.9	1.1	4.2
Services	115.8	116.3	120.1	121.3	123.3	123.8	127.2	128.9	129.7	.6	5.2
Public administration[2]	114.6	115.4	118.2	119.4	120.4	121.3	124.4	125.7	127.0	1.0	5.5
Private industry workers	111.6	112.9	114.5	115.8	117.2	118.2	119.2	120.6	122.0	1.2	4.1
Workers, by occupational group											
White-collar workers	112.2	113.6	115.9	117.2	118.5	119.9	120.9	122.3	124.0	1.4	4.6
Professional and technical workers	114.8	115.9	119.9	120.4	122.2	123.8	125.2	127.3	127.7	.3	4.5
Managers and administrators	112.0	114.0	114.8	115.7	118.0	119.2	121.0	122.2	123.8	1.3	4.9
Salesworkers	105.7	107.1	108.4	111.2	110.2	111.9	110.5	111.6	116.3	4.2	5.5
Clerical workers	113.4	114.6	116.7	118.3	119.8	120.7	122.0	122.9	124.7	1.5	4.1
Blue-collar workers	110.7	111.9	112.9	113.9	115.1	115.9	116.7	118.0	119.1	.9	3.5
Craft and kindred workers	112.2	113.4	114.3	115.4	116.5	117.3	118.0	119.4	120.8	1.2	3.7
Operatives, except transport	110.0	111.1	112.3	113.6	114.9	115.8	116.6	117.9	118.9	.8	3.5
Transport equipment operatives	108.0	110.3	110.7	110.2	111.7	112.7	113.4	114.0	114.5	.4	2.5
Nonfarm laborers	109.0	109.8	110.8	112.1	112.9	114.1	114.7	115.9	116.7	.7	3.4
Service workers	112.9	113.5	113.7	116.5	119.8	119.3	121.2	123.7	123.8	.1	3.3
Workers, by industry division											
Manufacturing	111.0	112.0	113.3	114.5	115.7	116.8	118.0	119.5	121.0	1.3	4.6
Durables	111.1	111.8	112.9	114.4	115.7	116.6	117.7	119.1	120.6	1.3	4.2
Nondurables	110.9	112.3	113.9	114.6	115.8	117.1	118.6	120.2	121.6	1.2	5.0
Nonmanufacturing	112.0	113.4	115.2	116.5	118.0	119.0	119.9	121.2	122.6	1.2	3.9
Construction	110.4	112.1	112.2	112.9	113.3	114.0	114.3	114.4	115.5	1.0	1.9
Transportation and public utilities	112.9	114.7	115.7	116.8	118.5	119.3	119.9	120.7	121.7	.8	2.7
Wholesale and retail trade	108.5	110.8	111.5	112.3	114.3	116.0	116.5	118.1	118.8	.6	3.9
Wholesale trade	111.8	114.1	115.7	116.5	118.2	120.0	120.7	122.9	123.7	.7	4.7
Retail trade	107.2	109.4	109.9	110.6	112.8	114.4	114.9	116.2	116.9	.6	3.6
Finance, insurance, and real estate	110.6	111.1	113.5	116.9	116.1	116.9	115.3	115.8	122.0	5.4	5.1
Services	116.0	116.6	120.4	121.9	124.2	124.7	127.1	129.5	129.9	.3	4.6
State and local government workers	115.1	115.7	119.2	120.0	121.6	122.0	126.1	127.1	128.4	1.0	5.6
Workers, by occupational group											
White-collar workers	115.6	116.1	119.8	120.6	122.2	122.5	127.1	128.0	129.3	1.0	5.8
Blue-collar workers	113.3	114.3	116.4	116.9	119.1	119.6	121.9	122.5	124.2	1.4	4.3
Workers, by industry division											
Services	115.5	115.9	119.8	120.6	122.2	122.5	127.2	128.1	129.4	1.0	5.9
Schools	115.2	115.4	119.9	120.6	122.2	122.3	127.8	128.7	129.9	.9	6.3
Elementary and secondary	115.6	115.8	121.1	121.7	122.9	123.0	129.3	130.2	130.8	.5	6.4
Hospitals and other services[3]	116.5	117.7	119.7	120.6	121.9	123.1	125.1	125.9	127.7	1.4	4.8
Public administration[2]	114.6	115.4	118.2	119.4	120.4	121.3	124.4	125.7	127.0	1.0	5.5

[1] Excludes farm, household, and Federal workers.

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

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

35. Employment Cost Index, private industry workers, by bargaining status, region, and area size

[June 1981 = 100]

Series	1983				1984				1985	Percent change	
	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	3 months ended	12 months ended
										March 1985	
COMPENSATION											
Workers, by bargaining status[1]											
Union	114.5	116.0	117.8	118.8	120.6	121.7	122.6	123.9	124.8	0.7	3.5
Manufacturing	114.0	114.8	116.3	117.2	119.3	120.5	121.6	123.2	124.2	.8	4.1
Nonmanufacturing	114.9	117.1	119.2	120.4	121.9	122.8	123.6	124.5	125.3	.6	2.8
Nonunion	111.5	112.8	114.4	115.9	118.0	119.2	120.3	121.9	123.8	1.6	4.9
Manufacturing	111.2	112.3	113.8	114.9	116.6	117.9	119.3	120.8	123.6	2.3	6.0
Nonmanufacturing	111.6	113.0	114.7	116.4	118.6	119.8	120.7	122.4	123.9	1.2	4.5
Workers, by region[1]											
Northeast	112.6	114.3	116.0	117.5	118.9	120.7	122.4	123.8	125.1	1.1	5.2
South	112.5	113.5	115.6	117.1	119.7	120.7	120.7	122.2	124.2	1.6	3.8
North Central	110.9	112.5	113.9	114.7	117.2	117.9	119.7	120.8	122.0	1.0	4.1
West	115.4	116.6	118.0	120.0	121.0	122.2	122.5	124.9	126.8	1.5	4.8
Workers, by area size[1]											
Metropolitan areas	112.9	114.2	116.0	117.4	119.4	120.6	121.5	123.2	124.7	1.2	4.4
Other areas	110.8	112.3	113.4	114.5	116.7	117.4	119.0	119.8	121.4	1.3	4.0
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	112.9	114.2	116.0	116.9	118.1	119.0	119.8	120.9	121.7	.7	3.0
Manufacturing	111.4	112.3	113.7	114.8	116.1	117.1	118.1	119.5	120.4	.8	3.7
Nonmanufacturing	114.3	116.0	118.3	118.9	120.1	120.7	121.3	122.1	122.8	.6	2.2
Nonunion	110.9	112.2	113.7	115.2	116.7	117.8	118.8	120.4	122.1	1.4	4.6
Manufacturing	110.7	111.8	113.0	114.2	115.4	116.5	117.9	119.5	121.5	1.7	5.3
Nonmanufacturing	111.0	112.4	114.0	115.6	117.2	118.3	119.2	120.7	122.3	1.3	4.4
Workers, by region[1]											
Northeast	112.0	113.6	115.3	116.6	117.4	118.9	120.5	121.9	123.0	.9	4.8
South	111.4	112.5	114.3	115.7	117.9	119.0	119.0	120.2	122.3	1.7	3.7
Midwest (formerly North Central)	110.1	111.5	112.8	113.6	115.5	116.0	117.8	118.7	119.6	.8	3.5
West	114.1	114.9	116.5	118.5	118.8	119.6	120.0	122.5	124.0	1.2	4.4
Workers, by area size[1]											
Metropolitan areas	111.9	113.2	114.9	116.2	117.6	118.6	119.5	121.0	122.4	1.2	4.1
Other areas	110.1	111.4	112.3	113.4	115.1	116.0	117.5	118.3	119.6	1.1	3.9

[1]The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see *BLS Handbook of Methods, Bulletin 1910.*

36. Wage and compensation change, major collective bargaining settlements, 1980 to date

[In percent]

Measure	Annual average					Quarterly average								
						1983				1984				1985
	1980	1981	1982	1983	1984	I	II	III	IV	I	II	III	IV	I[p]
Total compensation changes, covering 5,000 workers or more, all industries:														
First year of contract	10.4	10.2	3.2	3.4	3.6	−1.6	4.4	5.0	4.9	5.1	3.5	2.7	3.7	3.6
Annual rate over life of contract	7.1	8.3	2.8	3.0	2.8	1.4	3.6	4.3	3.1	4.7	3.2	3.1	2.0	3.1
Wage rate changes covering at least 1,000 workers, all industries:														
First year of contract	9.5	9.8	3.8	2.6	2.4	−1.2	2.7	3.7	4.2	2.8	2.6	2.1	2.3	2.8
Annual rate over life of contract	7.1	7.9	3.6	2.8	2.4	2.2	2.8	3.6	2.8	3.3	2.7	2.6	1.5	3.0
Manufacturing:														
First year of contract	7.4	7.2	2.8	0.4	2.3	−3.4	1.3	3.4	2.9	2.5	2.6	2.3	2.2	0.1
Annual rate over life of contract	5.4	6.1	2.6	2.1	1.5	4.5	.9	3.5	3.1	2.5	2.8	2.5	1.0	1.0
Nonmanufacturing (excluding construction):														
First year of contract	9.5	9.8	4.3	5.0	3.4	3.3	5.9	5.8	4.8	4.2	4.3	2.0	3.9	5.1
Annual rate over life of contract	6.6	7.3	4.1	3.7	3.8	5.3	5.2	4.3	2.7	4.8	4.2	2.8	3.8	4.6
Construction:														
First year of contract	13.6	13.5	6.5	1.5	.5	.7	1.7	1.5	1.1	−3.6	1.1	2.0	−2.8	−1.6
Annual rate over life of contract	11.5	11.3	6.3	2.4	1.0	2.4	2.1	2.9	2.6	−2.8	1.4	2.1	−.8	.3

p = preliminary.

37. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1980 to date

Measure	Year					Year and quarter								
						1983				1984				1985
	1980	1981	1982	1983	1984	I	II	III	IV	I	II	III	IV	I[p]
Average percent adjustment (including no change):														
All industries	9.9	9.5	6.8	4.0	3.7	0.3	1.3	1.2	1.1	0.9	0.9	1.2	0.7	0.7
Manufacturing	10.2	9.4	5.2	2.7	4.3	−.5	1.1	1.2	.9	1.2	1.0	1.0	1.1	.9
Nonmanufacturing	9.7	9.5	7.9	4.8	3.3	.9	1.5	1.2	1.2	.7	.9	1.3	.4	.6
From settlements reached in period	3.6	2.5	1.7	.8	.8	−.2	.3	.2	.6	.1	.1	.2	.3	.1
Deferred from settlements reached in earlier period	3.5	3.8	3.6	2.5	2.0	.4	1.0	.8	.3	.4	.7	.7	.2	.6
From cost-of-living clauses	2.8	3.2	1.4	.6	.9	.1	.1	.2	.2	.3	.2	.3	.2	.1
Total number of workers receiving wage change (in thousands)[1]	—	8,648	7,852	6,530	6,195	2,875	3,061	3,025	2,887	2,694	2,482	2,386	1,850	2,047
From settlements reached in period	—	2,270	1,907	2,327	1,851	448	561	599	996	295	355	406	911	122
Deferred from settlements reached in earlier period	—	6,267	4,846	3,260	3,668	812	1,405	1,317	669	984	1,148	1,581	443	1,001
From cost-of-living clauses	—	4,593	3,830	2,327	2,518	1,938	1,299	1,218	1,290	1,459	1,151	1,215	1,070	1,051
Number of workers receiving no adjustments (in thousands)	—	145	483	1,187	1,123	4,842	4,656	4,693	4,830	4,624	4,835	4,932	5,467	5,269

[1] The total number of workers who received adjustments does not equal the sum of workers that received each type of adjustment, because some workers received more than one type of adjustment during the period.

p = preliminary.

WORK STOPPAGE DATA

WORK STOPPAGES include all known strikes or lockouts involving 1,000 workers or more and lasting a full shift or longer. Data are based largely on newspaper accounts and cover all workers idle one shift or more in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments whose employees are idle owing to material or service shortages.

Estimates of days idle as a percent of estimated working time measure only the impact of larger strikes (1,000 workers or more). Formerly, these estimates measured the impact of strikes involving 6 workers or more; that is, the impact of virtually *all* strikes. Due to budget stringencies, collection of data on strikes involving fewer than 1,000 workers was discontinued with the December 1981 data.

38. Work stoppages involving 1,000 workers or more, 1947 to date

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (in thousands)	In effect during month (in thousands)	Number (in thousands)	Percent of estimated working time
1947	270		1,629		25,720	—
1948	245		1,435		26,127	.22
1949	262		2,537		43,420	.38
1950	424		1,698		30,390	.26
1951	415		1,462		15,070	.12
1952	470		2,746		48,820	.38
1953	437		1,623		18,130	.14
1954	265		1,075		16,630	.13
1955	363		2,055		21,180	.16
1956	287		1,370		26,840	.20
1957	279		887		10,340	.07
1958	332		1,587		17,900	.13
1959	245		1,381		60,850	.43
1960	222		896		13,260	.09
1961	195		1,031		10,140	.07
1962	211		793		11,760	.08
1963	181		512		10,020	.07
1964	246		1,183		16,220	.11
1965	268		999		15,140	.10
1966	321		1,300		16,000	.10
1967	381		2,192		31,320	.18
1968	392		1,855		35,567	.20
1969	412		1,576		29,397	.16
1970	381		2,468		52,761	.29
1971	298		2,516		35,538	.19
1972	250		975		16,764	.09
1973	317		1,400		16,260	.08
1974	424		1,796		31,809	.16
1975	235		965		17,563	.09
1976	231		1,519		23,962	.12
1977	298		1,212		21,258	.10
1978	219		1,006		23,774	.11
1979	235		1,021		20,409	.09
1980	187		795		20,844	.09
1981	145		729		16,908	.07
1982	96		656		9,061	.04
1983	81		909		17,461	.08
1984	62		376		8,499	.04
1984 January	6	12	28.0	42.9	505.3	.03
February	3	13	9.4	42.4	379.5	.02
March	2	10	3.0	16.5	296.3	.01
April	7	13	28.5	38.4	657.3	.03
May	5	15	8.1	39.2	587.6	.03
June	5	14	23.7	45.9	761.1	.04
July	8	20	70.8	106.4	1,228.0	.06
August	5	19	24.2	103.9	1,634.5	.07
September	10	18	107.9	122.9	731.0	.04
October	4	16	18.0	39.6	562.1	.03
November	4	15	12.0	32.3	500.1	.03
December	3	13	42.5	59.0	655.8	.04
1985[p] January	2	9	4.7	16.0	278.3	.01
February	4	13	29.3	43.9	259.3	.01
March	4	12	15.2	48.2	698.5	.03
April	1	6	1.2	9.8	215.6	.01

p = preliminary.

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Publications for Sale

BLS Bulletins

Employment, Hours, and Earnings, United States, 1909-84, Volume I and II. Bulletin 1312-12, 943 pp., $17 (GPO Stock No. 029-001-02836-9). Presents detailed industry statistics on the Nation's nonagricultural workers. Included are monthly and annual averages on employment for all employees and female employees; production workers in construction; and nonsupervisory workers in the remaining private nonagricultural industries. Also shown are average weekly hours, average hourly and weekly earnings, indexes of aggregate weekly hours and payrolls, and constant-dollar earnings related to 1977 as a base year. Replaces Employment and Earnings, United States, 1909-78 (BLS Bulletin 1312-11), issued in 1979.

Area Wage Surveys

These bulletins cover office, professional, technical, maintenance, custodial, and material movement jobs in major metropolitan areas. The annual series of 70 is available by subscription for $102 per year. Individual area bulletins are also available separately. Published in April were:

Jackson, Mississippi, Metropolitan Area, January 1985. Bulletin 3030-4, 41 pp., $2.25 (GPO Stock No. 829-001-0004-7).

Minneapolis-St. Paul, Minnesota-Wisconsin, Metropolitan Area, January 1985. Bulletin 3030-1, 43 pp., $2.25 (GPO Stock No. 829-001-0001-2).

Pittsburgh, Pennsylvania, Metropolitan Area, January 1985. Bulletin 3030-3, 55 pp., $2.25 (GPO Stock No. 829-001-0003-9).

York, Pennsylvania, Metropolitan Area, January 1985. Bulletin 3030-5, 29 pp., $1.75 (GPO Stock No. 829-001-0005-5).

Periodicals

CPI Detailed Report. The February issue provides a comprehensive report on price movements for the month, and includes statistical tables, charts, and technical notes. 171 pp., $4 ($25 per year).

Current Wage Developments. The April issue includes major collective bargaining settlements in private industry in 1984, selected wage and benefit changes, work stoppages in March, major agreements expiring in May, major work stoppages March 1985, and statistics on compensation changes. 64 pp., $2 ($21 per year).

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Other Publications

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Area Wage Summaries

Clarksville-Hopkinsville, TN-KY. March 1985. 6 pp.
Nashville-Davidson, TN. February 1985. 3 pp.
Savannah, GA. March 1985. 3 pp.
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