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In this issue:
Major medical plans for workers,
fifty years of the Job Service

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June 1983 cover:

"The Surgeon, Dr. Theodore Erickson,"
a 1944 drawing in red chalk and pencil
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MONTHLY LABOR REVIEW

Labor Month In Review

KLEIN AWARDS. The annual Lawrence R. Klein award for the best original article published during 1982 in the *Monthly Labor Review* and written by a Bureau of Labor Statistics author is shared by:

Paul O. Flaim, Office of Employment and Unemployment Statistics, for "The spendable earnings series: has it outlived its usefulness?" in the January issue, and Norman Bowers, Office of Employment and Unemployment Statistics, for "Tracking youth joblessness: persistent or fleeting?" in the February issue.

The award for the best original article written by an author outside of BLS goes to Paul S. Adler for "The productivity puzzle: numbers alone won't solve it," in the October issue.

The winners received their awards at the annual BLS awards ceremony, April 28, from Ben Burdetsky, secretary-treasurer of the Klein fund. Flaim previously won for an article published during 1979 and Bowers for an article published during 1980. The two are the first repeat winners in the 14-year history of the award.

The Flaim article investigates the usefulness of the spendable earnings series, which was discontinued in January 1982. He explains that the series began in 1939 and approximated earnings trends in its early years but that by the early 1970's some economists were already arguing that "because of the change in the composition of the labor force and other developments, the spendable earnings series no longer provided a reliable indication of the true trend in earnings."

After analyzing the series' accuracy, relevance, and concepts, Flaim concludes that "statistical evidence proves that because of the gradual change in the mix of workers, the spendable earnings series has become severely downward biased. Crucial questions also emerge regarding the formula used to translate gross earnings into spendable earnings. The fact that deductions for State and local taxes have been ignored in the computation process looms as an omission of growing importance. . . . In other words, enough questions can be raised about the series to conclude that it has probably outlived its usefulness." With publication of the data for December 1981, BLS discontinued the series.

The Bowers article gives reasons for high unemployment among young persons such as high turnover, seasonality, and work-school transitions and further explores youth joblessness by showing the results of a new study of matched data from the Current Population Survey. The study examines the unemployment experience of selected individuals in the course of a year, and over 2 consecutive years. Bowers says that the study's findings suggest:

- "Prolonged joblessness is somewhat concentrated among a relatively small group of workers but is also strongly affected by the business cycle.
- A clear association exists between the extent of past joblessness and the likelihood of subsequent unemployment.
- Two or more spells of joblessness in 1 year do not necessarily presage similar unemployment the next year.
- Recurrent unemployment is no respecter of age, striking all labor force groups."

Adler's article is a review essay of four books published in 1981 which grapple with the problem of the major decline in the rate of growth in productivity over the last two decades. The authors' vantage points are in management, labor, academia, and government. Adler uses the books to address the question of whether the productivity slowdown is basically a cause or an effect of current economic problems. He notes that economic theory is of little help in solving the puzzle.

Origin of the award. The Klein Award Fund was established by Lawrence R. Klein, editor-in-chief of the *Review* for 22 years until his retirement in 1968. Instead of accepting a retirement gift, Klein donated contributions and matched the amount collected to initiate the fund. Since then, he has contributed regularly, as have others. The purpose of the fund is to encourage *Review* articles that (1) exhibit originality of ideas or method of analysis, (2) adhere to the principles of scientific inquiry, and (3) are well written. Since 1969, fund trustees have presented awards to authors of 27 *Review* articles. Awards carry cash prizes of $200 for each winning article.

Tax-deductible contributions to the Klein Fund may be sent to Ben Burdetsky, Secretary-Treasurer, Lawrence R. Klein Fund, c/o School of Government and Business Administration, The George Washington University, Washington, D.C. 20052. □

2

Short workweeks during economic downturns

*By far the most common economic reasons for
part-time employment during recessions
are cutbacks in weekly hours due to slack work
and failure to find full-time positions;
each is characteristically distinct and illustrates
different underlying labor-market problems*

ROBERT W. BEDNARZIK

Often overshadowed in the current recession by the rise in the jobless rate, the number of persons involuntarily working part time reached record levels in 1982. As the unemployment level passed 11 million persons, the number of "economic part-timers" neared the 7 million mark. Many of these persons had their workweeks reduced, with accompanying pay cuts, while others accepted part-time jobs only after unsuccessful searches for full-time work. Unlike the unemployed, those subject to a reduction in hours are *not* usually entitled to draw unemployment insurance benefits for their lost work time.[1]

During an economic downturn, the number of involuntary part-timers typically rises before unemployment begins to increase, mainly because employers tend to reduce hours of work when possible before laying off employees to minimize the cost of turnover. In recovery periods, when new orders pick up and inventories are rebuilt, firms usually restore the hours of those on shortened workweeks before expanding their work forces. Thus, over the business cycle, changes in the number of persons involuntarily working part time are generally just a few steps ahead of changes in overall unemployment.

In 1982, the distribution (annual averages) of involuntary part-timers by reason for part-time work was:

Reason	Number (thousands)	Percent
Total	6,170	100.0
Slack workloads	3,264	52.9
Material shortages or repairs to plant and equipment . . .	53	0.9
New job started during the survey reference week	168	2.7
Job ended during the reference week	85	1.4
Could only find a part-time job	2,600	42.1

"Slack work" and "could find only part-time work," which together account for more than 90 percent of the total, will be the main focal points of this analysis.

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3

Data for these two subgroups, along with the number of persons involuntarily working part time have been seasonally adjusted specifically for this study.[2]

This article examines the type and extent of the relationship of the "slack work" and "could find only part-time work" components to changes in economic conditions. Given that, by definition, one group had been successful in finding full-time employment while the other had not, it is expected that they may differ with respect to demographic and employment characteristics, and thus behave differently over the business cycle. The cyclical analysis is based on monthly Current Population Survey (CPS) data from 1955 to 1982, a period that includes five complete business cycles and the most recent economic downturn.

To better understand observed labor market patterns, a detailed discussion of who involuntary part-time workers are, how the two main "reason" groups differ, and why some could find only part-time work will be presented. An analysis of the influence of occupation and industry attachment on involuntary part-time worker status concludes the study.

Link with the business cycle

Over the period for which data have been collected, there has been a direct and fairly stable relationship among the incidence of involuntary part-time work, the unemployment rate, and the business cycle.[3] (See chart 1.) On average, the number of involuntary part-timers as a percent of the total at work reaches its cyclical low and begins to rise about 11 months prior to the business cycle peak designated by the National Bureau of Economic Research (NBER) and about 7 months before the unemployment rate low point. It tends to turn

Chart 1. **Unemployment rate and percent of persons at work employed part time for economic reasons, with peaks and troughs in the business cycle, 1955-82**
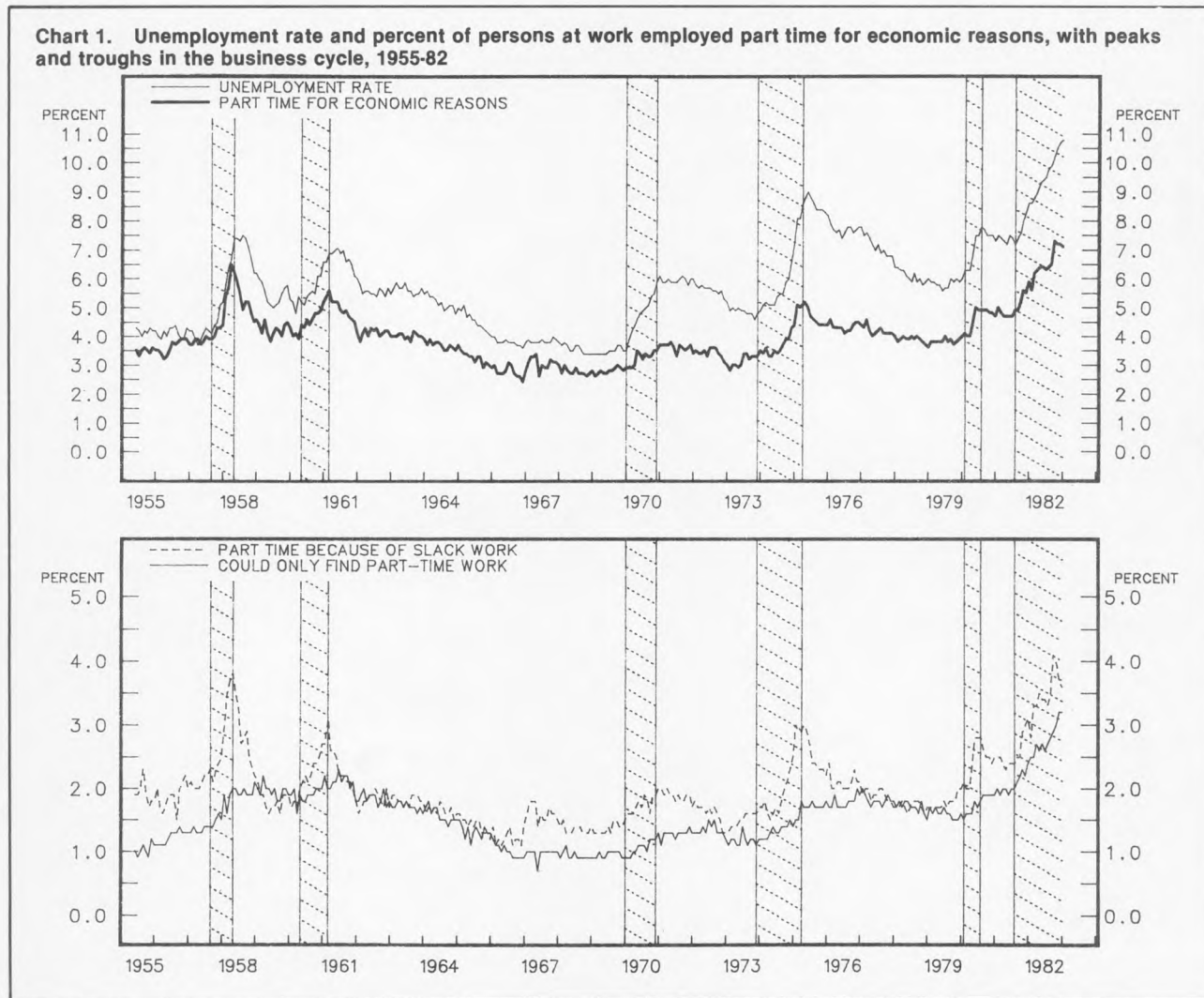
Table 1. Highs and lows in involuntary part-time employment and months from unemployment rate and business cycle peaks and troughs, selected recessionary periods, 1955–83, seasonally adjusted

Period and type of involuntary part-time work	Highs[1]				Lows[1]			
	As a percent of total at work	Date occurred	Months from[2]		As a percent of total at work	Date occurred	Months from[2]	
			Unemployment rate high	Business cycle trough			Unemployment rate low	Business cycle peak
1957–58:								
Total	6.5	Mar. 1958	−4	−1	3.8	May 1959	−9	−11
Slack work	3.8	Apr. 1958	−3	0	1.6	Sept. 1959	−5	−7
Could find only part-time work	2.2	Mar. 1959	+8	+11	1.6	Mar. 1960	+1	−1
1960–61:								
Total	5.6	Feb. 1961	−3	0	2.6	Jan. 1969	−4	−11
Slack work	3.1	Feb. 1961	−3	0	1.3	July 1969	+2	−5
Could find only part-time work	2.3	June 1961	+1	+4	0.9	May 1969	0	−7
1969–70:								
Total	3.8	Apr. 1971	−4	+5	2.8	Jan. 1973	−9	−10
Slack work	2.0	Mar. 1971	−5	+4	1.3	Jan. 1973	−9	−10
Could find only part-time work	1.5	Aug. 1972	+12	+21	1.1	Nov. 1973	+1	0
1973–75:								
Total	5.2	Apr. 1975	−1	+1	3.6	Dec. 1978	−7	−13
Slack work	3.0	Apr. 1975	−1	+1	1.6	Nov. 1978	−8	−14
Could find only part-time work	2.0	Jan. 1977	+20	+22	1.5	Jan. 1980	+6	0
1980:								
Total	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Slack work	2.8	June 1980	−1	−1	2.3	June 1981	−1	−1
Could find only part-time work	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
1981–82:								
Total	p7.5	Jan. 1983	+1	(4)	(4)	(4)	(4)	(4)
Slack work	4.1	Sept. 1982	−3	(4)	(4)	(4)	(4)	(4)
Could find only part-time work	p3.4	Jan. 1983	+1	(4)	(4)	(4)	(4)	(4)

[1] Ascertained in accordance with the standard rules for determining turning points in data series over time. See Arthur F. Burns and Wesley C. Mitchell, *Measuring Business Cycles* (New York, National Bureau of Economic Research, 1946).
[2] Measured as lead (−) and lag (+).
[3] Series showed no discernible turning point during this period.
[4] Data are not available.
p = preliminary.

downward around the time the business cycle bottoms out but a few months before overall joblessness begins to decline. (See table 1.)

The percentage of persons at work who are on part-time schedules because of slack work ("workweek reduction" rate) and the percentage who could find only part-time work ("failure to find full-time work" rate) do not necessarily follow the same pattern. However, the cyclical behavior of each provides valuable insights into the operation of the labor market. During economic contractions, for example, the reduction rate rises sooner and more rapidly than the failure-to-find rate.

In the recovery phase, the reduction rate begins to decline sooner than the failure-to-find rate, as employees' hours are restored before economic conditions improve enough to allow employers to hire additional full-time workers. Thus, the cyclical flavor of involuntary part-time employment comes from the ebb and flow in the length of the workweek as reflected in the workweek-reduction component more than from fluctuations in the availability of full-time jobs as reflected in the failure-to-find component. Because of its "length of workweek" orientation, the timing of the turning points in the reduction rate series parallels that of "hours of

work" series; it leads at business cycle peaks but is coincident at troughs.[4] By contrast, the cyclical timing of the failure-to-find rate series does not exactly parallel any other labor market series. Like movements in employment, it is coincident at business cycle peaks, but, unlike employment, it lags at troughs.[5] In this latter regard, it behaves more like unemployment. However, the failure-to-find series does not turn downward (show improvement) until well after unemployment has fallen.

The cyclical pattern in the incidence of involuntary part-time work during the recent recession differed somewhat from that of earlier postwar downturns, largely because the latest recession followed an unusually brief and weak recovery. The incidence of part-time work never really declined between the 1980 and 1981–82 recessions; it simply leveled before increasing further. That is, there were no discernible turning points except for a slight dip in the workweek-reduction rate, which occurred only a month before the 1981 business cycle peak, not the usual lead of several months. This seems to lend credence to the argument advanced by some analysts that the 1980 economic contraction was not really a separate downturn, but part of a lengthy recession spanning the entire 1980–82 period.[6]

The previous high point for the percentage of workers employed part time involuntarily—6.5 percent, reached in 1958—was equaled in May 1982. By October 1982, the rate had passed 7 percent. Interestingly, the distribution of workers by reason for involuntary part-time work differed from that of the earlier period. In 1958, the failure-to-find component accounted for less than 30 percent of the total, whereas it made up more than 40 percent in 1982. The cyclical rise in the failure-to-find rate during the recent recession was uncharacteristically sharp. (See chart 1.) Perhaps this reflects the failure of the full-time job market to recover fully from the 1980 downturn. Thus, more would-be full-time workers than is typical have had to settle for less remunerative part-time employment in recent years. Because past trends indicate that the failure-to-find rate, which was still rising at the end of 1982 while the workweek-reduction rate appears to have peaked in September, does not turn downward until several months after workweek levels are restored, involuntary part-time workers as a percent of those at work may not soon return to pre-1980 recession levels. Following the 1973–75 recession, for example, the proportion of persons at work on short schedules did not fall below its prerecession low for the first time in the postwar period.

Clearly, changes in the overall incidence of involuntary part-time work hide important differences in the behavior of the major components over the business cycle. The pattern in each component series stems from and illustrates different economic phenomena, and thus may imply different policy prescriptions. The more cyclical workweek-reduction series reflects firms' short-run adjustments in number of weekly hours worked to minimize costs in the face of unstable market conditions. The failure-to-find series is related both to the general state of the economy and to the hiring policies of individual firms. For example, because of depressed economic conditions, employers may hire part-time, rather than full-time, workers. During recessionary periods, the number of part-time jobs often continues to grow, albeit at a slower pace than in nonrecessionary times, while the number of full-time jobs decreases. Thus, for some workers, part-time work may represent a stopgap measure until a full-time job can be found. For others, failure to find full-time work may stem from inadequate job experience, skills, education, and training; in a weak job market, the lack of these qualities is magnified as employers can be more choosy in their hiring practices.

The more cyclical workweek-reduction rate is identified with changes in hours, while the failure-to-find rate is identified with changes in employment. The question that remains is how much the demographic and employment characteristics of workers in each category have contributed to the cyclical nature of their employment status.

Who are the involuntary part-timers?

Just as the burden of unemployment falls more heavily on certain worker groups, the incidence of economic part-time employment also varies significantly. Teenagers, blacks,[7] and women were disproportionately represented among those working part time involuntarily in 1982. The disparity for teenagers was the most striking, as their 16-percent share of involuntary part-time employment was twice their share of the labor force.

The following tabulation of 1982 annual averages shows that the incidence of those at work on short-time schedules also varies by reason within major demographic groups:

	Persons (thousands)		Percent of total employment	
	Slack work	Could find only part-time	Slack work	Could find only part-time
Men	1,881	962	3.5	1.8
Women . .	1,381	1,639	3.4	4.1
White . . .	2,749	2,118	3.3	2.6
Black and other . . .	514	482	4.7	4.4

As noted earlier, a greater percentage of all workers were on short schedules in 1982 because of workweek cutbacks (52.9 percent) than because of an unsuccessful search for a full-time job (42.1 percent). This was not true for women, however. And men were nearly twice as likely to be on shortened schedules as a result of a reduction in weekly hours than because they failed to find full-time jobs.

Although women were more likely than men to have reported that they could only find a part-time job, there was little difference in the percentages of men and women at work who suffered workweek cutbacks. Blacks were more likely than whites to be economic part-timers in both categories under study.

Why do they work part-time?

The cause-and-effect relationship between workweek cutbacks and the incidence of involuntary part-time work is fairly straightforward. Hours reductions can occur from time to time in any business or industry and, for the most part, are beyond the control of the individual worker. The situation is not as clearcut for those who failed to find a full-time job and accepted part-time work instead, particularly during the 1980–82 period when back-to-back recessions curtailed the number of full-time jobs available.

It is to be expected that some people will work part time during recessions rather than remain "fully" unemployed. There is some evidence from gross flow data[8] to

Table 2. Involuntary part-time workers in current month who were unemployed in the previous month, 1968–82 annual averages			
		Percent of	
Year[1]	Thousands of persons	Unemployed in prior month	Involuntary part-time workers in current month
1968	184	6.1	9.7
1969[2]	167	5.7	8.4
1970[2]	222	5.8	9.3
1971	275	5.6	10.5
1972	262	5.5	10.2
1973[2]	255	6.0	10.4
1974[2]	277	5.9	9.7
1975[2]	405	5.4	11.0
1976	393	5.6	11.3
1977	401	5.9	11.6
1978	353	6.0	10.6
1979	325	5.6	9.6
1980[2]	430	6.0	10.4
1981[2]	463	6.0	10.1
1981[2]	475	6.0	10.2
1982[2]	632	6.2	10.4

[1] For the years 1968 to 1980, the weights applied to the sample estimates to represent the Nation are based upon the 1970 Decennial Census population figures. The first 1981 figure is based on the 1970 census while the second and the 1982 figure are based on the 1980 census.

[2] Recession year as designated by the National Bureau of Economic Research.

support this view. The data pertaining to the flow of workers to involuntary part-time work from unemployment in table 2 show that, on average over the 1968–82 period, about 1 of 10 involuntary part-timers in a given month had been unemployed the previous month.[9] Although there was a cyclical aspect to this flow, it never exceeded a half million workers until 1982 when an average of 632,000 persons, or 6.2 percent of the unemployed total, in one month were employed part time involuntarily in the next month.

Movements in the failure-to-find series do not appear to be as cyclical as those in the workweek reduction series, especially prior to 1980. (See chart 1.) A detailed regression analysis of these two series using quarterly Current Population Survey data from 1955 to 1974 revealed that the reduction rate was clearly the more sensitive during economic downturns; in upturns both series responded fairly evenly.[10] Because the personal characteristics of the workers in each category differ widely, the types of jobs held by each also stand apart, and further discussion of the extent of these differences and their possible role in the observed cyclical disparities is warranted.

There are many reasons in addition to a depressed job market why some workers may be able to find only part-time jobs. They may lack the skills or experience required for many full-time jobs or they may be viewed by employers as too high a turnover risk because their nonwork responsibilities appear to permit only a marginal attachment to the labor force. Conversely, workers may find themselves in this predicament because their outside activities restrict the number of full-time job op-

portunities open to them to only those offering less traditional schedules; and, they might not always be free to relocate geographically to a more opportune job market. In any case, they probably settle for a part-time worker's paycheck because some income is better than none, or is higher than unemployment benefits. Many of the reasons for failure to find full-time work are, of course, overlapping. For example, a person may be only marginally attached to the labor force and may also be geographically immobile because of nonwork activities. Unfortunately, data are not available to address each combination of factors directly.

Work experience. Just as individuals move into and out of the work force over the course of a year, they also move into and out of part-time employment. Thus, many more people experience part-time work during the year than is indicated by the number of such workers for an average month in the year. Data from the CPS retrospective annual survey of work experience[11] of the population can provide some additional insights into involuntary part-time work not available from the regular monthly data, including more detailed characteristics of involuntary part-timers.

Also, the number of weeks worked during the year in part-time status, which is available from this data base, provides a very useful measure of an individual's labor market attachment. The data analyzed below are for persons who worked one or more weeks part time in 1981, and whose *main* reason for doing so was either slack work[12] or failure to find full-time work.

The distribution of persons with some involuntary part-time work experience in 1981 by reason for part-

Table 3. Distribution of involuntary part-time workers by reason for part-time status and selected demographic characteristics, 1981		
	Reason for part-time employment	
Characteristic	Slack work	Could find only part-time work
Age		
Total	100.0	100.0
16 to 19 years	6.3	21.9
20 to 24 years	18.2	26.9
25 to 44 years	49.1	35.7
45 to 64 years	24.4	14.4
65 and over	2.0	1.1
Marital and family status		
Total	100.0	100.0
Husbands..........................	37.1	9.7
Wives	20.2	24.6
Others in married couple families	11.3	27.7
Women who maintain families alone	5.5	7.8
Others in such families	5.2	11.5
Men who maintain families alone	1.8	.6
Others in such families	1.9	2.3
Unrelated individuals	17.0	15.8

7

time employment and by age and family and household status is shown in table 3. According to these data, persons who could find only part-time work tended to be young and to live in a family with other working members. This implies that they may have lacked experience or were geographically immobile. Half of those who could find only part-time work were under 25 years of age, and a fourth each were wives or someone in a family other than a husband or wife. Besides the lack of job experience, youth are further hindered in finding full-time work by school attendance. Wives or youth could also be hampered by a husband's or other family member's employment because it would limit their job prospects to nearby labor markets. In contrast, workers on reduced schedules because of slack work were more likely to be in the prime working age groups and to be husbands.

Persons who could find only part-time work generally had a looser attachment to the labor market than persons whose workweeks had been reduced. Persons whose main reason for involuntary part-time employment was slack work worked substantially more weeks total (49) during 1981 than those who could find only part-time work (30 weeks). Also, the length of time that those reporting slack work actually had to stay on shortened schedules during 1981 was very brief—only 6 weeks. In contrast, those who reported having difficulty finding full-time jobs worked more weeks part time than full time—17 compared with 13 weeks. It appears that full-time status for those who also worked part-time in 1981 because that was all they could find at the time was very tenuous.

The activity of involuntary part-time workers when they were not in the labor force in 1981 was also revealing:

	Slack work	Could only find part-time
Number of involuntary part-timers (in thousands)	9,876	4,752
Percent who worked only part year	25.6	45.2
Ill or disabled	4.4	3.0
Taking care of home or family	6.3	12.9
Going to school	4.0	19.3
Retired	.7	.1
Other	10.1	9.8

Among workers who could find only part-time jobs during 1981, the largest identifiable reason for weeks spent outside the labor force was school attendance followed by home or family responsibilities. The not-in-the-labor-force activities of those on short schedules because of slack work were much more varied. Clearly, the reasons behind a person's inability to find a full-time job and his or her decision to accept part-time employment instead go beyond the simple explanation of a recessionary decrease in the number of full-time jobs. This would help to account for the fact that the failure-to-find series is not as cyclically sensitive as the percentage of workers on part-time schedules because of slack workloads.

Occupation and industry

To further develop insight into the cyclical sensitivity of the slack-work and could find only part-time work series, the distribution of workers by occupation and industry in each category was analyzed.

The relationship among occupation, industry, and slack work is fairly straightforward. If slack work is concentrated in those occupations and industries which are most affected by recession, a worker's status could be said to be influenced by his or her occupation or industry affiliation. However, this is not the case for those workers who could only find part-time employment, because their short-time status is determined simultaneously with their occupation and industry status; that is, they had no occupation and industry attachment immediately prior to their securing employment. Unlike most workers reporting slack work, those who failed to find full-time employment were not, for example, craft or factory workers *before* they became involuntary part-time workers. It is, of course, expected that, once employed, most workers who could find only part-time positions would be in occupations and industries in which a lot of part-time employment normally occurs.

Blue-collar workers, the most cyclical component of the major occupational groups, were twice as likely as white-collar workers to have experienced a workweek reduction in 1982. A little more than half of all workers who encountered slack workloads were blue-collar in 1982, down from 60 percent a decade earlier. The 1982 distribution of part-timers for reasons of slack work and failure to find full-time jobs by major occupation was:

	Slack work	Could find only part-time
Total	100.0	100.0
White-collar workers	24.7	36.6
Blue-collar workers	53.5	22.0
Service workers	16.7	38.9
Farmworkers	5.1	2.5

More than a fifth of workers who could find only a part-time job were also blue-collar, but most were service workers or white-collar employees, particularly clerical workers. The percentage of workers on part-time schedules because that was all they could find has been increasing gradually since the late 1960's.

Although the workweek-reduction rate has remained relatively flat secularly, the distribution of workers on short schedules because of slack workloads has changed to reflect the economy's shift away from goods production to services. Interestingly, the blue-collar share of

Occupation and Industry	Period			
	Mar. 1970 to Mar. 1971[1]	Apr. 1974 to Apr. 1975[1]	June 1979 to June 1980[1]	Sept. 1981 to Sept. 1982[2]
Total change	100.0	100.0	100.0	100.0
Percent of total change attributable to:				
White-collar workers	28.9	16.4	23.7	24.5
Blue-collar workers	61.7	69.1	60.8	63.4
Service workers	23.8	11.3	11.5	10.0
Farmworkers	—	3.2	4.1	2.1
Goods-producing industries ..	40.9	66.0	60.2	47.9
Service-producing industries .	59.1	34.0	39.8	52.1

[1] National Bureau of Economic Research designated trough, business cycle month.
[2] Month in which the highest level of slack work in the current economic downturn occurred.

the increase in slack work did not change significantly over the four most recent postwar recessions, remaining near two-thirds of the total difference between the peak of the slack work series and the level observed a year earlier. (See table 4.) As a result, the percentage increase in slack work accounted for by blue-collar workers during the recent recessions has become disproportionately large, whereas in the 1970–71 period, their share of the increase in slack work was approximately equal to their share of the number of workers whose workweeks were cut back.

The data in table 4 also show that slightly more than half of the increase in slack work between September of 1981 and 1982 was in the service-producing sector, a reversal from the previous two recessions when most slack work occurred in the goods-producing sector. For example, only about a third of the increase in the incidence of slack work in the year preceding the 1975 peak was in the service sector. These developments are not that surprising when the percent distribution of slack work by major sector is examined, along with the incidence of failure to find full-time work and the distribution of total part-time work for economic reasons, for selected recessionary years:

	1970	1975	1982
Total part-time for			
economic reasons	100.0	100.0	100.0
Goods-producing	46.8	37.5	29.6
Service-producing	53.2	62.5	70.4
Slack work	100.0	100.0	100.0
Goods-producing	61.5	54.4	45.6
Service-producing	38.5	45.6	54.4
Could only find			
part-time work	100.0	100.0	100.0
Goods-producing	15.9	10.6	8.6
Service-producing	84.0	89.4	91.4

In 1982, the service-producing sector accounted for 70 percent of the part-time for economic reasons total and for over half of slack work, up substantially since 1970.

A question arises about the effect of the changing occupational and industry composition of the slack-work series on its degree of cyclical sensitivity. As we have seen, blue-collar workers, whose employment pattern is highly cyclical, accounted for a smaller proportion of slack work in 1982 than previously, and more than half of all workers reporting slack work are now found in the less cyclical service sector. A hint that the effect on the series' cyclical sensitivity might be marginal was provided by the fact that blue-collar workers, even though a smaller part of the whole, maintained their share of the increase in slack work in recent recessionary periods.

Table 5, which shows the increase in slack work during periods of economic contraction, provides further evidence that the effect may be slight. Although the percentage rise in slack work was lower in the current recession than in the 1973–75 episode, it was higher than during other postwar downturns for which data are available. Moreover, if the percentage change in slack work were computed over the back-to-back recessions in the 1980–82 period, it would easily surpass that of the 1973–75 recession. Apparently, the service-producing sector is becoming more cyclically sensitive with regard to the likelihood of workweek cutbacks.

When the 1982 industry distribution of persons who could only find part-time work is examined, an apparent paradox is observed. At the same time that the service sector provides part-time jobs in recessionary periods for those unable to find full-time work (recall that more than 90 percent of those who could find only part-time employment were in service-producing industries in 1982), many other workers in that sector had their workweeks reduced. This is attributable to the diverse types of industries making up the sector, some of

Period	Persons encountering slack work	
	Actual change (thousands)	Percent change
Aug. 1957 to Apr. 1958	858	61.0
Apr. 1960 to Feb. 1961	747	59.6
Dec. 1969 to Nov. 1970	289	26.5
Nov. 1973 to Mar. 1975	1,030	78.4
Jan. 1980 to July 1980	584	29.6
July 1981 to Sept. 1982[1]	1,491	64.0

[1] Month in which the highest level of slack work in the current economic downturn occurred.

Table 6. Nonagricultural wage and salary workers on part-time schedules because of slack workloads and failure to find full-time work, by industry, 1982 annual averages

Industry	Slack work		Could find only part-time work	
	Percent distribution	Percent of total at work	Percent distribution	Percent of total at work
Total	100.0	2.9	100.0	2.7
Mining	1.4	3.6	0.1	0.2
Construction	12.3	6.8	3.2	1.6
Manufacturing	33.5	4.3	5.3	0.6
Durable	16.3	3.6	1.6	0.3
Nondurable	17.1	5.4	3.7	1.1
Transportation and public utilities	5.5	2.3	4.0	1.5
Transportation	5.0	4.0	3.3	2.4
Public utilities	0.5	0.5	0.7	0.6
Trade	24.1	3.3	45.9	5.7
Wholesale	2.9	1.9	1.6	1.0
Retail	21.2	3.6	44.3	6.9
Finance, insurance, and real estate	2.6	1.1	3.1	1.2
Miscellaneous services	19.7	2.0	35.4	3.3
Business	4.5	3.3	5.6	3.7
Personal	6.0	7.9	4.1	4.9
Entertainment and recreation	1.6	4.3	3.2	7.6
Medical, except hospital .	1.9	1.5	4.6	3.4
Hospital	1.3	0.8	3.2	1.7
Education	2.3	0.8	10.2	3.2
Other	2.1	1.3	4.6	2.6
Public administration	1.1	0.5	2.9	1.3

which show considerable variation over the business cycle.[13] Table 6 presents a detailed look at the incidence of slack work and failure to find full-time work by industry. Large concentrations of slack work were found in manufacturing, retail trade, and miscellaneous services. The latter two industries also furnished jobs for the vast majority of workers who could find only part-time jobs. The retail trade and services industries are also diverse with regard to size, product or service provided, and geographic location, which could account for their exhibiting both cyclical and countercyclical tendencies at the same time. For example, Edward F. Denison's study of the miscellaneous services industry found that the behavior of its two largest components, health services and business services, was illustrative of the differences within the division: "Health services display almost no cyclical sensitivity while business services show a high degree."[14]

The data in table 6 also show the percentage of workers in each industry on short schedules—a way of standardizing for different work force sizes across industries. The largest incidences of workweek reductions in 1982 were in construction (6.8 percent), nondurable manufacturing (5.4 percent), and personal services (7.9 percent). This latter figure affords an excellent example of the fact that service-producing industries are not immune to recession as belt-tightening consumers cut back their use of personal services such as laundry, dry cleaning, portrait photography, and beauty and barber shops in hard times. Also, this same industry provided a disproportionately large number of part-time jobs to persons unable to find a full-time one. The greatest shares of failure to find full-time work were found in retail trade and in the entertainment and recreation service industries.

THE INVOLUNTARY PART-TIME WORK SERIES, which is highly cyclical and leads the national unemployment rate and business cycle turning points during the onset of a recession, is composed principally of two subseries that are quite distinct. Increases in the level of each mean different things in terms of how well labor markets are operating and suggest different policy precriptions. An increase in the workweek reduction rate, the more cyclical of the two, is really a reduction in hours worked, an indication of a demand deficient economy. Although a rise in the failure-to-find rate is also symptomatic of an economy gone sour, it reflects more structural employment issues such as skill levels, job experience, rigid work schedules, job mobility, and personal preferences.

Future changes in the make-up of the two groups could further alter the composition of involuntary part-time employment and thus influence the extent of its cyclical nature. For example, a continued decline in the labor force participation rate of youth, a large component of persons who could find only part-time work, or the continued shift towards a service-oriented economy, might eventually render the total less cyclical. In contrast, if national or State policies were enacted whereby benefits now accruing primarily to unemployed workers were also paid to workers whose hours were cut back— as is the case in many other industrialized countries— workweek reductions might become more prevalent. Based on the experience through the current recession, this could lead to an even closer tracking of the incidence of economic part-time work with the overall jobless rate. □

--------- *FOOTNOTES* ---------

[1] The availability of pro rata unemployment insurance (UI) benefits for partial work time lost is discussed in Daniel Hamermesh, "Unemployment Insurance, Short-Time Compensation and the Workweek," *Work Time and Employment*, Special Report No. 28 (Washington, National Commission for Employment Policy, 1978), pp. 233–38. Of course, many of the unemployed do not collect UI benefits either. In

1982, the number of persons claiming such benefits averaged about 40 percent of the total number unemployed. A detailed discussion of UI data can be found in Saul J. Blaustein, "Insured Unemployment Data" in *Data Collection, Processing and Presentation: National and Local* (Washington, National Commission on Employment and Unemployment Statistics, Vol. II, 1979), pp. 198–258.

[2] On a regular monthly basis, seasonally adjusted data for involuntary part-timers are limited to nonagricultural workers plus a division of this total into those who usually work full time and those usually working part time.

[3] Robert W. Bednarzik, "Involuntary part time work: a cyclical analysis," *Monthly Labor Review*, September 1975, pp. 12–18.

[4] Philip L. Rones, "Response to recession: reduce hours or jobs?" *Monthly Labor Review*, October 1981, pp. 3–11.

[5] The employment series referred to here is nonagricultural payroll employment, collected by State agencies from employer reports of payroll records.

[6] Alfred L. Malabre, Jr., "Some Analysts say Recession Began in 1980, Dispute Official Finding of Onset Last July," *Wall Street Journal*, July 8, 1982, p. 40.

[7] Data in this article are for black and other minorities throughout and are referred to as black.

[8] Gross flow data are a by-product of the CPS, which shows the labor force status of persons not only for the current month, but also for the previous month. The data thus permit the identification and measurement of the number of persons who enter involuntary part-time work from one month to the next.

[9] The numbers are somewhat inflated because they also reflect the movement from unemployment to full-time employment for those who began a job after the start of the survey week.

[10] Bednarzik, "Involuntary part-time work."

[11] Data are collected in March of each year for work performed in the previous calendar year. See, for example, Sylvia Lazos Terry, "Involuntary part-time work: new information from the CPS," *Monthly Labor Review*, February 1981, pp. 70–74.

[12] The slack work component in the work experience data includes a small number of workers on shortened workweek because of material shortages. Based on regular monthly data from the CPS, material shortages accounted for less than 3 percent of the slack work-material shortage total.

[13] Michael Urquhart, "The service industry: is it recession-proof?" *Monthly Labor Review*, October 1981, pp. 12–15.

[14] Edward F. Denison, "Shift to Services and the Rate of Productivity Change," *Survey of Current Business*, October 1973, pp. 20–35.

Birth of the unemployment survey

. . . The Current Population Survey conducted each month by the Census Bureau and analyzed and released by the Bureau of Labor Statistics . . . was originally the brainchild of the New Deal's Works Progress Administration. In the late 1930's, there still were no regular, accurate estimates of unemployment. Such estimates as existed usually were derived indirectly, by subtracting counts of those at work from estimates of the available labor force.

The lack of better information was keenly felt at the WPA, and young mathematical statisticians on the agency's staff—later recognized as among the most eminent in their profession—developed proposals for applying the new science of survey sampling to the measurement of unemployment.

The WPA's new approach—collecting direct survey evidence of individuals' activities in looking for work—was controversial, and the quality of the data obtained in early test surveys was hotly disputed. By 1942, however, support had built up for continuing the survey on a monthly basis, and with WPA on the way out, a permanent home was needed. After some bureaucratic skirmishing among competing agencies, the survey was assigned to the Census Bureau, where it has since remained, although responsibilities for program planning and for analyzing and publishing the data were shifted to the Bureau of Labor Statistics in 1959.

—COURTENAY SLATER
"Forty Years and Counting,"
American Demographics,
March 1983, pp. 42–45.

The U.S. Employment Service at 50: it too had to wait its turn

*On June 6, 1933, the U.S. Employment Service
was born with passage of the Wagner-Peyser Act;
earlier attempts to establish labor exchanges
had been controversial and short-lived,
but the legislation was virtually unopposed
in recognition of depression-era problems*

HENRY P. GUZDA

Like Tom Joad and his family, in John Steinbeck's classic narration of migrant life during the Great Depression, *The Grapes of Wrath*, thousands of Americans searched desperately for employment in the parched agricultural valleys of the southern and western United States of the 1930's. They crossed paths with other itinerant and poverty stricken families, who were also searching for work, and exchanged job information via the "grapevine." Usually the information was inaccurate. Consequently, many families arrived at prospective job sites and found little or no work. Similar tragedies haunted the industrial sector as well, as factories with few jobs to offer found a multitude of people outside their gates who were seeking work. A nationwide cry went out for the government to help the estimated 12.8 to 15 million unemployed find some remunerative work. In an attempt to answer those pleas, the Wagner-Peyser Act of June 6, 1933, created a nationwide system of free public employment services.

Over the years, the employment service has evolved from a simple labor exchange to an extensive delivery service. There were only 42 offices in the Federal-State cooperative venture when it began in 1933, and, in the early years, the Federal half of that partnership assumed more responsibility than originally intended. The employment service's primary responsibility was to connect the jobless with jobs, especially in many of the public service programs created by the "New Deal." Last year, the 2,400 offices of the service placed almost 5 million people, including 50,000 former participants in public jobs programs who were placed in private sector jobs. In 1982, the service also administered the unemployment compensation program, work incentive programs, and veterans placement operations. A recent addition to its responsibilities was the certification of placements under the targeted Job Tax Credit Program for hiring the disadvantaged.[1]

The Federal-State cooperative venture has had its ups and downs, but throughout its history critics and proponents alike have considered the employment service to be a vital government function. In fact, early arguments to create a national labor exchange received very little opposition. Republican Secretary of Labor William N. Doak, referring in 1931 to a proposed service, said, "Employment is the human keystone of all who desire or need work . . . our goal, indeed, is to obtain employment for all." His successor, Democratic Labor Secretary Frances Perkins, agreed wholeheartedly and supported passage of the Wagner-Peyser Act. In the years following the establishment of the first localized employment service systems in the United States during the 1890's, it was the organizational framework that created controversy and debate, not the issue of public labor exchanges itself. This should not be surprising, for the Wagner-Peyser Act was in essence a renaissance of ideas and philosophies that had been around even before the founding of our republic.[2]

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E pluribus unum

The modern concept of free public employment services originated in Europe. Some historians trace the nascency to medieval times, but most experts place the origins in the 16th century. By 1563, the British government of Queen Elizabeth I had passed legislation prescribing that guilds place apprentices in jobs for at least 1 year following their training. The Poor Law of 1601 consigned job placement of the poor to local parishes; this law remained in effect until 1834, and was used in staffing the textile factories of England during her industrial revolution. By the late 1800's, many of the great states of Europe had experimented with different types of employment services, and the basic idea had emigrated to America. The German-American Printers' Union, for example, had established a free employment agency for its members in New York and other towns by 1888.[3]

But the first real link between free public agencies in America and those in Europe was forged during the Paris International Exposition of 1889. The Scripps League of Newspapers, interested in the industrial relations of the Old World, sent several prominent labor experts to the exposition. Ohio Commissioner of Labor W.T. Lewis took particular interest in the French system of "Intelligence Offices" which provided job information to the unemployed. He returned home and advocated that the individual States create similar systems. The Municipal Labor Congress of Cincinnati, composed of all the trade and labor unions of the city, drafted this idea into a bill which passed the State Legislature on April 28, 1890, with only one dissenting vote.[4]

The "Ohio Idea," as it was called, established the Nation's first permanent public employment exchanges in the five largest cities of the State. (See table 1.) Governor, and soon-to-be U.S. President, William McKinley appointed Lewis as the first administrator of the program. Within 6 months of operation, more than 5,000 men and 3,000 women had found jobs through the service, and the cost-effectiveness of the overall program, compared with private employment agencies, obviated any other justification. During each of the first 3 years, the efficiency of the exchanges improved markedly, and the appropriations for operations never exceeded $5,000 in any year.

Other State commissioners of labor praised the "Ohio Idea," and wanted to emulate it in their own territories. L.G. Powers of Minnesota pointed out that in his State men paid $2 and women 25 cents just to apply for jobs at private agencies, and if a worker was hired the employer paid the agency an additional $1. Compared with Ohio's system, he stated, the private agencies in Minnesota cost the working people of the State over

Table 1. The placement record of public employment exchanges in Ohio, by city, 1890 and 1891

Largest cities	1890					
	Situations wanted		Help wanted		Positions secured	
	Men	Women	Men	Women	Men	Women
Cincinnati	1,662	1,383	1,076	1,429	867	839
Dayton	1,232	670	582	944	422	546
Toledo	1,687	729	783	1,327	712	639
Cleveland	2,097	857	390	2,650	471	1,385
Columbus	1,118	746	475	1,134	357	558
Total ...	7,796	4,385	3,306	7,484	2,829	3,958
	1891					
Cincinnati	4,841	3,428	3,369	8,291	2,312	2,429
Cleveland	6,308	3,830	925	3,471	886	2,508
Columbus	3,128	1,739	1,534	2,268	915	1,481
Dayton	3,351	2,118	1,386	2,004	790	1,119
Toledo	3,859	1,799	2,481	2,479	2,064	1,391
Total ...	21,457	12,914	9,659	13,513	6,967	8,628

SOURCE: *Annual Report*, Ohio Bureau of Labor Statistics, 1981.

$20,000 a year. In reference to the "Ohio Idea," Willard Hall of Missouri agreed that "the best argument in favor of the free-employment offices is the self-evident practicability of the system."[5]

One practical aspect of free employment agencies was to stop the illicit, inimical, and immoral methods used by many private agencies. Ohio Commissioner Lewis denounced private employment agencies, except those run by such philanthropic organizations as the Red Cross and YMCA, as frauds. Their existence, he added was for one purpose: "to fleece the jobless." Lewis based his assertion on a report from the Ohio Secretary of State that uncovered myriad cases of abuse and corruption, and concluded that the practices of most agencies were "downright swindles."[6]

Problem touches many States

The problem was not isolated to Ohio. J.R. Sovereign, Iowa's Commissioner of Labor, complained that employment agents in his State were the "most unscrupulous, despicable, double-dyed villains that ever lived. . . ." He compared the agent-client relationship to that of the "spider and the fly." Other States experienced similar situations and at the nationwide conference of State labor bureaus in 1892, the commissioners of New York, Kansas, California, Missouri, and 16 other States publicly condemned the private employment agency system.[7]

Probably the most heinous practice engaged in by private firms was the procurement of young girls for prostitution. Reformers had for many years denounced the operations of private "intelligence offices" that existed for the sole purpose of supplying houses of ill repute with innocent and naive servant girls. Minnesota Labor Commissioner Powers, in his annual report of

13

1891, assailed employment agents who "led country girls into lives of shame." The obvious benefits and securities of sending female applicants to properly monitored public offices, he said, was reason enough for establishing those offices at any cost.[8]

Yet despite the cost advantages and redeeming social value of public offices, the States and municipalities were less than enthusiastic about funding them. Most State legislatures extolled the many virtues of public employment offices during periods of high unemployment, but lost interest during times of prosperity. Even the States that promoted public employment systems often scrimped on appropriations. When some State employment offices failed to provide adequate services, the U.S. Commissioner of Labor, Carroll D. Wright, said, "the blame properly belongs to the legislatures which create the offices and then starve them."[9]

Exemplifying this problem was the public employment office at San Francisco, Calif. In 1895, an office opened in a poorly accessible location because of a niggardly rental allowance of $50 a month. Job seekers created chaos as they congested the sidewalks outside the building and the stairs going to the second-floor office. Police intervened, but the situation remained serious. Finally, a committee of local trades unions petitioned bankers, merchants, and other employers to help supplement the rental allotment, and the office moved to larger, more accessible quarters. An embarrassed State legislature increased funds the following year.[10]

Problems such as space, appropriations, personnel, and other administrative difficulties were commonplace, but the major drawback of the "Ohio Idea" was the parochialism of the State functions. They were limited to local job markets, but as John Andrews, Secretary of the American Association for Labor Legislation, explained, the labor market was becoming nationwide and the chain of State and municipal offices needed a third link for strength—the Federal Government. However, few people at either the State or national level expected the linkage to occur as it did.

The huddled masses

By the turn of the century, many Americans looked upon immigration as the Nation's chief problem, especially in its effects on the labor market and employment. Between 1890 and 1920, the largest influx of immigrants in our history occurred, reaching a high of 1.4 million in 1907. These "new immigrants"—people from eastern and southern Europe as opposed to older stock from northern and western parts of the continent —often were willing to work and live under conditions most American workers considered subpar. Organized labor, in particular, believed that unrestricted immigration was a bane, and that employers divided labor's

house against itself by using the lower-paid immigrant workers to break strikes and unions. For example, in 1906, Samuel Gompers demanded that President Theodore Roosevelt restrict the immigration of "undesirable classes."[11]

But a small segment of labor's friends believed there was a way of preventing employer exploitation of the "huddled masses" without debarment. Secretary of Commerce and Labor Oscar Straus, who had emigrated from Germany as a young boy, thought that relocation of immigrants away from urban and industrial areas (85 percent of all immigrants during this period landed in New York) would solve the problem. His Commissioner of Immigration, Terrence V. Powderly, was a willing, if unlikely, advocate of the redistribution idea. Powderly, former Grand Master Workman of the Knights of Labor, unlike his labor colleagues, believed that relocating thousands of "Poles, Bohemians, Hungarians, and Italians" in their natural agricultural environment would both "Americanize" them and prevent their exploitation in antiunion activities.[12]

The Division of Information, created by the Immigration Act of 1907, helped relocate immigrants. In that same year, the division also set up the first Federal employment office on Ellis Island in New York harbor. The office sent job placement inquiries and manpower statistics through the mails, getting valuable assistance from more than 3,500 receiving stations: Department of Agriculture substations, post offices, State bureaus of labor, chambers of commerce, and private organizations such as the Red Cross and the YMCA. More than 806,000 questionnaires were sent out inquiring about jobs, wages, community environment, transportation, and the class of labor desired. The division emphatically stressed that no information would be sent to firms engaged in strikes or lockouts. Powderly felt that the division's success hinged on preventing the use of its services for strikebreaking.[13]

The commissioner's former colleagues in the labor movement, however, decided from the outset that the process was ripe for abuse. Powderly's own Knights of Labor called the distribution plan a "hoax," and assurances that it would not result in strikebreaking, "tommy-rot gabble." Samuel Gompers argued that relocation of immigrants to rural areas would not work because they would eventually gravitate to the better paying jobs in the urban areas. Commissioner of Labor Charles Neill, part of the same Department of Commerce and Labor as Powderly, contended that redistribution would only create problems where none existed. "It is useless," he said, "to talk about any plan to distribute immigrants."[14]

Critics of the Division of Information had good reason for concern. Without a nationwide staffing operation, Powderly and his assistants could not monitor

local placements very well. Consequently, some employers circumvented the rules and used the division to recruit strikebreakers. In one instance, a Bureau of Immigration inspector visited a cigar plant in Columbia, Penna., and reported that the Division of Information had unintentionally but unequivocally aided in strikebreaking.[15]

To recoup some lost credibility after this widely publicized embarrassment, Powderly invited labor leaders, employers, and government officials to a conference on immigrant redistribution held in Washington. It started poorly and the atmosphere never improved as labor leaders hurled a litany of complaints against Powderly and the division. Joseph Valentine of the Iron Molders Union accused Powderly of colluding with "Wall Street." Labor Commissioner Neill, although defending his departmental colleague's integrity, once again criticized redistribution of immigration. "I am not trying to skin anyone's skunk" (that is, make Powderly look bad), he said, "but the facts are irrefutable."[16]

The conference, and needless to say, the Division of Information had failed in their collective purpose. When Congress, in 1913, separated the Department of Commerce and Labor into two Cabinet-level agencies, the Division of Information remained in name only.

New Department of Labor's views

The first Secretary of the new Department of Labor, William B. Wilson, was not ready to abandon the division. He viewed it as a means of providing employment information not only to immigrants, but to any and all jobseekers in a way the fragmented State and local offices could not. Wilson's Assistant Secretary, Louis F. Post, even published a series of articles heralding the division's potential value as a national labor exchange.

But Secretary Wilson's friends in the labor movement (he had been Secretary-Treasurer of the United Mine Workers' Union) still had the scars from earlier experiences with the Division of Information. John Walker, president of the Illinois State Federation of Labor, said, "Beware of the Greeks when they come bringing gifts . . . you know that we have been double-crossed so often that when anything is held out to us the first thing we look for is to see when we are going to get the worst of it." The official position of the American Federation of Labor was that the individual trade unions, not the Federal Government, should place union members.[17]

Despite labor's reluctance to accept a national employment service, officials in the Labor Department joined a groundswell of support for such a system. Royal Meeker and Ethelbert Stewart of BLS attended and participated in the annual meeting of the American Association of Public Employment Offices, in June 1915, in Detroit. Then, at a conference held in San Francisco in August 1915, Stewart called for a "connected network of public employment exchanges." Meeker, Commissioner of the Bureau, had a series of pamphlets on occupational classification and standards published for the use of prospective employers. Secretary Wilson lobbied his friends in Congress to pass legislation creating a national labor exchange system.[18]

The department's advocacy of public employment exchanges received considerable support. Representative Victor Murdock of Kansas repeatedly introduced legislation to create a national system. Congress apparently liked the idea, but felt that such a service would be extravagant during times of prosperity. Murdock's campaign got a considerable boost when President Woodrow Wilson called for "the creation of a great Federal employment bureau" at a Jackson Day commemorative dinner in 1915. But before any positive action could be taken on the matter, another pressing problem grabbed the nation's attention.[19]

Winds of war

In April 1917, the United States entered World War I, and the country faced the immediate task of mobilizing the civilian work force. Demand for factory output soared, agricultural produce needed harvesting, and the labor shortage became even more critical because of enlistments into the armed forces and the cessation of immigration. Employers turned to nontraditional labor reserves, blacks, women, and in some instances schoolchildren, to fill the void. The need for an employment service to prevent industrial paralysis by labor shortages was obvious. As in peacetime, the private agencies immediately proved they could not fill the demand, as evidenced by complaints that such agencies incited strikes in key defense plants to siphon manpower to other firms for fees. Frustrated by such problems, Grosvenor Clarkson, Director of the Council of National Defense, joined with other wartime directors in calling on the Labor Department to handle placements.[20]

Secretary Wilson was equal to the task. As early as 1916, he foresaw the need for a nationwide service if America went to war. He asked Congress for $750,000 additional appropriations for the Division of Information, but received only about one-third of that. After the declaration of war, President Wilson provided his labor secretary with an additional $825,000 in an illustration of the importance he placed on an employment service.

Secretary Wilson, under wartime emergency powers, changed the name of the Division of Information to the U.S. Employment Service, effective January 3, 1918. Even before that date, the division had begun to centralize employment functions to parallel the network of 13 zones of the Federal Reserve System. Wilson chose an old friend, John Densmore, to organize the system and by July 1, 1918, there were more than 350 field

15

agents and a staff of 1,700, not including so-called "dol-lar-a-year" volunteers. The U.S. Employment Service established Federal-State cooperative offices in all but eight States, and placed a phenomenal 65 percent of job applicants in the first month of operation; its total number of placements increased each month thereafter. (See table 2.)[21]

The service also handled special work problems through the various divisions in its infrastructure. When the wheat crop of 1918 was in jeopardy because of insufficient labor, Densmore received permission to fill the need by importing Mexican and Bahamian labor. The labor commissioners of Oklahoma and Kansas sent the Secretary of Labor a joint expression of gratitude stating, "not a bushel of wheat was lost through the lack of labor." The Women in Industry Division, created to place women in defense-related work, found employment for 368,000 women in 1918, amounting to 13 percent of all U.S. Employment Service placements during the war. In Washington State, the Boys Working Reserve arm of the service recruited hundreds of high school students and saved the apple crop.[22]

The U.S. Employment Service also cooperated with other wartime agencies. The need for efficient transfer of material from ship to shore in New York harbor resulted in the service administering an elastic labor pool to shift labor around to various worksites. Labor productivity increased by more than 30 percent in the harbor, and the concept spread to more than 14 other port cities. In many State offices of the service, facilities were shared and cooperative work was done with the Division of Negro Economics to place black workers in jobs, find suitable housing for them, and prevent racial disharmony in the workplace.[23]

Postwar battles

Historian John Lombardi hypothesized that the success of the service built a strong and varied basis for its continuance after the war. The service, he stated, had become the most important subdivision of the Labor

Department. But antiunion employers wanted the service eliminated, for they feared it would spread the labor credo. Secretary Wilson's son reported to his father that in Buffalo, N.Y., the manager of the Pierce Arrow Motor Co., although a prominent member of several labor boards, was secretly doing everything he could to destroy the agency in the State because he feared it would promote unionism after the war.[24]

But a battle loomed ominously as supporters of the service formed ranks. *The New York World* said, "maintain the service at all costs." The *New York Tribune* called it, "a work that should go on." And, the *New Orleans Item* stated, "the country needs it." Mississippi Governor Theodore Bilbo supported continuation of the service as did his northern counterpart, James Cox of Ohio. Even some chambers of commerce backed the employment service. The *Cleveland Press* editorialized "opposition to the employment service arises mainly from three sources: private employment agencies, private detective agencies, and big employers who are bitterly anti-union."[25]

Unfortunately, the 66th Congress wanted a return to "normalcy." All emergency agencies in the U.S. Department of Labor, except for the Women's Division of the U.S. Employment Service, the U.S. Housing Corporation, and the Division of Negro Economics, ceased to exist on June 30, 1919. Although some appropriations for continuance of a skeleton office of the service were later voted by Congress, most of the service's offices had to be closed and the employees furloughed. Employees remaining at the service had to resort to the "ghost of mail order placements," because appropriations between 1920 and 1930 averaged only about $200,000 a year, compared with the $5.5 million received in 1918. The service could not function efficiently on a shoestring budget.[26]

Other problems haunted the service during the next decade. President Harding issued an executive order allowing politicization of the agency and the entire staff was replaced. In one instance, a woman with meritorious service lost her job to a personal friend of Senator Joseph Frelinghuysen of New Jersey. The problem got so bad that South Carolina and Kentucky threatened to withdraw from the system if they could not appoint their own people to the remaining branch offices.[27]

But probably the worst black mark against the U.S. Employment Service during this period involved the issuance of unemployment figures. Francis Jones, who replaced John Densmore as director of the service in 1921, had been publishing statistics on the national unemployment picture, much to BLS' irritation. Commissioner of the Bureau Ethelbert Stewart complained to James Davis that the figures published by Jones were erroneous and embarrassing, but the problem continued.[28]

Table 2. Job placements of U.S. Employment Service, 1918				
Month	Registrations	Help wanted	Referred	Placed
January	82,353	80,002	62,642	51,183
February	92,452	92,594	70,369	58,844
March	144,156	177,831	118,079	100,446
April	195,578	320,328	171,306	149,415
May	206,181	328,587	179,821	156,284
June	246,664	394,395	221,946	192,798
July	282,294	484,033	250,152	217,291
August	555,505	1,227,705	500,510	395,530
September	531,226	1,476,282	513,662	362,696
October	594,737	1,588,975	606,672	455,931
November	744,712	1,724,973	748,934	558,469
Total	3,675,858	7,895,675	3,444,093	2,698,887

SOURCE: *Annual Report of the Secretary of Labor, 1918,* p. 285.

The duplication of functions finally resulted in a major embarrassment for the Labor Department and President Herbert Hoover. On January 22, 1930, Hoover stated that Labor Department figures showed that employment was on the rise and prosperity was just around the corner—that the economic downturn which had symbolically begun with the stock market crash of October 29, 1929, was coming to an end. Secretary Davis agreed, and predicted that recovery would be complete in a year.

The Industrial Commissioner of the State of New York, Frances Perkins, took issue with the "rosy" outlook. She knew the statistics came from the U.S. Employment Service, not from BLS, and had proof from her own efficient statistical operation that the unemployment situation was worsening, not improving. She publicly debunked Hoover's statements and cited the service's report in particular as "cruel and irresponsible at a time when the unemployed are reaching the end of their resources. . . ." The depression did continue far longer than Hoover predicted, and Perkins' stand marked the beginning of her political ascendancy while Jones' frivolous methods of data compilation hastened his departure.[29]

Jones' dismissal did not benefit the service. William Doak, replacing James Davis on December 9, 1930, as Labor Secretary, simply replaced Jones' political appointments with his own from the labor movement. Scandals increased, and Jones' replacement, John Alpine, was accused of creating seven sinecures at $3,500 a year to open mail, a job previously done by clerks at $600 per annum.[30]

Road to reform

The service became the obvious target of reform. "There was no doubt," said one pioneer in the revamping of the U.S. Employment Service, "at the beginning of the depression where the responsibility for dealing with unemployment rested [within the States] . . . . unfortunately, the States took little effective action." Senator Robert Wagner of New York sponsored legislation to force the States to play a greater role by abolishing the existing service and creating from those ashes a Federal-State system of efficiency and competency.[31]

Wagner's bill called for matching Federal funds to be given to the States for the purpose of administering employment programs. The concept was based on the efficient labor exchange system of Great Britain, a system Ethelbert Stewart had cited as a vital reason the allies won World War I. In 1919, Senator William Kenyon of Ohio and Congressman John Nolan of California had introduced the same legislation, but it died of postwar "normalcy." With the depression causing socioeconomic havoc, it appeared that Wagner's revival of the idea would pass easily and become law.[32]

Secretary of Labor Doak disliked Wagner's proposals. He tried to prevent their implementation by submitting a substitute proposal to strengthen the U.S. Employment Service through increased appropriations. Congress had already appropriated $500,000 to upgrade the service in the event Wagner's bill failed, and Doak hoped to get more. However, Congress opted for Wagner's legislation and sent it to President Hoover for his signature. Doak urged the President not to sign because the appropriated $500,000 would be lost, and because immediate problems would go unattended while the States set up their new systems. Hoover's pocket veto message clearly reflected Doak's influence: "It is not only changing horses while crossing a stream, but the other horse would not arrive for many months."[33]

With the Wagner bill vetoed, Doak acted fast to reorganize the service and silence his critics: he failed. Most of the Wagner bill proponents cited his job placement figures as ludicrous. One person cited as tragic, "the lack of performance, the waste of public money, the inefficiency, and even the bad faith in these offices [of the employment service]."

In New York, a Report to the Governor on Stabilization of Industry for the Prevention of Unemployment concluded the following: "The public conscience is not comfortable when good men [and women] anxious to work are unable to find employment." The chairperson of that committee was Frances Perkins, who had reorganized the State's employment service and increased real placements during a period of rising unemployment. She would later leave the State to become President Franklin Roosevelt's Secretary of Labor and would reorganize the national employment service to fit a changing and more mobile work force.[34]

Men and trees: making Wagner-Peyser

The employment service, not to mention the entire nation, was in serious trouble when Perkins took over the labor portfolio in 1933. She hoped to remedy the situation by changing the employment system in accordance with the provisions of Senator Wagner's bill which had been reintroduced in the 73rd Congress. Only at the State level, with Federal guidance and resources, she thought, could the spiraling unemployment rate be brought under control. And, she was willing to wait for the Wagner Bill's provisions to take shape, hoping that the transition of power from the Federal to the State governments would be quick.

Yet, even as the Wagner Bill sped through the Capitol, the Roosevelt Administration was working on something that would change Perkins' plans. The idea of the Civilian Conservation Corps was being discussed among the President's advisers. Roosevelt envisioned thousands of city-dwelling young men escaping to the great outdoors and helping to reclaim erroded land by

17

planting trees. Perkins suggested that the U.S. Army recruit the men and administer the camps, with overall responsibility entrusted to the Forestry Division of the Agriculture Department. Labor leaders expressed doubts about allowing the military to recruit the men— residual effects of the days when the army broke strikes and union gatherings, often by force. Roosevelt then stated, "I'll tell you what, the Department of Labor will recruit these men." Aghast, Perkins explained that the U.S. Employment Service existed, in actuality, on a stationery letterhead only. Roosevelt's reply was, "resurrect the Employment Service right away."[35]

Almost simultaneously, Congress passed the compromise Wagner-Peyser Bill; freshman Congressman Theodore Peyser had sponsored the same legislation in the House of Representatives that Wagner submitted to the Senate. Roosevelt signed the bill into law on June 6, 1933. Under this legislation, the Department of Labor was responsible for setting standards for operations, providing statistical research, and promulgating employment policies. The States were charged with administering the offices and placement operations. Washington would match the funds appropriated by the States, with the minimum Federal allotment set at $5,000 per State. A total of $1.5 million was appropriated by the Federal and State governments for the first year, with increments of $400,000 for each year until 1938.[36]

The basic flaw in the Wagner-Peyser Act, and the reason President Hoover vetoed it, was that after abolishing the existing service there would be a period during which the States would have to establish new offices. Roosevelt's creation of the Civilian Conservation Corp exposed that flaw. Consequently, on June 22, 1933, Perkins created a National Reemployment Service to give special attention to the placement of workers on public works projects. This interim agency filled the transitional void created by Wagner-Peyser's enactment, but did not compete with the State offices; many times its offices closed within days after the States assumed jurisdiction of an area.[37]

With Roosevelt's approval, Perkins brought in W. Frank Persons to administer the new employment service and reemployment adjunct. Persons, former organizer of the civilian relief effort for the Red Cross, put together almost overnight a coordinated effort that produced immediate results.

By July 1, 1933, the public employment system consisted of 192 offices in 120 cities and 23 States, with the National Re-employment Service filling in where the States had no facilities. By June 1, 1934, the new U.S. Employment Service had registered 12.5 million people for work, and before the United States entered World War II it placed over 26 million. During the war, it mobilized the American work force for the domestic effort and received compliments for its performance, as had the earlier agency following the first global conflict.[38]

THE STORY OF THE U.S. Employment Service since the enactment of the Wagner-Peyser Act has been one of evolution. In 1935, the Social Security Act mandated the responsibility for administering unemployment compensation to the service, and other compensation programs were added through the years. The service was transferred from the Labor Department in 1939, back to it in 1945, out again in 1948, and finally in to stay in 1949. The service placed veterans from both World War II and the Korean conflict, and played an integral role in the administration of the Manpower Training and Development Act of 1962 and the Area Redevelopment Act of 1961. During the 1970's, it administered programs under the Comprehensive Employment and Training Act. Even now this evolution continues, as the Job Training and Partnership Act of 1982 (PL 97-300), under title V, amends the Wagner-Peyser Act to give the U.S. Employment Service responsibility for "a new program and delivery system to train economically disadvantaged persons and others for private sector employment."[39]

On the 50th anniversary of the Wagner-Peyser Act, it is important to look at that legislation's formation and development. Juanita Kreps, then vice president of Duke University and later Secretary of Commerce, told a bipartisan symposium honoring the 40th anniversary of the act that we should always remember the lessons history teaches us. Following her remarks, heavy debate occurred over the merits and flaws in the current national employment service system. Yet even the harshest critic of the U.S. Employment Service agreed that its basic function was necessary for the promotion of the Nation's general welfare. Upon reflection, it is interesting that the same philosophy led to the creation of the first public employment offices in 1890 in Ohio.[40] □

—— *FOOTNOTES* ——

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A new method for estimating job separations by sex and race

Computations using data from the CPS show that the separation rate of women is the same as or lower than that of men when wage rates are taken into account; for blacks, the separation rate is lower than that for whites, irrespective of sex

SHELDON E. HABER, ENRIQUE J. LAMAS, AND
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With the development of human capital theory, increasing attention has been given to specific training and its impact on employer hiring decisions with respect to sex and race.[1] The traditionally weaker labor force attachment among women in comparison with men, for example, has given rise to the perception that the risk of loss of a firm's investment in specific training is greater for the former than the latter.[2] This perception is one basis for statistical discrimination in which class information, for example, that pertaining to sex, is used as a criterion for hiring men rather than women, although both may be equally qualified for a given job.[3]

The view that women are much more likely to separate from an employer has several bases, among them are casual observation, economic theory, and empirical data. Casual observation suggests that in married households responsibilities for home production have been delegated to the woman. The reasonableness of this inference is augmented by the economic theory of marriage in which the main inducement to marriage is seen as the advantages of specialization of labor, the

most important of which is procreation.[4] Not only may a married woman leave an employer to rear children, she may also leave if her spouse finds a better job elsewhere,[5] or when a temporary condition which has impelled her to find work ameliorates so that she may resume nonmarket activities. While information on worker turnover by sex and race is sparse,[6] the data that are most accessible, that is, work experience and job tenure data, imply that women are more apt to leave an employer than are men. For example, 26 percent more women had work experience in 1977 as were, on average, employed during any given month in that year; the corresponding figure for men was 13 percent.[7] Likewise, the median years of job tenure among women employed in January 1978 were 2.6 compared with 4.5 for men.[8]

The same perception of higher than average turnover may also prevail with respect to blacks, particularly black men whose labor force attachment is weaker than their white counterparts. Additionally, blacks have more spells of unemployment than whites, suggesting a lower success rate in finding stable employment.[9] Some evidence in support of the supposition of weaker employer attachment by blacks, particularly for black men and during the early 1960's for blacks of both sexes, is also suggested by work experience and job tenure data.[10]

Despite the utility of work experience and job tenure data, they provide only indirect information about employee separation rates because the former only reflect

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inter-labor force mobility[11] and the latter are sensitive to accessions as well as terminations. More direct information on separation rates can be derived from the Current Population Survey (CPS), and it is data from this source which are examined here.

Because of data limitations, the earlier turnover literature, which focused primarily on quits rather than separations, could only link turnover in an industry with other variables (for example, the percentage that women and blacks comprised of employees) similarly aggregated to an industry level. Some of the studies indicate that quit rates are higher in industries where women and blacks account for a large percentage of the work force; however, sometimes the regression coefficients for the sex and race variables are insignificant or they indicate that the quit rate is lower in industries with a large percentage of female and black workers.[12]

With the advent of survey data for individuals, it has been possible to directly ascertain the relationship between the quit rate and personal and job characteristics. W. Kip Viscusi, using a sample of more than 5,000 individuals from the 1976 University of Michigan Panel Study of Income Dynamics, found that the overall quit rate of women was approximately twice that of men.[13] However, were women to have the same types of jobs, for example, jobs in which the mean wage and occupational distribution were the same as for men, the observed differences in quit rates would be eliminated. Similar results were obtained by Francine D. Blau and Lawrence M. Kahn in their study of young wage and salary workers who were no longer in school.[14] Their sample was drawn from National Longitudinal Surveys covering 1969 to 1972. While the overall quit rate of young women was considerably higher than that of young men, the relationship was reversed when personal and job differences were taken into account. Likewise, holding personal and job-related characteristics constant, the predicted quit rate of young blacks was found to be lower than that of young whites, even though overall rates were nearly identical.

The turnover figures in our study also pertain to individuals, but instead of limiting turnover to quits, other separations, mainly permanent layoffs, are included. One reason for this is that some quits are a response to an imminent layoff but, more importantly, both quits and permanent layoffs result in unrecouped specific training outlays. Even though employers may be behaving optimally by laying off workers, they must evaluate all *ex post* outcomes in light of *ex ante* expectations. Any separation may represent an event which diminishes anticipated profits. Hence, inclusion of separations, other than quits, provides a more comprehensive measure of the turnover risk faced by employers when choosing employees.

The goals of the study are 1) to indicate how separation rates by demographic and socioeconomic groupings can be derived from CPS files[15] and 2) using such data, to focus on several questions relating to employer attachment. One question is whether the overall separation rate, as distinct from the overall quit rate, is substantially higher for females than males. A second question pertains to the relationship between the separation rate and marital status and the presence of children because, as noted, these are the core factors underlying the premise that employer attachment is markedly less for women than for men. Another issue dealt with is whether there are substantial differences in the overall separation rate between races. In the analysis, these questions are first examined neglecting differences in wage rates among jobs and then taking wage rates into account because employers hire for specific jobs which pay a given wage. The data are also compared with those of an earlier BLS study to ascertain whether employer attachment has changed over time.

The data set

The data are for approximately 21,000 workers in both the January and March 1978 CPS surveys. The March survey contained information regarding labor force status in that month as well as information on earnings, work experience, and number of employers worked for during 1977. The January survey also contains labor force status information as well as job tenure information. The January and March surveys were matched together in order to link information for persons in both surveys. The matching operation was carried out in two steps. First, the households in the four common rotation groups (out of the total of eight groups) were matched; the household match rate was 90.1 percent. Second, persons within matching households were also matched; the match rate for these individuals was 88.0 percent. In both cases, the match was less than perfect because, for example, some households and individuals moved between January and March and could not be reinterviewed. The sample weights were then adjusted on the basis of age, race, and sex to independent national population controls.

Included in the sample are wage and salary workers age 18 to 59 years with 1 or more weeks of work experience in 1977, except those in the military, school, agriculture, or private household work. In limiting the sample in this manner, attention is restricted to the main determinants of turnover, that is, job dissatisfaction and lack of work, among wage and salary workers in nonagricultural establishments where specific training is generally provided.

While all persons who change employers, that is, job changers,[16] are job separators, not all those who separate from a job are job changers. In particular, individuals who separate from their *only* employer during a

year are not counted in job changer statistics. For this reason, job changer statistics understate employee turnover, especially among women, because they are more likely than men to leave the labor force.

In this study, job separators are defined as 1) job changers in 1977 *plus* 2) one-employer-only individuals[17] who worked less than 52 weeks in 1977, were not employed or started a new job in January 1978, and were not working for their 1977 employer as of March 1978.[18,19] In 1977, the latter group accounted for 5.8 percent of male job separators, 28.0 percent of female job separators, and 16.5 percent of all job separators. One-employer-only individuals with less than 52 weeks work experience who were not employed (or started a new job) in January 1978, but who in March 1978 were working for the same employer as in 1977 were *excluded* from the count of job separators.[20] This group contains individuals who were recalled from layoff by their employer or who returned to their employer after withdrawing from the labor force for personal reasons, for instance, pregnancy; hence only minimal loss of specific training expenditures to employers can be presumed.

It is important to emphasize that while layoffs and quits cannot be distinguished in the CPS data, individuals who were temporarily laid off in 1977 and subsequently rehired in 1977 or the first quarter of 1978, are not counted as job separators; put another way, our count of job separators includes permanent layoffs but not temporary layoffs. This is seen from the following classification of workers who were on layoff in 1977 (but cannot be identified as being in this status in the CPS). Members of this group were:

1. reemployed by another employer during the year; or
2. reemployed by the same employer during the year and
   a. were still employed by that employer in January 1978
   b. were not employed or started a new job in January 1978; or
3. not reemployed during the year and
   a. worked for the same employer in January 1978
   b. were not employed or started a new job in January 1978.

Individuals in category 1 (defined above) are counted as job separators. Likewise, persons in subgroups 2b or 3b who *also* were not employed by their 1977 employer as of March 1978 are counted as job separators. Persons on layoff in these subsets either found work with another employer or were on layoff for the first 3 months of 1978, that is, they were on permanent layoff. (As indicated, the analysis is confined to individuals age 18 to 59, thereby excluding most job separators who retired.)

Also, it should be noted that our definition refers to job separators rather than job separations, thereby

understating the turnover risk faced by employers. Some evidence that this deficiency is probably not serious is suggested by multiple job changer data derived from the CPS sample which indicate that women and blacks are less likely to have three employers or more (implying separation from two employers or more) than men and whites.[21]

Separation rates by sex

Economic theory suggests that the decision to hire one individual rather than another for jobs in which specific training is provided depends on the likelihood that training costs will be recovered; this likelihood, in turn, is negatively related to the probability that an individual will permanently separate from a firm. In some studies the overall *quit* rate of women has been found to be substantially higher than that for men. However, as indicated in table 1, among women with work experience in 1977, the overall separation rate (including permanent layoffs) was 19.7; the corresponding figure for men was 17.3.[22] While *inter*-labor force mobility is greater among women, as noted below, *intra*-labor force mobility is greater among men. On balance, the overall separation rate is not much different between the sexes.

Table 1 also shows that there is little or no difference in separation rates when age is taken into account. Of importance, more than one-third of young persons age 18 to 24 permanently separate from their employer during a year, indicating that much of the specific training provided to this group is lost by employers. But as young women are no more likely to separate than young men, these losses are not sex related.

In addition, table 1 reveals that part-time workers are more prone to separation than full-time workers and their age-separation profile is flatter, suggesting that the factors influencing their turnover are different from those affecting full-time workers. Moreover, employers are not likely to provide substantial amounts of specific training to workers in part-time jobs in which marginal productivity is low and, hence, training costs are difficult to recover. This being the case, the economic signif-

Table 1. Separation rates by sex for persons with work experience in 1977

Age (in years)	Men			Women		
	Total	Full time	Part time	Total	Full time	Part time
Total, 18 and over	17.3	16.4	36.7	19.7	18.0	24.8
18 to 19	48.4	48.8	47.5	44.0	45.0	42.2
20 to 24	34.7	34.5	36.9	33.0	31.9	37.5
25 to 34	18.6	18.3	30.7	20.2	18.5	26.1
35 to 44	12.2	11.8	(¹)	15.0	13.6	18.6
45 to 54	8.2	7.6	35.1	11.8	8.9	19.6
55 to 59	8.9	8.6	(¹)	9.7	6.9	19.1

¹ Less than 50 sample observations.
SOURCE: Matched January-March 1978 Current Population Survey file.

Table 2. Separation rates by sex and wage rate, full-time workers with work experience in 1977

Characteristic	Men				Women			
	Total	Under $5.00	$5.00 to $9.99	$10.00 and over	Total	Under $5.00	$5.00 to $9.99	$10.00 and over
Total	16.4	27.8	11.4	9.5	18.0	20.6	10.8	14.2
Age (in years):								
18 to 24	36.4	40.7	26.1	(¹)	33.8	35.1	23.5	(¹)
25 to 44	15.6	25.3	11.9	11.3	16.6	18.8	11.3	21.0
45 to 59	7.9	13.5	6.3	6.2	8.3	9.4	6.2	(¹)
Education (in years):								
Less than 16	17.1	27.5	11.2	11.4	18.3	20.6	10.1	13.2
16 or more	13.5	30.2	12.3	7.1	16.3	20.9	12.5	(¹)
Marital status:								
Single, never married . . .	29.0	35.7	18.2	15.3	22.6	26.3	11.7	(¹)
Married, spouse present .	13.3	23.0	10.4	9.0	16.7	20.3	10.3	(¹)
Other	19.7	28.9	12.7	12.8	17.4	20.3	12.0	(¹)
Families with both spouses present and both worked in 1977:								
Children present	13.8	23.9	10.9	7.9	17.4	19.6	9.9	(¹)
All under 6 years	20.9	33.2	14.9	12.1	25.2	27.6	14.1	(¹)
Some under 6 years . .	15.4	20.7	12.7	14.9	18.2	19.7	10.8	(¹)
All between 6 and 17 years	10.7	19.1	9.0	6.2	13.9	16.0	8.4	(¹)
No child present under 17 years	15.0	23.3	11.3	11.4	16.4	18.8	10.7	(¹)

¹ Less than 50 sample observations.

Source: Matched January–March 1978 CPS file.

icance of the separation rate is most pronounced for jobs which are filled by full-time workers. When only full-time workers are considered,[23] the overall separation rate differential is reduced by one-third.[24] Given our focus on jobs in which specific training is most likely to be offered, in the remainder of this section and the next one, the data are restricted to full-time workers.

The separation behavior of full-time workers is shown in table 2. The separation rates in the first and fifth columns reflect worker characteristics without regard to the wage that individuals can obtain in the labor market. Implicit in these figures is the assumption that all jobs are alike. This assumption may also underlie employer perceptions of male and female separation rates. The remaining columns control for the wage of workers with given personal characteristics.

The percentage of full-time workers in each of the three wage groups was as follows:

Wage	Men	Women
Total	100.0	100.0
Under $5 per hour	32.7	72.5
Between $5 and $9.99 per hour	51.8	26.1
$10 and over per hour	15.5	1.4

The second wage category, $5 to $9.99 per hour, containing approximately one-half of the male workers but only one-quarter of the female workers, is referred to below as the "typical" male wage.

From table 2 we can see that, as expected, the separation rate and wage rate are negatively related, other

factors held constant. The separation rate differentials also conform to expectations with regard to marital status and presence of children. For both sexes, the separation rate of single persons, who are most likely to engage in job search and least likely to have job seniority, is greater than that of married persons with their spouse present. Additionally, the separation rate of married women (16.7 percent) is higher than that of married men (13.3 percent), but it is higher for single men (29.0 percent) than for single women (22.6 percent). Also, the separation rate of married women with young children all under 6 years (25.2 percent) is higher than that of women with only older children between 6 and 17 years (13.9 percent). In part, this is because women with young children are themselves young as much as because of the constraints on employer attachment imposed by the need to care for offspring. This age effect is seen in the higher separation rate of married men with only young children (20.9 percent) vis-à-vis those with only older ones (10.7 percent). Nevertheless, when children are present, the separation rate of married women (17.4 percent) is higher than that of married men (13.8 percent).

Further examination of table 2 reveals that the aforementioned separation patterns are quite different from the ones that are found to prevail when the wage rate is taken into consideration. For wage rates below $5 per hour, the separation rate of women, 20.6 percent, is lower than that of men, 27.8 percent. Women have a lower separation rate among all age groups; single and married persons; and families with and without children where both spouses are present and working; as well as other groups. For wage rates between $5 and $9.99, that is, the typical male wage, the separation rates for women and men are similar (approximately 11 percent for all full-time workers) except for single persons where the separation rate is higher for men than women (18.2 versus 11.7 percent).[25] At the higher wage range of $10 or more per hour, the differences between the female and male separation rates are not statistically significant. Given the very small proportion of women who earn such a high wage, we observe that the higher overall separation rate for women is due to their concentration in low-paying jobs. Indeed, if women who worked full time were distributed among the three wage groups in the same manner as men, their separation rate, instead of being 1.6 percentage points higher than the overall male rate, would have been smaller by 1.9 percentage points.

These findings suggest that a major factor influencing turnover among men and women is the ratio of their wage relative to that paid to a typical male worker. When the wage is less than this amount, men are likely to seek better job opportunities with employers other than their current one. In contrast, women, who be-

cause of family responsibilities often work close to home, may be reluctant to give up a low-paying job because the likelihood of finding a better-paying one, which is also close to home, is small. When the female wage equals or exceeds the typical male wage, the separation rate of women is no different from that of men. Thus, when the wage rate is taken into account, women do not exhibit higher separation rates than men despite women's lesser job tenure, home responsibilities, and tendency to relocate when husbands find employment elsewhere.

Among all the variables examined, education had the weakest impact on separations. Here again, however, holding education constant, men have a higher separation rate than women when the wage rate is less than that earned by a typical male. At wage rates earned by most men, the separation rates are similar.

Separation rates by race

As in the case of women, the weaker labor force attachment of black men and the high unemployment rate of blacks, irrespective of sex, suggest that the overall black separation rate may be higher than that of whites. Although the small number of observations for blacks, approximately 1,900 full-time workers, prevents detailed examination of their separation behavior, the broad outlines are clearly visible and indicate that the black separation rate is lower than that of whites.

The basis of this conclusion are the data in tables 3 and 4. The former compares black and white separation rates by personal characteristics unadjusted for wage rates; the latter compares black and white separation rates by wage category unadjusted for personal charac-

teristics. We notice from table 4 that the overall separation rate among blacks, 12.9 percent, is smaller than the corresponding figure for whites, 17.6 percent.[26] From table 3, the largest race differentials are found among women, young men, and single men. The lower separation rate of black men, particularly younger ones, is important to note because, as indicated, these groups have low labor force participation and high unemployment rates. From the tables, we see that the factors that influence separations among whites impact in a similar manner on blacks. In particular, at wage rates below the typical male wage, black men have a higher separation rate then black women, but at wage rates typical of male workers the two groups have similar separation rates.[27]

While the data are not as complete as one would like, it is clear that the overall black separation rate would be even lower than that shown if the distribution of blacks by wage category were the same as that of whites. Were this the case, the separation rate of black men would be 12.0 percent, black women, 11.2 percent[28] and all full-time black workers, 12.1 percent.

Employer attachment over time

Labor turnover is desirable to maintain efficient allocation of labor resources. But a rapid rise in labor turnover could result in large losses in specific training expenditures and reduced worker productivity. Whether such large losses have been incurred is not readily ascertainable. An easier question is whether employer attachment has changed over time. The increased proportion of women and young persons in the labor force, many of whom are in low-paying jobs, suggests that the overall separation rate may have risen in recent years. On the other hand, the growth of private pension plans and internalization of labor markets may have had a sufficiently large offsetting effect as to decrease the overall separation rate.

Some insight into this question can be obtained from job changer rates, as distinct from job separation rates,

Table 4. Separation rates by sex, race, and wage rate, full-time workers with work experience in 1977

Sex and race	Total	Wage rate		
		Under $5.00	$5.00 to $9.99	$10.00 and over
Total	17.1	23.6	11.2	9.8
Men	16.4	27.8	11.4	9.5
White	16.8	29.3	11.8	9.4
Black	14.1	19.3	7.6	12.7
Women	18.0	20.6	10.8	14.2
White	18.9	21.8	11.1	14.4
Black	11.7	12.6	8.8	(1)
White	17.6	24.8	11.6	9.7
Black	12.9	15.6	8.0	13.3

1 Less than 50 sample observations.
SOURCE: Matched January–March 1978 Current Population Survey file.

Table 3. Separation rates by sex and race, full-time workers with work experience in 1977

Characteristic	Men		Women	
	White	Black	White	Black
Total	16.8	14.1	18.9	11.7
Age (in years):				
18 to 24	37.5	27.4	34.7	26.1
25 to 44	15.9	13.4	17.7	9.7
45 to 59	7.8	8.1	8.7	4.7
Education (in years):				
Less than 16	17.6	13.6	19.2	11.6
16 or more	13.4	20.1	17.1	12.7
Marital status:				
Single, never married	30.6	20.4	24.3	13.9
Married, spouse present	13.4	11.3	17.3	11.4
Other	20.8	15.7	18.6	10.3
Families with both spouses present and both worked in 1977:				
Children present	14.1	10.8	18.1	11.9
All under 6 years	21.7	10.9	25.0	24.7
Some under 6 years	15.4	15.5	20.2	8.8
All between 6 and 17 years	10.9	8.6	14.8	8.0
No child present under 17 years	15.1	13.8	17.0	10.0

SOURCE: Matched January–March 1978 Current Population Survey file.

which can be derived also from the January–March 1978 CPS file and compared to similar rates from a 1961 BLS study.[29] From table 5, we see that the overall job changer rate has risen during the past two decades. The rise was most pronounced among white women and white men and least pronounced among black men.[30,31]

A part of this increase is because of differences in coverage. Assuming individuals under age 18 and over age 59, the self-employed, unpaid family workers, and agricultural and private household workers are mutually exclusive, their omission from the 1961 data would raise the overall job changer rate at that date from 10.1 to 12.3 percent. Thus, the overall job changer rate was at least 3.0 percentage points lower in 1961 than in 1977.[32]

Some of the increase is also due to the changing sex-age mix of persons with work experience between 1961 and 1977. Standardizing the 1961 job changer rates by the sex and age composition of all persons with work experience in 1977 would raise the 1961 overall figure by 1.1 percentage points; still, the larger portion of the increase, due to changes in age-specific rates, remains to be explained.[33]

One explanation for the increase may be the growth of two-worker families. Job dissatisfaction may also be rising. Whatever the reason, it appears that the job changer rate has increased, and that further study of the causes and consequences of this trend is warranted.

Conclusion

In this article, a methodology is developed for computing separation rates from household data collected by the Bureau of the Census in the Current Population Survey. This methodology is illustrated using data from the January and March 1978 files to estimate separation rates by sex and race, as well as other personal characteristics. Previously, separation rate data have only been available for manufacturing industries based on establishment reports; however, these data are no longer collected. With this methodology, separation rates can now be estimated not only for manufacturing but for all industries and by race, sex, and other demographic characteristics.

One need for separation data arises from the negative relationship between returns to employers from specific training and worker turnover. For a number of reasons, it is commonly believed that the overall separation rate of women and blacks is much higher than that of men and whites. However, as shown in this study, the overall separation rate of women is not much higher than that of men. Although women do exhibit greater inter-labor force mobility, intra-labor force mobility is greater among men; on balance their overall separation rates are not much different. As to race, the overall separation rate of blacks is found to be lower than that for whites, irrespective of sex.

Table 5. Separation rates and job changer rates by sex and race for persons with work experience

Sex and race	1977		1961
	Separation rate[1]	Job changer rate[1]	Job changer rate[2]
Total	18.3	15.3	10.1 (11.3)
Men	17.3	16.3	11.1 (12.3)
White	17.6	16.6	10.9
Black[3]	15.3	13.5	12.8
Women	19.7	14.2	8.6 (9.5)
White	20.4	14.8	8.8
Black[3]	14.1	9.9	7.0
White	18.8	15.8	10.1
Black[3]	14.9	11.7	10.2

[1] Age 18 to 59 years.
[2] Age 14 years and over; figures in parentheses for persons age 18 to 59 years where available.
[3] Nonwhite in 1961.
NOTE: For definitions of the separation and job changer rates, see text and footnotes 16 and 18.

These findings fail to take into account the fact that the wage rate differs among jobs. Among full-time workers, we find that at wage rates below $5 per hour (the wage received by almost three-fourths of the women in our sample) the female separation rate is lower than that of men irrespective of age, education, marital status, and presence or absence of children. At higher wage rates received by the typical man, the separation rate is the same for both sexes among each subgroup except for single, never-married persons where it is lower for women. Thus, the somewhat higher overall separation rate for women stems from their greater concentration in low-paying jobs. Likewise, the overall separation rate of blacks, which is less than that of whites, would be even lower if the two groups had the same wage distribution.

The major component of the separation rate is the job changer rate. It is possible to compare job changer rates based on our sample with similar figures from a 1961 BLS study. Although there are differences in coverage and concept between the two, it appears that the job changer rate has increased over the last two decades. This increase in turnover may indicate why productivity gains have tapered off in recent years.

In assessing the extent to which employer attachment among women differs from that of men, attention is primarily focused on full-time workers because specific training is most likely to be given to this group. However, women hired into full-time positions may seek part-time employment when they marry or have children. This aspect of turnover behavior is not captured by the data for full-time workers. But it is important to note that the separation rate figures for all persons with work experience cited in the text and footnotes are consistent with those for full-time workers.

As mentioned, permanent layoffs are included in our count of separations. Thus, it can be argued that the data overstate the separation rate of men whose layoff

rate rises, more so than that of women, during periods of high unemployment such as in 1977. On the other hand, the unemployment rate in 1977 was midway between its most recent peak in 1975 and trough in 1979 and was less than one-half percentage point higher than the average unemployment rate during 1972–81. Moreover, during this period the absolute differential between the female and male unemployment rates was greater in 1977 than in any other year (in 1977 the female unemployment rate was 1.9 percentage points higher than the male rate).[34] Nonetheless, if only because of the sensitivity of the layoff rate to the level of unemployment, additional research is needed to determine the empirical parameters which enter into employer decisions as to whom to hire and train. As this study indicates, the common perceptions regarding employer attachment of women and blacks are, in important respects, incorrect. ☐

------ *FOOTNOTES* ------

[1] Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (Columbia University Press, 1964).

[2] Specific training is training which raises a worker's productivity in the firm providing such training and is generally paid for by the firm.

[3] Edmund S. Phelps, "The Statistical Theory of Racism and Sexism," *American Economic Review*, September 1972, pp. 659–61; and Lester G. Thurow, *Generating Inequality* (Basic Books, Inc., 1975).

[4] Gary S. Becker, *A Treatise on the Family* (Harvard University Press, 1981).

[5] Jacob Mincer, "Family Migration Decisions," *Journal of Political Economy*, October 1978, pp. 749–73; and Robert H. Frank, "Why Women Earn Less: The Theory and Estimation of Differential Overqualification," *American Economic Review*, June 1978, pp. 349–60.

[6] Separation rates for manufacturing industries were reported by sex until 1968. As of that date, the quit rate was 16 percent higher for women than men. See W. Kip Viscusi, "Sex Differences in Worker Quitting," *The Review of Economics and Statistics*, August 1980, pp. 388–98.

[7] *Work Experience of the Population in 1977*, Special Labor Force Report 224 (Bureau of Labor Statistics, 1979), and *Employment and Earnings*, March 1982 (Bureau of Labor Statistics, 1982).

[8] *Job Tenure Declines as Work Force Changes*, Special Labor Force Report 235 (Bureau of Labor Statistics, 1979).

[9] James E. Hall, "Turnover in the Labor Force," *Brookings Papers on Economic Activity*, No. 2, 1973, pp. 709–56.

[10] See references in footnotes 7 and 8. Also, see *Work Experience of the Population in 1961*, Special Labor Force Report 25 (Bureau of Labor Statistics, 1962); and *Job Tenure of American Workers, January 1963*, Special Labor Force Report 36 (Bureau of Labor Statistics, 1963).

[11] *Inter*-labor force mobility refers to movements into and out of the labor force in contrast to *intra*-labor force mobility which pertains to movements among jobs and between employment and unemployment.

[12] John F. Burton, Jr. and John E. Parker, "Interindustry Variations in Voluntary Labor Mobility," *Industrial and Labor Relations Review*, January 1969, pp. 179–98; Donald O. Parsons, "Specific Human Capital: An Application to Quit Rates and Layoff Rates," *Journal of Political Economy*, November/December 1972, pp. 1120–44; John Pencavel, *An Analysis of the Quit Rate in American Manufacturing Industry* (Princeton University Press, 1970); and Vladimir Stoikov and Robert L. Raimon, "Determinants of Differences in the Quit Rate among Industries," *American Economic Review*, December 1968, pp. 1283–98.

[13] W. Kip Viscusi, "Sex Differences."

[14] Francine D. Blau and Lawrence M. Kahn, "Race and Sex Differences in Quits by Young Workers," *Industrial and Labor Relations Review*, July 1981, pp. 563–77.

[15] For a discussion of the need for such information, see Robert E. Hall and David Lilien, "The Measurement and Significance of Labor Turnover," *Concepts and Data Needs: Counting the Labor Force*, Appendix Volume 1, National Commission on Employment and Unemployment, Washington, D.C., 1979. This need is enhanced because turnover data for manufacturing industries are no longer being collected. Currently, the only source for turnover information is State unemployment insurance data collected by the individual States. See Carol M. Utter, "Labor turnover in manufacturing: the survey in retrospect," *Monthly Labor Review*, June 1982, pp. 15–18. Social Security Administration data can also be used to derive turnover rates. Also, see Malcomb Cohen and Arthur Schwartz, "U.S. labor turnover: analysis of a new measure," *Monthly Labor Review*, November 1980, pp. 9–13. However, because both unemployment and social security data can only be disaggregated by age, sex, race, and industry, neither is as rich in detail as the Current Population Survey.

[16] Job changers are individuals with two employers or more in a given year. Current Population Survey enumerators are instructed to report persons who during the year work at different establishments of the same company (or different agencies if the worker is in government) as having a different employer if the establishments (or agencies) maintain separate payrolls. For this reason, we count some individuals as separating from their employer when they should be considered as stayers. We believe this problem is a minor one. In the private sector only professional and managerial workers are likely to be affected, and in many occupations within these broad groupings, for example, accountants and managers of retail trade stores, one would expect few persons to be misclassified. In government, the most likely groups to be affected are clerical workers and blue-collar workers, because their skills are less agency specific than those of professionals and managers. Indeed, in the government when professionals and managers change agencies, they often do different things in their new job leading to a loss of specific training so that one would want to classify them as job separators even though they do not change their class of worker status. Moreover, when workers do change establishments or agencies but not employers, they may be carried on the same payroll. Thus, only a very small proportion of workers may be misclassified, including groups besides white men.

[17] In the Current Population Survey survey, only one employer is counted where an individual worked for two employers or more at the same time.

[18] The separation rate is defined as the proportion of individuals with work experience in 1977 who were job separators. The job changer rate is the proportion of individuals with work experience in 1977 who were job changers.

[19] Persons with one employer in 1977 who started a new job in January 1978, as determined from the job tenure data, had a break in employment prior to the survey week. For these individuals (as well as those not employed in January 1978), it is also possible to determine whether their March 1978 employer was the same as their 1977 employer. Where the employer was different, it is assumed that the person was a job separator; otherwise, the person is assumed to be a job stayer.

[20] Among individuals with work experience in 1977 who were on temporary or indefinite layoff in January 1978, 39 percent were reemployed with their longest employer in 1977 as of March 1978. This figure contrasts with Lilien's estimate of a 68-percent recall rate within 6 months in manufacturing. See David M. Lilien, "The Cyclical Pattern of Temporary Layoffs in U.S. Manufacturing," Ph.D. dissertation, Massachusetts Institute of Technology, 1977. The higher figure

reported by Lilien is due, in part, to the longer time span used in his computation of the recall rate and to unrequited demands being more easily postponed in the case of goods than services.

[21] The percentage of job changers (those with two employers or more) who were multiple job changers (those with three employers or more) was 28.7 for men, 20.1 for women, 25.4 for whites, and 21.9 for blacks. However, because these figures do not include individuals who separated from the last of exactly two employers by becoming unemployed or leaving the labor force, they provide only partial information about multiple job separators.

[22] Except as indicated, all differences noted in the text are statistically significant at the 0.10 level. Where relevant to the analysis, the figures in the footnotes have also been tested for statistical significance. The results of these tests can be obtained from the authors upon request.

[23] In our sample, full-time workers accounted for 96.0 of the men and 75.7 percent of the women with work experience in 1977.

[24] Among workers who were in the labor force year round (50 to 52 weeks) and usually worked full time (35 hours or more per week), the separation rate was 12.6 percent for women and 15.0 percent for men. The separation rate of year-round workers who usually worked part time was 13.8 percent for women and 38.0 percent for men.

[25] As in the case of full-time workers, for all persons with work experience in 1977 who earned less than $5 per hour the separation rate of women (21.6 percent) was lower than that of men (28.5 percent). Likewise, for *all* persons with work experience in 1977 with wage rates between $5 and $9.99 the difference in separation rates between the sexes was not statistically different (the separation rate was 13.1 percent for women, 11.8 percent for men). The findings cited in the text for specific groups of low-wage workers and workers earning the typical male wage also hold for the same subgroups among all persons with work experience in 1977. The only exception is among married persons, where the separation rate is higher for women (13.0 percent versus 10.5 percent for men).

[26] Separation rates by race and sex for *all* workers with work experience in 1977 were as follows: whites, 18.8; blacks, 14.7; white men, 17.6; black men, 15.3; white women, 20.4; and black women, 14.1. As in the case of full-time workers, for all workers with work experience in 1977, black separation rates were lower than those of whites for men as well as women.

[27] The same finding holds for all black workers with work experience in 1977.

[28] Because of sample size, no separation rate could be calculated for black women earning $10 or more per hour in 1977. The standardized estimate of 11.2 percent assumes the maximum separation rate of 100.0 percent for this group. As shown in table 5, only 1.4 percent of full-time female workers earned as much as $10 per hour.

[29] *Job Mobility in 1961*, Special Labor Force Report 35 (Bureau of Labor Statistics, 1963).

[30] Because of differences in coverage, no tests of statistical significance could be made in comparing the job changer rates in the BLS study and this one.

[31] It is also noticed from table 5 that, as expected, the disparity between the job changer and separation rates is larger for women than men and for black men than white men, reflecting differences among these groups in inter-labor force mobility. The job changer data also indicate that intra-labor force mobility is greater among men than women and greater among whites than blacks irrespective of sex.

[32] The difference would be even larger if students were also omitted from the 1961 job changer data; however, information for this group is lacking. Furthermore, with the surge of women and young people into the labor force in recent years, groups for whom inter-labor force mobility is higher than average, the job changer data may understate the secular rise in the overall separation rate.

[33] Some indication of how age-specific job turnover changed over time can be inferred from the following figures:

	Age (in years)			
	18 to 59	18 to 24	25 to 44	45 to 59
1961 job changer rate, men	12.3	24.1	12.5	6.3
1977 separation rate, men	17.3	37.0	16.0	8.4

As indicated by table 5, the difference between the separation and job changer rates is small for men. (See also Mincer, "Family Migration," where small differences are noted between the two rates when job tenure, which is related to age, is controlled for.) The decline in employer attachment among young persons is noteworthy in view of the inclusion of students in the 1961 data.

[34] Based on data provided by the U.S. Department of Labor, Bureau of Labor Statistics.

HMOs and other health plans: coverage and employee premiums

Ten years after the passage of the HMO Act,
health maintenance organizations represent
a small proportion of employee health plans;
benefits are more comprehensive and worker premiums
higher than for traditional insurance,
but other variables make comparisons difficult

ALLAN BLOSTIN AND WILLIAM MARCLAY

How do Health Maintenance Organizations (HMOs) compare with traditional health insurers—such as Blue Cross and Blue Shield organizations and commercial carriers—in terms of benefits provided and premiums required of employees? Although HMOs account for a small portion of the individuals with health insurance protection, interest in them has grown in recent years, particularly since the passage of the Health Maintenance Organization Act of 1973.

The Bureau of Labor Statistics' annual surveys of the incidence and characteristics of employee benefit plans in medium and large firms shed considerable light on the comparative coverages provided by HMOs and other sources of health insurance protection. Data from the 1981 study demonstrate that HMOs as a rule provide unlimited hospital-related care for physical ailments—such as room and board, surgical care, and doctors' visits to the hospital—with no charges over subscriber premiums; other health insurers typically curb such benefits through deductible or coinsurance provisions, ceilings on dollar payments, and limits on the maximum number of days of hospitalization coverage.

Differences were also found between HMOs and the traditional health insurers in other areas of health care—visits to physicians' offices, diagnostic X-ray and laboratory work, mental health care in and out of the hospital, care at home and in nursing facilities, prescription drugs, and dental and vision care. In these areas, however, even HMOs may limit the number of days of coverage or include copayment requirements, thereby imposing out-of-pocket charges on subscribers.

These patterns partly reflect a principal requirement of the HMO Act: Federally qualified HMOs must provide comprehensive care. However, the more extensive benefit schedules generally offered by HMOs commonly result in higher premium payments by employees. It must be emphasized that this review contrasts only plan provisions offered by HMOs and other health insurers and the employee premiums required for each. Overall evaluation of the two approaches to health care must also consider such factors as quality of care and total costs.

The HMO concept

A health maintenance organization provides a wide range of comprehensive health care services to a voluntarily enrolled population. Covered individuals receive care from specified providers for a fixed, prepaid fee, rather than on a fee-for-service basis.[1] There are two basic types of HMOs—the group/staff arrangement and the individual practice association (IPA). The group/staff HMO delivers health services at one or more facilities through groups of physicians working on a salaried or contractual basis. The IPA contracts with physicians in the community, who maintain their own offices and usually are paid by the HMO on an agreed fee-for-service schedule.[2]

Health maintenance organizations differ from traditional insurers in the following key respects:

- HMOs serve both as health care insurers as well as providers of health services to subscribers. Traditional insurers concentrate on financing health care, while insured individuals seek out their own providers.
- HMOs encourage preventive health care by paying for periodic physical examinations. Other health plans typically do not pay for routine physical examinations.

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HMO growth

Although the term "health maintenance organization" was not coined until 1970,[3] the concept goes back to a much earlier time. During the latter part of the 19th century and early in the 20th century, prepaid medical care programs for employees, and usually for their dependents, were established in a number of industries, including mining, lumbering, and the railroads.[4] The Nation's largest prepaid group practice—the Kaiser Foundation Health Plan—originated in 1938, when a health care program was established for Kaiser construction workers building the Grand Coulee Dam, in a remote location in Washington. This led to a company-sponsored plan covering Kaiser shipyard workers and their families in 1942 and to a plan open to the community at large in 1945.[5]

The further establishment of HMOs was slowed by a variety of forces, including initial opposition by the medical profession, competition from other health insurers, the costs of establishing an HMO, and reluctance of employees to limit their choice of physicians to a particular group. In the past decade, however, Federal legislation provided the catalyst for individual employers and traditional health insurers, among others, to encourage HMO growth.[6] The Health Maintenance Organization Act of 1973, as amended, greatly stimulated formation of comprehensive prepaid health care programs by:

- Providing grants, loans, and loan guarantees to HMOs.
- Preempting State laws and practices impeding the development and operation of qualified HMOs.
- Requiring an employer to include the option of membership in a qualified HMO in any employee health benefit package—dual-choice—if the employer (1) is covered by the minimum wage provisions of the Fair Labor Standards Act, (2) has at least 25 employees residing within an HMO's service area, (3) has an employee health benefit plan to which the employer contributes, and (4) has received a written request from a qualified HMO for inclusion in the employer's health benefits program.[7]

As described later in this article, requirements for Federal qualification include provision for a comprehensive range of "basic health services."

Enrollment almost doubles

The June 1981 enrollment in HMOs (subscribers and covered dependents) totaled 10.3 million, nearly double the enrollment 7 years earlier. About half of all the HMOs functioning that month were Federally qualified, but they covered 7.3 million subscribers and dependents.[8] Despite this impressive growth, HMO coverage is still quite limited. The 1981 BLS survey of employee benefit plans found 21 million workers under health insurance plans. Three percent participated in HMOs.[9]

Table 1. Percent of health insurance plans[1] by extent of coverage for selected categories of health care, medium and large firms, 1981

Category of health care	Covered in full[2]		Covered with limitations		Not covered	
	HMO	Other	HMO	Other	HMO	Other
Hospital room and board ..	95	4	5	96	—	—
Hospitalization — miscellaneous services	95	4	5	96	—	—
Extended care[3]	40	1	56	56	4	43
Surgical care	95	28	5	72	—	—
Physician visits — in-hospital	99	6	1	94	—	(⁴)
Physician visits — office	59	2	41	95	—	3
Diagnostic X-ray and laboratory[5] ...	84	16	16	84	—	—
Hospital outpatient care ...	57	7	43	93	—	—
Prescription drugs — non-hospital	10	2	52	95	38	3
Private duty nursing	89	(⁴)	6	96	5	4
Mental health care	—	—	96	99	4	1
In-hospital[6]	7	(⁷)	80	(⁷)	13	(⁷)
Non-hospital[5]	3	(⁷)	92	(⁷)	5	(⁷)
Dental	4	1	8	50	⁸87	49
Vision[9]	37	2	38	18	25	80

[1] Excludes plans restricted to dental benefits. Two plans combining non-HMO hospitalization care with HMO coverage of other health care categories are treated here as non-HMO plans.
[2] All needed coverage for a specific service is provided at no cost to the subscriber above the regular prepayment fee, that is, there are no copayment, deductible, or coinsurance features or limits on maximum days of coverage. Coverage need not extend to all aspects of a health care category; for example, vision care may be limited to eye examinations and exclude the cost of eyeglasses.
[3] Care provided by a nursing facility or home health care agency.
[4] Less than 0.5 percent.
[5] Charges incurred in the outpatient department of a hospital and outside of the hospital.
[6] Charges for room and board and for physicians' visits.
[7] Separate data were not available for non-HMO coverage of mental health care in and outside of the hospital.
[8] Employer-funded dental care plans frequently supplement these HMOs. Separate dental plans are not in the tabulations.
[9] Excludes care for children only.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no plans in this category.

Although the HMO Act requires many employers to offer a dual choice of health insurance plans, indications are that relatively few workers having the option actually select these prepaid arrangements. BLS Area Wage Surveys conducted during 1980 and 1981 yielded this finding on HMO availability and selection in 51 areas.[10] Typically, office workers were offered and selected HMO coverage to a greater degree than production workers. Moreover, HMOs were more popular in the Western States than in other parts of the country. The following tabulation shows the percent of full-time workers offered coverage and participating in HMO plans (asterisks indicate below 0.5 percent) in eight of the largest areas studied:[11]

Area	Production workers		Office workers	
	Offered	Participating	Offered	Participating
Boston	41	2	65	8
New York	16	*	42	3
Atlanta	7	*	8	1
Washington ...	35	4	65	9
Chicago	22	1	38	4
Minneapolis-St. Paul	46	13	64	19
Los Angeles-Long Beach .	53	18	60	14
San Francisco-Oakland	66	28	62	25

BLS benefit survey

The Bureau's annual survey of employee benefit plans in medium and large firms—those with at least 50, 100, or 250 workers, depending on the industry—provides a rich data base for comparing HMOs and traditional health insurance plans. Industrial coverage comprises mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale and retail trade; finance, insurance, and real estate; and selected services. An estimated 21.5 million full-time employees were within the scope of the 1981 survey.[12] Because the detailed information collected on health insurance plan provisions includes data on type of insurer, it is possible to contrast benefit coverages provided by HMOs and other insurers.

Approximately 1,300 establishments, employing 4.1 million workers, provided information for the survey. The data in this article relate to the number of HMO and other health plans reported by these establishments. In counting these plans, each HMO in an establishment was treated as a separate "plan." When several establishments in the survey offered the same HMO, each offering was counted as an independent plan. To reduce the effect of such duplication in counting HMOs, data in the accompanying tables show the proportion of HMO plans, rather than the absolute number of HMOs.[13] Participants in other forms of health insurance frequently are covered under basic hospital, surgical, and medical plans, supplemented with a major medical benefit policy. The combined coverages were treated here as single plans.[14]

Coverage patterns

All health insurance plans reported for full-time workers in the 1981 survey had provisions for inpatient and outpatient hospital care and surgical, X-ray, and laboratory benefits (table 1). Provisions for physician care—both in the hospital and in the office—were always included by HMOs and nearly always by other health insurance plans. Similarly, nearly universal inclusion of some private duty nursing and mental health care was found for both HMOs and the traditional insurers.

Significant differences, however, did exist. Extended care in a licensed nursing facility or through home health care services was provided in virtually all of the HMOs, compared with almost three-fifths of the other plans. This largely reflects a requirement of the HMO Act that qualified organizations provide home health care services as part of a package of basic health services.[15] Approximately 86 percent of the HMO plans reported in the 1981 survey were Federally qualified.

Both dental care and prescription drugs—which are not included in the Act's definition of basic health services—are covered more frequently by other insurers. Only 1 out of 8 HMO plans surveyed in 1981 included dental coverage. HMO sponsored dental care—where it exists—is almost always limited to the preventive services of examinations and X-rays. Traditional insurers provide a wider range of coverage, including restorative procedures such as fillings, periodontal care, inlays, and crowns. Quite often HMOs are supplemented by separate employer-financed dental insurance.[16]

Non-HMO health insurance almost always covers at least part of the costs of prescription drugs, commonly under the major medical portion of the plan. In contrast, three-fifths of the HMO plans provided this benefit in 1981. This includes coverage accepted by the employer as an optional, additional premium benefit in the employee health package.

Three-fourths of the HMOs included vision care benefits, compared with one-fifth of the other plans. Generally, however, HMOs with vision care provided only eye examinations, while the traditional insurers usually included eyeglasses and contact lenses, as well as examinations.[17]

Limits to coverage

Table 1 also shows significant differences in the extent of health coverage provided. For many key categories, HMOs usually furnish full coverage; that is, monthly premiums cover the full cost of providing all needed care. In contrast, traditional insurance plans commonly limit the extent of benefits paid by periodic premiums; employees must pay the balance of the bill.

Where HMOs limit coverage, it is usually by a restriction on the number of days for which benefits are provided—either on an annual or per illness basis—or through a requirement for copayments. A copayment is a nominal fee that the HMO subscriber pays when a service is rendered. Copayments serve to reduce premiums and they may tend to discourage overuse of HMO facilities.

As already described, non-HMO health insurance packages commonly combine basic health and major medical insurance. Basic health benefits usually have limits on the number of days of covered services or on the maximum dollar amount payable. Major medical insurance covers expenses which exceed basic benefit limitations and also covers types of expenses not paid for by the basic plan. Major medical insurance almost always includes a deductible—an amount the insured individual must pay before the policy will cover any expenses. The deductible was most commonly $100 a year in 1981, usually with a family limit of $200 or $300.[18] In addition, expenses are shared under major medical insurance (coinsurance), with the insurer commonly paying 80 percent of the total (50 percent for non-hospital mental health care). Usually, there is a lifetime ceiling on insurer payments—generally $250,000 or less.

Except for mental health care, HMOs in 1981 usually provided unlimited coverage of hospital-related care,

Table 2. Percent of health maintenance organization plans with limitations on days of coverage per year and per confinement for selected categories of health care, medium and large firms, 1981

Limit on days of coverage	Care in nursing facility	Mental health care— in-hospital[1]	Mental health care— non-hospital[2]
All HMOs	100	100	100
Benefit not covered	22	13	5
Covered with no limitations	32	12	13
Covered with limitations	47	76	82
Limits days per year	33	67	80
Less than 20 days	—	1	1
20	—	2	65
21–29	—	(3)	8
30	2	34	3
31–44	—	4	—
45	(3)	14	2
46–59	—	—	1
60	5	11	—
61–99	1	1	1
100	21	—	—
Greater than 100	4	1	—
Limits days per confinement	14	8	2
Less than 20 days	—	1	1
20	2	—	1
30	1	3	—
45	—	1	—
60	2	1	—
100	6	—	—
120	1	2	—
125	1	—	—
Greater than 125	1	1	—

[1] Charges for room and board and for physicians' visits.
[2] Charges incurred in the outpatient department of a hospital and outside of the hospital.
[3] Less than 0.5 percent.
NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no plans in this category.

such as room and board charges, surgical care, doctors' visits to the hospital, and miscellaneous services (including diagnostic X-rays, drugs, and laboratory work). Except for surgical care, these hospital services were covered in full by less than one-tenth of the non-HMO plans. Non-HMO plans often limited coverage of hospital charges to 120 or 365 days per confinement. Slightly more than a fourth of the traditional insurance plans paid in full the usual, customary, and reasonable charges for surgical care. The most frequent non-HMO limitation on coverage for surgical care was a schedule of maximum payments for individual procedures.

HMOs and traditional insurance plans in varying degrees limited coverage of non-hospital services, including visits to physicians' offices, prescription drugs, extended care in a nursing facility, care in a hospital's outpatient department, and mental health care (both in and out of a hospital). As already observed, HMO limitations often take the form of ceilings on the number of days of coverage or copayment provisions. The traditional plans typically cover non-hospital benefits under major medical provisions only; thus, they are subject to deductible and coinsurance features.

HMO limitations on days of coverage

Mental health care (in and out of the hospital) and extended care in a nursing facility are the major types of health care for which HMOs limit the days of coverage. (See table 2.) Three-fifths of the HMO plans limited mental health coverage in the hospital to 30, 45, or 60 days per year. Outside the hospital, the limit was 20 visits a year in nearly two-thirds of the plans.

As for extended care in nursing homes, three-fifths of the HMO plans providing this benefit limited the length of the stay, expressed on an annual, rather than on a confinement, basis. The most frequent restriction was 100 days.

HMO copayment requirements

As indicated, HMOs may charge subscribers a stated dollar amount per visit—copayment—for services outside the hospital. Table 3 shows the relative frequency and amounts of such copayments in five areas of health care where they are commonly found.

Even in each of these five areas, less than half of the plans in 1981 required copayments. Copayments typically were $1, $2, or $3 for visits to physicians' offices, laboratory tests and X-rays, and vision care. This was also true for such services in the outpatient department of a hospital as physical therapy or chemotherapy. However, outpatient services covering accidents and sickness performed in the emergency room of a hospital or an HMO facility may require a copayment of $10 or $15.[19]

Table 3. Percent of health maintenance organization plans with copayment provisions for selected categories of health care, medium and large firms, 1981

Copayment limits	Physicians' visits— office	Diagnostic X-ray and laboratory— non-hospital[1]	Mental health care— non-hospital[1]	Hospital outpatient care	Vision care[2]
All HMOs	100	100	100	100	100
Category not covered	—	—	5	—	25
Covered with no copayment provision	59	84	50	68	45
Covered with copayment provision (per visit)	41	16	45	32	29
$ 1.00	7	4	4	6	7
$ 1.50	(3)	—	—	—	(3)
$ 2.00	20	6	5	8	9
$ 2.50	—	—	—	—	(3)
$ 3.00	8	2	1	2	2
$ 4.00	4	1	2	1	2
$ 5.00	2	1	7	3	5
$ 7.50	—	—	—	—	1
$10.00	(3)	(3)	5	4	1
$15.00	—	—	5	6	1
$20.00	—	—	7	(3)	(3)
Greater than $20.00	—	—	1	1	—
Other	—	4[1]	5[7]	—	—

[1] Charges incurred in the outpatient department of a hospital and outside of the hospital.
[2] Excludes care for children only.
[3] Less than 0.5 percent.
[4] Plans calling for a copayment of $6.00 for each laboratory and diagnostic procedure and $5.25 for each X-ray.
[5] Plans varying the copayment based on the number of visits.
NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no plans in this category.

Both copayment requirements for doctors' visits and limitations on the number of visits applied frequently to mental health care outside the hospital. These copayments were often greater than those required for other non-hospital services; charges of $5 or greater per visit were found in one-fourth of the plans. In 7 percent of the plans, the amount of the copayment varied by the number of visits. For example, a subscriber might not be charged for the first 10 visits but was charged $10 for each subsequent visit.

HMO prescription drug plans often require a copayment per prescription, most commonly $1 or $2. However, as the following tabulation shows, coinsurance provisions also applied for 10 percent of the HMO plans (asterisk indicates under 0.5 percent):

	Percent of HMO plans
Total	100
Drugs not covered	38
Drugs covered with no limitations	10
Drug coverage subject to copayment per prescription	37
Less than $1.00	2
$1.00	11
$2.00	15
$2.50	5
$3.00	5
$3.50	*
Drug coverage subject to coinsurance provision	10
Other limitations	4

Prescription drugs were the major category of HMO coverage for which coinsurance provisions applied. The insurer virtually always paid 80 percent of the charge, with the subscriber paying the balance. Other limitations shown above for 4 percent of the plans consisted mainly of annual deductibles of $50 or $100.

Fewer than 10 percent of the HMOs limited coverage through coinsurance features, yearly deductibles, or maximum dollar payments in each of the following benefit areas: extended care in a nursing facility; diagnostic X-ray and laboratory tests outside the hospital; mental health care; outpatient care; and vision care.

Coinsurance provisions, where found, were commonly at the 50-percent level for non-hospital mental health care and at the 80-percent level for in-hospital mental health care and for hospital outpatient services. The few coinsurance requirements for outpatient services usually were accompanied by a $50 or $100 yearly deductible and a ceiling on maximum dollar benefits. These limitations on coverage of outpatient services were generally in HMO plans which did not fully cover hospital room and board. Nine percent of the plans limited vision care by a specified maximum dollar benefit or by a scheduled dollar amount per examination or prescription for eyeglasses.

Employee premiums

Because benefits are more likely to be covered in full by health maintenance organizations, their premium charges may exceed those of traditional insurers. The Health Maintenance Organization Act does not require an employer offering a dual choice of health plans to contribute more toward HMO coverage than toward other health insurance. Consequently, when an HMO's premium exceeds that of a traditional insurance plan, an employee may be required to pay the additional cost of the HMO plan.

Although the BLS employee benefit surveys do not obtain data on employer expenditures, they do collect information on the extent of worker contributions toward the cost of premiums. The 1981 survey found that nearly three-fourths of all non-HMO plans were fully paid for by employers for employee coverage, and just over one-half were noncontributory for dependent coverage. In contrast, about one-third of the HMO plans were noncontributory for employee coverage, and one-fourth for dependents (table 4).

Moreover, when employee contributions were required, they were higher, on the average, for HMO services. Monthly employee premiums in contributory HMO plans averaged $12.77 for employee coverage and $27.21 for dependent coverage. Corresponding figures for non-HMO plans were $7.21 and $18.96. A monthly

Table 4. Percent of health insurance plans[1] by amount of employee premium, medium and large firms, 1981

Employee premiums	HMO plans[2]		Other plans[3]	
	Employee coverage	Dependent coverage	Employee coverage	Dependent coverage
Total plans	100	100	100	100
Noncontributory plans	35	25	72	51
Contributory plans	62	72	28	49
Dollar amount of monthly employee premium:				
Less than $5.00	10	6	11	7
$ 5.00–$ 9.99	19	6	9	10
$10.00–$14.99	13	9	5	7
$15.00–$19.99	7	8	1	5
$20.00–$29.99	9	15	1	7
$30.00–$39.99	3	12	(4)	5
$40.00–$49.99	1	6	—	2
$50.00 or greater	—	8	—	3
Other[5]	—	(4)	(4)	(4)
Amount not determinable[6]	(4)	(4)	1	3
Contributory status not available	3	3	(4)	(4)

[1] Excludes plans restricted to dental benefits. Two plans combining non-HMO hospitalization care with HMO coverage of other health care categories are treated here as non-HMO plans.
[2] Average monthly employee premium in contributory plans was $12.77 for employee coverage and $27.21 for dependent coverage.
[3] Average monthly employee premium in contributory plans was $7.21 for employee coverage and $18.96 for dependent coverage.
[4] Less than 0.5 percent.
[5] Contributions based on percent of employee earnings.
[6] Employee contribution is specified only as a percent of the total premium.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no plans in this category.

employee premium of $20 or more for individual coverage was found in 13 percent of the HMO plans and in 1 percent of other plans. Similarly, $30 or more for dependent coverage was required in more than one-fourth of the HMO plans and in one-tenth of the other plans.

Consideration of employee *premiums* focuses on just one aspect of total health care *costs* borne by employees. It ignores out-of-pocket employee expenses at the time services are rendered. The BLS survey, however, focuses on benefit provisions and not on usage or its full cost. As noted, full comparison of HMOs and traditional insurers must consider more than cost factors, including quality of care and intangibles such as doctor-patient relations, and the health of the insured. ☐

—— *FOOTNOTES* ——

[1] For a comprehensive discussion of HMOs, see Robert G. Shouldice and Katherine H. Shouldice, *Medical Group Practice and Health Maintenance Organizations* (Washington, Information Resources Press, 1978). For a briefer introduction, see *A Student's Guide to Health Maintenance Organizations*, DHEW Publication No. (HRA) 79–3 (U.S. Department of Health, Education, and Welfare, Public Health Service, 1978).

[2] A 1981 National HMO Census, covering 243 plans, found that only 15 percent of all participants were enrolled in individual practice association prepayment plans. *National HMO Census 1981*, DHHS Publication No. 82–50177 (U.S. Department of Health and Human Services, Public Health Service, 1982), p. 5.

[3] Credit for the term goes to Dr. Paul M. Ellwood, Jr., president of InterStudy, a research institute on prepaid health plans.

[4] Margaret C. Klem and Margaret F. McKiever, *Management and Union Health and Medical Programs*, Public Health Service Publication 329 (U.S. Department of Health, Education, and Welfare, Public Health Service, 1953), pp. 3–5.

[5] For a more detailed history, see Herman M. Somers and Anne R. Somers, *Doctors, Patients, and Health Insurance* (Washington, The Brookings Institution, 1961), Chapter 17.

[6] The employer viewpoint is presented in Ruth H. Stack, *HMOs from the Management Perspective* (New York, AMACOM, 1979). Labor unions, at the national level, usually support HMOs but, because of possible requirements for employee contributions, local union officials at times have reacted negatively. The overall union viewpoint is in Bert Seidman, "HMOs and Health Care for All Americans," *AFL-CIO American Federationist*, June 1979, pp. 10–11.

[7] Employers must offer at least one group or staff HMO and at least one IPA if both are qualified and request inclusion in a health benefit program. Where employees are organized, the HMO offer must be made to the union; the employer's obligation ends if the union rejects the offer.

[8] *National HMO Census 1981*, pp. 1, 5.

[9] *Employee Benefits in Medium and Large Firms, 1981*, Bulletin 2140 (Bureau of Labor Statistics, 1982), p. 27. The BLS study may not be fully indicative of HMO penetration into employee health benefit plans. An analysis by the General Accounting Office of HMO contracts with employers of 25 workers or more found that the percentage of employees enrolled in the HMOs was considerably higher in small than in large firms. See *Can Health Maintenance Organizations Be Successful?—An Analysis of 14 Federally Qualified "HMOs,"* HRD–78–125 (U.S. General Accounting Office, June 30, 1978), pp. 48–49.

[10] The surveys are conducted annually in 70 areas, but questions related to HMO participation were phased into the program over a 3-year period beginning in 1980. The surveys provide data on earnings in selected blue- and white-collar occupations common to a wide variety of industries. Data are also obtained on weekly work schedules and employee benefits, separately for nonsupervisory office workers and for production and related workers (nonoffice). While wage data are collected annually, benefits are studied every 3 years.

[11] For data on each of the 51 areas, see tables B-14 and B-18 in *Area Wage Surveys: Selected Metropolitan Areas, 1980*, Bulletin 3000–72 (Bureau of Labor Statistics, 1982) and *Area Wage Surveys: Selected Metropolitan Areas, 1981*, Bulletin 3010–72 (Bureau of Labor Statistics, 1983).

[12] This employment total excludes executive management, part-time, temporary, seasonal, and operating personnel in constant travel status (for example, airline pilots), who are outside the scope of the survey. The 1981 survey collected data on employee work schedules and developed information on the incidence and detailed characteristics of 11 private sector employee benefits paid for at least in part by the employer: paid lunch and rest periods; holidays, vacations, and personal and sick leave; accident and sickness, long-term disability, health, and life insurance; and private retirement pension plans. Data were also collected on the incidence of 17 other employee benefits, including stock, savings and thrift, and profit sharing plans. Survey findings of general interest are included in annual BLS bulletins (see, for example, *Employee Benefits in Medium and Large Firms, 1981*). More intensive treatment of individual topics—such as the present analysis—appears in *Monthly Labor Review* articles. Tables in the bulletins show the proportion of full-time workers participating in the individual benefit plans studied or covered by specific types of plan provisions. Unlike the simple counts of reported plans in this article, these proportions in the bulletin tables are computed by applying appropriate sample weights to the reports from the individual establishments in the survey. For detailed information on the background and conduct of the survey, see Robert Frumkin and William Wiatrowski, "Bureau of Labor Statistics takes a new look at employee benefits," *Monthly Labor Review*, August 1982, pp. 41–45.

[13] A total of 365 HMO plans within individual establishments was included in the analysis.

[14] Plans restricted to dental benefits were excluded.

[15] The Act defines "basic health services" to include: (1) physicians' services; (2) inpatient and outpatient hospital services; (3) emergency health services; (4) short-term outpatient mental health services; (5) medical treatment and referral services for the abuse of or addiction to alcohol and drugs; (6) diagnostic laboratory and diagnostic and therapeutic radiologic services; (7) home health services; and (8) preventive health services (including immunizations, well-child care from birth, periodic health evaluations for adults, voluntary family planning services, infertility services, and children's eye and ear examinations).

[16] As indicated in footnote 14, such dental-only plans are excluded.

[17] Vision care benefits limited to children are excluded.

[18] *Employee Benefits in Medium and Large Firms, 1981*, p. 24.

[19] Where an HMO varied the copayment by type of outpatient services, table 3 includes the charge for the most common service. If a charge for emergency care was specified, it was tabulated.

Communications

Worklife estimates should be consistent with known labor force participation

JOHN L. FINCH

New worklife expectancy estimates were published by the Bureau of Labor Statistics last year and were described at length by Shirley J. Smith in the March 1982 issue of the *Monthly Labor Review*.[1] These new figures are different from those previously published for 1970 for two reasons: First, 1977 data were used. And second, a new methodology was adopted in which the probability of entering or leaving the labor force at a particular age was incorporated explicitly into the model.

The 1970 model, with respect to the worklife expectancy of an individual known to be in the labor force at a given age, assumed that he or she would remain active until reaching the age of peak participation. As Smith observes, this assumption resulted in a worklife expectancy which was overstated for young persons. The new methodology, which measures the extent of movement into and out of the labor force, is conceptually superior to the 1970 model for those individuals whose labor force status is known in the reference year.

Under either model, the expectation of working life at a given age is simply the total number of person-years worked after that age, divided by the number of people alive at that age. Thus, the new model should give the same results for "all persons"—those in, and those not in, the labor force—as did the 1970 model, if the same data base is used in each. This is not the case.

Implicit in any worklife calculation is a labor force participation rate for each age group. Table 1 compares the participation rates implied by the Bureau's new worklife figures with the rates published by the Bureau for 1977.[2] (See appendix for methodology.) As indicated, the Bureau's implicit rates are too low for men (70 percent versus 75.1 percent) and slightly high for women (44.3 percent versus 43.7 percent).

One result of this inconsistency is that, when the new methodology is applied to 1970 data, different expecta-

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Table 1. Labor force participation rates, as published, and as implied by the new worklife estimates, 1977

Age	Men		Women	
	Published rates[1]	Implicit rates	Published rates[1]	Implicit rates
16 and over ..	78.3 [2](75.1)	70.0	48.5 [2](43.7)	44.3
16-17	50.6	40.5	42.2	36.3
18-19	74.4	57.2	60.6	51.8
20-24	86.7	75.1	66.7	62.8
25-34	95.6	92.5	59.5	63.0
35-44	95.8	94.7	59.6	65.3
45-54	91.2	90.4	55.8	60.4
55-64	74.0	67.3	41.0	40.0
65 and over	20.1	14.0	8.1	6.0

[1] These data are from *Handbook of Labor Statistics* (Bureau of Labor Statistics, 1980), table 2, pp. 8–9.
[2] Rates in parentheses have been adjusted for static population.

tions are obtained for "all persons" than were obtained with the old model.[3] This is an incorrect result, for if participation rates and mortality rates are the same in both models, worklife expectancy should be the same for "all persons." Probabilities of leaving and entering the labor force have no effect upon the *total* number of years an average person will work.

For example, suppose two people, Brown and White, are alive at age 97, and Brown works at ages 98 and 99, whereas White is retired. The worklife expectancy for "all persons" is 1 year. Now suppose as an alternative that Brown works at age 98 and then retires, while White reenters the labor market at age 99. The worklife expectancy is still 1 year, because we are not here attempting to distinguish between those, like Brown, who are active in the base year and those, like White, who are inactive.

A second result of this inconsistency is that incorrect "transition probabilities" (probabilities of leaving and entering the labor force) are obtained. As one would expect, transition probabilities are not independent of labor force participation rates. To illustrate, suppose the participation rate for a group is 80 percent in Year 1 and 90 percent in Year 2, and that 10 percent of those alive in Year 1 die by Year 2. If 95 percent of the survivors who were active in Year 1 were still active in Year 2, then 70 percent of those survivors inactive in Year 1 must, by mathematical identity, have become active by Year 2.

To accept the new BLS worklife projections, one must accept the participation rates implicit in those projec-

tions. For example, one must be willing to concede that men in their early 20's, 87 percent of whom are currently in the labor force, are about to drop out in large numbers, leaving a 75-percent participation rate[4]—an unlikely occurrence indeed. (See table 1.) Therefore, one must conclude that the transition probabilities and the Bureau's published labor force participation rates cannot both be correct. (See the appendix for a mathematical proof of this assertion.)

Perhaps the survey from which the transition probabilities were obtained captured the effects of some transitory movement into and out of the labor force. If so, this movement should not be extrapolated into the future, because changes observed in a single sample cannot reliably be projected over people's lifetimes, and because no trend toward significantly lower male participation has been observed between 1977 and the present. Alternatively, it is possible that sampling error by the survey was magnified by iterative computation of the participation rates employed in the Bureau's estimates. In any event, the transition probabilities should be adjusted to make them consistent with known participation rates.

If the labor force participation rates and transition probabilities used in the new model are made consistent with published participation rates for 1977 (see appendix), significantly different worklife expectancies are obtained. Table 2 presents a comparison between the Bureau's 1977 worklife figures and the revised figures calculated by the author. (Results of the author's calculations for single years of age are available on request.) The adjusted transition probabilities are used solely to distinguish people who are currently in the labor force from those who are not. These probabilities do not affect "all person" worklife expectancies, because there is no justification for such an effect, unless observed transition is seen as a predictor of future participation

Table 3. Changes in men's worklife expectancies by age during 1970–77, as estimated by BLS and as revised

[in years]

Age	BLS estimates			Revised figures		
	1970	1977	Difference	1970	1977	Difference
16	41.4	38.5	−2.9	41.4	41.3	−0.1
20	39.4	36.8	−2.6	39.4	39.0	−0.4
30	31.2	29.2	−2.0	31.2	30.7	−0.5
40	23.2	20.3	−2.9	23.2	21.6	−1.6
50	14.8	11.7	−3.1	14.8	13.0	1.8
60	7.4	4.3	−3.1	7.4	5.6	−1.8
70	5.4	.9	−4.5	5.4	1.2	4.2

which somehow invalidates currently observed participation rates.

As previously indicated, worklife estimates consistent with published participation rates are substantially greater for men and slightly lower for young women than those issued by the Bureau last year. Additionally, Table 3, which presents the original estimates and the revised figures for the 1970–77 trends in worklife expectancy for men, indicates that, while labor force participation has indeed fallen for older men, the drop is less than originally reported.

The increment-decrement model remains a useful tool for distinguishing the work expectancies of persons now in the labor force from those of persons who are not. However, it adds no information to the conventional model for predicting the worklife of "all persons." In any case, if the model is applied correctly, the estimates should be consistent with known labor force participation.

Methodological appendix. The labor force participation rates for specific ages were obtained by solving the 10th degree polynomial:

$$f(x) = \sum_{i=0}^{10} a_i x^i$$

where x is age and $f(x)$ is the fraction of those born who are in the labor force at exact age x. The solution for the 11 coefficients, a_i, is possible because

$$\int_u^v f(x)dx$$

is known for the eight age groups (16–17, 18–19, 20–24, 25–34, 35–44, 45–54, 55–64, and ≥ 65) and because it was assumed that $f(99) = 0$, that the BLS figure for $f(75)$ is correct, and that the BLS figure for

$$\int_{75}^{\infty} f(x)dx$$

is correct.

Given that

$$(1) \qquad A_{t+1} = (AA)A_t + (IA)I_t,$$

Table 2. BLS worklife estimates compared with revised figures based on published labor force rates, by sex and labor force status, 1977

[in years]

Sex and age	All persons			In labor force		Not in labor force	
	BLS	Revised	Difference	BLS	Revised	BLS	Revised
Men:							
Age 16 ..	38.5	41.3	+2.8	39.6	42.2	38.1	40.6
Age 20 ..	36.8	39.0	+2.2	37.3	39.4	35.9	37.8
Age 30 ..	29.2	30.7	+1.5	29.3	30.7	27.2	28.6
Age 40 ..	20.3	21.6	+1.3	20.4	21.7	16.9	18.3
Age 50 ..	11.7	13.0	+1.3	12.2	13.4	7.2	8.7
Age 60 ..	4.3	5.6	+1.3	5.2	6.6	1.9	2.8
Age 70 ..	0.9	1.2	+0.3	2.6	2.5	0.6	0.7
Women:							
Age 16 ..	27.7	27.3	−0.4	28.8	28.2	27.4	26.7
Age 20 ..	26.0	25.3	−0.7	26.7	25.9	25.2	24.4
Age 30 ..	19.9	19.1	−0.8	20.9	20.1	18.2	17.6
Age 40 ..	13.7	13.4	−0.3	14.9	14.6	11.4	11.5
Age 50 ..	7.5	7.8	+0.3	9.2	9.6	4.9	5.5
Age 60 ..	2.5	3.1	+0.6	4.4	5.3	1.2	1.6
Age 70 ..	0.5	0.6	+0.1	2.4	2.3	0.2	0.3

35

where A_t is the number of active persons at age t, I_t is the number of inactive persons, (AA) is the fraction of active persons who remain active until the next age $(t+1)$, and (IA) is the fraction of inactives who become active; and, given that all those alive, N_t, are either active or inactive:

$$(2) \qquad N_t = A_t + I_t;$$

given that the participation rate, W_t, is the fraction of those alive who are active:

$$(3) \qquad W_t = \frac{A_t}{N_t};$$

and, given that the probability of remaining alive for one year, P_t, is:

$$(4) \qquad P_t = \frac{N_{t+1}}{N_t};$$

then it follows that:

$$(5) \qquad (AA) = P_x \frac{W_{t+1}}{W_t} - \left(\frac{1}{W_t} - 1\right) (IA).$$

That is, if mortality and participation rates are known (that is, P and W are given), then the transition probabilities, (AA) and (IA) cannot equal just any values which happen to appear in a sample. If those values do not lie along the line segment defined by equation 5, then either they or the underlying mortality and participation rates must be incorrect.

In fact, the transition probabilities used in the BLS estimates for males lie mainly below this locus (like B):
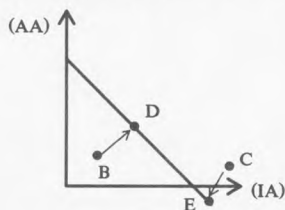
A first attempt to adjust the BLS transition probabilities minimally by moving to the locus perpendicularly (B to D) led to some negative figures (C to E). Therefore, it was decided to adjust all figures proportionately (B to D' and C to E'):
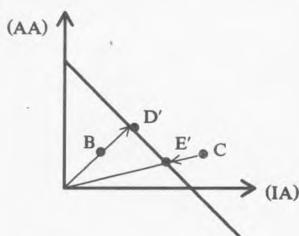
————FOOTNOTES————

[1] Shirley J. Smith, "New worklife estimates reflect changing profile of labor force," *Monthly Labor Review*, March 1982, pp. 15–20.

[2] *Handbook of Labor Statistics*, Bulletin 2070 (Bureau of Labor Statistics, 1980), pp. 8–9.

[3] See Smith, "New worklife estimates," table 3, p. 17.

[4] See Shirley J. Smith, *New Worklife Estimates*, Bulletin 2157 (Bureau of Labor Statistics, 1982), table 4A, p. 10. An example of an implicit participation rate for 20-year-old men would be $63,850/96,892 = 75.1$ percent, well below the 86.7 percent actually observed for such persons.

Labor force participation rates are not the relevant factor

SHIRLEY J. SMITH

The new BLS worklife estimates presented in my article in the March 1982 issue of the Review are the result of a computer simulation spelling out the lifetime implications of age-specific mortality, labor force entry, and exit rates which prevailed in this country during 1977. They were derived using a new model, known as the increment-decrement working life table. This model was tested against its predecessor, the conventional worklife model, and judged superior because of its explicit allowance for movement into and out of the job market at midlife. (The earlier technique had estimated worklife expectancies and entry and exit rates from a cross-sectional profile of labor force activity rates. This entailed assuming continuous labor force involvement from age of first entry to age of final retirement.)

The preceding critique by John L. Finch maintains that, because the labor force participation rates implicit in the new 1977 working life tables do not match annual average rates for the year published elsewhere by BLS, the worklife expectancies displayed in these tables are wrong. To paraphrase his argument, the implicit rates for men are too low and those for women are somewhat high. As a result, "incorrect 'transition probabilities' . . . are obtained." He states that, through biased entry and exit rates, errors are passed on to the worklife expectancy figures. According to Finch, the 1977 tables understate the length of working life for men and overstate that of younger women.

Finch makes a number of valid observations which, on first reading, seem to substantiate his claim. He is correct in noting that, if the participation rates and

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mortality rates were the same in the old and new models, their population-based expectancies would also be identical. In reality, when the two models are applied to data for the same year they yield quite different estimates. Furthermore, he is correct in observing that the two contain different schedules of implicit participation rates. He may even be correct in asserting that the increment-decrement activity rates for men are somewhat low, due to understatement of labor force retention.

However, I would take issue with Finch's quick solution, which implies knowledge of the precise magnitude and character of this understatement. He maintains that the link between annual average participation rates and transition probabilities is tautological, such that the "correct" probabilities would explain age-to-age differences (as between cells a and b or b and c) in the activity rates described in exhibit 1. Building on this supposed relationship he forces BLS figures through an additional iteration to bring them into line with the cross-sectional profile of labor force activity for 1977. This is accomplished by:

1. Reestimating the size of the model labor force at each age (that is, multiplying the number of life table survivors to that age by the annual average participation rates published for that age group).[1]
2. Using conventional formulae to revise the person-years of activity estimates accordingly.
3. Recomputing worklife expectancies on the basis of these values.
4. Determining discrepancies between the size of the labor force in his revised estimates and that embodied in the 1977 increment-decrement tables from BLS. (Differences are taken to indicate the magnitude of misstatement in transition probabilities.)
5. Adjusting the probabilities of labor force entry and exit accordingly, to take account of the apparent "error."

A closer look at this revision process shows that Finch has actually reestimated worklife durations using the conventional model. Steps 1 through 3 exactly replicate worklife derivation in that model. His "revised increment-decrement figures" no longer rest on observed transition probabilities, but instead are drawn from

cross-sectional activity rates.[2] (The increment-decrement technique actually derives participation levels from transition probabilities, and not vice versa.)

Furthermore, steps 4 and 5 rework the model input (observed rates of labor force entry and exit), then present the same data in an adjusted form as model output. But because the figures have been significantly altered, they are no longer really observed values. The observed values are lost.

Such adjustments might be warranted in a stable population, where age-specific activity rates never changed—for example, if a=d=g; b=e=h; and c=f= i in exhibit 1. But with rates changing over time, the activity level of persons aged x (cell h) is a function of the same group's activity level 1 year earlier (cell d), and not that of persons aged x−1 at the same point in time (cell g). The more rapidly activity rates change, the more Finch's cross-sectional approach introduces its own bias.

To elaborate a little further, the real-world activity rate of persons aged x is a function of three things: (1) their present age (the "age effect"), (2) the current economic and social climate (the "period effect"), and (3) the group's unique work experience accumulated over previous ages (the "cohort effect"). The last set of factors is very important. The share of a birth cohort active at age x is the cumulative result of net labor force entries and exits made by group members during *each* previous year of life. To use an obvious example, the share of all 38-year-old women active in 1978 was determined by labor force entry and exit rates of 37-year-olds in 1977, 27-year-olds in 1967, 17-year-olds in 1957, and so on. It had nothing to do with entry and exit rates of 16- to 36-year-old women in 1977.

The new working life table is an artificial construct which attempts to eliminate cohort effects. It focuses directly on age and period factors. Working with a hypothetical "stable population" (that is, one in which age-specific rates never change), it spells out the lifetime implications of labor force entry and exit rates observed in the reference year—in this case, 1977.

If those rates have been constant over the lifetime of a real cohort, model and observed labor force activity rates will necessarily match. But this is never the case. Any marked trend upward or downward in entry or exit rates will cause real and model activity rates to diverge. One would expect this result in a model based on labor force mobility rates. For instance, in the case of 38-year-old women, the worklife model for 1977 implies a higher activity rate than was observed in the real cohort during that year. This is because the labor force entry and retention rates of 1977, used to define the model's active population, were much higher than those experienced by the real cohort between 1956 and 1976. Because we wish to look at the implications of work

Exhibit 1. Hypothetical labor force activity rates underlying the Finch and BLS worklife tables

Age	1977 annual averages (Finch)	1977 January (BLS)	1978 January (BLS)
x − 1	a	d	g
x	b	e	h
x + 1	c	f	i

patterns in 1977, it is to our advantage to weed out those earlier cohort factors. The trends are less obvious for men, but the same factors pertain.

There may be merit in Finch's observation that the activity rates of men in the 1977 tables are somewhat low. However, the character of biases in the transition matrix cannot be identified solely from a cross-sectional profile of activity rates, nor can the biases be eliminated by a simple prorating procedure. There are several key problems yet to confront in the area of worklife, such as how best to quantify person-years of work, and how to move from a period to a longitudinal model. Fine-tuning the activity rates will not bring us any closer to a solution of these problems. Nonetheless, we will certainly give further thought to the question of implicit participation rates as we continue to refine BLS worklife estimates. □

---FOOTNOTES---

[1] His activity rates are not actually the official BLS estimates. At least some of the difference in estimates may be attributed to this fact. For men 62 to 68, Finch's values are as much as 10 to 15 percentage points higher than BLS figures.

[2] For a discussion of the conventional model and the reasons it is no longer used at BLS, see Shirley J. Smith, *Tables of Working Life: The Increment-Decrement Model,* Bulletin 2135 (Bureau of Labor Statistics, 1982).

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.

Research Summaries
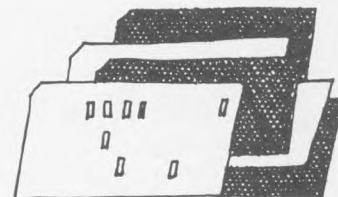
Compensation cost increases: slowdown continues in 1982

WILLIAM R. BAILEY

Most Bureau of Labor Statistics measures of compensation cost and its components showed markedly decelerating rates of increase in 1982, as the recession that began in mid-1981 continued. The Employment Cost Index (ECI) recorded a 1982 increase in employer costs for compensation (wages, salaries, and employee benefits) in private industry of 6.4 percent, down sharply from 9.8 percent in 1981. Major collective bargaining settlements in private industry provided the lowest average wage adjustments ever recorded since the series began in 1968.[1] Gross average hourly earnings rose 5.0 percent, compared with 7.3 percent in 1981, and gross weekly earnings rose 4.7 percent, following a 6.1-percent rise a year earlier. However, when adjusted for inflation, measures of real compensation and earnings reversed declines that began in 1978, because price increases in 1982 slowed even more than wage increases. (See table 1.)

The dampened 1982 increases in compensation costs resulted from a combination of economic forces that are difficult to isolate. These forces included the recession, which had a pervasive impact throughout the labor market, and conditions specific to certain industries, such as competition from imports in auto manufacturing and increased competition in trucking resulting from deregulation.

Pervasive dampening of increases

The ECI for 1982 provides data on compensation cost trends by occupation, industry, and collective bargaining status. The following tabulation shows the percent change in compensation costs in private industry for the year ending in December of 1981 and 1982.

	1981	1982
White-collar workers	10.1	6.5
Blue-collar workers	9.6	6.1
Service workers	9.3	8.4
Manufacturing industry	9.8	6.2
Nonmanufacturing industry	9.7	6.6
Union	10.7	7.2
Nonunion	9.4	6.0

The declines in the rate of increase in private-sector compensation costs were pervasive among all broad occupational and industry groups, as well as among union and nonunion groups.

Wage and salary trends. More detailed ECI series by occupation and industry are limited to the wage and salary components of compensation. These series provide additional evidence of the widespread nature of the deceleration in 1982 rates of increase. The data show, for instance, that the deceleration was not limited to labor force groups usually considered most sensitive to business cycle influences (for example, unskilled workers or workers in durable goods manufacturing). Virtually all other series showed slowdowns as well—notably

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Table 1. Changes in employee wages and compensation, 1976–82

[In percent]

Measure	1976	1977	1978	1979	1980	1981	1982
Employment Cost Index:[1]							
Compensation:[2]							
Current dollars	—	—	—	—	9.8	9.8	6.4
Constant dollars	—	—	—	—	−2.4	1.0	2.4
Wages and salaries:							
Current dollars	7.2	7.0	7.7	8.7	9.0	8.8	6.3
Constant dollars	2.3	0.2	−1.2	−4.1	−3.1	0.1	2.3
Gross Average Hourly Earnings:[3]							
Current dollars	7.7	7.6	9.2	8.0	8.8	7.3	5.0
Constant dollars	2.7	0.8	0.2	−4.7	−3.4	−1.2	1.0
Gross Average Weekly Earnings:[3]							
Current dollars	6.8	7.6	8.9	7.4	7.9	6.1	4.7
Constant dollars	1.9	0.7	−0.1	−5.3	−4.1	−2.4	0.8

[1] Covers private industry workers, excluding farm and household.
[2] In addition to wages and salaries, includes changes in the cost of employee benefits.
[3] Covers production and nonsupervisory workers in private nonfarm establishments.

NOTE: Changes are for the 12-month period ending in December. Dashes indicate data not available.

Table 2. **Employment Cost Index for wages and salaries, 1981–82**

[In percent]

Series	1981	1982
Private industry workers[1]	8.8	6.3
By occupational group:		
White-collar workers	9.1	6.4
Professional and technical workers	10.7	7.0
Managers and administrators	8.6	6.3
Salesworkers	7.5	4.2
Clerical workers	8.9	7.1
Blue-collar workers	8.6	5.6
Craft and kindred workers	8.5	6.6
Operatives, except transport	9.0	5.0
Transport equipment operatives	7.8	4.1
Nonfarm laborers	7.9	4.4
Service workers	8.3	8.5
By industry division:		
Manufacturing	8.7	5.6
Durables	9.2	5.6
Nondurables	7.7	5.8
Nonmanufacturing	9.0	6.5
Construction	8.8	5.2
Transportation and public utilities	8.4	7.2
Wholesale and retail trade	7.6	4.8
Wholesale trade	7.8	6.2
Retail trade	7.5	4.1
Finance, insurance, and real estate	9.9	6.5
Services	10.6	8.0
By bargaining status:		
Union	9.6	6.5
Manufacturing	8.9	5.8
Nonmanufacturing	10.2	7.1
Nonunion	8.5	6.1
Manufacturing	8.3	5.6
Nonmanufacturing	8.6	6.2

[1] Excludes farm and household workers.

NOTE: Changes are for the 12-month period ending in December.

white-collar workers and nonmanufacturing industries.[2] (See table 2.)

Among occupational categories, the 1982 slowdown in wage increases was pronounced for transport equipment and other operatives and nonfarm laborers. Their rates fell to 53–56 percent of their 1981 increase. These were also the groups with the highest unemployment rates among private industry workers. The wage slowdown for salesworkers, however, was equally severe— the rate of increase was also about half as large as it had been in 1981 (4.2 compared with 7.5 percent). Salesworkers' earnings are one of the most volatile ECI series because they reflect fluctuations in commissions.

The slowdown in wage increases extended to all industry divisions for which separate data are available. The greatest slowdown was in the retail trade industry, where the 12-month rate of change fell from 7.5 percent in 1981 to 4.1 percent in 1982. Construction and durable manufacturing also showed marked slowdowns.

A look at wage trends by bargaining status reveals that both nonunion and union workers experienced a slowing in the rate of wage increase in about the same degrees. The 12-month rate for nonunion workers fell from 8.5 percent in December 1981 to 6.1 percent in December 1982 (about a 28-percent drop). The union

rate declined from 9.6 percent to 6.5 percent (a 32-percent drop). For both groups, the rates of increase recorded by the ECI in 1982 were the lowest since these data became available in 1976.

Negotiated wage changes. The 1982 deceleration in the rate of wage increases in the union sector is also apparent in the BLS series on major collective bargaining settlements in private industry. Wage adjustments negotiated in 1982 covered 3.3 million workers and were the lowest since 1968, averaging 3.8 percent for the first contract year and 3.6 percent over the life of the contract. The adjustment rates for the recent 3-year bargaining cycle are shown below:

	1979	1980	1981	1982
Adjustment in first-year	7.4	9.5	9.8	3.8
Adjustment over life-of-contract	6.0	7.1	7.9	3.6

Rates of change were dampened by the fact that about one-third of the workers in major 1982 bargaining situations will receive no specified wage increases over the life of their contracts. Even when increases were specified in contracts, they were the lowest (averaging 5.7 percent) since 1973—a year of wage and price controls.[3]

Wage adjustments which actually became effective under all major contracts (stemming from current settlements, cost-of-living adjustments, and deferred increases for prior-year contracts) were also dampened in 1982, as shown in the following tabulation of effective wage adjustments:

	1979	1980	1981	1982
Total adjustment	9.1	9.9	9.5	6.8
Adjustments resulting from—				
Current settlement	3.0	3.6	2.5	1.7
Prior settlement	3.0	3.5	3.8	3.6
Cost-of-living adjustments	3.1	2.8	3.2	1.4

The adjustments were held down by the low adjustments from current settlements and by reduced cost-of-living adjustments resulting from the lower rate of consumer price increases. Deferred adjustments in 1982 remained high, however, because they reflected specified wage adjustments negotiated in prior years.

Constant-dollar trend

Although the rate of wage increases slowed substantially in 1982, the result, when adjusted for inflation, was more favorable to workers than it had been in several years. Wages as measured by the ECI rose 6.3 percent, the lowest over-the-year increase since 1976, but consumer prices rose even less, 3.9 percent. Therefore, real wages recorded their first substantial over-the-year increase since 1976—2.3 percent. In the interim years, real wages as measured by the ECI were stable or declined by as much as 4.1 percent (1979). (See table 1.)

Measures covering the gross average hourly earnings and gross average weekly earnings of production and nonsupervisory workers in the private nonfarm economy also showed improvement when adjusted for inflation. (See table 1.)[4] Because these measures do not isolate employment shifts among occupations and industries with different wage levels, they include the impact of the 1982 recession on the earnings of production or nonsupervisory workers. A recession typically retards the increase in average earnings because of employment reductions in high-paying cyclically-sensitive industries and the reduction of premium-paid hours. Weekly earnings are further reduced by shorter workweeks.

Reflecting these influences, real average hourly earnings declined through mid-1982, but finished the year with a 1.0-percent gain for the 12 months ending in December. For average weekly earnings, the recessionary impact was slightly more pronounced because of the additional effects of a shortened workweek, which is an alternative to layoffs when demand is reduced. Real average weekly earnings finished the year with an increase of 0.8 percent, a sharp contrast to the 2.4-percent decline of 1981, and declines of 4.1 percent and 5.3 percent for 1980 and 1979.   □

------ FOOTNOTES ------

[1] For a description of the Employment Cost Index and collective bargaining data, see the explanatory notes for Wage and Compensation Data in the Current Labor Statistics section of this *Review*.

[2] In this report, the indicator of the degree of slowdown in a rate of increase is the ratio of the 1982 rate to the 1981 rate.

[3] For a complete review of bargaining in 1982, see Mary Anne Andrews and David Schlein, "Bargaining calendar will be heavy in 1982," *Monthly Labor Review*, December 1981, pp. 21–31, and George Ruben, "Collective bargaining in 1982: results dictated by economy." *Monthly Labor Review*, January 1983, pp. 29–37.

[4] Unlike the ECI, the average hourly and average weekly earnings series do not standardize the unit of labor services for which earnings are measured. Earnings measures are influenced by shifts between high- and low-paying jobs, changes in hours paid at premium rates, and, for weekly earnings, changes in the length of the workweek. Therefore, they reflect not only changes in rates of pay as such, but also the employment effects of business cycle expansions and contractions on the earnings of employed labor.

Research Notes
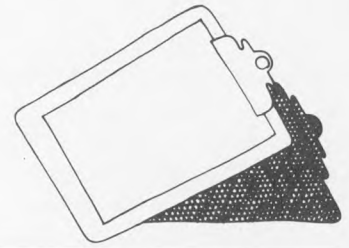
Benchmark unemployment

In *Estimating Benchmark Unemployment for the 1980's*, John E. Connaughton and Roger A. Madsen (both of the University of North Carolina-Charlotte) present a method for determining the level of "benchmark unemployment"—frictional and structural unemployment—in the 1980's.

The authors trace the evolution of the concept of benchmark (that is, noncyclical) unemployment from President Kennedy's Council of Economic Advisors, who proposed a 4-percent benchmark in 1961, through the Nixon Administration advisors (5 percent), to the Carter Administration advisors who, using novel weighting procedures, suggested a 4.9-percent benchmark. The authors cite other and usually higher benchmarks proposed, including those of the Reagan Administration advisors.

Connaughton and Madsen point out that most analysts agree that benchmark unemployment has risen over time. These analysts attribute the rise to several factors, but particularly emphasize the effect of the change in the labor force because of increased proportions of women and teenage workers who have higher unemployment rates than prime age men (25 to 54 years).

Connaughton and Madsen propose a model for determining benchmark unemployment that includes the ratio of the demographic mix of workers, the ratio of prices to unit labor costs, the noninstitutional population 16 years and over, annualized real Gross National Product, lagged unemployment of the civilian labor force, and a randomly distributed unexplained residual. The authors also specify the following factors to estimate the demographic mix: average years of completed schooling of females, the ratio of manufacturing employment to total employment, the proportion of adult females with spouse present, the noninstitutional civilian labor force, and again, an unexplained residual. A rationale is provided for the selection of each factor of each equation.

The authors estimate that benchmark unemployment at the threshold of the 1980's was 6.7 percent, a rise of 2.7 percentage points since the Kennedy advisors suggested 4 percent in 1961. The authors caution that: "The findings which suggest that the benchmark rate

has increased from 4.0 percent in 1961 to 6.7 percent in 1981 in no way imply that 6.7 percent is an acceptable rate of unemployment. The 6.7 percent represents the unemployment rate, or benchmark rate, below which the economy can be expected to feel significant inflationary pressure caused by labor market tightness. To reduce unemployment below 6.7 percent without inflationary pressure, micro rather than macro policies must be followed to increase productivity and labor market efficiency."

This paper was presented at the 95th annual (winter 1982) meeting of the American Economic Association.
—Robert Fisher, *MLR*.

The R&D - productivity link

The well-documented slowdown in the growth of the U.S. productivity over the last decade was accompanied by dampened growth in company-financed research and development. In *R&D and Declining Productivity Growth*, F.M. Scherer, professor of economics at Swarthmore College, examines the link between the two factors.

Corporate research and development is a profit-seeking activity, but its returns are apparent only after a considerable lag. Citing an earlier study, the author says that David Ravenscraft and Scherer found that peak returns generally accrue 4 to 6 years after R&D spending takes place. Effects of the lag may be seen in R&D activity patterns over the last decade: during the early 1970's, firms responded to depressed returns to R&D by cutting back their R&D spending relative to sales, and concentrating on relatively high-yield projects. When healthy returns on this leaner portfolio of R&D projects began to materialize during the second half of the decade, firms were encouraged to expand their R&D activities, with the result that real growth in R&D spending has been about 5.7 percent per year since 1979.

Assessing the importance of R&D in productivity growth is difficult because the benefits of an innovation tend to be greater for society as a whole than for the innovating industry, the author observes. About three-fourths of all company-financed industrial R&D is oriented toward the creation of products which are sold to other industries, often at prices which have been driven down by competition from other innovating firms. To the extent that industries which purchase new products share in the benefits of the selling industry's R&D, the true productivity contribution of innovators is understated.

"Research Notes" are brief reports on selected research published elsewhere that is related to the work of the Bureau. They are prepared by the author(s), the MLR staff, or others.

Scherer has used a matrix structure to measure the interindustry technology flows which arose from 1974 R&D expenditures. On the basis of these results, regressions were constructed to estimate the marginal productivity of the economy's R&D capital stock over the last two decades. In almost all cases, the marginal productivity of R&D for the society as a whole was found to have been higher during 1973–78 than during the more bullish 1964–69 period, in apparent contrast to the situation for individual firms and industries. Scherer estimates that the previously noted contraction in corporate R&D expenditures during the early to mid-1970's has cost the economy at least .20 to .28 percentage point of the productivity growth that would have resulted if spending had continued to increase at rates posted during the 1960's. And because of the characteristic lag between R&D investments and returns, the effects of the falloff in R&D activity are likely to be felt for several years to come.

Scherer offers two scenarios which might account for the stagnation of R&D growth during the last decade. In the first, R&D spending is cut back because firms have fewer innovation opportunities or because the markets for their innovations are crowded with similar products. In the second, the decline in R&D results from an increasing divergence between its private and social returns brought about by intensified research competition or more rapid imitation of new products.

To date, there is some evidence to support each interpretation of the slowdown in R&D activity. But, says Scherer, definitive conclusions about, and prescriptions for, the problem will not be possible until U.S. statistical series related to productivity and to technology flows are considerably improved.

This paper was presented at the winter 1982 meetings of the American Economic Association and is scheduled to appear in the *Proceedings* of those meetings. —Mary K. Rieg, *MLR*.

Military spending

In *Economic Consequences of Military Spending*, Faye Duchin of the Institute of Economic Analysis, New York University, examines the impact of military spending on employment in the United States and on the world economy if such spending is increased or decreased.

Statistical data are presented which show the proportion of total employment generated by military spending in 1968 (the peak year for military spending in Vietnam) and in 1979, and the industry and occupational composition of employment created by military spending in 1968 and 1977.

In analyzing the effect of military spending on the world economy, the author presents several alternative scenarios of hypothetical increases and decreases in military spending. The base scenario uses the recent trends in military bbspending to project into the future. Scenario 1 reduces military spending in all regions below that of the base in each year from 1981 to 2000, resulting, nonetheless, in real increases in military expenditures over the 20-year period. In this scenario, a portion of the "savings" (from the reduced military spending) is transferred from rich developed regions to the poorest, least-developed regions in the form of economic aid. In scenario 2, the real military expenditures are continually reduced and the entire "savings" are transferred to the poorest regions.

Personal consumption to the year 2000 for each scenario is projected for the world, the developed countries, and the four poorest regions ("arid" Africa, "low-income" Asia, "resource-poor" Latin America, and "tropical" Africa) which, according to the scenarios, would receive the additional aid.

This paper was presented at the 95th annual (winter 1982) meeting of the American Economic Association. —Anna H. Hill, *MLR*. □

Major Agreements Expiring Next Month

This list of selected collective bargaining agreements expiring in July is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Labor organization[1]	Number of workers
American Metal Climax, Inc., Climax Molybdenum Co. Division (Climax, Colo.)	Mining	Oil, Chemical and Atomic Workers	2,300
A. O. Smith Corp. (Milwaukee, Wis.)	Transportation equipment	Federal Labor Union	3,000
Associated General Contractors of America, Inc.:			
Massachusetts Chapter and 3 others	Construction	Carpenters	7,000
Massachusetts Chapter and 7 others	Construction	Bricklayers	3,500
St. Louis Chapter (Missouri)	Construction	Iron Workers	1,700
Bowaters Southern Paper Corp. (Calhoun, Tenn.)	Paper	Paperworkers; Electrical Workers (IBEW)	1,100
Briggs and Stratton Corp. (Milwaukee, Wis.)	Machinery	Allied Industrial Workers	7,900
Brooklyn Union Gas Co. (New York)	Utilities	Transport Workers	2,350
California Metal Trades Association (California)	Construction	Boilermakers	1,200
Carborundum Co., 7 Divisions (Niagara Falls, N.Y.)	Stone, clay, and glass products	Oil, Chemical and Atomic Workers	1,950
Crucible, Inc. (New York and Pennsylvania)	Primary metals	Steelworkers	4,900
Dresser Industries, Inc., Harbison-Walker Refractories (Interstate)	Stone, clay, and glass products	Steelworkers	1,400
E. J. Brach and Sons, Inc. (Chicago, Ill.)	Food products	Teamsters (Ind.)	3,200
Firestone Tire and Rubber Co., Firestone Steel Products Co. Division (Wyandotte, Mich.)	Transportation equipment	Auto Workers	1,050
Floor Covering Association of Southern California and 3 others (California)	Construction	Painters	1,850
FMC Corp., Northern Ordnance Division (Fridley, Minn.)	Fabricated metal products	Auto Workers	2,300
Fred Meyer, Inc. (Oregon)	Retail trade	Food and Commercial Workers	1,800
General Refractories Co. (Interstate)	Stone, clay, and glass products	Steelworkers	1,100
Industry Food Agreement (Arizona)[2]	Retail trade	Food and Commercial Workers	4,400
Kaiser Steel Corp., Steel Manufacturing Division (Fontana, Calif.)	Primary metals	Steelworkers	5,550
Kelsey-Hayes Co., Heintz Division (Pennsylvania)	Fabricated metal products	Auto Workers	1,000
Kimberly-Clark Corp. (Memphis, Tenn.)	Paper	Paperworkers	1,100
Kroger Co. (Indiana)	Retail trade	Food and Commercial Workers	2,000
McGraw-Edison Co., Power Systems Division (Canonsburg, Pa.)	Electrical products	Steelworkers	1,450
Mirro Aluminum Co. (Manitowoc and Two Rivers, Wis.)	Fabricated metal products	Steelworkers	1,750
Montgomery Ward and Co., Inc. (Baltimore, Md.)	Retail trade	Teamsters (Ind.)	1,550
National Tea Co., Standard Grocery Division (Illinois and Indiana)	Retail trade	Food and Commercial Workers	1,100
Pipeline Contractors Association of California and Associated General Contractors of California (California)	Construction	Plumbers	1,500
Restaurant Association State of Washington, Inc., and Independents (Washington)	Restaurants	Hotel Employees and Restaurant Employees	1,550
Sand and Gravel Producers (Louisiana)[2]	Mining and quarrying of non-metallic minerals, except fuels	Teamsters (Ind.)	1,000
Sealed Power Corp. (Muskegon, Mich.)	Machinery	Auto Workers	1,050
Southern California Association of Cabinet Manufacturers (California)	Furniture	Carpenters	1,350
Todd Pacific Shipyards Corp., Los Angeles Division (California)	Transportation equipment	Marine and Shipbuilding Workers	4,000
Weyerhaeuser Co. (Plymouth, N.C.)	Paper	Paperworkers; Operating Engineers	1,600
White Pine Copper Co. (White Pine, Mich.)	Mining	Steelworkers	1,050
Winery Employers Association (California)	Food products	Distillery Workers	2,000

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

[2] Industry area (group of companies signing same contract).

Developments in Industrial Relations
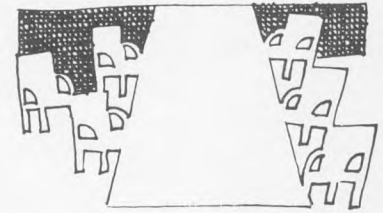
Pattern contract in copper mining and processing

An expected pattern setter for the 1983 round of bargaining in the copper mining and processing industry was established when a coalition of 13 unions settled with Kennecott Corp. for 4,000 employees in Utah, Nevada, Arizona, New Mexico, and Maryland. The new contract freezes wages and benefits for its 3-year term, except for possible quarterly pay adjustments resulting from the cost-of-living clause, which was continued. There will be some reductions in benefits for workers hired after the July 1 effective date of the accord. The reduction will not apply to any of the company's 4,000 laid-off employees who are rehired.

Kennecott, which operated at a loss in 1982, had initially pressed the Steelworkers and the other unions for wage-and-benefit concessions similar to those the Steelworkers had accepted in negotiations with major steel producers. (See *Monthly Labor Review*, May 1983, pp. 47–48.)

A spokesman for the union coalition called the settlement "a major victory in holding the line . . . [and] protecting jobs and benefits."

The coalition was continuing to bargain with ASARCO, Phelps-Dodge Corp., Inspiration Consolidated Copper Co., and other companies, where current contracts also expire at the end of June. Currently, about 24,000 members of the union are employed in the industry, compared with 45,000 when the downturn began in 1981.

Concessions smaller at Allegheny Ludlum

Allegheny Ludlum Steel Corp., which had withdrawn from the Coordinating Committee Steel Companies (an association of major steel companies) and the Steelworkers union negotiated a contract that provided for a smaller wage concession than the Coordinating Committee's agreement. The pay cut at Allegheny Ludlum was 50 cents an hour, which will be restored in increments of 18 cents an hour in April 1984, 14 cents in April 1985, and 18 cents in April 1986. (See *Monthly Labor Review*, May 1983, pp. 47–48, for terms of the

February settlement for the seven Coordinating Committee Steel Companies, which included a $1.25 an hour temporary pay cut.)

The Allegheny Ludlum accord also differed from the Coordinating Committee's settlement by instituting a company payment of 25 cents an hour into individual retirement accounts, rather than increasing company financing of supplemental unemployment benefits.

A company official admitted that the agreement "isn't as competitive as we'd like it to be." The union said that it was able to negotiate a smaller wage cut with Allegheny Ludlum because the company earned a profit in 1982, while other companies had losses.

Allegheny Ludlum has not announced why it quit the Coordinating Committee, but union sources say the company believed that certain bargaining goals of the committee favored the larger companies. The Allegheny Ludlum contract covers 5,400 workers at operations in Pennsylvania, Delaware, and Connecticut. It expires October 1, 1986, 2 months after the Coordinating Committee's agreements.

Volkswagen, Champion accords with UAW

More than 8,000 members of the Auto Workers union were covered by 3-year agreements with Volkswagen of America and Champion Spark Plug Co. that did not provide for specified wage increases except for a 3-percent third year increase at Champion. Both companies revised their automatic cost-of-living pay adjustment clauses. At Volkswagen, the adjustments will be made annually during the first 2 years, reverting to quarterly adjustments in December 1985. At Champion, quarterly adjustments will continue but each of the first 10 possible adjustments will be reduced by 1 cent an hour.

The Volkswagen contract, which covered 5,500 employees (including 2,400 on layoff) at New Stanton, Pa., and South Charleston, W. Va., also increased company financing of supplemental unemployment benefits, and improved worker job security, health, and safety provisions.

At Champion, benefit improvements included an additional annual paid holiday and a longer paid shutdown during the Christmas-New Year's Day period—6 days in 1983, 7 in 1984, and 8 in 1985.

The Champion settlement ended a 6-week strike and covered operations in Toledo and Cambridge, Ohio; Burlington, Iowa; Detroit, Mich.; and Windsor, Ontario, Canada.

Communication accord aids displaced workers

The Communications Workers of America (CWA) and other unions' effort to win increased job security in current negotiation with American Telephone & Telegraph Co.'s Bell System was bolstered by CWA's agreement with General Telephone Co. of California that contained two forms of aid. One provides that workers with 20 years of service who are displaced because of technological change are entitled to immediate pensions calculated at unreduced rates. In addition, these workers will receive $200 to $400 a month, varying by length of service, for up to 4 years, and will be entitled to $3,000 to be used to maintain insurance coverage for up to 4 years, finance training in another field, or cover moving expenses.

The second aid plan is available to all employees with at least 1 year of service who decline a company request to relocate to another job more than 50 miles away. These workers will receive up to 36 weeks of pay, computed at 1 week for each of the first 10 years of service, plus 2 weeks for each additional year. In addition, General Telephone will pay half their insurance for the first 6 months after leaving the company, plus up to $2,500 of their retraining courses.

Other changes for the 21,000 employees included improvement in pensions and a boost to $500,000 in lifetime major medical, from $100,000. Wages also were increased: for workers at the top of their progression schedule, the increase was 7 percent effective March 4, 2.25 percent in October 1983, and 4 percent in March and October 1985. The contract expires in March 1986.

Company reorganizes, nullifies contract

The 6,200 members of the United Food and Commercial Workers union employed by Wilson Foods Corp. faced an uncertain future when the meatpacking company filed for reorganization under Federal bankruptcy laws and cut pay by 40 to 50 percent. Kenneth J. Griggy, chairman and chief executive officer of the company, claimed that the filing nullified the current labor contract. He said the company was not going out of business, but union leaders must understand that "we simply cannot continue under the existing competitive disadvantage." According to Griggy, Wilson's labor costs of about $17 an hour were 80 percent higher than some of its competitors, apparently referring to Iowa Beef Processors and other firms that have entered the industry in recent years and introduced new processing and distribution systems that undercut the costs of Wilson and other "old line" meatpackers.

Prior to the bankruptcy filing and compensation cut, the company had discussed wage concessions with the union that would have been at least partly offset by adoption of profit sharing and a lump-sum payment to workers in exchange for termination of the "burdensome" agreement provisions. According to Wilson, these proposals were not acceptable to the union.

There was no immediate comment from the United Food and Commercial Workers on Wilson's contract nullification move. The current agreement between Wilson and the union was negotiated in late 1981 and had been scheduled to expire in August 1985. It is similar to contracts the union negotiated with other meatpackers, providing for no specified wage increases, suspension of the automatic cost-of-living pay adjustment formula until the last day of the contract, and cuts in pay rates for new employees.

Truckers scheduled pay increase diverted

In the trucking industry, a scheduled 33-cent-an-hour cost-of-living pay adjustment for members of the Teamsters union was diverted to help bolster health and welfare plans. Such a diversion was permitted under the February 1982 accord between Trucking Management, Inc., the industry's main bargaining arm, and the union. At the time that accord was negotiated, the parties diverted 25 cents of a 72-cent adjustment scheduled for April 1982.

Early in 1983, the industry had sought to eliminate the April 1983 adjustment, and to reopen the entire contract for bargaining, contending that it needed labor cost relief because of reduced operations and earnings. The proposal was rejected by the union. (See *Monthly Labor Review*, April 1983, p. 42.)

Elsewhere, 3,800 members of the Machinists union covered by the Western States Truck Maintenance Agreement had their 33-cent scheduled cost-of-living adjustment diverted to help maintain health and welfare and pension benefits.

Similarly, about three-fourths of the 7,500 local cartage drivers represented by the independent Chicago Truck Drivers Union had their scheduled 33-cent adjustment diverted to help maintain multiemployer health and welfare plans. The other drivers, who are covered by separate plans maintained by individual employers, had 13 cents of their scheduled 33-cent adjustment diverted.

Williams convicted, resigns as Teamsters head

Roy L. Williams, president of the Teamsters union since 1981, resigned in mid-April. The action came after a Federal district judge said the union leader could remain free pending his appeal of a bribery-conspiracy conviction only if he gave up the post. (See *Monthly La-*

bor Review, March 1983, p. 45.) Earlier, Williams had been sentenced to a 55-year term because Federal criminal rules require a maximum sentence before prison authorities can determine if a convict is physically able to stand imprisonment. Williams, age 68, suffers from emphysema. Final sentencing is scheduled in June.

Jackie Presser, age 56, a vice president of the union, was selected to complete Williams' 5-year term of office, which runs to June 1986. The decision by the Teamsters' executive board was unanimous. Presser was head of the Ohio Conference of Teamsters, as well as several other units of the union in the State.

Public contract bans layoffs, contracting out

Employees of Milwaukee County, Wis., negotiated a contract that bans layoffs during the first year and the use of outside contractors during both years. In exchange, they agreed to a single general wage increase of 3 percent, effective in the second year. The 6,500 workers, who are represented by the State, County and Municipal Employees, will be eligible for step or merit pay increases in both years.

The accord was negotiated by the Personnel Committee of the County Board. County Executive O'Donnell, criticized the accord, saying the ban on layoffs severely restricted his ability to counter possible budget deficits. However, he did not veto the settlement, apparently because he did not have the backing needed to push an alternative through the board.

Sugar and pineapple accords

In Hawaii, 13,000 members of the International Longshoremen's and Warehousemen's Union were covered by settlements with sugar and pineapple growers. The 2-year agreement for the 7,500 sugar workers did not provide for an immediate wage increase, but they will receive a 30-cent-an-hour increase in February 1984. Other provisions included elimination of the Presidents Day paid holiday and a $300 increase (to $900) in maximum annual dental benefits.

The 21-month pineapple accord also did not call for an immediate wage increase, but the workers will receive increases ranging from 15.5 to 23 cents in February and July of 1984. The medical plan was improved and the minimum monthly pension rate was increased to $8.50 (formerly $7.50) for each year of service to 35 years, plus $4.25 (formerly $3.75) for each additional year.

Workers retain current pay to help company

More than 14,500 employees of Meijer Inc. supermarkets throughout Michigan were covered by a contract that retained wage and benefit levels for current employees, but made some concessionary changes for new workers. Joseph Crump, secretary-treasurer of a United Food and Commercial Workers local union, said the contract was accepted by the employees not because Meijer was in financial difficulty but "with the idea that it would help the company expand." The revisions require new employees to pay a small portion of the cost of their insurance benefits and reduces their pay for Sunday work to time and one-half. Current employees will continue to receive double time pay for Sunday work and insurance benefits fully financed by Meijer.

Social security system changes

Years of controversy over the financial condition of the social security system were eased when President Ronald Reagan signed into law a plan designed to assure the solvency of the system for the next 75 years. The amendments to the 48-year-old system were developed by a bipartisan National Commission on Social Security. Among other things, the new law:

- Defers the scheduled July 1983 cost-of-living adjustments in benefits to January 1984 and provides that all future annual adjustments also will be in January.
- Modifies the cost-of-living adjustments for 1985 through 1988 in cases where trust funds are less than 15 percent of the amount that will be needed for the year. If this occurs, the adjustment will equal the rise in the Consumer Price Index or the increase in average wages, whichever is less.
- Gradually increases the normal retirement age to 67 by the year 2027.
- Increases employer and employee payroll taxes from 6.7 percent of wages to 7 percent in 1984, 7.15 percent in 1988, and 7.51 percent in 1989.
- Increases the tax for self-employed persons by 33 percent to equal the combined amount paid by employers and employees. This increase will be offset by a special income tax credit.
- Brings those who start work for the Federal Government after January 1, 1984, under the system.
- Brings employees of private, nonprofit organizations under the system on January 1, 1984.
- Prohibits State and local governments from withdrawing from the system.
- Further reduces benefits for workers who retire early.
- For retired persons with adjusted gross income of $25,000, imposes income taxes on either one-half of the social security benefits received or one-half of the income over $25,000, whichever is less. The base income is $32,000 for married couples.

Harsher penalties for union officers banned

Employers cannot arbitrarily discipline union officials more severely than other workers for participating in unauthorized work stoppages. In a unanimous decision, the Supreme Court ruled that employers can impose

harsher penalties on union officers in such cases only if the labor contract specifically holds them responsible for stopping unauthorized strikes.

The case arose in 1977 when members of Local 563 of the International Brotherhood of Electrical Workers refused to cross a picket line set up by members of an Operating Engineers local at the construction site of Metropolitan Edison Co.'s nuclear power plant near Harrisburg, Pa. After the picketing was ended and work resumed, Metropolitan Edison imposed 25-day suspensions on David Lang and Gene Light, the local's president and vice president, and 5 to 10 days suspensions on about 130 other members of the local.

The company contended that the additional penalty for Lang and Light was warranted because they had a special duty to obey and help enforce the no-strike provision in the collective bargaining agreement, even though the agreement did not list the specific obligations of union officers. The company also cited earlier arbitration decisions on the issue.

The union then filed a complaint with the National Labor Relations Board, which held that the more severe penalty for Lang and Light violated provisions of the National Labor Relations Act assuring employees the right to hold union office. The board also said that even if a waiver of union officers' rights is included in a labor contract, the waiver must be reflected in "clear and unmistakable language." The board's position was affirmed by a court of appeals, leading to the company's appeal to the Supreme Court.

In the opinion, written by Justice Lewis Powell, the Supreme Court said: "If, as the company urges, an employer could define unilaterally the actions that a union official is required to take, it would give the employer considerable leverage over the manner in which the official performs his union duties. Failure to comply with the employer's directions would place the official's job in jeopardy. But compliance might cause him to take actions that would diminish the respect and authority necessary to perform his job as a union official. This is the dilemma Congress sought to avoid. We believe the Board's decision furthers these policies and upholds its determination."

The company's contention that a higher duty was required of the two officers because of the earlier arbitration decisions also was rejected. The court explained that the previous arbitration decisions did not apply because they had been issued during labor agreements which specifically stated that such decisions would be binding only "for the term of *this* agreement."

Public workers not protected by 'free speech'

Public employees who complain about their supervisors or working conditions are not protected by constitutional guarantees of free speech and can be fired, according to the Supreme Court. The case originated in 1980, when Sheila Myers, an assistant district attorney in New Orleans, circulated a questionnaire among fellow employees seeking information on office morale, the competence of supervisors, pressure on employees to participate in political campaigns, and the need for a grievance committee. When she was fired for this activity, she began legal action. A U.S. district court ruled that Myers' constitutional rights had been violated and ordered her reinstated with back pay and $1,500 in damages. The decision was affirmed on appeal, leading to the appeal to the Supreme Court.

Writing for the five member majority, Justice Byron R. White said that "While . . . public officials should be receptive to constructive criticism offered by their employees, the First Amendment does not require a public office to be run as a round table for employee complaints over internal office affairs." Continuing, he said that when a public employee speaks not on matters of public concern, but only on "matters of personal interest, absent the most unusual circumstances, a Federal court is not the appropriate forum in which to review the wisdom of a personnel decision taken by a public agency. . . ."

In a dissenting opinion, Justice William J. Brennan, joined by the other three justices, said that the majority decision would deter public employees from making critical statements about the operation of their agencies for fear of reprisal, depriving the public of information needed to evaluate the performance of elected officials. □

Book Reviews
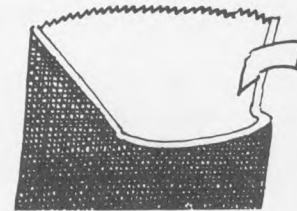
Incentives to change

Full Employment and Public Policy: The United States and Sweden. By Helen Ginsburg. Lexington, Mass., D.C. Heath and Co., Lexington Books, 1983. 235 pp. $24.95.

In this highly useful book, Professor Helen Ginsburg, of Brooklyn College of the City University of New York, compares in rich detail the Swedish and American approaches to employment policy. The first half of the book is devoted to an analysis of the sources, dimensions, and results of unemployment in the United States, tracing the origins of the Humphrey-Hawkins "full employment" legislation of 1978, while the second half describes and evaluates the vast array of measures adopted in Sweden to preserve full employment there. Although Professor Ginsburg's discussion of the American economy is valuable, as a summary of the relatively feeble steps taken to ameliorate high levels of unemployment and as a basis for intercountry comparisons, by far the most intriguing chapters deal with the Swedish experience. These represent the most extensive and most current examination of Sweden's unique economic policy now available in the United States.

The contrast between the Swedish and American approaches is sharp. While levels of national unemployment in excess of 9 and 10 percent are tolerated in the United States, with added millions outside the labor force despite a willingness to work or employed at jobs that pay them only a substandard income, Swedish policymakers, whether from government, labor, or business, become deeply concerned when unemployment rises above 2 percent. The ironies are manifold: while Americans generally pay rhetorical homage to the "work ethic," our society gives relatively higher priority to social-welfare programs and transfer payments than to the systematic assurance of employment. Sweden, on the other hand, has the image of a "welfare-oriented" society, but regularly emphasizes, and underwrites, the provision of jobs and decries any proposed substitution of "welfare" for "work." Ginsburg notes that production and investment in Sweden remain predominantly in private hands, also noting the irony that government ownership of industry increased under the supposedly more conservative "centrist" regime of 1976–82, after decades of Social Democratic rule.

Full-employment policy in Sweden is a legacy of the Keynesian-oriented Social Democratic party, but the short-lived opposition regime of 1976–82 continued to enforce it. Several macroeconomic and microeconomic tools used in its implementation reflect a genuine national consensus in support of the full-employment principle, according to Ginsburg. These tools include: a National Labor Market Board, with representation from business, labor, and government, which also supervises 24 County Labor Market Boards and the employment service; Investment-Reserve Funds, under which companies can set aside up to half of pretax profits with substantial tax advantages, for tax-free use in approved projects during recessions; accelerated public works; stockpiling and inplant training subsidies, for use during slack periods; job placement, information, and training services, with mandatory listing of job openings with the employment service; regional development or relocation grants, largely to offset higher unemployment in the northern regions; and specialized skills training and general or remedial education designed to meet the needs of women, youth, the handicapped, immigrant workers, and others with unique problems in the labor market.

When unemployment rises, "relief" indeed is provided, but primarily in the form of direct job creation, at prevailing wages and benefits and *without* a means test. Sweden uses public-service employment as an antirecession tool to a far greater extent than does the United States, with an increasing emphasis on social service, public health, and children's programs in addition to the traditional construction, forestry, and conservation projects. Where plant closings and major layoffs are contemplated, firms are required to give advance warnings, notify the local Labor Market Board and the employment service, and negotiate with unions before personnel cuts are implemented.

Like most other countries, Sweden experiences rising and troublesome youth unemployment, although it remains quite low in contrast with the astronomically high rates in the United States. Similar problems have arisen in recent years in relation to increasing immigration and a rising proportion of immigrant workers in the labor force. In the past, Sweden has had a racially and culturally homogeneous population, and perhaps, as Ginsburg observes, the ultimate test of Sweden's

commitment to full employment will lie in its handling of the immigration issue. So far, the commitment has been extended to those of immigrant background, as well as to women and others who are newly entering the work force.

As Ginsburg concedes, it is uncertain how much of the Swedish system could be successfully implemented in the United States. Unlike American workers, Swedish workers, white- and blue-collar alike, overwhelmingly are unionized, and there is no evidence that the equally organized employers are intent upon "breaking" unions. Furthermore, there is far greater social consciousness and class unity in Sweden, where, Ginsburg notes, higher-paid workers may accept relatively lower wage increases in order that the lesser-paid can advance more rapidly, surely a rare occurrence in the United States. Nevertheless, while few would argue that all Swedish policies are readily transferable, it is clear that a great many valuable lessons can be learned from the Swedish experience.

Ginsburg's book should be read by every policymaker dealing with the persistent problem of unemployment. It demonstrates tellingly that full employment, without inflation, can be achieved and maintained in a capitalistic economy, provided that there is a genuine social and political commitment to this goal.

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Union activity in the U.S.S.R.

Soviet Trade Unions: Their Development in the 1970's. By Blair A. Ruble. New York, Cambridge University Press, 1981. 144 pp., bibliography. $29.50.

What do Soviet trade unions do? That's the question that most Americans think of when the subject is mentioned. What should they do? That's the question that has dominated Soviet thinking.

This monograph is based on the author's doctoral dissertation at the University of Toronto and includes material previously published. Specialists in the Soviet Union will find the volume most useful, and those reasonably informed about labor relations will not find the material difficult. A 13-page bibliography (with citations in Russian and English) can be consulted for further information. Blair Ruble begins by reporting briefly on the early development of unions under Lenin. As is well known, the 1921 Communist Party Congress, after considerable debate, assigned the unions a dual function—

to protect workers but only within the broader goals of the party. Under Stalin, protection of workers was abandoned and unions turned to promoting productivity. Thus, Ruble arrives at his starting point—the resurrection of Soviet unions under Nikita Khrushchev's leadership, beginning in 1957.

Ruble cites and summarizes many studies and much information on trade union activity. Almost all readers will conclude that the Khrushchev initiative has had some success. Union leaders now play a role in the formation of national labor policy. On the factory level, the "carrot" has emerged as a substitute for the "stick." Pay policies tend to favor the lower-income worker, and Ruble tells us that wage inequality has diminished. Perhaps nothing summarizes the change in the domestic situation more dramatically than this comment: "Four decades ago, a truant would have been sent to jail or to a forced labor colony. Today he can hardly even be fired, a turnabout resulting from an increasing awareness of the social causes of labor discipline violations."

But all is not sweetness and light. Trade union officials are not elected directly, nor controlled entirely, by the membership. The party ultimately controls. The removal of the labor federation's president in 1975 resulted in the appointment of a person who had no trade union experience—about 18 months later! In 1979, the required written notice for legally vacating a job was changed from 2 weeks to 1 month. The trade union newspaper is filled with accounts of managerial failure to live up to collective agreements and the law; less frequent are accounts of the removal of managers for these violations. Individual workers and unions attempted to improve safety conditions during the 1970's, but were not overwhelmingly successful. Ruble's chapter on limited worker participation in management suggests that even this may be declining. And the assignment of individuals to psychiatric hospitals and then to "corrective labor facilities" for protesting poor working conditions will hardly encourage the average Soviet worker to participate in his trade union or factory committees.

Ruble's conclusion is balanced: Unions "have neither entirely succeeded nor entirely failed in meeting their dual function." Thus, he sees the unions as encouraging productivity and defending workers against the managers. What will the future bring? Ruble's book was completed long before Leonid Brezhnev's death and is vague about future patterns. But Yuri Andropov's recent speech in a Moscow factory suggests that unions may be sorely tested in the next decade. The new leader called upon workers to "increase the efficiency of production." He also called for increased discipline. The campaign to increase discipline has already begun, with the media criticizing "absenteeism, loafing, and late arrivals at work" (*The New York Times*, Feb. 1, 1983, and *World Press Review*, March 1983).

Readers will find this volume an excellent summary of the 1970 decade. But the newly launched unions will surely change in the next decade. Perhaps Ruble is already planning a sequel and will tell us what happened during the 1980's.

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Agriculture and natural resources

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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 1983 issue of the *Review*, to reflect experience through 1982.

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, February 1980). 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, and 15 were made in August 1981 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 3	May	July 8	June	August 5	July	1–11
Producer Price Index	June 10	May	July 15	June	August 12	July	23–27
Consumer Price Index	June 22	May	July 22	June	August 23	July	19–22
Real earnings	June 22	May	July 22	June	August 23	July	12–16
Productivity and costs:							
Nonfinancial corporations	....	......	....	....	August 26	2nd quarter	28–31
Nonfarm business and manufacturing	....	......	July 29	2nd quarter	....	......	28–31
Major collective bargaining settlements	....	......	July 28	1st half	....	......	35–36
Employment Cost Index	....	......	....	....	August 4	2nd quarter	32–34

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

Definitions

Employed persons include (1) all 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 un-

employed 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 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 1982.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–82

[Numbers in thousands]

Year	Noninsti-tutional population	Labor force											Not in labor force
		Number	Percent of population	Employed							Unemployed		
				Total	Percent of population	Resident Armed Forces	Civilian			Number	Percent of labor force	
							Total	Agriculture	Nonagri-cultural industies			
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	47,617
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	4,365	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	85,846	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	64.2	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	10,678	9.5	62,067

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 1981	1982	1982 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1983 Jan.	Feb.	Mar.	Apr.
Total															
Noninstitutional population [1,2]	171,775	173,939	173,512	173,691	173,854	174,038	174,200	174,360	174,549	174,718	174,864	175,021	175,169	175,320	175,465
Labor force [2]	110,315	111,872	111,408	112,043	111,811	112,090	112,303	112,528	112,420	112,702	112,794	112,215	112,217	112,148	112,457
Participation rate [3]	64.2	64.3	64.2	64.5	64.3	64.4	64.5	64.5	64.4	64.5	64.5	64.1	64.1	64.0	64.1
Total employed [2]	102,042	101,194	101,152	101,659	101,345	101,262	101,372	101,213	100,844	100,796	100,758	100,770	100,727	100,767	101,129
Employment-population ratio [4]	59.4	58.2	58.3	58.5	58.3	58.2	58.2	58.0	57.8	57.7	57.6	57.6	57.5	57.5	57.6
Resident Armed Forces [1]	1,645	1,668	1,668	1,665	1,664	1,674	1,689	1,670	1,668	1,660	1,665	1,667	1,664	1,664	1,671
Civilian employed	100,397	99,526	99,484	99,994	99,681	99,588	99,683	99,543	99,176	99,136	99,093	99,103	99,063	99,103	99,458
Agriculture	3,368	3,401	3,356	3,446	3,371	3,445	3,429	3,363	3,413	3,466	3,411	3,412	3,393	3,375	3,371
Nonagricultural industries	97,030	96,125	96,128	96,548	96,310	96,143	96,254	96,180	95,763	95,670	95,682	95,691	95,670	95,729	96,088
Unemployed	8,273	10,678	10,256	10,384	10,466	10,828	10,931	11,315	11,576	11,906	12,036	11,446	11,490	11,381	11,328
Unemployment rate [5]	7.5	9.5	9.2	9.3	9.4	9.7	9.7	10.1	10.3	10.6	10.7	10.2	10.2	10.1	10.1
Not in labor force	61,460	62,067	62,104	61,648	62,043	61,948	61,897	61,832	62,129	62,016	62,070	62,806	62,952	63,172	63,008
Men, 16 years and over															
Noninstitutional population [1,2]	82,023	83,052	82,844	82,929	83,006	83,097	83,173	83,231	83,323	83,402	83,581	83,652	83,720	83,789	83,856
Labor force [2]	63,486	63,979	63,829	64,172	63,851	63,898	64,055	64,301	64,300	64,414	64,384	63,916	63,996	63,957	64,207
Participation rate [3]	77.4	77.0	77.0	77.4	76.9	76.9	77.0	77.3	77.2	77.2	77.0	76.4	76.4	76.3	76.6
Total employed [2]	58,909	57,800	57,973	58,251	57,775	57,664	57,710	57,598	57,456	57,408	57,338	57,283	57,234	57,300	57,476
Employment-population ratio [4]	71.8	69.6	70.0	70.2	69.6	69.4	69.4	69.2	69.0	68.8	68.6	68.5	68.4	68.4	68.5
Resident Armed Forces [1]	1,512	1,527	1,529	1,527	1,526	1,537	1,551	1,526	1,524	1,516	1,529	1,531	1,528	1,528	1,530
Civilian employed	57,397	56,271	56,444	56,724	56,249	56,127	56,159	56,072	55,932	55,892	55,809	55,752	55,706	55,772	55,946
Unemployed	4,577	6,179	5,856	5,921	6,076	6,234	6,345	6,703	6,844	7,006	7,046	6,633	6,762	6,657	6,731
Unemployment rate [5]	7.2	9.7	9.2	9.2	9.5	9.8	9.9	10.4	10.6	10.9	10.9	10.4	10.6	10.4	10.5
Women, 16 years and over															
Noninstitutional population [1,2]	89,751	90,887	90,668	90,762	90,848	90,941	91,027	91,129	91,226	91,316	91,283	91,369	91,449	91,532	91,609
Labor force [2]	46,829	47,894	47,579	47,871	47,960	48,192	48,248	48,227	48,120	48,288	48,410	48,299	48,220	48,191	48,251
Participation rate [3]	52.2	52.7	52.5	52.7	52.8	53.0	53.0	52.9	52.7	52.9	53.0	52.9	52.7	52.6	52.7
Total employed [2]	43,133	43,395	43,179	43,408	43,570	43,598	43,662	43,615	43,388	43,388	43,420	43,486	43,493	43,467	43,653
Employment-population ratio [4]	48.1	47.7	47.6	47.8	48.0	47.9	48.0	47.9	47.6	47.5	47.6	47.6	47.6	47.5	47.7
Resident Armed Forces [1]	133	139	139	138	138	137	138	144	144	144	136	136	136	136	141
Civilian employed	43,000	43,256	43,040	43,270	43,432	43,461	43,524	43,471	43,244	43,244	43,284	43,350	43,357	43,331	43,512
Unemployed	3,696	4,499	4,400	4,463	4,390	4,594	4,586	4,612	4,732	4,900	4,990	4,813	4,727	4,724	4,597
Unemployment rate [5]	7.9	9.4	9.2	9.3	9.2	9.5	9.5	9.6	9.8	10.1	10.3	10.0	9.8	9.8	9.5

[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		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
TOTAL															
Civilian noninstitutional population[1]	170,130	172,271	171,844	172,026	172,190	172,364	172,511	172,690	172,881	173,058	173,199	173,354	173,505	173,656	173,794
Civilian labor force	108,670	110,204	109,740	110,378	110,147	110,416	110,614	110,858	110,752	111,042	111,129	110,548	110,553	110,484	110,786
Participation rate	63.9	64.0	63.9	64.2	64.0	64.1	64.1	64.2	64.1	64.2	64.2	63.8	63.7	63.6	63.7
Employed	100,397	99,526	99,484	99,994	99,681	99,588	99,683	99,543	99,176	99,136	99,093	99,103	99,063	99,103	99,458
Employment-population ratio[2]	59.0	57.8	57.9	58.1	57.9	57.8	57.8	57.6	57.4	57.3	57.2	57.2	57.1	57.1	57.2
Agriculture	3,368	3,401	3,356	3,446	3,371	3,445	3,429	3,363	3,413	3,466	3,411	3,412	3,393	3,375	3,371
Nonagricultural industries	97,030	96,125	96,128	96,548	96,310	96,143	96,254	96,180	95,763	95,670	95,682	95,691	95,670	95,729	96,088
Unemployed	8,273	10,678	10,256	10,384	10,466	10,828	10,931	11,315	11,576	11,906	12,036	11,446	11,490	11,381	11,328
Unemployment rate	7.6	9.7	9.3	9.4	9.5	9.8	9.9	10.2	10.5	10.7	10.8	10.4	10.4	10.3	10.2
Not in labor force	61,460	62,067	62,104	61,648	62,043	61,948	61,897	61,832	62,129	62,016	62,070	62,806	62,952	63,172	63,008
Men, 20 years and over															
Civilian noninstitutional population[1]	72,419	73,644	73,392	73,499	73,585	73,685	73,774	73,867	73,984	74,094	74,236	74,339	74,434	74,528	74,611
Civilian labor force	57,197	57,980	57,794	58,008	57,959	58,055	58,064	58,354	58,363	58,454	58,443	58,048	58,177	58,170	58,454
Participation rate	79.0	78.7	78.7	78.9	78.8	78.8	78.7	79.0	78.9	78.9	78.7	78.1	78.2	78.1	78.3
Employed	53,582	52,891	53,024	53,190	52,943	52,905	52,832	52,776	52,649	52,589	52,534	52,452	52,428	52,589	52,752
Employment-population ratio[2]	74.0	71.8	72.2	72.4	71.9	71.8	71.6	71.4	71.2	71.0	70.8	70.6	70.4	70.6	70.7
Agriculture	2,384	2,422	2,417	2,446	2,424	2,462	2,433	2,436	2,444	2,434	2,389	2,426	2,374	2,420	2,404
Nonagricultural industries	51,199	50,469	50,607	50,744	50,519	50,443	50,399	50,340	50,205	50,155	50,145	50,025	50,054	50,169	50,348
Unemployed	3,615	5,089	4,770	4,818	5,016	5,150	5,232	5,578	5,714	5,865	5,909	5,597	5,749	5,581	5,702
Unemployment rate	6.3	8.8	8.3	8.3	8.7	8.9	9.0	9.6	9.8	10.0	10.1	9.6	9.9	9.6	9.8
Women, 20 years and over															
Civilian noninstitutional population[1]	81,497	82,864	82,591	82,707	82,811	82,926	83,035	83,152	83,271	83,385	83,383	83,490	83,593	83,699	83,794
Civilian labor force	42,485	43,699	43,355	43,632	43,819	43,983	44,039	43,996	43,936	44,112	44,286	44,201	44,216	44,166	44,238
Participation rate	52.1	52.7	52.5	52.8	52.9	53.0	53.0	52.9	52.8	52.9	53.1	52.9	52.9	52.8	52.8
Employed	39,590	40,086	39,827	40,064	40,254	40,311	40,368	40,286	40,112	40,123	40,215	40,238	40,291	40,277	40,509
Employment-population ratio[2]	48.6	48.4	48.2	48.4	48.6	48.6	48.6	48.4	48.2	48.1	48.2	48.2	48.2	48.1	48.3
Agriculture	604	601	600	614	586	598	590	588	578	590	628	625	657	647	622
Nonagricultural industries	38,986	39,485	39,227	39,450	39,668	39,713	39,778	39,698	39,534	39,533	39,587	39,613	39,634	39,630	39,886
Unemployed	2,895	3,613	3,528	3,568	3,565	3,672	3,671	3,710	3,824	3,989	4,071	3,963	3,925	3,889	3,729
Unemployment rate	6.8	8.3	8.1	8.2	8.1	8.3	8.3	8.4	8.7	9.0	9.2	9.0	8.9	8.8	8.4
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,214	15,763	15,861	15,820	15,794	15,753	15,702	15,671	15,625	15,579	15,580	15,525	15,478	15,429	15,389
Civilian labor force	8,988	8,526	8,591	8,738	8,369	8,378	8,511	8,508	8,453	8,476	8,400	8,299	8,160	8,148	8,094
Participation rate	55.4	54.1	54.2	55.2	53.0	53.2	54.2	54.3	54.1	54.4	53.9	53.5	52.7	52.8	52.6
Employed	7,225	6,549	6,633	6,740	6,484	6,372	6,483	6,481	6,415	6,424	6,344	6,413	6,345	6,237	6,197
Employment-population ratio[2]	44.6	41.5	41.8	42.6	41.1	40.4	41.3	41.4	41.1	41.2	40.7	41.3	41.0	40.4	40.3
Agriculture	380	378	339	386	361	385	406	339	391	442	394	361	362	308	344
Nonagricultural industries	6,845	6,171	6,294	6,354	6,123	5,987	6,077	6,142	6,024	5,982	5,950	6,052	5,983	5,929	5,853
Unemployed	1,763	1,977	1,958	1,998	1,885	2,006	2,028	2,027	2,038	2,052	2,056	1,886	1,815	1,911	1,897
Unemployment rate	19.6	23.2	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5	22.7	22.2	23.5	23.4
White															
Civilian noninstitutional population[1]	147,908	149,441	149,249	149,250	149,429	149,569	149,536	149,652	149,838	149,887	150,056	150,129	150,187	150,382	150,518
Civilian labor force	95,052	96,143	95,941	96,405	96,165	96,385	96,375	96,640	96,453	96,719	96,864	96,176	95,987	95,996	96,287
Participation rate	64.3	64.3	64.3	64.6	64.4	64.4	64.4	64.6	64.4	64.5	64.6	64.1	63.9	63.8	64.0
Employed	88,709	87,903	88,011	88,350	88,089	88,021	87,979	87,872	87,477	87,435	87,443	87,466	87,194	87,324	87,709
Employment-population ratio[2]	60.0	58.8	59.0	59.2	59.0	58.8	58.8	58.7	58.4	58.3	58.3	58.3	58.1	58.1	58.3
Unemployed	6,343	8,241	7,930	8,055	8,076	8,364	8,396	8,768	8,976	9,284	9,421	8,711	8,793	8,672	8,577
Unemployment rate	6.7	8.6	8.3	8.4	8.4	8.7	8.7	9.1	9.3	9.6	9.7	9.1	9.2	9.0	8.9
Black															
Civilian noninstitutional population[1]	18,219	18,584	18,511	18,542	18,570	18,600	18,626	18,659	18,692	18,723	18,740	18,768	18,796	18,823	18,851
Civilian labor force	11,086	11,331	11,201	11,318	11,267	11,341	11,400	11,443	11,398	11,475	11,522	11,542	11,548	11,554	11,631
Participation rate	60.8	61.0	60.5	61.0	60.7	61.0	61.2	61.3	61.0	61.3	61.5	61.5	61.4	61.4	61.7
Employed	9,355	9,189	9,135	9,209	9,171	9,211	9,220	9,172	9,102	9,159	9,127	9,142	9,276	9,253	9,207
Employment-population ratio[2]	51.3	49.4	49.3	49.7	49.4	49.5	49.5	49.2	48.7	48.9	48.7	48.7	49.4	49.2	48.8
Unemployed	1,731	2,142	2,066	2,109	2,096	2,130	2,180	2,271	2,296	2,316	2,395	2,400	2,271	2,302	2,423
Unemployment rate	15.6	18.9	18.4	18.6	18.6	18.8	19.1	19.8	20.1	202	20.8	20.8	19.7	19.9	20.8
Hispanic origin															
Civilian noninstitutional population[1]	9,310	9,400	9,235	9,297	9,428	9,521	9,689	9,464	9,474	9,355	9,301	9,328	9,368	9,551	9,665
Civilian labor force	5,972	5,983	5,966	6,004	5,965	5,972	6,045	5,961	5,973	5,923	5,898	5,981	5,992	6,074	6,206
Participation rate	64.1	63.6	64.6	64.6	63.3	62.7	62.4	63.0	63.0	63.3	63.4	64.1	64.0	63.6	64.2
Employed	5,348	5,158	5,211	5,182	5,155	5,136	5,162	5,097	5,075	5,012	4,998	5,053	5,042	5,088	5,304
Employment-population ratio[2]	57.4	54.9	56.4	55.7	54.7	53.9	53.3	53.9	53.6	53.6	53.7	54.2	53.8	53.3	54.9
Unemployed	624	825	755	822	810	836	883	864	898	911	900	929	950	986	902
Unemployment rate	10.4	13.8	12.7	13.7	13.6	14.0	14.6	14.5	15.0	15.4	15.3	15.5	15.8	16.2	14.5

[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

[Numbers in thousands]

Selected categories	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
CHARACTERISTIC															
Civilian employed, 16 years and over	100,397	99,526	99,484	99,994	99,681	99,588	99,683	99,543	99,176	99,136	99,093	99,103	99,063	99,103	99,458
Men	57,397	56,271	56,444	56,724	56,249	56,127	56,159	56,073	55,932	55,892	55,809	55,752	55,706	55,772	55,946
Women	43,000	43,256	43,040	43,270	43,432	43,461	43,524	43,471	43,244	43,244	43,284	43,350	43,357	43,331	43,512
Married men, spouse present	38,882	38,074	38,212	38,274	38,254	38,177	38,121	37,998	37,852	37,641	37,507	37,450	37,428	37,452	37,523
Married women, spouse present	23,915	24,053	23,891	24,112	24,331	24,173	24,235	24,159	24,081	23,985	24,155	24,205	24,070	24,171	24,371
Women who maintain families	4,998	5,099	5,093	4,991	5,120	5,200	5,208	5,118	5,107	5,025	4,985	5,038	5,050	5,097	4,944
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,464	1,505	1,442	1,530	1,457	1,523	1,548	1,537	1,576	1,584	1,547	1,637	1,624	1,515	1,560
Self-employed workers	1,638	1,636	1,656	1,679	1,661	1,655	1,620	1,569	1,621	1,628	1,627	1,587	1,541	1,585	1,607
Unpaid family workers	266	261	266	251	254	254	255	254	229	241	224	231	223	260	208
Nonagricultural industries:															
Wage and salary workers	89,543	88,462	88,454	88,872	88,548	88,491	88,576	88,562	88,064	87,936	87,976	87,813	87,794	87,912	88,187
Government	15,689	15,516	15,464	15,454	15,614	15,471	15,562	15,681	15,436	15,514	15,477	15,386	15,501	15,452	15,518
Private industries	73,853	72,945	72,990	73,418	72,934	73,020	73,014	72,881	72,628	72,422	72,499	72,427	72,293	72,459	72,668
Private households	1,208	1,207	1,196	1,204	1,205	1,200	1,227	1,220	1,216	1,221	1,163	1,162	1,232	1,235	1,205
Other	72,645	71,738	71,794	72,214	71,729	71,820	71,787	71,661	71,412	71,201	71,336	71,265	71,061	71,225	71,463
Self-employed workers	7,097	7,262	7,246	7,262	7,301	7,286	7,338	7,422	7,332	7,349	7,335	7,465	7,385	7,453	7,528
Unpaid family workers	390	401	410	392	398	393	408	378	403	382	383	380	353	342	353
PERSONS AT WORK [1]															
Nonagricultural industries	91,377	90,552	90,755	91,082	90,917	90,414	90,486	90,884	90,232	90,238	90,219	90,903	90,207	90,271	92,267
Full-time schedules	74,339	72,245	72,562	72,869	72,545	72,288	72,045	71,723	71,394	71,442	71,499	71,786	71,564	71,878	73,594
Part time for economic reasons	4,499	5,852	5,750	5,731	5,561	5,577	5,820	6,495	6,903	6,411	6,425	6,845	6,481	6,202	6,082
Usually work full time	1,738	2,169	2,197	2,195	2,126	2,047	2,100	2,519	2,381	2,228	2,153	2,200	2,097	1,927	1,871
Usually work part time	2,761	3,683	3,553	3,536	3,435	3,530	3,720	3,976	4,022	4,183	4,272	4,645	4,384	4,275	4,211
Part time for noneconomic reasons	12,539	12,455	12,443	12,482	12,811	12,549	12,621	12,666	12,435	12,385	12,295	12,271	12,162	12,191	12,592

[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		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
CHARACTERISTIC															
Total, all civilian workers	7.6	9.7	9.3	9.4	9.5	9.8	9.9	10.2	10.4	10.7	10.8	10.4	10.4	10.3	10.2
Both sexes, 16 to 19 years	19.6	23.2	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5	22.7	22.2	23.5	23.4
Men, 20 years and over	6.3	8.8	8.3	8.3	8.7	8.9	9.0	9.6	9.8	10.0	10.1	9.6	9.9	9.6	9.8
Women, 20 years and over	6.8	8.3	8.1	8.2	8.1	8.3	8.3	8.4	8.7	9.0	9.2	9.0	8.9	8.8	8.4
White, total	6.7	8.6	8.3	8.4	8.4	8.7	8.7	9.1	9.3	9.6	9.7	9.1	9.2	9.0	8.9
Both sexes, 16 to 19 years	17.3	20.4	20.4	19.9	19.7	20.9	20.8	20.7	21.5	21.2	21.6	20.0	19.7	21.4	20.4
Men, 16 to 19 years	17.9	21.7	21.9	20.9	21.2	22.5	22.5	22.2	23.0	22.6	22.8	21.2	21.1	22.9	21.7
Women, 16 to 19 years	16.6	19.0	18.8	18.7	18.0	19.1	18.9	19.1	19.9	19.8	20.4	18.7	18.2	19.7	19.0
Men, 20 years and over	5.6	7.8	7.3	7.5	7.7	7.9	8.0	8.6	8.8	9.1	9.2	8.4	8.7	8.5	8.6
Women, 20 years and over	5.9	7.3	7.1	7.2	7.1	7.3	7.2	7.5	7.6	8.0	8.1	7.8	7.7	7.4	7.2
Black, total	15.6	18.9	18.4	18.6	18.6	18.8	19.1	19.8	20.1	20.2	20.8	20.8	19.7	19.9	20.8
Both sexes, 16 to 19 years	41.4	48.0	48.0	49.4	51.2	49.3	51.2	48.6	47.7	49.8	49.5	45.7	45.4	43.5	49.0
Men, 16 to 19 years	40.7	48.9	48.4	49.7	55.7	48.9	50.5	51.0	49.2	53.0	52.5	45.9	45.3	44.5	48.0
Women, 16 to 19 years	42.2	47.1	47.7	49.1	46.0	49.7	52.1	45.9	45.9	46.2	46.2	45.5	45.4	42.3	50.0
Men, 20 years and over	13.5	17.8	17.0	17.1	17.3	17.4	17.6	19.2	19.6	19.2	20.5	19.7	18.7	18.8	20.3
Women, 20 years and over	13.4	15.4	15.4	15.3	15.1	15.5	15.4	15.7	16.2	16.5	16.5	18.2	17.0	17.7	17.0
Hispanic origin, total	10.4	13.8	12.7	13.7	13.6	14.0	14.6	14.5	15.0	15.4	15.3	15.5	15.8	16.2	14.5
Married men, spouse present	4.3	6.5	6.0	6.1	6.4	6.6	6.8	7.2	7.5	7.6	7.8	7.1	7.2	7.1	7.1
Married women, spouse present	6.0	7.4	7.6	7.3	7.1	7.4	7.3	7.6	7.9	8.2	8.2	7.8	7.6	7.5	7.3
Women who maintain families	10.4	11.7	11.5	11.9	12.1	12.0	11.7	12.4	11.3	12.5	13.2	13.2	13.0	13.5	13.2
Full-time workers	7.3	9.6	9.1	9.2	9.4	9.6	9.7	10.2	10.5	10.6	10.8	10.3	10.4	10.3	10.2
Part-time workers	9.4	10.5	10.8	10.5	10.0	11.2	10.4	10.6	10.3	11.3	11.1	10.6	10.1	10.5	10.6
Unemployed 15 weeks and over	2.1	3.2	2.8	3.0	3.2	3.2	3.3	3.5	3.8	4.1	4.3	4.2	4.2	4.2	3.9
Labor force time lost[1]	8.5	11.0	10.4	10.7	10.4	10.7	10.9	11.7	12.0	12.4	12.7	11.7	12.0	11.8	11.4
INDUSTRY															
Nonagricultural private wage and salary workers	7.7	10.1	9.8	9.8	10.0	10.2	10.2	11.0	11.0	11.4	11.6	10.8	10.8	10.8	10.5
Mining	6.0	13.4	10.6	12.1	14.0	15.8	16.0	18.5	17.9	18.1	18.1	17.1	18.4	18.6	20.3
Construction	15.6	20.0	19.3	18.9	19.5	20.3	20.4	22.3	22.3	21.8	22.0	20.0	19.7	20.3	20.3
Manufacturing	8.3	12.3	11.3	11.5	12.2	12.1	12.4	14.1	14.1	14.8	14.8	13.0	13.3	12.8	12.4
Durable goods	8.2	13.3	11.9	12.2	13.1	12.8	13.3	16.0	16.0	17.0	17.1	14.7	14.7	14.1	13.5
Nondurable goods	8.4	10.8	10.6	10.4	11.1	11.0	11.0	11.2	11.2	11.4	11.4	10.5	11.4	11.1	10.8
Transportation and public utilities	5.2	6.8	6.7	6.4	6.8	6.6	7.1	7.9	7.9	8.3	8.0	7.8	8.0	7.8	7.7
Wholesale and retail trade	8.1	10.0	9.9	10.2	9.7	10.3	10.0	10.4	10.4	10.6	11.0	10.8	10.9	11.2	10.4
Finance and service industries	5.9	6.9	7.0	6.8	6.9	7.0	7.0	7.1	7.1	7.7	7.9	7.6	7.3	7.2	7.3
Government workers	4.7	4.9	5.2	4.9	4.7	4.7	4.7	4.9	4.9	5.1	5.1	5.7	6.0	5.9	6.1
Agricultural wage and salary workers	12.1	14.7	14.6	18.1	15.0	14.1	14.2	13.3	13.3	15.6	16.5	16.0	16.4	16.3	17.2

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

59

6. Unemployment rates by sex and age, seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total, 16 years and over	7.6	9.7	9.3	9.4	9.5	9.8	9.9	10.2	10.5	10.7	10.8	10.4	10.4	10.3	10.2
16 to 24 years	14.9	17.8	17.4	17.4	17.3	17.9	18.2	18.3	18.7	19.0	18.9	18.3	18.3	18.1	18.1
16 to 19 years	19.6	23.2	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5	22.7	22.2	23.5	23.4
16 to 17 years	21.4	24.9	24.4	25.1	23.6	25.8	25.8	26.5	26.1	26.3	27.4	24.1	23.4	25.1	26.3
18 to 19 years	18.4	22.1	21.8	21.4	22.0	22.6	22.5	22.0	22.9	22.8	22.7	21.7	21.5	22.7	21.8
20 to 24 years	12.3	14.9	14.5	14.5	14.5	14.7	15.3	15.3	15.8	16.3	16.0	16.1	16.3	15.4	15.4
25 years and over	5.4	7.4	7.0	7.1	7.3	7.5	7.5	7.9	8.1	8.3	8.6	8.1	8.2	8.1	8.0
25 to 54 years	5.8	7.9	7.4	7.6	7.7	8.0	8.0	8.6	8.7	8.9	9.1	8.7	8.7	8.7	8.5
55 years and over	3.6	5.0	4.9	4.9	5.1	5.3	5.2	5.2	5.5	5.7	5.8	5.4	5.4	5.4	5.6
Men, 16 years and over	7.4	9.9	9.4	9.5	9.7	10.0	10.2	10.7	10.9	11.1	11.2	10.6	10.8	10.7	10.7
16 to 24 years	15.7	19.1	18.7	18.6	18.7	19.2	19.5	20.0	20.2	20.6	20.5	19.7	19.8	19.5	19.4
16 to 19 years	20.1	24.4	24.1	23.8	24.3	25.2	25.1	25.4	25.6	25.7	25.8	23.9	23.6	25.3	24.4
16 to 17 years	22.0	26.4	24.8	26.3	25.4	27.7	27.4	29.0	28.8	28.2	29.0	24.4	23.6	26.0	27.0
18 to 19 years	18.8	23.1	23.7	22.2	23.7	23.4	23.4	23.0	23.4	24.1	24.0	23.5	23.4	24.8	22.8
20 to 24 years	13.2	16.4	15.9	15.8	15.9	16.2	16.6	17.3	17.4	18.0	17.8	17.6	17.8	16.6	17.0
25 years and over	5.1	7.5	6.9	7.0	7.4	7.5	7.7	8.2	8.5	8.6	8.8	8.2	8.5	8.4	8.5
25 to 54 years	5.5	8.0	7.3	7.5	7.9	8.1	8.2	9.0	9.1	9.2	9.4	8.7	9.1	9.0	8.9
55 years and over	3.5	5.1	5.0	4.7	4.9	4.9	5.5	5.5	6.0	6.2	6.3	5.8	5.7	5.8	6.3
Women, 16 years and over	7.9	9.4	9.3	9.3	9.2	9.6	9.5	9.6	9.9	10.2	10.3	10.0	9.8	9.8	9.6
16 to 24 years	14.0	16.2	16.0	16.0	15.6	16.4	16.8	16.3	17.0	17.2	17.1	16.7	16.6	16.6	16.5
16 to 19 years	19.0	21.9	21.3	21.8	20.6	22.6	22.5	22.1	22.5	22.6	23.0	21.5	20.7	21.5	22.4
16 to 17 years	20.7	23.2	24.0	23.6	21.6	23.8	23.9	23.8	22.9	24.2	25.6	23.7	23.2	24.2	25.5
18 to 19 years	17.9	21.0	19.8	20.6	20.2	21.9	21.5	20.9	22.3	21.4	21.3	19.8	19.3	20.5	20.7
20 to 24 years	11.2	13.2	13.0	12.9	13.0	13.1	13.7	13.1	14.0	14.4	14.0	14.2	14.5	14.1	13.5
25 years and over	5.9	7.3	7.1	7.3	7.2	7.4	7.1	7.5	7.6	7.9	8.2	7.9	7.7	7.7	7.4
25 to 54 years	6.3	7.7	7.5	7.8	7.5	7.7	7.7	8.0	8.2	8.5	8.8	8.7	8.2	8.3	7.9
55 years and over	3.8	4.8	4.7	5.0	5.4	5.8	4.8	4.8	4.8	4.9	5.1	4.8	4.9	4.7	4.5

7. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
NUMBER OF UNEMPLOYED															
Job losers	4,267	6,268	5,889	5,938	6,181	6,323	6,446	6,979	7,325	7,369	7,295	6,704	6,809	6,823	6,750
On layoff	1,430	2,127	1,967	1,956	2,097	2,126	2,218	2,625	2,519	2,531	2,468	2,131	2,024	1,945	1,948
Other job losers	2,837	4,141	3,922	3,982	4,084	4,197	4,228	4,354	4,806	4,838	4,827	4,573	4,784	4,878	4,803
Job leavers	923	840	901	864	826	819	814	786	803	794	826	839	848	901	815
Reentrants	2,102	2,384	2,342	2,393	2,378	2,478	2,440	2,437	2,322	2,546	2,629	2,623	2,491	2,426	2,488
New entrants	981	1,185	1,096	1,159	1,091	1,230	1,304	1,303	1,296	1,244	1,288	1,174	1,161	1,155	1,245
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	51.6	58.7	57.6	57.3	59.0	58.3	58.6	60.7	62.4	61.6	60.6	59.1	60.2	60.4	59.7
On layoff	17.3	19.9	19.2	18.9	20.0	19.6	20.2	22.8	21.4	21.2	20.5	18.8	17.9	17.2	17.2
Other job losers	34.3	38.8	38.3	38.5	39.0	38.7	38.4	37.8	40.9	40.5	40.1	40.3	42.3	43.1	42.5
Job leavers	11.2	7.9	8.8	8.3	7.9	7.5	7.4	6.8	6.8	6.6	6.9	7.4	7.5	8.0	7.2
Reentrants	25.4	22.3	22.9	23.1	22.7	22.8	22.2	21.2	19.8	21.3	21.8	23.1	22.0	21.5	22.0
New entrants	11.9	11.1	10.7	11.2	10.4	11.3	11.9	11.3	11.0	10.4	10.7	10.4	10.3	10.2	11.0
PERCENT OF CIVILIAN LABOR FORCE															
Job losers	3.9	5.7	5.4	5.4	5.6	5.7	5.8	6.3	6.6	6.6	6.6	6.1	6.2	6.2	6.1
Job leavers	.8	.8	.8	.8	.7	.7	.7	.7	.7	.7	.7	.8	.8	.8	.7
Reentrants	1.9	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.3	2.4	2.4	2.3	2.2	2.2
New entrants	.9	1.1	1.0	1.1	1.0	1.1	1.2	1.2	1.2	1.1	1.2	1.1	1.1	1.0	1.1

8. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Less than 5 weeks	3,449	3,883	3,930	3,871	3,605	3,959	3,933	4,004	3,930	3,963	4,019	3,536	3,731	3,440	3,547
5 to 14 weeks	2,539	3,311	3,255	3,281	3,398	3,249	3,346	3,549	3,511	3,549	3,460	3,328	3,106	3,140	3,154
15 weeks and over	2,285	3,485	3,080	3,267	3,517	3,569	3,637	3,856	4,167	4,524	4,732	4,634	4,618	4,615	4,356
15 to 26 weeks	1,122	1,708	1,582	1,633	1,683	1,780	1,808	1,830	1,951	2,191	2,125	1,928	1,928	1,875	1,662
27 weeks and over	1,162	1,776	1,498	1,634	1,834	1,789	1,829	2,026	2,216	2,333	2,607	2,706	2,689	2,740	2,694
Mean duration, in weeks	13.7	15.6	14.3	14.9	16.3	15.6	16.1	16.6	17.1	17.3	18.0	19.4	19.0	19.1	19.0
Median duration, in weeks	6.9	8.7	8.3	8.6	9.8	8.3	8.3	9.4	9.6	10.0	10.1	11.5	9.6	10.3	11.3

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 177,000 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 12–17 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 issue, represents the percent of 186 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 1982 data, published in the July 1982 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Earlier comparable unadjusted and seasonally adjusted data are published in a Supplement to *Employment and Earnings* (unadjusted data from April 1977 through February 1982 and seasonally adjusted data from January 1974 through February 1982) and in *Employment and Earnings, United States, 1909–78,* BLS Bulletin 1312–11 (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 for Surveys and Studies,* Bulletin 1910 (Bureau of Labor Statistics, 1976).

9. Employment by industry, selected years, 1950–82

[Nonagricultural payroll data, in thousands]

Year	Total	Private sector	Goods-producing				Service-producing									
			Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
									Total	Wholesale trade	Retail trade			Total	Federal	State and local
1950	45,197	39,170	18,506	901	2,364	15,241	26,691	4,034	9,386	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1955	50,641	43,727	20,513	792	2,839	16,882	30,128	4,141	10,535	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1960 [1]	54,189	45,836	20,434	712	2,926	16,796	33,755	4,004	11,391	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1964	58,283	48,686	21,005	634	3,097	17,274	37,278	3,951	12,160	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	60,765	50,689	21,926	632	3,232	18,062	38,839	4,036	12,716	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	63,901	53,116	23,158	627	3,317	19,214	40,743	4,158	13,245	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	65,803	54,413	23,308	613	3,248	19,447	42,495	4,268	13,606	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	67,897	56,058	23,737	606	3,350	19,781	44,160	4,318	14,099	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	70,384	58,189	24,361	619	3,575	20,167	46,023	4,442	14,705	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	70,880	58,325	23,578	623	3,588	19,367	47,302	4,515	15,040	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	71,214	58,331	22,935	609	3,704	18,623	48,278	4,476	15,352	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	73,675	60,341	23,668	628	3,889	19,151	50,007	4,541	15,949	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	76,790	63,058	24,893	642	4,097	20,154	51,897	4,656	16,607	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	78,265	64,095	24,794	697	4,020	20,077	53,471	4,725	16,987	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	76,945	62,259	22,600	752	3,525	18,323	54,345	4,542	17,060	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	79,382	64,511	23,352	779	3,576	18,997	56,030	4,582	17,755	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	82,471	67,344	24,346	813	3,851	19,682	58,125	4,713	18,516	4,708	13,808	4,467	15,303	15,127	2,727	12,399
1978	86,697	71,026	25,585	851	4,229	20,505	61,113	4,923	19,542	4,969	14,573	4,724	16,252	15,672	2,753	12,919
1979	89,823	73,876	26,461	958	4,463	21,040	63,363	5,136	20,192	5,204	14,989	4,975	17,112	15,947	2,773	13,147
1980	90,406	74,166	25,658	1,027	4,346	20,285	64,748	5,146	20,310	5,275	15,035	5,160	17,890	16,241	2,866	13,375
1981	91,105	75,081	25,481	1,132	4,176	20,173	65,625	5,157	20,551	5,359	15,192	5,301	18,592	16,024	2,772	13,253
1982	89,630	73,842	23,882	1,121	3,913	18,848	65,748	5,058	20,551	5,294	15,258	5,350	19,001	15,788	2,739	13,050

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

10. Employment by State

[Nonagricultural payroll data, in thousands]

State	March 1982	February 1983	March 1983 P	State	March 1982	February 1983	March 1983 P
Alabama	1,314.5	1,302.3	1,304.3	Montana	266.0	265.3	267.1
Alaska	183.7	194.7	198.6	Nebraska	603.3	579.0	583.6
Arizona	1,038.8	1,038.0	1,042.6	Nevada	404.0	399.7	403.0
Arkansas	718.8	712.8	727.0	New Hampshire	387.0	382.4	385.3
California	9,867.2	9,688.9	9,738.5	New Jersey	3,037.2	3,014.1	3,032.6
Colorado	1,313.2	1,302.4	1,309.7	New Mexico	470.9	470.3	472.3
Connecticut	1,417.2	1,402.8	1,407.7	New York	7,197.7	7,100.4	7,132.6
Delaware	256.3	251.9	254.7	North Carolina	2,344.3	2,310.0	2,318.7
District of Columbia	593.7	590.4	591.5	North Dakota	244.8	246.7	248.6
Florida	3,816.4	3,837.5	3,846.1	Ohio	4,129.1	4,015.0	4,034.9
Georgia	2,184.4	2,198.2	2,209.2	Oklahoma	1,241.0	1,187.5	1,195.2
Hawaii	403.7	399.1	400.1	Oregon	956.8	933.5	939.6
Idaho	307.7	306.7	308.2	Pennsylvania	4,579.3	4,362.9	4,398.9
Illinois	4,605.1	4,441.4	4,463.9	Rhode Island	386.8	383.9	385.5
Indiana	2,019.4	1,944.2	1,952.9	South Carolina	1,168.3	1,147.7	1,154.8
Iowa	1,029.7	1,001.9	1,005.5	South Dakota	226.5	223.4	224.1
Kansas	932.5	890.8	897.6	Tennessee	1,697.8	1,640.2	1,649.2
Kentucky	1,154.6	1,140.8	1,152.5	Texas	6,332.4	6,161.1	6,163.1
Louisiana	1,628.8	1,588.6	1,588.6	Utah	557.6	552.5	555.2
Maine	398.7	396.9	396.8	Vermont	201.3	201.0	202.8
Maryland	1,656.1	1,623.2	1,640.7	Virginia	2,115.1	2,101.3	2,114.4
Massachusetts	2,616.3	2,567.9	2,587.2	Washington	1,567.8	1,548.9	1,558.3
Michigan	3,204.5	3,119.7	3,129.4	West Virginia	611.9	581.1	581.7
Minnesota	1,698.6	1,651.9	1,658.3	Wisconsin	1,857.0	1,802.5	1,806.2
Mississippi	797.8	779.9	782.7	Wyoming	213.2	205.2	204.1
Missouri	1,909.5	1,869.9	1,884.4	Virgin Islands	37.5	35.9	36.0

p= preliminary.

11. Employment by industry division and major manufacturing group, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average 1981	1982	1982 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1983 Jan.	Feb.	Mar. ᵖ	Apr. ᵖ
TOTAL	91,105	89,630	90,083	90,166	89,839	89,535	89,313	89,264	88,877	88,750	88,565	88,920	88,759	88,955	89,213
PRIVATE SECTOR	75,081	73,842	74,231	74,313	74,007	73,900	73,640	73,504	73,118	72,996	72,810	73,182	73,003	73,225	73,492
GOODS-PRODUCING	25,481	23,882	24,289	24,255	23,994	23,840	23,657	23,530	23,239	23,081	22,986	23,162	23,018	23,050	23,183
Mining	1,132	1,121	1,182	1,152	1,124	1,100	1,086	1,075	1,058	1,046	1,037	1,027	1,005	997	990
Construction	4,176	3,913	3,938	3,988	3,940	3,927	3,899	3,883	3,856	3,854	3,818	3,927	3,787	3,777	3,808
Manufacturing	20,173	18,848	19,169	19,115	18,930	18,813	18,672	18,572	18,325	18,181	18,131	18,208	18,226	18,276	18,385
Production workers	14,021	12,782	13,042	13,008	12,852	12,760	12,647	12,566	12,335	12,203	12,172	12,246	12,267	12,323	12,432
Durable goods	12,117	11,112	11,375	11,332	11,203	11,133	10,993	10,900	10,666	10,550	10,519	10,576	10,607	10,640	10,729
Production workers	8,301	7,364	7,576	7,553	7,443	7,388	7,272	7,191	6,979	6,874	6,853	6,913	6,939	6,981	7,061
Lumber and wood products	668.7	613.9	615	617	615	614	614	616	614	616	621	633	640	649	666
Furniture and fixtures	467.3	441.7	443	443	442	439	443	439	434	435	436	436	433	440	449
Stone, clay, and glass products	638.2	577.2	584	586	580	579	574	571	565	556	552	554	554	556	564
Primary metal industries	1,121.1	918.5	976	945	926	906	889	865	831	813	803	815	810	820	827
Fabricated metal products	1,592.4	1,442.6	1,481	1,472	1,452	1,446	1,427	1,414	1,381	1,365	1,358	1,368	1,371	1,371	1,379
Machinery, except electrical	2,507.0	2,288.7	2,389	2,377	2,322	2,274	2,230	2,208	2,142	2,108	2,086	2,067	2,060	2,062	2,066
Electric and electronic equipment	2,092.2	2,011.2	2,034	2,034	2,026	2,018	2,011	1,995	1,969	1,963	1,946	1,964	1,972	1,982	1,999
Transportation equipment	1,892.6	1,726.0	1,748	1,755	1,745	1,759	1,719	1,709	1,658	1,631	1,662	1,679	1,711	1,702	1,717
Instruments and related products	726.8	705.2	713	713	708	708	702	701	694	689	682	684	681	679	679
Miscellaneous manufacturing	410.7	387.3	392	390	387	390	384	382	378	374	373	376	375	379	383
Nondurable goods	8,056	7,736	7,794	7,783	7,727	7,680	7,679	7,672	7,659	7,631	7,612	7,632	7,619	7,636	7,656
Production workers	5,721	5,418	5,466	5,455	5,409	5,372	5,375	5,375	5,356	5,329	5,319	5,333	5,328	5,342	5,371
Food and kindred products	1,674.3	1,644.0	1,643	1,652	1,637	1,643	1,628	1,629	1,644	1,644	1,636	1,637	1,627	1,629	1,630
Tobacco manufactures	69.8	65.6	67	67	67	65	65	63	63	61	66	67	65	65	64
Textile mill products	822.5	748.9	773	759	741	741	737	735	735	726	725	723	723	727	733
Apparel and other textile products	1,244.0	1,158.3	1,165	1,165	1,161	1,126	1,145	1,143	1,141	1,134	1,131	1,145	1,143	1,139	1,137
Paper and allied products	687.8	659.5	664	661	658	657	653	657	650	652	650	650	649	650	649
Printing and publishing	1,265.8	1,270.7	1,274	1,274	1,269	1,267	1,269	1,269	1,268	1,266	1,265	1,270	1,268	1,273	1,277
Chemicals and allied products	1,107.3	1,074.0	1,082	1,079	1,073	1,068	1,070	1,066	1,061	1,059	1,054	1,052	1,052	1,050	1,053
Petroleum and coal products	215.6	206.8	206	207	205	205	205	209	208	206	206	207	206	206	207
Rubber and miscellaneous plastics products	736.1	697.8	706	708	704	700	699	694	684	678	678	680	685	695	705
Leather and leather products	233.0	210.1	214	211	212	208	208	207	205	205	201	201	201	202	201
SERVICE-PRODUCING	65,625	65,748	65,794	65,911	65,845	65,695	65,656	65,734	65,638	65,669	65,579	65,758	65,741	65,905	66,030
Transportation and public utilities	5,157	5,058	5,094	5,101	5,078	5,044	5,025	5,031	5,007	4,992	4,983	4,949	4,938	4,934	4,955
Wholesale and retail trade	20,551	20,551	20,584	20,652	20,595	20,615	20,550	20,492	20,441	20,425	20,316	20,487	20,448	20,521	20,512
Wholesale trade	5,359	5,294	5,323	5,331	5,307	5,299	5,278	5,272	5,254	5,228	5,205	5,197	5,192	5,199	5,204
Retail trade	15,192	15,258	15,261	15,321	15,288	15,316	15,272	15,220	15,187	15,197	15,111	15,290	15,256	15,322	15,308
Finance, insurance, and real estate	5,301	5,350	5,335	5,342	5,352	5,359	5,360	5,367	5,357	5,363	5,377	5,384	5,396	5,406	5,424
Services	18,592	19.001	18,929	18,963	18,988	19,042	19,048	19,084	19,074	19,135	19,148	19,200	19,203	19,314	19,418
Government	16,024	15,788	15,852	15,853	15,832	15,635	15,673	15,760	15,759	15,754	15,755	15,738	15,756	15,730	15,721
Federal	2,772	2,739	2,730	2,728	2,739	2,737	2,740	2,731	2,740	2,745	2,761	2,749	2,751	2,748	2,746
State and local	13,253	13,050	13,122	13,125	13,093	12,898	12,933	13,029	13,019	13,009	12,994	12,989	13,005	12,982	12,975

p=preliminary.

12. Hours and earnings, by industry division, selected years, 1950–82

[Gross averages, production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly earnings	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	Average weekly hours	Average hourly earnings
	Private sector			Mining			Construction			Manufacturing		
1950	$53.13	39.8	$1.335	$67.16	37.9	$1.772	$69.68	37.4	$1.863	$58.32	40.5	$1.440
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.30	40.7	1.85
1960[1]	80.67	38.6	2.09	105.04	40.4	2.60	112.67	36.7	3.07	89.72	39.7	2.26
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.45	38.8	2.46	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.19	41.4	2.71
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.49	40.6	2.82
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.83	37.1	3.23	164.40	42.7	3.85	195.45	37.3	5.24	133.33	39.8	3.35
1971	127.31	36.9	3.45	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.90	37.0	3.70	189.14	42.6	4.44	221.19	36.5	6.06	154.71	40.5	3.82
1973	145.39	36.9	3.94	201.40	42.4	4.75	235.89	36.8	6.41	166.46	40.7	4.09
1974	154.76	36.5	4.24	219.14	41.9	5.23	249.25	36.6	6.81	176.80	40.0	4.42
1975	163.53	36.1	4.53	249.31	41.9	5.95	266.08	36.4	7.31	190.79	39.5	4.83
1976	175.45	36.1	4.86	273.90	42.4	6.46	283.73	36.8	7.71	209.32	40.1	5.22
1977	189.00	36.0	5.25	301.20	43.4	6.94	295.65	36.5	8.10	228.90	40.3	5.68
1978	203.70	35.8	5.69	332.88	43.4	7.67	318.69	36.8	8.66	249.27	40.4	6.17
1979	219.91	35.7	6.16	365.07	43.0	8.49	342.99	37.0	9.27	269.34	40.2	6.70
1980	235.10	35.3	6.66	397.06	43.3	9.17	367.78	37.0	9.94	288.62	39.7	7.27
1981	255.20	35.2	7.25	439.19	43.7	10.05	398.52	36.9	10.80	318.00	39.8	7.99
1982	266.92	34.8	7.67	460.93	42.6	10.82	425.41	36.8	11.56	330.65	38.9	8.50
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1950	....	....	....	$44.55	40.5	$1.100	$50.52	37.7	$1.340	....	....	....
1955	....	....	....	55.16	39.4	1.40	63.92	37.6	1.70	....	....	....
1960[1]	....	....	....	66.01	38.6	1.71	75.14	37.2	2.02	....	....	....
1964	$118.78	41.1	$2.89	74.66	37.9	1.97	85.79	37.3	2.30	$70.03	36.1	$1.94
1965	125.14	41.3	3.03	76.91	37.7	2.04	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.39	37.1	2.14	92.13	37.3	2.47	77.04	35.5	2.17
1967	130.82	40.5	3.23	82.35	36.6	2.25	95.72	37.1	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	87.00	36.1	2.41	101.75	37.0	2.75	83.97	34.7	2.42
1969	147.74	40.7	3.63	91.39	35.7	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	96.02	35.3	2.72	112.67	36.7	3.07	96.66	34.4	2.81
1971	168.82	40.1	4.21	101.09	35.1	2.88	117.85	36.6	3.22	103.06	33.9	3.04
1972	187.86	40.4	4.65	106.45	34.9	3.05	122.98	36.6	3.36	110.85	33.9	3.27
1973	203.31	40.5	5.02	111.76	34.6	3.23	129.20	36.6	3.53	117.29	33.8	3.47
1974	217.48	40.2	5.41	119.02	34.2	3.48	137.61	36.5	3.77	126.00	33.6	3.75
1975	233.44	39.7	5.88	126.45	33.9	3.73	148.19	36.5	4.06	134.67	33.5	4.02
1976	256.71	39.8	6.45	133.79	33.7	3.97	155.43	36.4	4.27	143.52	33.3	4.31
1977	278.90	39.9	6.99	142.52	33.3	4.28	165.26	36.4	4.54	153.45	33.0	4.65
1978	302.80	40.0	7.57	153.64	32.9	4.67	178.00	36.4	4.89	163.67	32.8	4.99
1979	325.58	39.9	8.16	164.96	32.6	5.06	190.77	36.2	5.27	175.27	32.7	5.36
1980	351.25	39.6	8.87	176.46	32.2	5.48	209.60	36.2	5.79	190.71	32.6	5.85
1981	382.18	39.4	9.70	190.95	32.2	5.93	229.05	36.3	6.31	208.97	32.6	6.41
1982	402.09	39.0	10.31	198.42	31.9	6.22	245.44	36.2	6.78	225.27	32.6	6.91

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

64

13. Weekly hours, by industry division and major manufacturing group, seasonally adjusted

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. P	Apr. P
PRIVATE SECTOR	35.2	34.8	34.9	35.0	34.9	34.9	34.8	34.8	34.7	34.7	34.8	35.1	34.5	34.8	35.0
MANUFACTURING	39.8	38.9	39.0	39.1	39.2	39.2	39.0	38.8	38.8	38.9	38.9	39.8	39.1	39.6	40.1
Overtime hours	2.8	2.3	2.4	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.5	3.0
Durable goods	40.2	39.3	39.5	39.6	39.7	39.7	39.4	38.9	39.0	39.2	39.2	40.2	39.5	40.0	40.6
Overtime hours	2.8	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.4	2.9
Lumber and wood products	38.7	38.0	37.6	38.5	38.7	38.6	38.2	38.5	38.0	38.5	38.5	40.8	39.4	39.6	40.0
Furniture and fixtures	38.4	37.3	37.4	37.5	37.8	37.6	37.9	37.4	37.5	37.6	37.7	38.8	37.7	38.3	39.4
Stone, clay, and glass products	40.6	40.1	40.0	40.2	40.4	40.6	40.3	40.2	40.2	40.2	40.0	41.6	40.3	40.7	41.0
Primary metal industries	40.5	38.6	38.5	38.5	38.9	38.9	38.8	37.8	38.0	38.2	38.9	38.9	38.9	39.4	39.8
Fabricated metal products	40.3	39.2	39.4	39.5	39.4	39.5	39.2	38.8	38.9	39.0	39.1	39.8	39.5	39.9	40.7
Machinery, except electrical	40.9	39.6	40.1	39.8	39.6	39.8	39.5	39.0	39.2	39.2	39.3	39.7	39.4	39.8	40.3
Electric and electronic equipment	39.9	39.3	39.3	39.4	39.5	39.8	39.3	38.8	39.0	39.2	39.3	39.9	39.3	39.8	40.2
Transportation equipment	40.9	40.5	41.1	41.1	41.6	41.0	40.5	39.8	40.1	40.8	39.9	41.7	41.0	41.9	42.5
Instruments and related products	40.4	39.8	39.9	40.2	40.2	40.1	40.1	39.8	39.4	39.2	39.6	40.6	39.6	40.1	40.4
Miscellaneous manufacturing	38.8	38.5	38.5	38.7	38.6	38.7	38.6	38.3	38.6	38.6	38.4	39.4	37.9	38.8	39.3
Nondurable goods	39.1	38.4	38.4	38.5	38.6	38.6	38.5	38.6	38.5	38.5	38.5	39.3	38.5	38.9	39.4
Overtime hours	2.8	2.5	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.8	3.0
Food and kindred products	39.7	39.5	39.4	39.4	39.5	39.5	39.1	39.4	39.7	39.4	39.2	39.4	39.1	39.2	39.4
Textile mill products	39.6	37.5	37.7	37.9	37.8	37.7	38.2	38.1	38.2	38.6	38.4	40.3	38.9	39.6	40.5
Apparel and other textile products	35.7	34.7	34.7	34.8	35.1	35.2	35.0	35.2	35.0	35.1	35.0	36.9	35.0	35.4	35.9
Paper and allied products	42.5	41.8	42.1	41.8	42.0	41.9	41.7	41.5	41.7	41.6	41.6	41.7	41.3	42.0	42.4
Printing and publishing	37.3	37.0	37.1	36.8	37.1	37.0	36.8	37.0	36.9	37.1	37.1	37.6	37.1	37.4	37.7
Chemicals and allied products	41.6	40.9	40.7	41.0	41.0	40.9	40.9	41.2	40.8	40.6	40.9	41.1	41.0	41.2	41.3
Petroleum and coal products	43.2	43.9	44.0	44.1	44.1	43.3	43.9	44.0	43.3	43.9	44.4	44.6	44.6	45.0	44.2
Rubber and miscellaneous plastics products	40.3	39.6	39.8	39.9	40.1	40.2	39.7	39.6	39.0	39.3	39.6	40.2	39.8	40.5	41.3
Leather and leather products	36.8	35.6	35.6	35.6	35.7	36.1	36.0	35.7	35.2	35.9	35.8	36.7	34.9	35.9	37.0
WHOLESALE AND RETAIL TRADE	32.2	31.9	31.8	32.0	31.9	31.9	31.9	32.1	31.9	31.8	32.1	32.0	31.3	32.0	31.9
WHOLESALE TRADE	38.6	38.4	38.3	38.5	38.6	38.5	38.5	38.4	38.3	38.4	38.4	38.7	38.2	38.5	38.5
RETAIL TRADE	30.1	29.9	29.8	30.0	29.8	29.9	29.9	30.1	29.9	29.8	30.2	30.0	29.2	30.0	29.9
SERVICES	32.6	32.6	32.7	32.7	32.7	32.6	32.6	32.8	32.6	32.6	32.7	32.8	32.5	32.7	32.7

p=preliminary.

14. Hourly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. P	Apr. P
PRIVATE SECTOR	$7.25	$7.67	$7.58	$7.63	$7.64	$7.67	$7.70	$7.76	$7.79	$7.81	$7.82	$7.90	$7.92	$7.90	$7.93
Seasonally adjusted	(1)	(1)	7.59	7.65	7.67	7.71	7.74	7.72	7.77	7.79	7.82	7.87	7.90	7.89	7.94
MINING	10.05	10.82	10.65	10.66	10.82	10.91	10.93	11.04	11.02	11.06	11.08	11.27	11.30	11.20	11.20
CONSTRUCTION	10.80	11.56	11.32	11.46	11.41	11.53	11.60	11.68	11.82	11.66	11.90	11.89	11.95	11.88	11.91
MANUFACTURING	7.99	8.50	8.42	8.45	8.50	8.55	8.51	8.59	8.56	8.61	8.69	8.71	8.75	8.75	8.78
Durable goods	8.53	9.05	8.94	9.01	9.06	9.11	9.09	9.16	9.13	9.17	9.23	9.26	9.31	9.30	9.31
Lumber and wood products	7.00	7.50	7.24	7.41	7.59	7.64	7.61	7.70	7.61	7.63	7.59	7.72	7.76	7.72	7.79
Furniture and fixtures	5.91	6.32	6.21	6.23	6.30	6.34	6.39	6.41	6.41	6.44	6.47	6.50	6.51	6.51	6.53
Stone, clay, and glass products	8.27	8.87	8.72	8.80	8.86	8.93	8.93	9.03	9.04	9.04	9.08	9.12	9.11	9.15	9.18
Primary metal industries	10.81	11.33	11.24	11.23	11.31	11.37	11.49	11.54	11.42	11.49	11.49	11.57	11.54	11.28	11.36
Fabricated metal products	8.20	8.78	8.69	8.79	8.83	8.85	8.85	8.90	8.85	8.90	8.97	8.98	9.05	9.05	9.08
Machinery, except electrical	8.81	9.28	9.24	9.26	9.27	9.30	9.33	9.40	9.34	9.36	9.41	9.38	9.42	9.44	9.44
Electric and electronic equipment	7.62	8.17	8.03	8.05	8.09	8.18	8.24	8.31	8.34	8.38	8.45	8.48	8.51	8.54	8.52
Transportation equipment	10.39	11.12	10.89	11.08	11.21	11.25	11.18	11.24	11.30	11.35	11.44	11.41	11.49	11.49	11.54
Instruments and related products	7.43	8.26	8.07	8.16	8.23	8.31	8.40	8.44	8.48	8.57	8.66	8.75	8.78	8.79	8.77
Miscellaneous manufacturing	5.96	6.42	6.35	6.38	6.41	6.40	6.39	6.49	6.50	6.56	6.66	6.71	6.73	6.74	6.72
Nondurable goods	7.18	7.73	7.65	7.66	7.70	7.77	7.74	7.84	7.81	7.88	7.96	7.98	8.00	8.01	8.05
Food and kindred products	7.43	7.89	7.90	7.92	7.90	7.88	7.85	7.91	7.88	8.00	8.06	8.08	8.10	8.14	8.19
Tobacco manufactures	8.88	9.78	10.05	9.93	10.35	10.42	9.53	9.57	9.50	10.16	9.63	9.87	9.97	10.33	10.47
Textile mill products	5.52	5.83	5.79	5.79	5.79	5.81	5.82	5.86	5.87	5.92	6.03	6.08	6.10	6.11	6.13
Apparel and other textile products	4.96	5.18	5.18	5.16	5.18	5.17	5.18	5.20	5.19	5.22	5.26	5.31	5.32	5.31	5.33
Paper and allied products	8.60	9.32	9.11	9.14	9.28	9.41	9.45	9.63	9.54	9.60	9.66	9.66	9.66	9.68	9.70
Printing and publishing	8.18	8.73	8.59	8.61	8.66	8.74	8.79	8.90	8.87	8.91	8.99	8.96	8.98	9.02	9.04
Chemicals and allied products	9.12	9.98	9.81	9.83	9.95	10.02	10.03	10.20	10.24	10.28	10.34	10.35	10.43	10.41	10.47
Petroleum and coal products	11.38	12.46	12.50	12.52	12.53	12.42	12.42	12.62	12.57	12.69	12.72	13.17	13.26	13.35	13.47
Rubber and miscellaneous plastics products	7.16	7.63	7.52	7.56	7.64	7.65	7.64	7.76	7.72	7.79	7.89	7.89	7.89	7.91	7.93
Leather and leather products	4.99	5.33	5.32	5.32	5.36	5.30	5.33	5.41	5.39	5.41	5.44	5.51	5.51	5.53	5.52
TRANSPORTATION AND PUBLIC UTILITIES	9.70	10.31	10.14	10.17	10.20	10.29	10.43	10.46	10.48	10.59	10.62	10.69	10.71	10.68	10.71
WHOLESALE AND RETAIL TRADE	5.93	6.22	6.18	6.20	6.20	6.21	6.22	6.26	6.30	6.32	6.29	6.44	6.47	6.42	6.44
WHOLESALE TRADE	7.57	8.06	7.97	8.03	8.01	8.07	8.11	8.14	8.17	8.18	8.24	8.34	8.32	8.29	8.33
RETAIL TRADE	5.25	5.49	5.44	5.47	5.47	5.48	5.48	5.52	5.54	5.58	5.56	5.67	5.71	5.68	5.69
FINANCE, INSURANCE, AND REAL ESTATE	6.31	6.78	6.64	6.77	6.71	6.78	6.87	6.90	6.97	7.01	7.01	7.23	7.25	7.25	7.29
SERVICES	6.41	6.91	6.81	6.85	6.84	6.87	6.90	6.99	7.05	7.08	7.12	7.19	7.19	7.18	7.19

[1] Not available.   p=preliminary.

15. Hourly Earnings Index, for production workers on private nonagricultural payrolls, by industry

[1977=100]

Industry	Not seasonally adjusted					Seasonally adjusted						
	Apr. 1982	Feb. 1983	Mar. 1983 P	Apr. 1983 P	Percent change from: Apr. 1982 to Apr. 1983	Apr. 1982	Dec. 1982	Jan. 1983	Feb. 1983	Mar. 1983 P	Apr. 1983 P	Percent change from: Mar. 1983 to Apr. 1983
PRIVATE SECTOR (in current dollars)	146.5	153.8	153.5	154.0	5.2	146.3	152.1	152.8	153.4	153.4	153.9	0.3
Mining	156.5	165.4	164.0	164.6	5.2	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Construction	137.4	144.1	143.6	144.4	5.2	138.7	143.8	143.8	145.5	144.9	145.9	.7
Manufacturing	150.9	157.4	157.0	157.2	4.2	150.8	155.6	156.6	157.4	157.1	157.2	.1
Transportation and public utilities	146.4	156.1	155.5	155.7	6.3	146.9	153.4	155.1	155.7	156.5	156.2	−.2
Wholesale and retail trade	144.3	150.2	150.1	150.9	4.5	143.7	148.6	148.9	149.3	149.4	150.2	.5
Finance, insurance, and real estate	145.4	158.1	157.9	158.7	9.2	144.9	153.7	156.9	156.3	157.4	158.2	.5
Services	145.6	153.4	153.2	153.7	5.6	145.1	152.4	152.2	152.2	152.4	153.2	.5
PRIVATE SECTOR (in constant dollars)	93.7	95.5	95.1	(2)	(2)	93.7	94.3	94.8	95.3	95.0	(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.

16. Weekly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1982									1983			
	1981	1982	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. p	Apr. p
PRIVATE SECTOR															
Current dollars	$255.20	$266.92	$262.27	$265.52	$267.40	$269.98	$271.04	$270.05	$270.31	$271.01	$274.48	$273.34	$270.86	$274.13	$275.96
Seasonally adjusted	(¹)	(¹)	264.89	267.75	267.68	269.08	269.35	268.66	269.62	270.31	272.14	276.24	272.55	274.57	277.90
Constant (1977) dollars	170.13	167.87	167.80	168.16	167.33	167.90	168.24	167.42	167.06	167.81	170.59	169.88	168.24	169.85	(¹)
MINING	439.19	460.93	454.76	454.12	463.10	463.68	463.43	462.58	461.74	460.10	467.58	478.98	466.69	461.44	$460.32
CONSTRUCTION	398.52	425.41	415.44	429.75	427.88	438.14	436.16	430.99	438.52	420.93	437.92	437.55	423.03	432.43	437.10
MANUFACTURING															
Current dollars	318.00	330.65	325.85	329.55	334.05	332.60	331.89	334.15	333.84	338.37	344.99	341.43	340.38	346.50	348.57
Constant (1977) dollars	212.00	207.96	208.48	208.71	209.04	206.84	206.40	207.16	206.33	209.52	214.41	212.20	211.42	214.68	(¹)
Durable goods	342.91	355.67	350.45	355.90	360.59	357.11	356.33	357.24	357.90	363.13	370.12	367.62	366.81	372.93	$375.19
Lumber and wood products	270.90	285.00	270.05	285.29	297.53	294.90	295.27	298.76	292.22	293.76	295.25	302.62	301.86	304.94	309.26
Furniture and fixtures	226.94	235.74	230.39	231.76	238.77	233.31	243.46	241.66	244.22	245.36	250.39	243.75	243.47	251.29	254.67
Stone, clay, and glass products	335.76	355.69	347.93	355.52	361.49	362.56	362.56	365.72	367.02	367.02	366.83	367.54	358.93	370.58	375.46
Primary metal industries	437.81	437.34	434.99	430.11	439.96	437.75	440.07	438.52	431.68	440.07	450.41	451.23	451.21	446.69	454.40
Fabricated metal products	330.46	344.18	338.91	346.33	349.67	344.27	346.04	346.21	346.04	350.66	359.70	354.71	354.76	362.00	365.92
Machinery except electrical	360.33	367.49	367.75	367.62	367.09	363.63	364.80	367.54	365.19	370.66	380.16	371.45	371.15	377.60	377.60
Electric and electronic equipment	304.04	321.08	313.17	315.56	319.56	319.84	322.18	322.43	326.09	331.85	339.69	336.66	334.44	340.75	339.95
Transportation equipment	424.95	450.36	441.05	455.39	466.34	456.75	447.20	443.98	457.65	467.62	474.76	468.95	469.94	481.43	483.53
Instruments and related products	300.17	328.75	318.77	327.22	330.85	328.25	335.16	335.91	334.96	341.09	349.86	351.75	348.57	354.24	350.80
Miscellaneous manufacturing	231.25	247.17	242.57	245.63	247.43	244.48	246.65	250.51	253.50	256.50	259.74	259.68	253.72	262.19	262.08
Nondurable goods	280.74	296.83	291.47	294.14	297.99	299.15	299.54	304.19	302.25	306.53	311.24	308.03	305.60	311.59	313.95
Food and kindred products	294.97	311.66	306.52	312.05	312.05	312.05	310.86	315.61	312.84	317.60	319.98	315.12	312.66	315.83	317.77
Tobacco manufactures	344.54	369.68	367.83	369.40	397.44	383.46	363.09	379.93	370.50	386.08	364.98	360.26	339.98	377.05	398.91
Textile mill products	218.59	218.63	215.39	219.44	220.60	216.13	222.91	223.85	227.17	231.47	236.38	236.51	236.07	242.57	245.20
Apparel and other textile products	177.07	179.75	178.19	180.08	183.89	183.02	183.37	182.52	183.21	184.79	186.20	187.44	184.60	188.51	189.22
Paper and allied products	365.50	389.58	380.80	379.31	389.76	391.46	393.12	401.57	397.82	402.24	410.55	402.82	397.03	405.59	408.37
Printing and publishing	305.11	323.01	316.11	315.99	319.55	322.51	326.11	331.08	328.19	332.34	340.72	332.42	330.46	337.35	338.10
Chemicals and allied products	379.39	408.18	399.27	401.06	406.96	407.81	408.22	420.24	417.79	421.48	428.08	423.32	426.59	428.89	432.41
Petroleum and coal products	491.62	546.99	550.00	549.63	553.83	546.48	546.48	572.95	555.59	564.71	563.50	572.90	574.16	584.73	595.37
Rubber and miscellaneous plastics products	288.55	302.15	297.04	300.13	306.36	302.94	303.31	307.30	303.40	308.48	317.97	316.39	313.23	321.15	325.13
Leather and leather products	183.63	189.75	187.26	191.52	196.71	191.33	192.95	192.06	190.27	194.76	196.38	197.26	191.20	197.42	202.03
TRANSPORTATION AND PUBLIC UTILITIES	382.18	402.09	393.43	394.60	399.84	403.37	409.90	405.85	406.62	413.01	415.24	409.43	411.26	411.18	413.41
WHOLESALE AND RETAIL TRADE	190.95	198.42	195.91	197.78	199.02	202.45	202.77	200.95	200.97	200.34	203.80	202.22	199.92	203.51	204.79
WHOLESALE TRADE	292.20	309.50	304.45	308.35	309.19	312.31	313.05	312.58	314.55	314.93	318.89	320.26	315.33	318.34	319.87
RETAIL TRADE	158.03	164.15	161.02	163.01	164.65	168.24	168.24	166.70	165.09	165.73	170.14	166.13	163.88	168.13	168.99
FINANCE, INSURANCE, AND REAL ESTATE	229.05	245.44	240.37	245.75	242.23	245.44	249.38	249.09	252.31	253.76	254.46	263.90	261.73	261.00	262.44
SERVICES	208.97	225.27	221.33	222.63	224.35	227.40	227.70	228.57	229.13	230.10	232.82	234.39	232.96	234.07	233.68

¹ Not available.   p = preliminary.

17. Indexes of diffusion: industries in which employment increased

[In percent]

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1981	56.7	48.7	51.1	68.3	65.3	54.0	59.9	50.3	50.3	34.7	28.2	31.2
	1982	32.5	42.5	35.8	40.9	51.1	32.0	43.5	37.6	43.0	26.1	34.9	39.0
	1983	54.8	39.2	p 60.5	p 72.6								
Over 3-month span	1981	53.5	52.2	60.2	70.2	70.4	65.9	59.4	57.0	40.1	30.6	26.3	23.4
	1982	28.0	31.2	33.6	37.1	35.8	35.8	27.7	31.7	27.7	28.0	23.9	38.2
	1983	41.1	p 51.3	p 64.2									
Over 6-month span	1981	64.8	65.9	67.2	67.7	67.2	67.5	51.3	39.0	33.9	30.1	27.7	24.2
	1982	21.8	27.4	27.4	29.8	28.8	30.1	24.2	21.0	24.7	28.2	28.0	p 33.3
	1983	p 49.7	...	...	...	...	...	...	...	...	...	...	...
Over 12-month span	1981	73.9	71.0	70.4	62.1	50.0	43.3	35.2	33.6	31.5	27.2	27.7	25.8
	1982	23.1	23.1	21.2	18.8	18.0	21.0	24.7	21.8	p 25.0	p 34.9	...	...
	1983	...	...	...	...	...	...	...	...	...	...	...	...

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.

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.

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 unem-

ployed. 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.

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	1982										1983		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. p
All programs:													
Insured unemployment	4,892	4,760	4,388	4,327	4,495	4,398	4,283	4,391	4,635	5,074	5,459	5,436	5,134
State unemployment insurance program:[1]													
Initial claims[2]	2,418	2,347	1,989	2,399	2,655	2,358	2,342	2,443	2,661	3,080	3,143	2,065	2,075
Insured unemployment (average weekly volume)	4,282	4,067	3,729	3,707	3,912	3,831	3,712	3,828	4,156	4,581	4,923	4,759	4,401
Rate of insured unemployment	4.9	4.6	4.3	4.3	4.6	4.4	4.2	4.4	4.7	5.2	5.6	5.5	5.0
Weeks of unemployment compensated	18,144	16,158	13,679	14,648	14,655	15,015	14,547	13,786	15,170	17,873	ʳ18,232	16,888	19,121
Average weekly benefit amount for total unemployment	$117.10	$117.61	$118.08	$118.64	$117.28	$118.97	$120.78	$122.81	$123.43	$123.42	ʳ$124.34	$124.44	$125.89
Total benefits paid	$2,072,642	$1,849,881	$1,573,444	$1,692,150	$1,679,378	$1,746,195	$1,710,573	$1,647,343	$1,820,019	$2,135,302	ʳ$2,196,641	$2,044,646	$2,321,281
State unemployment insurance program:[1] (Seasonally adjusted data)													
Initial claims[2]	2,521	2,442	2,379	2,528	2,317	2,814	2,902	2,688	2,680	2,586	2,187	ʳ2,138	2,148
Insured unemployment (average weekly volume)	3,777	3,939	3,925	3,995	3,959	4,137	4,446	4,680	4,618	4,355	3,980	3,979	3,884
Rate of insured unemployment	4.3	4.5	4.5	4.6	4.5	4.7	5.1	5.3	5.3	5.0	4.6	4.6	4.5
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	10	9	8	10	10	11	11	10	17	24	21	16	18
Insured unemployment (average weekly volume)	11	10	9	8	7	7	8	9	14	26	37	37	34
Weeks of unemployment compensated	48	37	31	29	25	24	25	28	33	90	ʳ132	138	149
Total benefits paid	$5,141	$4,013	$3,395	$3,314	$2,821	$2,793	$2,900	$3,366	$4,006	$11,191	ʳ$16,541	$17,372	$18,779
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	13	13	11	14	13	12	13	16	14	15	16	10	11
Insured unemployment (average weekly volume)	38	33	29	28	29	27	26	28	31	33	35	33	31
Weeks of unemployment compensated	172	146	120	123	120	118	111	110	126	146	ʳ142	131	146
Total benefits paid	$19,677	$16,806	$13,526	$13,922	$13,445	$13,140	$12,303	$12,144	$14,023	$16,114	ʳ$16,090	$15,103	$16,824
Railroad unemployment insurance:													
Applications	9	5	5	36	68	68	14	20	17	17	20	7	7,628
Insured unemployment (average weekly volume)	65	57	44	44	55	55	61	82	81	83	102	72	65,000
Number of payments	154	130	95	93	100	100	137	159	162	172	219	158	169,000
Average amount of benefit payment	$215.71	$209.48	$200.75	$199.15	$202.54	$202.54	$216.14	$212.35	$216.55	$217.00	$220.32	$214.54	$213.44
Total benefits paid	$33,853	$26,262	$19,110	$18,574	$17,998	$17,998	$31,123	$31,638	$35,061	$39,500	$44,514	$33,100	$36,243
Employment service:[5]													
New applications and renewals	7,439	....	....	10,965	....	....	14,320	....	....	4,527	....	....	7,229
Nonfarm placements	1,232	....	....	1,902	....	....	2,804	....	....	642	....	....	1,034

[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 on claims and payments made jointly with State programs.

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

NOTE: Data for Puerto Rico and the Virgin Islands included. Dashes indicate data not available.
p= preliminary.
r= revised.

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.

Beginning with the January 1983 data, tables 19 through 21 introduce a new treatment of homeownership costs into the Consumer Price Index for All Urban Consumers (CPI-U). The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) will not be affected by this change until 1985. For an explanation of the change, see "Changing the treatment of shelter costs for homeowners in the CPI" by Robert Gillingham and Walter Lane in the June 1982 issue of the *Monthly Labor Review* and "Labor Month in the Review" in the March 1983 issue. Additional information appears in the *CPI Detailed Report*, January 1983.

19. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–82

[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	116.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.2	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	6.0	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	267.2	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

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						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
All items	283.1	294.1	293.6	292.4	293.1	293.2	293.4	282.5	293.6	293.2	292.0	292.1	292.3	293.0
Food and beverages	275.6	279.6	279.1	279.1	280.7	281.6	283.2	275.9	279.9	279.4	279.6	281.1	282.1	283.5
Housing	306.7	320.7	319.0	316.3	317.9	318.5	318.6	306.2	321.2	319.6	316.8	317.0	317.6	319.2
Apparel and upkeep	191.1	195.5	195.4	193.6	191.0	192.0	194.5	190.5	194.6	194.4	192.8	190.0	191.0	194.0
Transportation	285.1	295.5	295.8	294.8	293.0	289.9	287.4	286.6	297.0	297.3	296.3	294.3	291.1	288.6
Medical care	318.8	338.7	342.2	344.3	347.8	351.3	352.3	317.4	336.5	339.8	341.8	345.3	348.9	350.0
Entertainment	232.8	240.3	239.9	240.1	241.5	243.1	244.6	229.5	236.5	236.1	236.5	237.7	239.5	240.8
Other goods and services	252.2	271.2	273.8	276.6	279.9	281.6	281.9	249.3	267.8	270.9	274.0	277.8	279.6	280.0
Commodities	258.8	267.5	267.8	267.7	267.2	266.7	266.7	259.1	267.9	268.2	268.2	268.0	267.8	268.4
Commodities less food and beverages	247.1	257.6	258.2	258.0	256.5	255.2	254.3	247.5	258.3	258.9	258.8	257.8	257.1	257.4
Nondurables less food and beverages	263.4	271.0	271.4	270.0	267.4	265.2	263.4	265.3	272.9	273.3	271.9	269.3	266.9	265.0
Durables	233.5	246.0	246.6	247.3	247.3	247.1	247.4	232.4	245.4	246.2	247.0	247.3	247.8	249.7
Services	325.5	340.3	338.6	335.6	337.9	338.9	339.4	325.8	341.2	339.3	336.2	336.9	337.8	338.5
Rent, residential	219.6	228.9	230.2	230.8	232.2	....	....	219.1	228.4	229.7	230.2	231.7	232.5	233.1
Household services less rent of shelter (12/82=100)	...	...	...	100.0	100.9	101.0	101.6	...	....	....	....	....	....	....
Transportation services	288.8	300.5	299.9	299.4	300.1	299.9	299.8	287.9	298.4	297.5	296.7	297.1	296.9	296.7
Medical care services	345.1	366.9	371.0	373.4	377.4	381.5	382.2	343.0	363.9	367.7	370.1	374.0	378.2	379.0
Other services	254.0	268.4	269.2	270.0	271.5	272.6	272.9	252.4	266.1	266.8	267.5	269.1	270.2	270.6
Special indexes:														
All items less food	281.7	294.0	293.6	292.1	292.6	292.6	292.4	281.3	293.9	293.5	292.1	291.9	291.9	292.4
All items less homeowners' costs (12/82=100)	...	...	...	100.0	100.2	100.2	100.3	...	...	...	...	...	...	...
Commodities less food	245.2	255.4	256.0	255.8	254.4	253.2	252.4	245.6	256.1	256.7	256.6	255.7	255.0	255.4
Nondurables less food	258.4	265.7	266.1	264.7	262.4	260.5	258.9	260.2	267.5	267.9	266.6	264.2	262.2	260.6
Nondurables less food and apparel	296.6	305.5	306.2	305.2	303.1	299.9	296.5	297.8	306.9	307.5	306.5	304.4	301.1	297.4
Nondurables	270.7	276.5	276.4	275.8	273.2	274.6	274.4	271.6	277.4	277.4	276.8	276.2	275.6	275.3
Services less rent of shelter (12/82=100)	...	....	...	100.0	100.7	101.0	101.3	...	....	....	....	....	....	....
Services less medical care	321.1	335.1	332.9	329.3	331.4	332.2	332.7	321.6	336.3	334.0	330.4	330.7	331.2	332.0
Domestically produced farm foods	263.8	266.6	265.3	264.8	265.7	266.6	268.4	262.7	265.5	264.4	264.0	265.0	266.0	267.6
Selected beef cuts	272.0	272.0	271.9	270.0	271.2	272.0	272.6	273.3	273.2	273.2	271.2	272.5	273.5	274.0
Energy [1]	406.1	425.0	422.6	419.9	414.5	406.7	399.9	407.9	426.0	423.7	420.8	415.1	406.9	399.8
Energy commodities [1]	424.5	431.9	431.6	425.4	414.9	401.6	388.3	425.0	432.3	431.8	425.6	415.2	401.9	388.7
All items less energy	273.6	284.0	283.6	282.5	283.8	284.7	285.6	272.3	282.8	282.5	282.2	282.2	283.0	284.4
All items less food and energy	269.8	281.5	281.2	279.9	281.1	282.0	282.6	268.3	280.4	280.2	279.0	279.3	280.2	281.6
Commodities less food and energy	225.3	236.0	236.6	237.1	237.1	237.9	239.1	224.5	235.4	236.2	236.8	237.1	c237.9	240.0
Services less energy	321.5	334.4	333.1	329.6	331.8	332.9	333.1	321.8	335.2	333.7	330.1	330.5	331.4	331.9
Purchasing power of the consumer dollar, 1967 = $1	$0.353	$0.340	$0.341	$0.342	$0.341	$0.341	$0.341	$0.354	$0.341	$0.341	$0.342	$0.342	$0.342	$0.341

See footnotes at end of table.

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
FOOD AND BEVERAGES	275.6	279.6	279.1	279.1	280.7	281.6	283.2	275.9	279.9	279.4	279.6	281.1	282.1	283.5
Food	283.0	287.0	286.4	286.5	288.1	289.0	290.5	283.1	287.2	286.6	286.7	288.4	289.3	290.7
Food at home	277.1	279.4	278.3	277.8	279.3	280.3	281.9	276.2	278.5	277.4	277.1	278.6	279.7	281.2
Cereals and bakery products	281.3	285.0	285.5	286.3	287.8	288.7	289.8	280.0	283.7	284.1	284.9	286.4	287.4	288.5
Cereals and cereal products (12/77 = 100)	153.9	154.0	153.2	153.4	154.0	154.0	155.0	154.8	154.9	154.1	154.2	154.8	154.7	155.8
Flour and prepared flour mixes (12/77 = 100)	139.2	139.9	139.2	139.5	140.3	139.8	139.4	139.6	140.3	139.5	139.8	140.6	140.1	139.9
Cereal (12/77 = 100)	165.2	167.5	167.2	168.0	168.1	169.2	171.3	167.2	169.7	169.4	170.1	170.3	171.4	173.5
Rice, pasta, and cornmeal (12/77 = 100)	151.2	147.6	146.1	145.3	146.5	145.3	146.0	152.4	148.7	147.3	146.5	147.6	146.3	147.0
Bakery products (12/77 = 100)	147.1	149.7	150.3	150.9	151.7	152.4	152.8	146.0	148.6	149.1	149.6	150.5	151.2	151.6
White bread	242.3	246.7	246.8	248.1	248.9	249.8	252.0	238.3	242.6	242.6	243.9	244.6	245.7	247.8
Other breads (12/77 = 100)	145.1	146.5	147.3	147.6	147.7	148.7	149.0	147.0	148.4	149.4	149.6	149.7	150.6	151.1
Fresh biscuits, rolls, and muffins (12/77 = 100)	148.4	151.0	150.9	151.6	152.6	153.1	152.0	144.6	147.1	146.9	147.6	148.6	149.1	148.0
Fresh cakes and cupcakes (12/77 = 100)	148.0	150.1	150.5	151.5	153.1	154.0	153.8	146.4	148.5	148.8	149.7	151.3	152.2	152.1
Cookies (12/77 = 100)	149.4	152.2	153.6	153.7	153.6	153.7	155.1	150.2	153.2	154.5	154.6	154.6	154.6	156.0
Crackers, bread, and cracker products (12/77 = 100)	135.3	141.9	143.3	144.1	144.9	146.5	146.0	136.5	143.3	144.6	145.5	146.4	147.9	147.3
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	146.3	148.7	149.6	150.4	152.3	154.2	154.2	148.7	151.4	152.3	152.9	154.9	156.8	156.9
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	153.5	154.4	155.8	155.2	156.8	155.7	156.2	146.8	147.6	148.6	148.4	149.8	149.0	149.4
Meats, poultry, fish, and eggs	256.9	265.1	263.6	261.6	263.0	264.0	264.2	256.4	265.0	263.5	261.5	262.8	263.9	264.0
Meats, poultry, and fish	262.1	272.4	270.8	268.8	270.3	271.7	271.4	261.5	272.1	270.6	268.6	270.0	271.4	271.1
Meats	261.2	274.9	273.6	271.1	272.2	273.2	272.8	260.6	274.6	273.2	270.8	271.8	272.9	272.4
Beef and veal	271.7	272.2	272.0	270.2	271.3	272.2	272.8	272.3	272.7	272.5	270.6	271.8	272.9	273.5
Ground beef other than canned	265.8	262.4	263.0	261.7	262.7	261.8	263.6	266.9	263.7	264.2	262.7	263.7	263.0	264.7
Chuck roast	284.3	281.9	281.7	281.0	281.7	286.9	284.8	293.1	290.4	290.3	289.6	290.4	295.9	293.0
Round roast	243.0	237.9	241.4	243.0	243.3	242.6	239.9	245.9	240.5	244.3	246.4	246.6	245.3	242.8
Round steak	258.8	253.4	257.1	253.5	255.1	259.8	257.9	256.4	251.0	255.1	251.3	253.0	258.0	257.1
Sirloin steak	260.6	266.3	259.8	253.0	253.1	260.3	262.8	262.2	268.0	260.6	252.7	254.5	261.7	264.5
Other beef and veal (12/77 = 100)	161.5	164.9	164.1	162.8	163.7	163.5	164.4	159.8	163.4	162.4	161.2	162.1	162.1	163.0
Pork	239.5	277.9	274.2	270.1	272.0	273.6	271.1	238.9	277.0	273.4	269.5	271.4	272.9	270.4
Bacon	249.6	312.4	298.7	290.8	290.8	294.5	288.7	253.3	317.7	304.0	296.1	295.5	299.5	293.1
Chops	216.3	252.3	249.0	242.4	245.6	252.1	246.4	214.7	250.0	247.0	240.8	243.9	250.3	244.7
Ham other than canned (12/77 = 100)	109.2	126.5	127.3	129.6	129.2	125.0	125.6	106.5	123.4	124.2	126.4	126.0	121.7	122.4
Sausage	305.8	342.1	337.7	332.0	333.6	333.9	336.9	306.6	343.2	338.5	332.5	335.0	334.8	337.0
Canned ham	247.6	267.2	270.5	272.4	275.2	276.2	277.3	251.2	271.4	275.0	276.9	279.7	280.6	282.2
Other pork (12/77 = 100)	132.6	151.3	149.6	145.6	147.9	150.4	148.1	131.7	150.5	148.6	144.9	147.1	149.5	147.3
Other meats	262.4	272.2	271.6	269.7	269.3	269.2	269.7	261.7	272.2	271.5	269.8	268.7	269.0	269.3
Frankfurters	260.5	274.8	274.4	268.9	269.7	269.4	270.8	260.0	274.0	273.8	268.4	268.5	268.6	270.1
Bologna, liverwurst, and salami (12/77 = 100)	149.2	158.5	156.6	155.3	154.0	154.5	155.2	149.4	158.5	156.4	155.1	153.9	154.5	155.1
Other lunchmeats (12/77 = 100)	133.7	140.1	141.3	141.8	139.9	139.7	139.0	131.7	137.9	139.1	139.8	137.7	137.8	137.0
Lamb and organ meats (12/77 = 100)	141.0	137.0	135.4	134.3	137.4	137.2	138.2	144.2	140.6	138.5	137.5	140.3	140.1	140.9
Poultry	194.7	195.4	192.0	190.4	191.3	194.0	193.7	192.8	193.2	190.0	188.4	189.4	191.9	191.6
Fresh whole chicken	195.1	192.6	189.3	185.4	186.8	190.6	190.7	192.8	190.3	187.4	183.5	185.0	188.4	188.4
Fresh and frozen chicken parts (12/77 = 100)	127.5	126.8	125.3	124.8	125.0	126.2	126.6	125.9	124.9	123.5	123.1	123.5	124.6	125.1
Other poultry (12/77 = 100)	123.9	128.5	126.4	126.0	126.3	127.7	126.6	123.3	128.0	124.6	125.3	125.7	127.1	125.6
Fish and seafood	376.3	367.1	366.6	369.6	376.7	379.2	380.1	375.5	366.0	365.3	368.2	375.1	377.5	378.9
Canned fish and seafood (12/77 = 100)	141.0	138.6	139.0	138.9	140.2	139.1	138.3	140.5	138.1	138.4	138.2	139.5	138.5	137.8
Fresh and frozen fish and seafood (12/77 = 100)	144.7	140.5	140.0	141.9	145.4	147.6	148.6	144.6	140.2	139.6	141.5	145.0	147.1	148.3
Eggs	195.2	175.8	175.0	172.5	172.9	169.3	175.0	196.3	176.7	176.2	173.3	173.7	170.0	175.8
Dairy products	246.5	247.1	247.4	247.8	249.5	249.7	249.6	245.9	246.4	246.7	247.1	248.9	249.1	248.9
Fresh milk and cream (12/77 = 100)	135.3	135.0	135.1	135.5	136.7	136.7	136.8	134.8	134.5	134.6	135.0	136.2	136.2	136.3
Fresh whole milk	221.7	220.8	220.9	221.9	223.7	223.4	223.4	220.8	220.0	220.1	221.1	222.9	222.6	222.6
Other fresh milk and cream (12/77 = 100)	135.1	135.3	135.4	135.2	136.9	137.3	137.7	134.6	134.7	134.9	134.7	136.3	136.8	137.1
Processed dairy products (12/77 = 100)	144.9	146.2	146.6	146.6	147.1	147.4	147.2	145.3	146.5	146.9	146.9	147.4	147.7	147.4
Butter	250.1	252.6	252.5	252.1	253.4	253.6	253.5	252.7	255.1	255.1	254.5	255.9	256.2	256.1
Cheese (12/77 = 100)	143.3	144.7	144.5	144.6	145.2	145.5	145.5	143.6	145.0	144.8	144.9	145.5	145.8	145.8
Ice cream and related products (12/77 = 100)	149.5	150.4	152.4	151.8	152.5	153.1	150.7	148.9	149.6	151.5	150.8	151.6	152.2	149.8
Other dairy products (12/77 = 100)	139.5	141.0	140.9	141.7	141.6	141.6	143.9	140.3	141.7	141.5	142.4	142.3	142.3	144.6
Fruits and vegetables	293.1	280.7	276.1	277.6	276.2	278.1	286.9	289.1	275.0	271.3	273.6	272.6	274.5	282.9
Fresh fruits and vegetables	302.1	277.4	268.3	272.3	269.2	272.0	288.6	296.1	268.4	261.0	266.6	264.3	267.1	283.0
Fresh fruits	297.8	317.1	288.9	273.9	268.3	270.5	282.8	287.3	300.4	275.4	262.5	258.9	261.0	272.5
Apples	288.7	250.7	239.4	243.7	244.2	244.0	249.3	288.5	251.9	239.9	243.7	244.8	243.9	249.6
Bananas	263.0	227.8	243.7	242.6	241.3	254.0	257.1	261.1	226.7	241.9	242.0	239.9	250.9	254.6
Oranges	316.3	520.8	399.6	313.0	292.2	286.3	299.1	309.5	465.7	360.4	283.0	267.5	263.1	272.7
Other fresh fruits (12/77 = 100)	157.2	148.0	143.3	144.8	143.1	145.1	154.4	151.8	142.4	137.5	138.7	138.0	139.8	149.0
Fresh vegetables	306.1	240.2	249.1	270.8	270.0	273.4	294.0	304.2	239.7	248.1	270.4	269.2	272.7	292.5
Potatoes	301.0	243.8	240.8	241.3	236.2	240.6	241.1	294.8	240.5	235.9	237.5	231.5	236.5	236.1
Lettuce	270.9	259.2	259.2	334.6	301.3	249.0	247.9	271.3	260.9	259.8	336.0	303.4	250.0	246.6
Tomatoes	258.1	210.5	242.9	272.8	236.8	265.0	352.2	261.8	213.7	246.6	278.4	241.5	269.0	358.1
Other fresh vegetables (12/77 = 100)	185.0	131.5	137.6	142.2	156.0	165.6	175.8	184.0	131.0	137.1	141.5	155.3	165.2	174.9
Processed fruits and vegetables	285.8	286.8	287.3	286.0	286.6	287.4	287.6	283.7	284.6	285.1	283.8	284.3	285.1	285.3
Processed fruits (12/77 = 100)	149.0	149.2	149.7	149.5	150.1	150.8	151.3	148.6	148.8	149.4	149.2	149.8	150.5	151.0
Frozen fruit and fruit juices (12/77 = 100)	149.2	144.8	145.6	143.6	144.7	144.6	145.0	148.2	144.0	144.7	142.6	143.8	143.7	144.1
Fruit juices other than frozen (12/77 = 100)	152.4	152.5	153.4	154.0	154.1	155.3	156.6	151.4	151.4	152.6	153.1	153.1	154.4	155.6
Canned and dried fruits (12/77 = 100)	145.3	149.2	149.1	149.6	150.4	151.0	151.0	145.0	148.8	149.7	150.2	151.1	151.7	151.5
Processed vegetables (12/77 = 100)	138.2	139.1	139.0	138.0	137.9	138.1	137.7	137.2	137.9	137.8	136.8	136.7	136.9	136.6
Frozen vegetables (12/77 = 100)	142.0	147.7	149.0	147.5	149.7	151.2	149.7	143.4	148.8	150.4	148.9	151.2	152.7	151.3

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						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
FOOD AND BEVERAGES — Continued														
Food — Continued														
Food at home — Continued														
Fruits and vegetables — Continued														
Cut corn and canned beans except lima (12/77=100)	141.2	140.8	140.8	140.3	139.5	138.5	138.9	138.8	138.4	138.4	137.8	137.0	136.2	136.4
Other canned and dried vegetables (12/77=100)	134.8	133.9	133.0	132.0	131.0	131.1	131.1	133.3	132.4	131.6	130.5	129.6	129.8	129.7
Other foods at home	331.7	334.8	334.3	333.7	337.1	338.2	339.1	332.6	335.7	335.1	334.6	337.9	339.1	339.9
Sugar and sweets	365.5	370.6	370.3	369.2	371.5	370.7	372.8	365.4	370.6	370.1	369.1	371.4	370.6	372.5
Candy and chewing gum (12/77=100)	150.3	149.4	149.5	149.7	149.8	149.6	150.3	150.1	149.3	149.5	149.6	149.8	149.6	150.3
Sugar and artificial sweeteners (12/77=100)	161.0	167.3	165.2	164.3	167.0	165.9	166.9	162.4	168.8	166.6	165.6	168.5	167.1	168.3
Other sweets (12/77=100)	147.4	151.0	152.5	151.7	152.0	152.3	153.4	145.5	148.9	150.2	149.4	149.8	150.2	151.0
Fats and oils (12/77=100)	259.6	258.4	258.6	258.6	259.3	258.0	258.4	259.7	258.4	258.5	258.7	259.3	258.1	258.4
Margarine	256.7	258.4	257.5	256.5	259.4	255.9	255.8	256.1	257.8	256.8	255.4	258.5	255.3	254.5
Nondairy substitutes and peanut butter (12/77=100)	156.1	151.2	152.0	151.7	151.6	151.8	151.4	154.4	149.5	150.3	150.2	150.0	150.1	149.7
Other fats, oils, and salad dressings (12/77=100)	129.5	129.7	129.8	130.3	130.2	129.8	130.4	130.0	130.2	130.3	130.8	130.7	130.3	131.0
Nonalcoholic beverages	424.8	427.5	426.2	424.3	431.1	432.2	432.7	426.6	429.2	427.9	426.1	432.8	433.9	434.5
Cola drinks, excluding diet cola	306.6	308.9	308.8	307.2	312.9	312.5	314.1	303.8	306.2	306.2	304.8	310.3	310.0	311.5
Carbonated drinks, including diet cola (12/77=100)	143.4	146.2	144.8	142.4	145.2	147.4	146.7	141.4	144.0	142.4	140.2	142.8	144.9	144.5
Roasted coffee	366.6	362.0	360.0	361.4	365.0	365.9	363.2	362.2	357.2	354.8	356.2	359.9	360.5	357.9
Freeze dried and instant coffee	343.6	343.6	344.2	346.1	348.2	349.3	349.2	343.4	343.2	343.7	345.6	347.8	349.0	348.8
Other noncarbonated drinks (12/77=100)	138.9	139.1	138.8	139.0	141.0	140.6	141.1	139.1	139.3	139.1	139.2	141.3	140.8	141.3
Other prepared foods	266.5	270.5	270.2	270.7	272.6	275.1	276.0	268.1	272.2	271.9	272.4	274.2	276.8	277.5
Canned and packaged soup (12/77=100)	135.6	136.8	136.6	136.9	138.1	139.0	140.0	137.8	138.7	138.5	138.9	140.1	141.1	141.9
Frozen prepared foods (12/77=100)	147.0	148.5	149.7	149.0	150.6	152.0	153.1	146.5	147.9	149.2	148.5	150.0	151.3	152.2
Snacks (12/77=100)	153.4	153.3	153.1	152.7	154.0	157.6	157.9	155.4	155.4	155.2	154.8	156.0	159.6	160.1
Seasonings, olives, pickles, and relish (12/77=100)	153.2	156.5	157.1	157.4	159.5	161.1	161.6	152.2	155.6	156.2	156.4	158.5	160.1	160.4
Other condiments (12/77=100)	148.2	152.1	151.7	152.6	153.8	154.9	154.9	149.9	153.9	153.4	154.4	155.6	156.8	156.7
Miscellaneous prepared foods (12/77=100)	147.7	151.4	150.2	151.0	151.1	151.5	151.7	147.9	151.6	150.3	151.2	151.4	151.7	151.9
Other canned and packaged prepared foods (12/77=100) ...	143.2	145.8	145.0	146.1	146.1	146.4	146.8	144.5	147.2	146.4	147.3	147.3	147.7	148.0
Food away from home	302.4	310.7	311.4	312.6	314.5	315.2	316.5	305.4	313.8	314.6	315.8	317.7	318.4	319.7
Lunch (12/77=100)	147.0	151.2	151.6	152.2	153.1	153.3	153.7	148.6	152.8	153.2	153.8	154.8	155.0	155.3
Dinner (12/77=100)	145.7	149.5	149.7	150.4	151.3	151.7	152.0	147.3	151.2	151.4	152.1	153.0	153.4	153.7
Other meals and snacks (12/77=100)	147.9	152.1	152.7	153.0	154.0	154.5	156.0	148.7	152.7	153.3	153.7	154.6	155.1	156.5
Alcoholic beverages	206.6	210.6	210.9	210.9	211.6	213.3	215.1	208.8	212.8	213.0	213.0	213.7	215.6	217.3
Alcoholic beverages at home (12/77=100)	134.0	136.2	136.2	136.1	136.5	137.7	139.1	135.4	137.6	137.5	137.4	137.8	139.2	140.6
Beer and ale	209.2	212.7	212.5	212.6	213.3	217.4	219.8	208.3	211.8	211.7	211.7	212.5	216.4	218.6
Whiskey	147.0	150.0	150.7	150.2	150.5	150.9	151.3	147.8	150.7	151.2	150.7	151.2	151.6	151.9
Wine	235.3	236.4	235.9	235.6	235.6	234.7	239.1	243.3	244.8	243.7	243.3	243.0	241.8	246.8
Other alcoholic beverages (12/77=100)	118.1	120.3	120.4	120.2	120.6	120.7	121.5	118.0	120.3	120.4	120.1	120.6	120.5	121.2
Alcoholic beverages away from home (12/77=100)	138.2	142.7	143.6	144.2	144.8	145.4	145.7	139.7	144.0	144.8	145.3	146.0	146.6	146.9
HOUSING	306.7	320.7	319.0	316.3	317.9	318.5	318.6	306.2	321.2	319.6	316.0	317.0	317.6	319.2
Shelter (CPI-U)	327.6	342.8	340.7	335.9	338.3	339.2	339.3	328.5	.....	.....	.....	.....	.....	.....
Renters' costs	.....	.....	.....	100.0	100.8	101.2	101.4	.....	.....	.....	.....	.....	.....	.....
Rent, residential	219.6	228.9	230.2	230.8	232.2	233.1	233.6	219.1	.....	.....	.....	.....	.....	.....
Other renters' costs	320.1	341.6	337.8	333.0	339.2	340.8	340.6	318.9	.....	.....	.....	.....	.....	.....
Homeowners' costs [2]	.....	.....	.....	100.0	100.7	100.9	100.9	.....	.....	.....	.....	.....	.....	.....
Owners' equivalent rent	.....	.....	.....	100.0	100.7	100.9	100.8	.....	.....	.....	.....	.....	.....	.....
Household insurance	.....	.....	.....	100.0	100.9	100.9	101.5	.....	.....	.....	.....	.....	.....	.....
Maintenance and repairs	327.2	339.4	339.0	337.8	342.9	339.4	339.9	323.7	.....	.....	.....	.....	.....	.....
Maintenance and repair services	357.8	374.1	373.4	371.4	380.6	373.6	376.7	358.6	.....	.....	.....	.....	.....	.....
Maintenance and repair commodities	255.0	257.3	257.8	258.5	259.4	259.3	257.7	248.6	.....	.....	.....	.....	.....	.....
Shelter (CPI-W)	.....	.....	.....	.....	.....	.....	.....	345.2	343.0	338.0	337.9	338.8	341.1	
Rent, residential	.....	.....	.....	.....	.....	.....	.....	228.4	229.7	230.3	231.7	232.5	233.1	
Other renters' costs	.....	.....	.....	.....	.....	.....	.....	339.5	335.6	330.7	337.3	339.0	339.0	
Lodging while out of town	.....	.....	.....	.....	.....	.....	.....	355.6	349.3	341.4	350.8	353.6	353.1	
Tenants' insurance (12/77=100)	.....	.....	.....	.....	.....	.....	.....	148.3	149.1	149.3	151.5	151.5	152.6	
Homeownership	.....	.....	.....	.....	.....	.....	.....	387.1	383.7	376.8	375.9	376.9	379.9	
Home purchase	.....	.....	.....	.....	.....	.....	.....	289.7	290.4	290.9	291.9	293.7	298.9	
Financing, taxes, and insurance	.....	.....	.....	.....	.....	.....	.....	524.3	514.6	495.7	490.2	491.3	491.8	
Property insurance	.....	.....	.....	.....	.....	.....	.....	408.5	409.7	412.1	414.5	417.9	419.2	
Property taxes	.....	.....	.....	.....	.....	.....	.....	226.4	227.5	228.8	230.6	231.4	231.7	
Contracted mortgage interest costs	.....	.....	.....	.....	.....	.....	.....	678.8	663.4	633.5	624.0	625.1	625.7	
Mortgage interest rates	.....	.....	.....	.....	.....	.....	.....	232.4	226.6	215.9	212.0	211.1	207.5	
Maintenance and repairs	.....	339.4	339.0	337.8	342.9	339.4	.....	335.4	334.9	333.7	337.8	336.2	337.5	
Maintenance and repair services	.....	374.1	373.4	371.4	380.6	373.6	.....	374.9	374.0	371.7	377.3	374.5	376.6	
Maintenance and repair commodities	.....	257.3	257.8	258.5	259.4	259.3	.....	251.2	251.6	252.3	253.6	254.5	254.2	
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	.....	.....	.....	.....	.....	.....	.....	145.7	145.9	146.5	148.2	148.0	146.0	
Lumber, awnings, glass, and masonry (12/77=100)	.....	.....	.....	.....	.....	.....	.....	120.4	120.8	121.3	120.5	122.2	124.1	
Plumbing, electrical, heating, and cooling supplies (12/77=100)	.....	.....	.....	.....	.....	.....	.....	134.6	135.3	136.2	137.3	136.6	137.5	
Miscellaneous supplies and equipment (12/77=100)	.....	.....	.....	.....	.....	.....	.....	141.8	141.6	141.2	141.3	142.2	142.4	

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Fuel and other utilities	339.3	363.4	362.2	364.1	365.4	364.6	363.8	340.2	364.7	363.6	365.5	366.8	365.9	365.2
Fuels	430.5	464.5	461.9	464.0	463.5	461.5	459.7	429.9	464.0	461.7	463.9	463.3	461.2	459.5
Fuel oil, coal, and bottled gas	664.0	677.2	691.3	688.5	671.1	654.0	625.3	666.7	679.7	693.7	690.8	673.4	656.0	627.3
Fuel oil	692.3	699.1	712.8	708.7	689.3	669.7	636.4	694.4	ᶜ701.2	714.7	710.6	691.2	671.3	637.9
Other fuels (6/78 = 100)	168.0	183.7	189.0	190.4	188.4	187.1	185.9	169.5	184.8	190.3	191.6	189.5	188.1	187.0
Gas (piped) and electricity	375.9	413.4	407.6	410.6	413.5	414.5	418.0	374.8	412.4	406.9	410.0	412.8	413.8	417.5
Electricity	313.3	327.0	318.4	319.6	319.2	320.1	321.2	312.3	326.3	317.3	318.7	318.3	319.4	320.7
Utility (piped) gas	458.6	542.0	543.1	549.6	559.1	560.1	568.3	456.6	538.8	541.6	547.6	556.9	557.6	565.9
HOUSING														
Fuel and other utilities														
Other utilities and public services	195.0	204.5	205.1	206.6	210.1	210.9	211.4	195.4	205.3	205.9	207.3	210.9	211.6	212.2
Telephone services	158.5	166.2	166.6	168.2	171.4	171.7	172.1	158.6	166.6	167.0	168.6	171.7	172.1	172.5
Local charges (12/77 = 100)	125.6	135.2	135.4	137.8	140.6	139.9	140.3	125.7	135.7	135.9	138.1	140.8	140.2	140.6
Interstate toll calls (12/77 = 100)	117.7	119.7	119.7	119.7	121.0	121.8	121.8	117.8	120.2	120.2	120.2	121.5	122.2	122.2
Intrastate toll calls (12/77 = 100)	109.0	110.4	111.1	111.5	114.0	115.9	116.3	108.7	110.1	110.9	111.3	113.9	115.8	116.2
Water and sewerage maintenance	316.9	334.1	335.1	335.8	341.6	343.9	345.6	319.7	337.1	338.2	338.9	344.8	347.2	349.0
Household furnishings and operations	231.6	235.4	235.1	235.7	235.8	236.7	237.6	228.0	232.3	231.8	232.3	232.6	233.4	234.6
Housefurnishings	192.7	195.9	195.1	195.3	194.9	195.9	197.1	190.4	193.9	193.0	193.2	193.0	193.8	195.3
Textile housefurnishings	217.7	223.2	222.6	222.0	221.9	228.2	230.3	219.9	226.4	225.8	224.9	224.5	232.2	234.8
Household linens (12/77 = 100)	134.7	136.4	133.8	132.7	131.5	139.0	136.7	135.6	137.6	135.0	134.0	132.6	140.7	137.9
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	136.7	142.0	144.0	144.4	145.6	145.7	150.9	138.7	145.3	147.5	147.6	148.6	149.5	156.2
Furniture and bedding	212.1	215.8	214.1	215.4	213.9	213.8	215.8	208.2	212.3	210.3	211.6	210.4	210.2	213.2
Bedroom furniture (12/77 = 100)	140.8	146.7	146.2	147.4	146.1	146.6	148.9	137.2	143.5	142.1	143.4	142.6	142.7	146.0
Sofas (12/77 = 100)	118.0	119.4	116.4	118.2	117.3	116.5	118.3	118.2	119.6	117.0	118.8	117.9	117.1	118.9
Living room chairs and tables (12/77 = 100)	121.6	122.6	122.1	122.2	121.6	121.0	122.0	121.8	122.9	122.5	122.5	122.0	121.5	122.6
Other furniture (12/77 = 100)	140.5	140.6	140.1	140.4	139.4	139.8	139.7	135.8	136.0	135.3	135.6	134.6	135.1	136.0
Appliances including TV and sound equipment	150.1	152.0	151.7	151.5	151.9	151.5	151.9	149.7	151.9	151.5	151.4	151.8	151.3	151.7
Television and sound equipment (12/77 = 100)	109.1	108.5	108.1	107.2	107.0	107.1	106.9	108.2	107.6	107.3	106.3	106.1	106.1	105.9
Television	104.7	103.5	102.9	102.6	102.3	101.9	101.2	103.5	102.1	101.7	101.4	101.1	100.5	99.9
Sound equipment (12/77 = 100)	114.0	114.1	113.9	112.4	112.2	112.8	113.1	113.2	113.3	113.1	111.4	111.3	111.8	111.9
Household appliances	180.3	185.4	185.2	186.1	187.6	186.3	187.7	180.4	185.9	185.6	186.7	187.9	186.7	188.0
Refrigerators and home freezers	183.7	191.1	192.7	193.3	193.2	192.2	193.3	189.3	196.9	198.4	199.1	199.2	198.1	198.9
Laundry equipment (12/77 = 100)	133.3	140.0	142.7	143.0	141.5	141.8	142.5	133.5	140.4	140.3	141.4	142.1	142.3	142.9
Other household appliances (12/77 = 100)	122.2	123.5	122.7	123.2	124.7	123.6	124.6	120.0	121.7	120.7	121.5	122.8	121.5	122.7
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	121.9	122.9	120.7	121.5	123.7	122.3	124.2	119.3	121.4	119.2	120.1	121.9	120.2	122.4
Office machines, small electric appliances, and air conditioners (12/77 = 100)	122.5	124.0	124.7	125.1	125.8	125.1	125.2	120.7	122.0	122.4	123.0	123.8	122.9	122.9
Other household equipment (12/77 = 100)	137.3	139.6	139.1	139.2	139.1	140.2	140.7	135.3	137.6	137.1	137.1	137.0	137.9	138.6
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	140.9	143.4	142.6	142.7	141.2	143.3	143.0	133.3	136.0	134.5	134.3	133.2	134.9	135.0
Clocks, lamps, and decor items (12/77 = 100)	129.0	131.3	131.3	131.0	130.8	132.4	133.9	125.4	126.4	126.8	126.6	126.1	127.3	129.2
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	143.1	145.1	144.6	145.1	145.9	145.7	146.4	139.0	141.3	141.0	141.2	141.9	141.8	142.6
Lawn equipment, power tools, and other hardware (12/77 = 100)	132.1	134.8	134.2	134.1	134.1	135.4	135.5	137.3	140.1	139.5	139.2	139.3	140.6	140.9
Housekeeping supplies	284.2	290.1	290.3	292.3	294.0	294.8	295.4	280.4	286.7	287.1	288.8	290.7	291.6	292.2
Soaps and detergents	279.5	283.5	283.5	285.3	288.9	290.1	292.3	275.7	279.7	279.9	281.5	285.0	286.1	288.1
Other laundry and cleaning products (12/77 = 100)	142.1	146.8	147.3	148.0	149.0	149.1	149.5	140.9	145.7	146.2	146.9	147.7	147.9	148.3
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	145.7	148.9	148.2	148.6	150.2	150.4	149.3	145.4	148.9	148.1	148.5	150.3	150.5	149.1
Stationery, stationery supplies, and gift wrap (12/77 = 100)	130.7	137.6	138.3	137.9	138.1	138.6	139.3	133.8	140.7	141.4	141.0	141.1	141.7	142.3
Miscellaneous household products (12/77 = 100)	147.5	150.9	151.6	152.3	153.5	154.3	154.4	142.4	145.6	146.2	146.9	148.3	149.1	149.2
Lawn and garden supplies (12/77 = 100)	144.7	142.3	141.9	145.7	144.3	144.4	145.0	136.7	135.1	134.9	138.5	137.0	137.4	138.5
Housekeeping services	309.9	313.8	314.3	315.0	315.4	315.9	316.4	308.2	313.2	313.7	314.5	315.0	315.6	316.1
Postage	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	150.8	157.0	157.7	158.6	159.3	159.8	160.6	150.6	157.2	157.8	158.7	159.5	160.0	160.7
Appliance and furniture repair (12/77 = 100)	135.0	139.0	139.5	140.2	140.4	141.2	141.5	133.5	137.4	137.9	138.5	138.7	139.5	139.8
APPAREL AND UPKEEP	191.1	195.5	195.4	193.6	191.0	192.0	194.5	190.5	194.6	194.4	192.8	190.0	191.0	194.0
Apparel commodities	180.8	184.6	184.3	182.3	179.2	180.2	182.8	180.8	184.1	183.8	181.9	178.7	179.7	182.9
Apparel commodities less footwear	176.8	180.9	180.6	178.4	175.0	176.0	178.9	176.6	180.2	179.8	177.8	174.3	175.3	178.9
Men's and boys'	181.7	188.6	189.0	187.4	184.9	184.4	186.7	181.6	188.6	188.9	187.6	185.2	184.8	187.0
Men's (12/77 = 100)	114.5	119.0	119.3	118.3	116.8	116.2	117.1	114.7	119.4	119.7	118.8	117.4	116.9	117.6
Suits, sport coats, and jackets (12/77 = 100)	107.2	111.6	111.5	108.7	106.5	106.7	109.1	100.4	104.3	104.2	101.7	99.9	100.2	102.1
Coats and jackets (12/77 = 100)	98.1	103.7	103.4	103.2	98.8	98.1	100.0	99.7	106.4	105.4	105.5	100.5	99.9	102.2
Furnishings and special clothing (12/77 = 100)	136.8	141.0	142.4	141.5	142.2	142.6	141.4	133.1	137.7	139.1	137.9	138.7	139.1	137.6
Shirts (12/77 = 100)	119.9	125.2	125.8	126.5	124.5	122.0	121.7	122.3	128.1	128.7	129.2	127.5	125.0	124.4
Dungarees, jeans, and trousers (12/77 = 100)	108.6	112.4	112.6	111.9	111.0	110.5	111.5	144.2	118.0	118.1	117.5	116.5	116.1	117.4
Boys' (12/77 = 100)	117.8	121.7	121.6	120.7	118.9	119.3	123.2	116.1	119.8	119.7	119.0	117.2	117.7	121.4
Coats, jackets, sweaters, and shirts (12/77 = 100)	109.4	114.5	113.7	112.2	108.9	108.1	115.5	109.7	115.3	114.6	113.3	110.4	109.3	116.4
Furnishings (12/77 = 100)	128.7	133.6	132.6	132.4	132.0	132.5	134.0	124.7	129.5	128.5	128.3	128.0	128.4	129.6
Suits, trousers, sport coats, and jackets (12/77 = 100)	120.1	122.7	123.4	122.8	121.5	122.9	124.9	117.8	119.7	120.5	120.0	118.6	120.2	122.3
Women's and girls'	160.3	163.0	162.2	159.5	153.9	155.7	160.0	163.0	164.7	163.8	161.3	155.4	157.2	162.8
Women's (12/77 = 100)	106.8	108.1	107.3	105.5	101.8	103.2	106.2	109.0	109.8	108.8	106.8	102.9	104.4	108.4
Coats and jackets	162.0	170.5	169.5	166.3	158.1	160.9	170.1	173.1	176.8	173.2	171.0	161.4	165.5	178.4
Dresses	163.1	162.6	161.4	159.0	152.9	154.9	158.5	148.1	149.2	147.7	144.9	139.8	140.6	144.4

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						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
APPAREL AND UPKEEP—Continued														
Apparel commodities—Continued														
Apparel commodities less footwear—Continued														
Separates and sportswear (12/77 = 100)	100.3	102.0	100.1	97.1	93.7	94.6	98.5	101.2	102.9	100.9	97.8	94.4	95.3	99.2
Underwear, nightwear, and hosiery (12/77 = 100)	127.1	129.9	130.6	130.8	128.8	130.0	131.0	126.9	129.6	130.2	103.5	128.4	129.7	130.7
Suits (12/77 = 100)	92.7	88.6	87.4	82.8	76.9	79.7	83.7	114.1	106.7	105.8	99.7	91.8	95.6	104.7
Girls' (12/77 = 100)	105.6	109.9	110.4	109.5	105.1	105.1	107.6	106.0	108.7	109.6	109.2	105.0	104.9	108.0
Coats, jackets, dresses, and suits (12/77 = 100)	98.2	104.5	103.9	103.7	95.8	96.5	98.4	97.2	102.3	102.2	102.0	95.2	95.8	97.6
Separates and sportswear (12/77 = 100)	104.6	106.0	106.0	104.1	102.1	101.5	105.6	106.9	105.2	105.1	105.1	102.9	102.0	107.5
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	119.6	126.0	129.3	129.1	125.7	125.8	126.4	118.7	125.1	128.1	128.0	124.9	124.9	125.6
Infants' and toddlers'	264.7	275.8	274.2	273.1	277.1	278.8	280.1	275.4	286.8	285.5	284.2	287.5	289.5	291.1
Other apparel commodities	212.7	213.1	212.7	210.1	211.5	213.4	213.4	201.6	201.7	201.4	199.2	200.1	201.7	201.9
Sewing materials and notions (12/77 = 100)	118.1	119.3	120.0	120.8	120.4	120.5	120.4	116.5	117.7	118.2	118.5	118.5	118.5	118.4
Jewelry and luggage (12/77 = 100)	145.7	145.6	144.9	142.2	143.7	145.4	145.4	136.7	136.2	135.7	133.5	134.4	135.9	136.1
Footwear	204.9	206.8	206.9	205.9	204.8	205.6	206.6	205.2	206.7	206.7	205.8	204.6	205.2	206.1
Men's (12/77 = 100)	132.5	133.2	132.5	132.0	131.4	132.2	133.2	134.5	135.0	134.2	133.7	133.0	133.9	134.8
Boys' and girls' (12/77 = 100)	129.2	129.5	129.3	129.0	130.4	131.2	131.1	132.1	132.1	131.8	131.5	132.9	133.4	133.2
Women's (12/77 = 100)	124.7	126.9	127.6	126.8	124.5	124.6	125.5	120.8	122.8	123.6	122.9	120.4	120.4	121.1
Apparel services	271.3	281.3	282.0	282.8	283.9	285.4	286.7	269.0	279.7	280.3	281.1	282.2	283.6	284.9
Laundry and drycleaning other than coin operated (12/77 = 100)	162.4	167.2	167.9	168.9	169.6	170.3	170.8	160.9	165.8	166.4	167.5	168.1	168.8	169.3
Other apparel services (12/77 = 100)	141.1	148.2	148.1	147.7	148.3	149.1	150.4	141.5	149.3	149.2	148.8	149.4	150.3	151.4
TRANSPORTATION	285.1	295.5	295.8	294.8	293.0	289.9	287.4	286.6	297.0	297.3	296.3	294.3	291.1	288.6
Private	281.3	291.1	291.4	290.4	288.4	285.2	282.7	283.7	293.8	294.1	293.1	290.9	287.6	285.0
New cars	194.4	197.7	199.0	200.1	201.0	201.3	201.2	194.2	197.4	198.7	199.9	200.8	201.0	200.9
Used cars	280.9	306.7	310.5	312.6	311.0	309.1	309.3	280.9	306.7	310.5	312.6	311.1	309.1	309.3
Gasoline	383.9	390.6	388.1	381.3	371.9	359.4	348.6	385.4	391.9	389.5	383.0	373.6	361.2	350.3
Automobile maintenance and repair	310.2	321.9	322.3	323.1	324.4	325.9	326.6	311.1	322.6	323.1	323.8	325.2	326.6	327.4
Body work (12/77 = 100)	154.5	160.4	161.0	161.4	162.2	162.7	163.6	152.7	159.4	159.8	160.2	161.1	161.5	162.5
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	148.7	153.2	153.7	154.3	155.4	156.1	156.3	152.8	157.2	157.8	158.3	159.4	160.1	160.3
Maintenance and servicing (12/77 = 100)	143.9	149.3	149.3	149.9	150.5	151.1	150.9	143.4	148.6	148.6	149.2	149.9	150.5	150.3
Power plant repair (12/77 = 100)	148.0	154.3	154.4	154.2	154.4	155.4	156.2	147.5	153.8	153.9	153.7	153.9	154.8	155.6
Other private transportation	254.5	261.4	260.7	259.6	259.9	259.7	259.2	257.8	264.1	262.9	261.6	261.5	261.1	260.5
Other private transportation commodities	215.6	214.4	215.1	214.3	215.6	215.0	213.3	218.2	216.9	217.7	216.9	218.0	217.4	215.8
Motor oil, coolant, and other products (12/77 = 100)	150.2	151.9	153.3	153.3	153.9	154.8	154.8	148.7	151.0	152.3	152.3	153.0	153.8	153.8
Automobile parts and equipment (12/77 = 100)	137.9	136.7	137.0	136.5	137.3	136.7	135.5	139.9	138.6	139.0	138.4	139.1	138.5	137.4
Tires	191.7	189.6	190.4	190.0	191.3	190.6	188.1	195.5	193.2	194.0	193.7	194.9	194.1	191.7
Other parts and equipment (12/77 = 100)	135.7	135.4	135.1	133.8	134.3	133.7	133.9	135.9	135.4	135.4	133.9	134.3	133.6	133.8
Other private transportation services	267.2	276.4	275.3	274.2	274.2	274.1	273.9	270.8	279.1	277.5	276.0	275.6	275.2	274.8
Automobile insurance	269.8	283.9	286.9	288.8	292.0	295.6	297.0	269.6	283.2	286.1	288.2	291.3	294.9	296.3
Automobile finance charges (12/77 = 100)	188.9	185.2	178.9	173.8	169.6	165.0	161.9	188.2	184.6	178.1	173.0	168.7	164.0	161.0
Automobile rental, registration, and other fees (12/77 = 100)	129.7	138.8	139.2	139.3	139.8	140.1	141.1	130.1	139.8	140.0	140.1	140.5	140.8	141.9
State registration	168.5	183.7	183.8	183.8	184.6	184.9	186.6	167.8	183.2	183.4	183.4	184.0	184.3	186.3
Drivers' licenses (12/77 = 100)	122.9	132.8	132.8	132.8	132.8	133.5	133.9	123.0	133.1	133.1	133.1	133.1	133.7	134.1
Vehicle inspection (12/77 = 100)	129.3	128.5	128.5	128.5	128.6	128.6	129.2	130.6	129.9	129.8	129.8	129.9	129.9	130.5
Other vehicle-related fees (12/77 = 100)	145.3	154.2	155.0	155.2	155.8	156.2	157.0	152.5	162.7	162.9	163.2	163.9	164.1	165.1
Public	336.7	356.3	356.0	355.6	357.7	355.2	354.5	331.0	348.2	348.2	348.0	349.8	347.7	347.3
Airline fare	379.0	413.7	411.6	408.8	412.3	405.5	402.9	376.3	411.1	408.8	405.9	409.8	401.5	398.9
Intercity bus fare	365.6	370.6	373.8	377.7	381.8	383.8	389.4	367.0	372.5	375.7	379.3	383.3	385.4	392.0
Intracity mass transit	306.6	315.2	316.1	317.7	318.5	319.4	320.1	305.7	314.7	315.7	316.7	317.4	318.3	319.0
Taxi fare	297.2	300.2	300.5	300.8	300.9	301.2	300.8	306.6	309.9	310.1	310.5	310.5	310.8	310.4
Intercity train fare	314.1	338.4	348.3	351.3	351.8	351.8	351.9	314.5	338.4	349.3	351.9	352.3	352.2	352.3
MEDICAL CARE	318.8	338.7	342.2	344.3	347.8	351.3	352.3	317.4	336.5	339.8	341.8	345.3	348.9	350.0
Medical care commodities	200.0	211.6	212.9	213.7	215.3	216.7	218.6	200.6	212.1	213.4	214.0	215.9	217.2	219.0
Prescription drugs	186.1	199.4	201.0	202.8	204.1	205.9	208.7	187.0	200.5	202.1	203.9	205.3	207.1	209.9
Anti-infective drugs (12/77 = 100)	139.3	149.1	150.1	150.9	151.4	153.3	153.8	141.1	151.2	152.3	153.1	153.5	155.5	155.8
Tranquilizers and sedatives (12/77 = 100)	148.6	161.5	163.5	165.8	166.6	168.2	171.4	148.3	161.1	163.2	165.5	166.4	167.9	171.2
Circulatories and diuretics (12/77 = 100)	135.7	143.0	144.0	144.9	145.9	147.2	151.2	135.6	142.8	143.9	144.8	145.8	147.2	151.0
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	170.8	183.5	183.9	185.5	186.5	189.0	192.4	172.0	185.1	185.2	187.0	188.0	190.8	194.2
Pain and symptom control drugs (12/77 = 100)	150.8	161.7	164.0	166.2	167.7	168.6	170.0	152.0	163.6	166.0	168.0	169.5	170.3	171.7
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	142.7	152.3	153.4	154.2	155.8	156.4	157.8	142.7	152.4	153.6	154.5	156.2	156.7	158.1
Nonprescription drugs and medical supplies (12/77 = 100)	142.5	149.2	149.9	149.7	151.0	151.6	152.3	143.2	149.8	150.5	150.3	151.8	152.4	153.1
Eyeglasses (12/77 = 100)	129.5	132.6	132.9	133.0	133.9	134.6	134.9	128.1	131.4	131.6	131.8	132.6	133.4	133.7
Internal and respiratory over-the-counter drugs	228.1	240.7	241.9	241.3	244.3	245.1	245.5	229.6	241.9	243.0	242.2	245.7	246.4	246.8
Nonprescription medical equipment and supplies (12/77 = 100)	138.1	144.1	145.2	145.2	145.3	146.1	148.0	138.8	145.1	146.2	146.3	146.3	147.4	149.4
Medical care services	345.1	366.9	371.0	373.4	377.4	381.5	382.2	343.0	363.9	367.7	370.1	374.0	378.2	379.0
Professional services	295.8	306.6	308.3	309.4	312.5	315.4	316.7	295.9	306.9	308.4	309.5	312.7	315.7	316.9
Physicians' services	320.3	334.2	335.3	336.6	341.3	344.8	346.4	323.2	337.4	338.6	339.9	344.6	348.2	349.8

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
MEDICAL CARE—Continued														
Medical care service—Continued														
Professional services—Continued														
Dental services	278.6	287.0	289.2	290.1	291.6	294.0	294.6	276.6	285.0	287.0	288.0	289.3	291.8	292.3
Other professional services (12/77 = 100)	142.4	146.1	147.2	147.6	149.1	150.5	151.6	139.4	143.0	143.9	144.4	145.7	147.2	148.3
Other medical care services	404.7	439.8	446.8	450.8	455.9	461.3	461.4	401.6	435.6	442.3	446.3	451.3	457.0	457.1
Hospital and other medical services (12/77 = 100)	168.5	180.0	182.6	183.2	185.1	188.6	189.5	166.9	178.3	180.7	181.5	183.4	187.0	187.8
Hospital room	538.5	576.8	586.6	588.5	594.6	604.1	606.2	531.0	569.1	578.7	581.5	587.1	596.7	598.8
Other hospital and medical care services (12/77 = 100)	165.2	176.0	176.0	178.7	180.6	184.5	185.6	164.2	174.7	176.7	177.5	179.4	183.3	184.3
ENTERTAINMENT	232.8	240.3	239.9	240.1	241.5	243.1	244.6	229.5	236.5	236.1	236.5	237.7	239.5	240.8
Entertainment commodities	236.6	242.9	241.4	241.8	242.6	244.5	246.8	230.8	236.6	235.4	236.0	236.7	238.8	240.8
Reading materials (12/77 = 100)	146.1	153.1	153.4	154.3	156.1	156.1	159.3	145.3	152.4	152.7	153.8	155.5	155.5	158.7
Newspapers	276.4	290.4	290.9	294.7	295.7	296.5	299.6	276.0	290.1	290.5	294.8	295.6	296.4	299.8
Magazines, periodicals, and books (12/77 = 100)	152.4	159.2	159.6	159.3	162.6	162.2	167.1	152.2	159.2	159.6	159.2	162.6	162.1	167.3
Sporting goods and equipment (12/77 = 100)	132.3	134.3	132.1	131.6	131.5	133.4	134.2	124.3	125.8	124.7	124.3	124.4	127.0	127.2
Sport vehicles (12/77 = 100)	135.4	137.1	133.8	133.3	132.9	136.1	137.3	122.5	123.6	122.2	122.0	122.0	126.0	126.4
Indoor and warm weather sport equipment (12/77 = 100)	119.9	120.6	119.9	120.0	120.3	120.5	120.8	118.1	118.3	117.6	117.7	117.0	117.9	118.4
Bicycles	197.6	198.7	198.3	197.1	197.3	196.7	197.8	198.9	199.9	199.5	198.5	198.4	197.7	198.0
Other sporting goods and equipment (12/77 = 100)	125.6	131.9	131.5	130.6	131.4	132.1	131.6	126.0	132.1	131.3	130.0	130.9	131.9	131.5
Toys, hobbies, and other entertainment (12/77 = 100)	134.5	137.1	136.4	136.8	136.8	138.0	138.6	133.5	136.1	135.2	135.6	135.6	136.7	137.3
Toys, hobbies, and music equipment (12/77 = 100)	133.4	136.4	135.5	135.5	135.5	136.9	137.6	130.2	133.0	131.8	132.0	131.9	133.0	133.7
Photographic supplies and equipment (12/77 = 100)	128.3	129.6	129.0	129.7	129.9	131.2	131.6	129.5	130.6	130.1	130.8	131.0	132.3	132.8
Pet supplies and expenses (12/77 = 100)	140.8	143.9	143.4	144.2	144.2	144.9	145.6	141.7	145.0	144.5	145.1	145.1	145.9	146.5
Entertainment services	227.8	237.2	238.2	238.2	240.5	241.6	241.9	228.4	237.6	238.4	238.5	240.8	241.8	242.1
Fees for participant sports (12/77 = 100)	141.9	148.0	149.0	148.9	150.0	150.6	150.9	143.5	149.4	150.1	150.0	151.2	151.7	152.2
Admissions (12/77 = 100)	131.2	136.6	136.9	137.3	139.9	140.9	140.1	130.3	135.6	135.9	136.4	138.8	139.8	139.1
Other entertainment services (12/77 = 100)	125.1	129.6	129.8	129.6	129.8	130.3	131.0	125.9	130.5	130.7	130.6	130.6	131.2	131.8
OTHER GOODS AND SERVICES	252.2	271.2	273.8	276.6	279.9	281.6	281.9	249.3	267.8	270.9	274.0	277.8	279.6	280.0
Tobacco products	234.1	257.3	264.0	272.3	280.3	282.8	283.3	233.2	256.6	263.4	271.9	279.9	282.2	282.7
Cigarettes	237.3	262.3	269.8	279.0	287.6	290.0	290.4	236.3	261.4	268.8	278.0	286.5	288.8	289.3
Other tobacco products and smoking accessories (12/77 = 100)	138.1	142.9	142.8	143.8	145.8	147.8	148.6	138.2	143.1	143.0	143.9	145.8	147.7	148.5
Personal care	243.7	252.9	254.2	254.8	256.1	257.8	257.8	241.8	250.9	252.1	252.5	253.9	255.5	255.8
Toilet goods and personal care appliances	240.6	251.5	253.5	252.2	253.9	256.0	257.1	241.5	252.1	254.1	253.1	254.8	256.8	257.8
Products for the hair, hairpieces, and wigs (12/77 = 100)	140.8	147.8	148.3	146.8	147.1	148.1	148.5	140.0	146.9	147.3	146.2	146.5	147.4	147.8
Dental and shaving products (12/77 = 100)	148.0	155.2	157.2	156.2	157.6	159.3	160.4	146.6	153.5	155.4	154.6	155.9	157.8	158.9
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	135.1	141.4	141.7	142.2	144.0	145.6	146.0	136.1	142.1	142.3	143.0	144.8	146.4	146.7
Other toilet goods and small personal care appliances (12/77 = 100)	137.4	142.2	144.7	143.2	143.6	144.1	144.9	140.7	145.8	148.4	147.0	147.3	147.7	148.5
Personal care services	247.3	255.1	255.8	258.0	259.0	260.4	259.5	242.6	250.0	250.6	252.4	253.4	254.7	254.3
Beauty parlor services for women	248.9	258.3	258.9	262.1	263.3	264.4	262.4	242.5	251.6	252.1	254.7	255.8	256.8	255.5
Haircuts and other barber shop services for men (12/77 = 100)	138.4	141.0	141.4	141.6	142.0	143.1	143.7	137.2	139.8	140.3	140.4	140.8	141.9	142.6
Personal and educational expenses	290.4	319.3	320.0	320.5	322.1	323.3	323.9	291.7	320.4	321.3	321.7	323.6	325.0	325.7
Schoolbooks and supplies	263.3	283.0	283.1	283.3	288.4	292.0	292.3	267.5	286.8	286.8	287.0	292.4	296.0	296.3
Personal and educational services	297.1	327.7	328.6	329.1	330.2	331.0	331.5	298.0	328.7	329.8	330.3	331.5	332.5	333.2
Tuition and other school fees	151.1	167.2	167.2	167.2	167.3	167.4	167.4	151.7	167.7	167.7	167.7	167.7	167.9	167.9
College tuition (12/77 = 100)	150.7	166.8	166.8	166.8	166.9	167.0	167.0	150.9	166.9	166.9	166.9	167.0	167.1	167.1
Elementary and high school tuition (12/77 = 100)	152.2	168.6	168.7	168.7	168.7	168.8	168.8	152.9	169.6	169.7	169.7	169.7	169.8	169.8
Personal expenses (12/77 = 100)	157.4	171.9	174.1	175.4	178.8	179.6	181.2	156.7	171.7	174.0	175.2	177.9	179.5	181.1
Special indexes:														
Gasoline, motor oil, coolant, and other products	379.3	385.7	383.5	377.0	367.9	355.8	345.2	380.6	386.9	384.8	378.5	369.4	357.3	346.7
Insurance and finance	420.9	432.9	426.2	413.4	. . . .	. . . .	. . . .	419.9	433.9	427.2	414.7	411.1	411.6	411.8
Utilities and public transportation	302.7	326.5	324.1	326.0	329.1	329.4	331.1	301.5	325.4	323.2	325.1	328.1	328.5	330.4
Housekeeping and home maintenance services	344.0	355.0	354.8	354.0	355.3	355.1	356.0	344.0	355.7	355.4	354.4	357.9	356.5	357.9

[1] Excludes motor oil, coolant, and other products as of January 1983.
[2] See box with "Price Data."

c = corrected.

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) 1982			Size class B (385,000–1.250 million) 1982			Size class C (75,000–385,000) 1982			Size class D (75,000 or less) 1982		
	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.
Northeast												
EXPENDITURE CATEGORY												
All items	151.8	151.0	151.8	156.6	157.1	158.2	160.7	162.3	162.9	155.8	156.3	156.1
Food and beverages	145.1	144.4	146.0	142.4	142.1	144.2	147.0	147.4	149.8	141.9	142.0	144.0
Housing	157.7	155.9	156.7	164.9	166.5	168.8	172.9	175.2	176.2	163.0	163.2	163.1
Apparel and upkeep	122.2	119.8	120.3	127.0	124.9	121.9	128.5	129.1	126.6	131.4	131.1	124.3
Transportation	160.7	161.0	159.1	166.6	166.7	164.8	165.2	166.2	164.2	164.6	164.5	162.5
Medical care	151.4	153.6	158.1	158.1	160.6	161.6	161.5	163.6	165.5	157.0	159.8	164.1
Entertainment	140.6	140.2	141.6	139.9	135.9	139.1	138.1	139.2	140.0	144.8	145.0	147.2
Other goods and services	150.0	152.8	154.4	151.4	153.9	157.3	154.3	157.8	160.4	153.4	158.7	159.4
COMMODITY AND SERVICE GROUP												
Commodities	147.7	147.5	147.6	152.4	153.5	153.1	152.0	153.7	153.3	150.9	151.7	150.2
Commodities less food and beverages	149.3	149.4	148.4	157.2	159.0	157.1	154.3	156.6	154.5	155.2	156.3	152.7
Services	157.1	155.6	157.1	163.3	162.9	166.1	175.0	176.4	178.3	163.5	163.4	165.1
North Central Region												
EXPENDITURE CATEGORY												
All items	163.1	162.0	162.4	158.9	159.3	159.6	155.9	156.2	155.8	159.0	156.8	156.6
Food and beverages	143.5	143.3	144.7	142.6	141.9	143.4	143.8	143.4	143.8	149.2	149.1	149.1
Housing	181.2	179.1	180.2	168.5	169.1	170.2	162.6	162.8	163.2	167.8	161.9	162.2
Apparel and upkeep	118.8	116.4	115.4	128.7	129.4	124.4	127.8	126.1	124.1	121.9	121.4	122.0
Transportation	164.5	163.8	160.7	164.1	164.5	162.1	165.0	165.2	162.0	163.1	163.8	160.6
Medical care	157.9	160.3	164.2	162.7	164.0	167.7	160.9	162.9	164.7	163.7	166.5	171.0
Entertainment	140.7	140.2	141.3	133.5	134.1	135.9	142.5	143.7	144.3	133.3	134.5	135.2
Other goods and services	150.5	152.8	155.4	161.4	163.8	167.5	148.1	150.6	152.9	157.3	160.3	163.3
COMMODITY AND SERVICE GROUP												
Commodities	151.9	151.7	151.2	149.7	150.8	149.7	148.2	148.7	147.2	147.6	148.4	147.2
Commodities less food and beverages	155.8	155.7	153.9	152.6	154.5	152.0	150.1	150.9	148.4	147.0	148.1	146.2
Services	179.7	177.3	178.8	173.7	173.1	175.3	168.6	168.4	169.6	177.0	170.1	171.5
South												
EXPENDITURE CATEGORY												
All items	158.1	157.5	158.0	159.6	159.3	159.5	159.1	158.8	159.0	159.8	159.1	159.5
Food and beverages	146.8	147.0	148.7	146.4	146.4	147.3	145.6	145.4	146.1	147.5	147.3	147.7
Housing	166.1	164.3	164.9	167.5	166.0	166.1	167.3	166.0	167.3	169.7	168.2	169.9
Apparel and upkeep	127.5	128.0	127.6	125.3	124.7	124.0	123.7	122.6	120.1	112.4	111.1	108.3
Transportation	164.7	164.6	162.1	167.7	168.0	165.0	166.0	166.8	163.8	164.5	163.5	161.3
Medical care	160.9	164.0	167.1	161.3	163.5	167.2	169.4	173.5	176.8	173.9	179.4	182.5
Entertainment	135.5	135.0	137.5	147.3	148.5	151.0	144.5	144.4	145.9	149.7	143.8	145.4
Other goods and services	152.9	155.0	157.5	152.5	158.1	163.2	153.3	154.9	157.8	153.2	155.8	160.3
COMMODITY AND SERVICE GROUP												
Commodities	150.1	150.9	150.9	151.7	152.3	151.7	149.9	150.2	149.2	150.6	150.6	149.2
Commodities less food and beverages	151.6	152.6	151.5	154.0	154.8	153.2	151.8	152.3	150.2	152.0	151.9	149.6
Services	169.2	166.9	167.9	171.5	169.9	171.1	173.2	172.1	173.9	173.6	172.1	174.9
West												
EXPENDITURE CATEGORY												
All items	160.3	156.9	157.8	160.1	157.9	158.3	152.6	150.1	151.0	158.1	157.8	157.9
Food and beverages	148.3	147.8	149.3	148.6	149.2	150.6	145.7	144.8	146.0	150.8	150.7	150.6
Housing	166.9	160.7	163.2	166.0	161.2	162.2	153.4	148.3	150.1	158.7	158.3	159.3
Apparel and upkeep	120.7	119.9	120.1	126.5	125.8	125.1	123.8	123.4	122.4	138.6	136.9	139.7
Transportation	169.4	166.3	162.8	169.8	168.1	165.3	166.0	163.1	161.0	165.7	165.2	162.0
Medical care	168.9	171.1	174.4	165.1	168.4	170.5	168.8	170.7	174.2	169.6	171.5	173.3
Entertainment	136.6	137.8	139.2	142.4	142.5	144.7	136.2	137.2	143.3	154.9	154.3	155.2
Other goods and services	155.4	159.3	162.9	155.0	158.9	161.7	148.0	153.0	155.9	164.2	165.2	168.8
COMMODITY AND SERVICE GROUP												
Commodities	149.4	148.1	148.0	151.6	150.7	150.5	150.6	149.0	148.5	147.7	148.9	148.0
Commodities less food and beverages	149.9	148.3	147.0	152.9	151.3	150.1	152.6	150.7	148.6	146.4	148.1	146.8
Services	174.8	168.5	170.7	171.8	167.9	169.0	155.4	151.7	154.0	173.4	171.0	172.5

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 (revised)						
	1982				1983			1982				1983		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
U.S. city average[2]	283.1	294.1	293.6	...	...	293.2	293.4	282.5	293.6	293.2	...	...	292.3	293.0
Anchorage, Alaska (10/67=100)	260.0	...	257.2	...	257.6	...	261.0	254.5	...	254.4	...	250.6	...	253.9
Atlanta, Ga.	...	297.8	...	296.1	...	295.1	...	...	298.7	...	297.8	...	297.0	...
Baltimore, Md.	281.9	...	290.1	...	291.4	...	292.4	282.2	...	289.7	...	289.7	...	295.0
Boston, Mass.	269.8	...	285.0	...	286.2	...	285.9	269.8	...	284.4	...	283.9	...	284.3
Buffalo, N.Y.	...	277.1	...	277.8	...	280.3	...	...	274.3	...	275.0	...	276.5	...
Chicago, Ill.-Northwestern Ind.	276.4	294.4	294.3	293.1	294.0	293.7	293.7	276.5	293.2	293.1	291.8	292.8	291.4	291.4
Cincinnati, Ohio-Ky.-Ind.	284.9	...	304.2	...	306.0	...	307.6	287.2	...	307.1	...	305.2	...	307.6
Cleveland, Ohio	...	316.6	...	317.6	...	319.9	...	...	314.1	...	315.0	...	313.7	...
Dallas-Ft. Worth, Tex.	...	306.7	...	303.3	...	304.5	...	...	302.5	...	299.4	...	298.1	...
Denver-Boulder, Colo.	309.2	...	326.2	...	327.5	...	329.6	315.0	...	332.5	...	323.9	...	326.8
Detroit, Mich.	278.2	295.2	296.0	292.6	292.6	292.3	292.4	275.1	291.2	292.1	288.7	288.0	287.1	289.8
Honolulu, Hawaii	...	275.2	...	269.9	...	270.4	...	...	274.7	...	271.0	...	274.8	...
Houston, Tex.	...	317.6	...	318.1	...	317.3	...	...	314.9	...	316.1	...	317.4	...
Kansas City, Mo.-Kansas	...	289.3	...	290.6	...	292.3	...	...	287.3	...	288.6	...	289.0	...
Los Angeles-Long Beach, Anaheim, Calif.	286.4	289.5	288.5	285.3	285.6	286.8	287.1	290.2	292.8	291.6	288.0	288.0	290.1	289.6
Miami, Fla. (11/77=100)	155.1	...	156.8	...	157.9	...	159.0	156.4	...	158.6	...	159.2	...	159.7
Milwaukee, Wis.	289.3	...	303.1	...	305.0	...	305.0	292.5	...	306.9	...	303.5	...	311.0
Minneapolis-St. Paul, Minn.-Wis.	...	307.7	...	306.1	...	305.8	...	...	307.6	...	306.1	...	309.0	...
New York, N.Y.-Northeastern N.J.	267.4	284.5	283.6	281.8	282.6	283.2	283.5	265.9	282.7	281.9	280.3	280.8	279.6	280.3
Northeast, Pa. (Scranton)	267.2	...	279.4	...	278.9	...	278.9	268.4	...	280.6	...	282.6	...	280.6
Philadelphia, Pa.-N.J.	...	281.8	282.9	281.6	282.1	282.0	283.0	...	281.2	282.0	281.0	282.5	283.3	285.5
Pittsburgh, Pa.	...	300.7	...	302.1	...	304.8	...	...	300.3	...	301.7	...	296.6	...
Portland, Oreg.-Wash.	286.7	...	285.6	...	286.6	...	284.7	283.8	...	283.5	...	281.7	...	283.0
St. Louis, Mo.-Ill.	280.7	...	290.0	...	291.1	...	293.2	279.3	...	288.9	...	285.3	...	293.2
San Diego, Calif.	319.0	...	321.7	...	324.9	...	327.5	313.9	...	318.2	...	313.6	...	315.4
San Francisco-Oakland, Calif.	...	302.4	...	293.9	...	297.3	...	...	301.3	...	293.6	...	293.9	...
Seattle-Everett, Wash.	293.4	...	297.5	...	297.5	...	297.8	289.6	...	294.1	...	291.4	...	290.8
Washington, D.C.-Md.-Va.	289.0	...	286.3	...	289.0	...	289.0	283.8	...	291.6	...	292.9	...	294.3

[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 1982	1982									1983			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
FINISHED GOODS														
Finished goods	r280.7	277.3	277.8	279.9	281.7	282.3	281.2	284.1	284.9	r285.5	283.6	283.7	283.4	283.0
Finished consumer goods	r281.0	277.3	277.7	280.1	282.1	282.8	281.9	284.3	285.3	r285.6	283.0	283.0	282.5	282.0
Finished consumer foods	259.3	260.0	262.3	263.4	260.6	259.7	259.9	257.7	257.4	r258.3	258.3	259.9	260.8	262.9
Crude	r252.7	266.6	259.9	254.7	241.0	239.2	228.2	232.4	236.1	r247.6	232.6	240.4	247.5	265.4
Processed	257.7	257.3	260.3	262.0	260.2	259.4	260.6	257.9	257.2	257.1	258.4	259.5	259.9	260.5
Nondurable goods less foods	r333.6	325.7	324.3	328.7	335.3	337.2	338.3	340.0	342.5	r342.2	335.2	332.5	330.6	328.0
Durable goods	226.7	224.1	225.0	225.9	226.7	227.5	223.0	231.0	231.2	r232.0	231.9	233.5	233.1	232.2
Consumer nondurable goods less food and energy	r223.8	222.3	223.1	223.5	223.7	224.3	225.5	227.8	228.4	r229.2	227.4	227.7	228.1	229.8
Capital equipment	r279.4	277.2	278.1	279.2	280.2	280.7	278.7	283.2	283.8	r284.9	285.7	286.2	286.5	286.5
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	310.4	309.9	309.8	309.9	311.1	310.8	310.5	309.9	309.9	r310.1	309.9	310.5	309.2	309.1
Materials and components for manufacturing	r289.8	290.6	291.4	289.8	289.2	288.7	289.9	289.4	288.7	r288.3	289.0	291.3	290.3	291.1
Materials for food manufacturing	r255.1	254.4	260.0	260.7	259.7	258.0	257.3	254.2	251.0	r249.8	250.9	253.0	252.5	254.8
Materials for nondurable manufacturing	r284.4	287.6	287.6	285.4	283.1	282.6	281.7	280.4	279.2	r278.0	277.4	277.4	277.0	277.5
Materials for durable manufacturing	310.1	311.0	311.0	307.5	308.0	306.5	310.5	309.8	309.3	r309.4	312.1	319.1	315.0	316.4
Components for manufacturing	r273.9	272.6	273.6	273.6	273.9	274.3	275.8	276.7	276.9	r277.3	277.4	278.1	279.0	279.0
Materials and components for construction	r293.7	294.0	293.7	294.5	294.3	293.5	294.2	293.7	293.6	r294.7	296.2	298.6	299.4	300.1
Processed fuels and lubricants	r591.7	579.9	570.9	581.1	600.7	603.8	592.3	590.0	593.0	r595.0	583.5	571.1	557.9	549.0
Manufacturing industries	r497.8	487.5	481.4	491.7	506.9	510.7	496.4	496.6	500.4	r502.2	493.2	483.5	471.8	468.4
Nonmanufacturing industries	r674.3	661.1	649.5	659.5	683.0	685.5	676.9	672.1	674.2	r676.4	662.7	647.8	633.4	619.2
Containers	r285.6	287.0	287.0	286.5	286.3	285.4	285.3	285.1	284.9	r285.0	284.9	285.1	285.3	285.0
Supplies	r272.1	272.1	273.4	273.4	273.1	272.6	272.2	272.0	272.8	r273.0	273.6	274.2	274.5	275.6
Manufacturing industries	r265.8	265.3	266.7	266.7	266.8	266.5	266.7	266.9	266.9	r267.2	268.0	268.7	268.9	268.8
Nonmanufacturing industries	275.7	276.0	277.2	277.1	276.7	276.0	275.3	274.9	276.1	r276.3	276.8	277.3	277.6	279.4
Feeds	r207.0	213.1	214.2	213.1	210.3	203.1	198.1	192.9	199.8	r204.7	206.9	207.6	207.8	219.1
Other supplies	r289.8	288.9	290.1	290.4	290.5	291.1	291.3	291.9	291.9	r291.1	291.3	291.8	292.1	292.1
CRUDE MATERIALS														
Crude materials for further processing	319.5	322.6	328.3	325.6	323.4	319.8	316.1	312.0	313.2	r312.7	313.7	321.0	322.1	325.7
Foodstuffs and feedstuffs	247.8	254.4	262.6	259.9	255.5	249.6	242.9	236.3	236.3	r237.1	239.6	249.3	249.1	256.8
Nonfood materials	r473.9	469.9	470.2	467.7	469.8	471.0	473.7	474.8	478.6	r475.3	473.0	475.5	479.4	474.4
Nonfood materials except fuel	r376.8	378.8	376.6	370.0	369.2	369.5	369.5	371.9	369.2	r365.8	368.1	366.6	367.1	366.5
Manufacturing industries	387.2	389.0	386.3	378.9	378.4	378.9	379.1	382.2	379.2	375.0	377.5	375.5	376.2	376.0
Construction	r270.3	273.3	274.5	274.2	271.4	270.3	268.8	266.3	265.6	r268.1	268.9	270.8	270.2	267.2
Crude fuel	r886.1	851.2	864.8	883.9	901.3	906.9	923.5	917.2	954.7	r952.2	926.3	949.1	970.0	943.2
Manufacturing industries	1,034.8	989.1	1006.7	1,032.0	1,053.9	1,061.1	1,083.6	1,075.3	1,124.5	r1,121.4	1,088.2	1,118.7	1,144.8	1,109.4
Nonmanufacturing industries	r782.2	755.8	766.4	780.5	794.5	798.9	810.7	805.9	834.2	r832.2	812.0	828.8	845.7	825.5
SPECIAL GROUPINGS														
Finished goods excluding foods	r285.8	281.1	281.0	283.4	286.7	287.9	286.3	290.8	292.0	r292.5	289.9	289.6	288.8	287.5
Finished consumer goods excluding foods	287.8	282.3	281.8	284.8	288.8	290.2	288.9	293.3	294.8	r295.0	291.1	290.3	289.1	287.2
Finished consumer goods less energy	r244.1	243.0	244.3	245.1	244.5	244.7	243.9	246.5	246.7	r247.6	246.9	248.0	248.4	249.5
Intermediate materials less foods and feeds	315.7	315.1	314.6	314.7	316.1	316.0	315.9	315.5	315.5	315.7	315.3	315.9	314.5	314.0
Intermediate materials less energy	r290.4	291.0	291.6	290.8	290.4	289.7	290.5	290.1	289.8	r290.0	290.7	292.6	292.3	293.1
Intermediate foods and feeds	r239.4	240.9	245.0	245.1	243.6	240.2	238.1	234.4	234.4	r235.1	236.5	238.2	237.9	243.2
Crude materials less agricultural products	r536.3	531.6	531.5	529.1	531.5	532.0	535.5	537.2	541.9	r537.4	534.8	537.5	541.7	535.9
Crude materials less energy	240.4	247.3	252.8	248.7	245.1	240.7	235.6	230.0	229.2	229.9	232.6	241.6	242.8	248.4

[1] Data for December 1982 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 1982	1982 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	1983 Jan.	Feb.	Mar.	Apr.
	All commodities	299.3	298.0	298.6	299.3	300.4	300.2	299.3	299.8	300.3	ʳ300.7	300.0	301.2	300.5	300.8
	All commodities (1957–59 = 100)	317.6	316.2	316.8	317.6	318.7	318.5	317.6	318.1	318.6	ʳ319.0	318.3	319.6	318.8	319.1
	Farm products and processed foods and feeds	248.9	251.6	255.8	255.3	252.4	249.6	247.4	243.8	243.9	244.8	245.9	249.9	250.4	254.7
	Industrial commodities	312.3	309.9	309.6	310.6	312.8	313.2	312.7	314.3	315.0	ʳ315.2	314.0	314.4	313.4	312.6
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	ʳ242.4	250.6	256.5	252.7	246.6	240.8	234.5	299.2	230.7	ʳ232.6	233.1	240.8	241.4	250.5
01–1	Fresh and dried fruits and vegetables	ʳ253.7	267.6	271.5	264.5	239.1	238.6	221.0	223.0	233.4	ʳ248.8	227.0	227.2	234.3	266.0
01–2	Grains	210.9	226.0	228.2	225.7	212.8	197.2	187.3	183.2	198.6	262.3	206.3	222.4	227.4	243.8
01–3	Livestock	257.8	267.6	282.9	277.5	270.3	268.4	259.0	248.5	239.1	237.2	242.3	251.1	251.4	260.6
01–4	Live poultry	191.9	186.2	192.7	207.2	212.5	189.3	196.5	177.1	181.6	177.8	177.1	200.1	177.8	170.8
01–5	Plant and animal fibers	202.9	207.4	214.1	203.1	220.8	207.5	196.8	198.1	195.3	200.6	201.7	206.4	217.0	213.6
01–6	Fluid milk	282.5	280.3	278.8	278.9	279.0	278.8	281.9	285.0	285.9	285.5	284.5	284.5	282.9	280.8
01–7	Eggs	178.7	192.1	164.3	159.3	171.7	171.7	173.3	177.9	172.5	170.0	170.0	170.0	170.0	170.0
01–8	Hay, hayseeds, and oilseeds	212.8	222.8	227.3	219.3	220.0	204.5	201.8	194.3	204.8	209.0	212.4	217.9	217.8	226.3
01–9	Other farm products	274.5	274.2	273.9	271.8	265.5	274.4	276.8	274.0	276.3	280.1	279.9	282.0	280.3	279.2
02	Processed foods and feeds	ʳ251.5	251.1	254.4	255.8	254.6	253.5	253.5	250.8	250.2	ʳ250.5	251.8	253.9	254.3	256.0
02–1	Cereal and bakery products	ʳ253.8	253.5	252.8	252.7	253.0	252.7	254.0	253.0	254.2	ʳ256.2	256.9	257.3	257.4	259.1
02–2	Meats, poultry, and fish	257.6	258.2	267.6	271.2	266.0	262.2	265.7	256.9	251.6	249.9	252.2	257.7	260.1	259.3
02–3	Dairy products	248.9	248.4	248.5	248.7	248.6	248.8	249.1	249.8	250.2	250.8	250.7	251.0	250.7	251.0
02–4	Processed fruits and vegetables	ʳ274.5	275.2	273.8	275.8	274.4	274.1	272.8	273.4	272.8	ʳ275.7	274.6	273.9	272.9	273.8
02–5	Sugar and confectionery	ʳ269.7	256.0	265.3	269.1	275.7	285.5	278.5	276.3	280.4	ʳ280.1	281.8	286.4	283.7	286.7
02–6	Beverages and beverage materials	256.9	256.6	256.5	256.7	256.9	258.0	257.1	257.9	258.4	ʳ258.8	260.9	261.6	261.8	263.0
02–7	Fats and oils	ʳ215.1	218.1	222.3	221.8	221.3	215.6	211.4	213.8	207.2	ʳ203.0	203.6	205.6	205.0	213.4
02–8	Miscellaneous processed foods	248.6	249.6	248.0	248.6	248.1	245.9	247.0	247.9	247.8	248.6	248.9	248.9	248.5	249.9
02–9	Prepared animal feeds	211.3	216.3	217.4	216.4	213.9	207.5	204.3	199.8	206.0	ʳ210.1	212.1	212.4	212.5	222.3
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	ʳ204.6	205.4	205.4	205.0	204.1	204.2	204.3	204.1	203.9	ʳ202.6	202.6	202.4	203.2	203.3
03–1	Synthetic fibers (12/75 = 100)	ʳ162.1	163.0	163.4	162.8	161.5	162.2	162.5	161.1	161.2	ʳ159.7	158.4	155.4	156.3	155.4
03–2	Processed yarns and threads (12/75 = 100)	ʳ138.3	140.4	141.0	139.4	135.9	135.9	136.6	136.5	136.7	136.7	135.1	135.4	135.9	136.0
03–3	Gray fabrics (12/75 = 100)	145.3	146.3	145.9	146.0	144.9	144.6	143.6	143.7	143.1	143.3	144.8	144.4	145.0	146.2
03–4	Finished fabrics (12/75 = 100)	124.6	125.4	125.2	124.0	123.8	124.3	123.7	123.2	123.0	122.8	122.3	122.4	122.5	122.8
03–81	Apparel	ʳ194.4	194.1	194.5	195.0	194.8	195.1	195.4	195.7	195.4	ʳ193.0	192.9	193.3	194.6	194.7
03–82	Textile housefurnishings	ʳ238.5	241.8	239.5	239.7	238.2	236.4	238.2	236.2	236.2	ʳ236.2	240.8	238.7	238.5	238.5
04	Hides, skins, leather, and related products	ʳ262.6	263.4	263.2	261.8	263.1	262.0	263.5	263.2	263.2	ʳ264.1	265.6	265.0	265.9	267.1
04–2	Leather	ʳ311.4	310.6	309.8	307.7	307.4	304.9	309.2	309.5	312.8	ʳ314.4	314.9	312.7	316.0	317.9
04–3	Footwear	245.0	244.8	244.5	244.2	247.3	247.3	247.7	248.0	249.1	ʳ247.7	247.5	246.9	248.0	248.4
04–4	Other leather and related products	ʳ247.4	248.1	248.1	245.6	246.9	244.9	247.7	247.2	247.1	ʳ249.1	254.6	255.0	254.5	254.4
05	Fuels and related products and power	ʳ693.2	670.6	662.2	677.3	701.1	705.6	700.4	698.8	706.1	ʳ703.4	686.3	673.5	662.3	648.1
05–1	Coal	ʳ534.7	532.6	534.0	533.6	538.0	539.0	538.5	538.1	539.6	ʳ538.7	532.3	534.6	540.0	539.3
05–2	Coke	ʳ461.7	467.5	467.5	462.0	460.3	459.1	460.0	452.3	452.3	452.3	450.9	447.3	447.3	447.3
05–3	Gas fuels[2]	1060.8	992.7	1,001.2	1,027.5	1,054.3	1,074.6	1,112.2	1,130.1	1,190.0	ʳ1,181.2	1,143.5	1,169.2	1,190.5	1,158.4
05–4	Electric power	ʳ406.5	406.3	407.1	405.7	416.0	414.9	415.0	408.7	404.9	ʳ409.9	411.2	411.2	411.7	409.5
05–61	Crude petroleum[3]	ʳ733.4	717.9	717.8	718.2	718.4	718.4	718.3	735.3	733.6	ʳ720.0	720.1	693.3	678.5	678.4
05–7	Petroleum products, refined[4]	ʳ761.2	733.5	713.2	739.4	776.5	781.7	761.6	754.6	758.0	ʳ754.2	727.1	699.2	672.7	651.8
06	Chemicals and allied products	ʳ292.3	294.3	295.0	293.3	291.6	291.6	290.6	289.9	290.5	ʳ289.6	289.2	290.6	290.1	291.3
06–1	Industrial chemicals[5]	ʳ352.6	357.8	357.1	351.2	349.1	349.1	346.5	345.8	345.2	ʳ342.4	339.9	341.0	339.4	339.7
06–21	Prepared paint	ʳ262.8	258.9	264.7	264.7	264.7	264.7	264.7	264.7	264.7	ʳ264.7	265.1	265.1	265.1	265.1
06–22	Paint materials	304.6	306.7	306.9	304.9	304.5	302.5	303.0	303.0	302.4	ʳ301.7	301.3	299.3	298.1	299.5
06–3	Drugs and pharmaceuticals	210.1	208.9	209.9	209.7	210.0	211.2	212.4	214.9	215.5	216.0	218.3	221.3	222.7	225.1
06–4	Fats and oils, inedible	267.1	282.6	288.4	287.5	278.2	254.2	254.1	242.3	239.6	240.8	241.9	253.4	262.0	278.8
06–5	Agricultural chemicals and chemical products	ʳ292.4	295.8	294.8	294.1	291.5	290.8	289.9	288.8	286.5	ʳ285.2	282.8	282.5	284.0	283.7
06–6	Plastic resins and materials	ʳ283.4	286.0	283.2	282.1	280.9	282.2	281.6	281.3	282.2	ʳ282.5	282.8	282.3	282.8	284.7
06–7	Other chemicals and allied products	ʳ270.1	270.0	272.7	273.8	271.1	272.3	271.2	268.6	272.3	ʳ272.0	272.6	274.8	272.2	273.4
07	Rubber and plastic products	ʳ241.4	241.1	242.1	242.5	242.0	242.6	242.5	242.2	241.7	ʳ242.2	244.5	242.8	243.1	242.2
07–1	Rubber and rubber products	ʳ267.8	266.6	269.0	269.3	268.8	270.1	269.5	268.9	267.9	ʳ268.2	273.9	270.0	271.1	269.2
07–11	Crude rubber	278.9	283.3	283.7	282.5	280.3	278.7	276.6	272.5	270.9	ʳ271.1	271.0	274.2	281.1	280.6
07–12	Tires and tubes	255.2	253.4	254.9	255.3	255.0	257.8	255.6	255.7	254.5	ʳ256.0	259.1	250.4	250.1	246.6
07–13	Miscellaneous rubber products	ʳ276.9	274.7	278.8	279.5	279.4	279.7	281.6	281.4	280.7	ʳ279.7	290.7	290.8	291.9	291.6
07–2	Plastic products (6/78 = 100)	ʳ132.3	132.6	132.5	132.8	132.5	132.5	132.7	132.7	132.7	ʳ133.0	132.6	132.8	132.6	132.5
08	Lumber and wood products	284.7	286.5	284.6	289.0	288.6	284.2	283.0	279.4	279.9	ʳ285.6	292.1	302.7	305.0	305.4
08–1	Lumber	310.8	312.4	310.5	315.8	319.2	311.6	310.3	305.6	305.1	ʳ312.6	324.2	343.6	348.2	352.8
08–2	Millwork	279.4	276.6	276.3	280.5	282.3	280.2	279.5	278.6	280.3	ʳ286.5	293.7	300.5	304.0	302.7
08–3	Plywood	232.1	234.0	230.5	239.2	232.4	229.0	228.5	224.0	227.8	231.2	234.4	239.3	238.8	239.3
08–4	Other wood products	236.2	237.7	237.4	236.0	236.0	235.8	235.6	235.8	233.0	ʳ231.2	232.0	233.2	231.6	230.8

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 1982	1982									1983			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	Jan.	Feb.	Mar.	Apr.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	r288.7	288.5	289.6	289.5	289.1	289.3	289.4	289.8	289.8	r290.5	291.1	293.3	293.8	295.1
09–1	Pulp, paper, and products, excluding building paper and board	r273.2	275.3	274.8	274.1	272.6	272.2	271.5	270.3	269.4	r268.8	269.1	269.0	269.1	268.8
09–11	Woodpulp	r379.0	389.9	393.3	388.0	368.3	367.0	365.0	350.4	347.3	r347.2	350.5	349.5	346.7	344.5
09–12	Wastepaper	121.1	128.1	121.5	115.2	115.6	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0
09–13	Paper	r286.3	289.4	288.2	287.8	286.3	285.3	285.3	285.4	280.6	r279.2	279.8	279.1	278.6	278.7
09–14	Paperboard	254.9	261.2	258.8	255.9	255.0	255.4	250.7	248.0	247.6	r244.1	243.6	244.0	246.6	248.4
09–15	Converted paper and paperboard products	264.4	264.3	264.3	264.5	264.4	264.3	264.2	264.0	264.7	r264.8	265.0	265.1	265.2	264.5
09–2	Building paper and board	r239.5	236.3	240.2	240.0	239.8	244.4	243.4	242.1	241.0	r242.0	240.5	240.8	243.3	246.1
10	Metals and metal products	r301.6	303.1	302.8	299.3	299.5	299.2	301.8	301.6	300.5	r299.9	301.7	306.1	305.4	305.3
10–1	Iron and steel	r339.0	342.8	341.3	338.3	337.5	337.1	336.5	337.6	335.9	r332.8	333.2	340.3	341.8	341.7
10–17	Steel mill products	r349.5	352.2	352.1	349.9	349.0	348.6	348.2	349.8	348.6	r344.7	343.7	351.8	350.1	350.1
10–2	Nonferrous metals	263.6	266.1	263.6	253.4	256.4	255.7	265.1	262.9	261.7	r263.2	267.6	275.5	268.8	271.7
10–3	Metal containers	r328.5	330.0	330.2	329.9	330.0	328.8	328.8	329.7	329.0	r328.3	327.0	330.3	331.6	332.0
10–4	Hardware	r280.3	278.5	278.9	280.3	281.2	282.6	282.7	283.0	283.1	r285.8	284.9	285.6	285.9	286.3
10–5	Plumbing fixtures and brass fittings	278.7	280.3	281.0	282.6	283.3	274.6	277.1	277.8	278.3	r279.2	280.6	283.4	285.5	287.5
10–6	Heating equipment	r237.2	236.0	237.2	238.5	238.9	238.4	239.1	238.4	238.8	239.3	240.1	240.8	241.1	242.3
10–7	Fabricated structural metal products	r304.8	305.2	304.9	305.3	303.9	304.3	306.4	305.9	305.3	r304.7	303.3	302.5	303.7	302.6
10–8	Miscellaneous metal products	r282.3	279.7	284.5	283.9	283.2	283.3	283.8	284.1	283.4	r283.2	288.6	288.6	289.8	285.3
11	Machinery and equipment	r278.8	277.6	278.2	278.6	279.6	279.9	280.2	281.1	281.8	r282.4	282.7	283.6	284.0	284.9
11–1	Agricultural machinery and equipment	r311.1	306.8	308.2	309.7	311.0	312.2	314.1	317.5	318.7	r320.7	321.4	322.5	322.8	324.8
11–2	Construction machinery and equipment	r343.9	341.5	343.5	343.9	346.1	346.5	347.5	347.6	347.9	r348.1	348.6	348.1	349.6	350.8
11–3	Metalworking machinery and equipment	r320.9	319.6	320.7	321.2	322.5	322.8	323.1	323.1	323.5	r323.6	323.7	324.5	324.8	325.6
11–4	General purpose machinery and equipment	r304.0	303.4	303.8	303.5	304.8	304.9	305.0	305.9	306.4	r307.0	306.9	307.5	307.3	307.9
11–6	Special industry machinery and equipment	r325.1	322.9	323.9	325.0	327.1	326.7	326.8	327.8	329.1	r329.9	331.7	332.9	333.7	334.4
11–7	Electrical machinery and equipment	r231.6	231.7	231.3	231.5	231.6	231.8	231.7	232.6	233.7	r234.2	234.3	235.8	236.1	237.3
11–9	Miscellaneous machinery	r268.4	266.1	267.9	268.5	269.5	270.9	271.5	271.6	272.0	r272.3	272.5	272.5	273.5	274.0
12	Furniture and household durables	r206.9	206.0	206.5	207.0	206.8	208.1	208.3	208.9	208.9	r209.2	210.1	211.7	212.1	213.1
12–1	Household furniture	r229.8	229.7	230.0	230.2	230.0	230.4	230.7	231.2	231.4	r232.0	231.5	231.6	232.9	233.7
12–2	Commercial furniture	r275.5	274.2	275.2	276.0	277.4	278.1	278.2	278.3	278.6	r278.5	281.6	282.6	285.4	286.7
12–3	Floor coverings	r181.2	181.1	181.3	181.9	181.2	181.0	181.5	181.6	181.3	r181.5	181.0	181.2	181.0	181.4
12–4	Household appliances	r199.1	197.8	198.9	199.6	200.2	201.0	201.2	201.3	201.2	r201.8	202.1	203.2	203.4	205.2
12–5	Home electronic equipment	88.1	87.9	88.0	88.4	87.2	88.0	87.4	87.8	87.0	r87.1	87.6	87.2	87.2	86.9
12–6	Other household durable goods	r289.3	285.9	285.4	286.1	285.1	291.8	293.4	296.5	297.2	r298.1	302.0	313.9	311.7	313.3
13	Nonmetallic mineral products	320.2	320.2	321.2	320.9	321.1	320.5	321.2	321.1	321.2	r320.5	321.5	321.9	321.9	323.7
13–11	Flat glass	221.5	216.2	226.4	226.4	226.1	221.1	221.1	221.1	225.3	225.3	229.7	229.7	229.7	229.7
13–2	Concrete ingredients	r310.0	309.5	312.5	312.7	311.8	311.2	310.8	309.9	310.0	r306.7	308.1	309.6	309.0	310.6
13–3	Concrete products	297.8	297.7	298.2	298.5	298.8	299.0	298.7	298.6	298.2	298.5	298.6	299.5	300.1	300.3
13–4	Structural clay products, excluding refractories	r260.8	258.1	258.6	258.9	259.3	263.9	264.0	264.0	264.8	r264.8	264.4	264.4	270.9	275.3
13–5	Refractories	337.1	338.7	339.5	340.4	340.4	340.7	340.8	340.8	337.2	r337.2	338.2	338.2	338.2	338.7
13–6	Asphalt roofing	r398.4	386.7	385.5	396.4	399.8	400.1	413.4	406.7	399.0	r397.0	392.2	378.9	373.2	389.0
13–7	Gypsum products	256.1	263.2	259.4	256.4	255.8	253.9	253.9	255.1	255.0	253.9	259.7	263.4	263.4	271.4
13–8	Glass containers	355.5	358.1	358.1	358.1	358.1	358.0	358.6	358.5	357.8	357.6	358.2	355.8	354.1	353.8
13–9	Other nonmetallic minerals	r471.8	479.1	471.3	465.2	466.6	466.0	467.7	470.4	471.3	r471.0	471.8	476.1	476.3	478.6
14	Transportation equipment (12/68 = 100)	249.7	245.8	247.5	249.1	249.8	250.6	244.5	256.0	256.3	257.5	257.1	257.3	257.1	255.6
14–1	Motor vehicles and equipment	251.3	247.2	249.2	251.1	252.0	252.8	244.6	257.8	257.8	r258.1	257.8	258.1	257.7	255.9
14–4	Railroad equipment	r346.5	343.5	342.8	342.8	342.6	347.7	348.0	350.8	350.8	r350.8	357.6	357.3	357.4	357.2
15	Miscellaneous products	r276.4	273.2	272.2	271.5	273.4	272.0	279.5	285.4	285.2	r290.4	284.7	285.7	284.4	287.6
15–1	Toys, sporting goods, small arms, ammunition	r221.5	221.0	221.8	221.9	222.0	223.5	221.8	221.2	221.3	r223.7	223.7	225.6	226.2	226.8
15–2	Tobacco products	r323.1	306.7	307.0	307.0	311.5	311.5	329.1	365.4	364.5	r382.9	350.9	338.1	335.1	354.7
15–3	Notions	r277.0	271.5	280.1	280.1	280.1	280.1	280.1	280.1	279.8	r279.8	280.5	280.6	280.6	280.3
15–4	Photographic equipment and supplies	r210.4	214.2	210.6	210.4	208.9	208.9	209.9	209.7	209.7	r210.0	210.3	212.1	216.9	216.9
15–5	Mobile homes (12/74 = 100)	r161.9	162.2	162.5	162.4	162.6	162.8	162.9	162.6	161.6	r161.7	161.3	161.3	163.3	162.5
15–9	Other miscellaneous products	r338.3	334.1	331.3	328.6	333.7	327.0	345.2	345.2	345.1	r351.6	350.3	359.2	349.9	349.8

[1] Data for December 1982 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] Prices for natural gas are lagged 1 month.

[3] Includes only domestic production.

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

[5] 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 1982	1982									1983			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.¹	Jan.	Feb.	Mar.	Apr.
All commodities — less farm products	303.0	300.9	301.2	302.2	303.9	304.1	303.7	304.7	305.1	r305.4	304.6	305.2	304.4	304.0
All foods	r254.4	254.7	257.9	259.0	256.6	255.8	255.3	252.8	251.9	252.7	252.4	254.7	255.5	258.1
Processed foods	r256.0	255.1	259.0	260.8	259.5	258.7	259.2	256.2	254.7	r254.7	255.8	258.2	258.6	259.5
Industrial commodities less fuels	272.8	272.3	272.8	272.4	272.5	272.6	272.5	274.4	274.4	r274.9	275.4	277.0	277.0	277.5
Selected textile mill products (Dec. 1975 = 100)	138.2	139.0	138.7	138.2	137.6	137.8	137.8	137.4	137.1	r136.8	136.6	136.7	137.1	137.2
Hosiery	138.3	138.0	138.5	138.5	138.5	138.5	138.7	138.7	139.7	139.7	141.7	144.5	144.5	144.5
Underwear and nightwear	r217.6	215.9	215.9	217.4	218.6	218.6	219.6	220.1	219.7	r219.7	223.1	222.3	223.8	223.8
Chemicals and allied products, including synthetic rubber and fibers and yarns	r283.8	285.6	286.1	284.5	282.9	283.3	282.5	281.8	282.3	r281.4	280.8	281.6	281.1	281.9
Pharmaceutical preparations	206.0	204.5	205.8	205.4	205.9	207.4	209.0	211.7	212.3	r212.8	215.5	218.4	220.0	222.9
Lumber and wood products, excluding millwork	288.8	290.5	288.1	294.5	294.6	288.3	287.2	282.5	283.4	r289.6	298.7	313.5	316.4	319.8
Steel mill products, including fabricated wire products	349.4	352.2	352.1	349.9	348.4	348.1	347.8	349.1	348.5	344.8	343.1	350.5	348.8	348.7
Finished steel mill products, excluding fabricated wire products	348.4	351.0	350.9	348.6	347.7	347.3	346.9	348.6	348.0	344.0	342.1	350.5	348.7	348.8
Finished steel mill products, including fabricated wire products	r348.0	351.0	350.9	348.6	347.0	346.7	346.3	347.8	347.2	343.3	341.5	349.1	347.4	347.3
Special metals and metal products	r286.6	285.6	286.3	285.2	285.7	285.8	284.0	289.5	288.9	r288.7	289.7	292.3	291.8	291.0
Fabricated metal products	r291.6	290.8	292.6	292.8	292.0	291.9	292.9	293.0	292.5	r292.5	293.9	294.2	295.3	293.4
Copper and copper products	r185.5	191.6	193.0	179.7	179.2	179.8	181.0	178.8	181.2	r181.8	190.5	201.6	199.0	201.0
Machinery and motive products	272.1	269.6	270.7	271.7	272.8	273.3	270.7	276.4	277.0	r277.9	277.9	278.5	278.6	278.5
Machinery and equipment, except electrical	r306.4	304.6	305.7	306.2	307.6	308.1	308.6	309.4	310.0	r310.6	311.1	311.6	312.1	312.8
Agricultural machinery, including tractors	r323.1	319.0	319.9	321.3	321.8	322.8	325.5	330.6	332.2	r335.1	336.0	337.1	337.4	340.1
Metalworking machinery	350.4	348.8	349.3	350.1	352.6	353.1	353.5	354.1	354.2	r354.1	354.8	355.9	355.7	356.3
Numerically controlled machine tools (Dec. 1971 = 100)	r239.6	239.9	239.9	240.0	239.2	239.2	239.4	239.4	239.4	r239.4	238.0	238.7	236.8	235.0
Total tractors	r355.0	352.4	353.6	354.1	354.8	355.5	359.6	361.4	361.4	r364.2	365.3	365.6	365.7	370.4
Agricultural machinery and equipment less parts	r313.8	310.3	311.0	312.2	312.8	313.6	315.8	320.1	321.5	r324.3	325.1	326.1	326.4	328.7
Farm and garden tractors less parts	r327.8	323.5	325.0	325.8	325.4	326.0	333.0	336.1	336.1	r340.3	342.2	342.2	342.2	348.7
Agricultural machinery, excluding tractors less parts	r319.6	315.6	316.1	317.9	319.1	320.4	319.6	326.4	329.3	r331.1	331.2	333.3	333.7	333.4
Construction materials	r288.0	288.2	288.2	289.5	289.2	288.3	288.4	288.0	287.8	r287.9	290.0	294.4	294.9	295.5

¹ Data for December 1982 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 1982	1982									1983			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.¹	Jan.	Feb.	Mar.	Apr.
Total durable goods	279.0	278.1	278.5	278.3	278.9	278.8	278.6	281.2	281.2	282.0	282.8	285.2	285.1	285.1
Total nondurable goods	315.3	313.6	314.5	316.0	317.6	317.1	315.7	314.3	315.3	r315.3	313.4	313.5	312.4	312.8
Total manufactures	292.7	291.1	291.3	292.4	293.7	293.8	292.9	293.8	293.9	r294.3	293.7	294.1	293.0	292.9
Durable	r279.8	278.7	279.2	279.3	279.9	279.8	279.6	282.3	282.4	283.2	283.9	286.1	285.8	285.8
Nondurable	306.4	304.1	304.0	306.3	308.5	308.6	307.1	306.0	306.1	r305.9	303.9	302.3	300.5	300.2
Total raw or slightly processed goods	r331.2	331.9	335.1	333.4	333.2	331.1	329.9	327.9	330.9	r331.6	330.3	336.2	338.1	340.7
Durable	r233.8	245.3	239.7	225.4	225.3	225.0	226.2	224.2	219.2	r217.4	225.2	236.3	244.3	244.9
Nondurable	r337.3	337.2	341.1	340.3	340.1	337.9	336.5	334.5	338.1	r339.0	337.0	342.5	343.9	346.7

¹ Data for December 1982 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 1982	1982 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[1]	1983 Jan.	Feb.	Mar.	Apr.
	MINING														
1011	Iron ores (12/75 = 100)	175.2	171.3	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1
1092	Mercury ores (12/75 = 100)	312.2	327.0	308.3	307.5	306.2	287.5	289.5	312.5	308.3	312.5	306.2	289.5	285.4	272.9
1311	Crude petroleum and natural gas	r925.8	893.3	901.2	914.3	924.3	926.7	937.6	945.9	969.0	r958.4	942.8	938.4	939.5	922.9
1455	Kaolin and ball clay (6/76 = 100)	151.2	151.7	151.7	151.7	151.7	151.7	151.7	151.7	151.7	151.7	153.6	156.3	158.4	164.3
	MANUFACTURING														
2021	Creamery butter	276.0	275.3	274.9	274.9	275.0	276.3	276.8	276.8	276.5	277.8	275.5	275.6	275.6	275.6
2024	Ice cream and frozen desserts (12/72 = 100)	214.4	214.2	214.2	214.2	213.6	213.6	216.5	216.5	216.5	216.5	216.5	217.7	217.7	218.6
2041	Flour mills (12/71 = 100)	186.2	192.5	188.4	189.1	185.5	180.2	182.2	179.6	184.8	185.5	182.6	181.7	183.8	191.9
2044	Rice milling	185.1	177.9	183.0	180.3	177.6	183.0	183.0	183.0	175.2	196.1	191.3	183.0	183.0	188.9
2067	Chewing gum	304.1	303.4	303.4	303.4	303.3	304.7	304.7	304.8	306.0	306.1	326.0	326.0	326.1	326.1
2074	Cottonseed oil mills	168.3	164.7	167.9	170.2	174.6	173.1	164.4	157.6	164.1	r169.1	157.5	160.4	153.8	172.0
2083	Malt	256.9	259.1	259.8	259.8	259.8	259.8	251.2	251.2	240.6	240.6	232.6	232.6	232.6	232.6
2085	Distilled liquor, except brandy (12/75 = 100)	140.1	140.2	139.8	139.8	139.8	140.4	140.4	140.4	141.3	141.3	141.3	141.3	141.3	141.3
2091	Canned and cured seafoods (12/73 = 100)	187.0	188.2	188.0	188.4	187.8	184.3	186.2	186.3	186.4	186.6	182.8	179.2	177.9	177.8
2098	Macaroni and spaghetti	258.5	259.5	259.5	259.5	259.5	259.5	259.5	255.5	255.5	255.5	255.5	255.5	255.5	255.5
2251	Women's hosiery, except socks (12/75 = 100)	116.8	116.2	116.9	116.9	116.8	116.9	116.9	116.9	118.5	r118.3	118.6	122.7	122.8	122.8
2261	Finishing plants, cotton (6/76 = 100)	139.5	141.6	141.5	141.4	140.3	139.8	138.5	136.8	136.2	136.1	135.3	136.0	136.1	135.6
2262	Finishing plants, synthetics, silk (6/76 = 100)	128.2	128.5	128.4	127.6	126.8	129.0	128.2	127.5	127.8	r127.3	125.6	125.5	125.0	125.6
2284	Thread mills (6/76 = 100)	157.2	156.7	156.6	156.6	156.5	158.0	158.0	157.9	157.9	157.8	157.9	161.9	165.6	165.7
2298	Cordage and twine (12/77 = 100)	141.5	141.0	141.0	141.0	141.0	141.0	142.6	142.6	142.6	142.6	142.6	142.7	142.8	137.6
2321	Men's and boys' shirts and nightwear	r215.1	217.3	217.5	217.8	218.1	218.2	221.5	221.6	221.6	r221.0	223.4	223.5	222.5	222.8
2323	Men's and boys' neckwear (12/75 = 100)	119.5	117.3	117.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3
2331	Women's and misses' blouses and waists (6/78 = 100)	r126.8	126.5	126.5	126.6	126.4	126.7	126.6	126.7	128.5	r127.6	124.8	124.7	125.3	125.3
2361	Children's dresses and blouses (12/77 = 100)	120.6	122.2	122.2	122.2	119.4	120.3	118.6	118.6	117.0	117.0	117.0	117.0	115.5	115.5
2381	Fabric dress and work gloves	292.1	295.5	295.5	294.5	294.5	288.2	288.2	287.4	287.4	287.4	288.8	288.8	288.8	291.0
2394	Canvas and related products (12/77 = 100)	r145.4	145.7	145.9	143.1	143.1	143.1	144.8	147.3	147.3	r147.3	149.4	149.4	146.8	146.8
2396	Automotive and apparel trimmings (12/77 = 100)	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0
2448	Wood pallets and skids (12/75 = 100)	r145.6	145.9	144.7	144.2	144.1	143.9	143.8	144.3	144.2	r144.6	144.5	145.1	145.6	146.8
2515	Mattresses and bedsprings	r205.7	205.7	205.9	205.9	205.7	205.9	206.0	206.0	206.0	r206.0	208.7	208.7	208.7	208.8
2521	Wood office furniture	r270.3	270.8	270.8	270.8	270.9	271.3	271.3	271.4	271.4	r271.4	272.5	272.5	278.7	281.5
2647	Sanitary paper products	r348.7	344.5	343.6	346.2	346.9	351.5	352.3	351.8	357.8	r355.9	356.9	359.6	359.6	357.2
2654	Sanitary food containers	r259.7	259.9	259.9	259.9	259.9	259.9	260.8	261.7	261.7	r261.7	263.2	263.1	266.7	266.6
2655	Fiber cans, drums, and similar products (12/75 = 100)	177.8	176.5	176.7	176.7	176.7	177.5	177.5	177.9	180.7	183.8	183.8	183.8	183.8	185.5
2911	Petroleum refining (6/76 = 100)	r278.3	267.4	259.2	267.9	281.5	283.7	279.6	278.3	280.1	278.3	268.3	258.5	249.7	241.4
2952	Asphalt felts and coating (12/75 = 100)	r173.5	168.1	168.4	173.1	174.7	174.4	180.4	177.2	173.7	r172.9	170.8	165.1	162.6	169.1
3031	Reclaimed rubber (12/73 = 100)	r207.9	209.2	209.5	210.7	209.9	209.7	209.8	209.8	209.3	r208.8	207.1	207.4	207.0	206.7
3251	Brick and structural clay tile	r307.4	303.4	304.5	305.0	305.9	313.8	314.0	314.0	315.5	r315.5	317.1	317.1	329.8	333.7
3253	Ceramic wall and floor tile (12/75 = 100)	r140.6	140.6	140.6	140.6	140.6	140.7	140.7	140.7	140.7	r140.7	138.0	138.0	138.1	138.1
3255	Clay refractories	r352.8	355.2	355.5	356.2	356.3	356.8	356.9	357.0	350.3	350.3	352.0	352.0	352.1	353.1
3259	Structural clay products, n.e.c.	r219.7	215.9	215.8	215.9	215.9	219.0	219.0	219.0	218.9	r219.0	219.5	219.5	219.4	232.8
3261	Vitreous plumbing fixtures	265.0	261.8	265.4	265.5	264.2	263.9	267.2	269.1	270.3	269.7	272.1	273.3	275.1	275.3
3262	Vitreous china food utensils	r357.8	346.5	355.5	360.2	360.2	360.2	360.2	360.8	370.2	r377.7	369.2	369.2	369.2	369.2
3263	Fine earthenware food utensils	r318.2	314.9	316.2	316.9	316.9	316.9	316.9	323.5	324.8	r326.0	363.5	363.5	363.5	363.5
3269	Pottery products, n.e.c. (12/75 = 100)	r167.3	164.0	166.3	167.4	167.4	167.4	167.4	169.6	171.9	r173.7	183.8	183.8	183.8	183.8
3274	Lime (12/75 = 100)	r186.3	186.3	188.0	188.3	188.0	188.0	187.8	187.7	187.5	r185.7	187.5	185.8	185.4	188.1
3297	Nonclay refractories (12/74 = 100)	201.8	202.3	203.2	203.8	203.8	203.8	203.8	203.8	203.7	203.6	203.7	203.6	203.6	203.8
3313	Electrometallurgical products (12/75 = 100)	121.4	120.3	120.3	120.4	120.4	121.4	121.4	121.3	121.3	121.2	121.1	121.2	121.1	119.0
3425	Hand saws and saw blades (12/72 = 100)	r219.1	215.3	221.3	221.4	221.5	221.6	221.6	221.6	221.8	r221.6	221.4	226.0	225.9	225.9
3482	Small arms ammunition (12/75 = 100)	r164.2	166.3	166.3	170.3	170.3	170.3	149.0	150.1	150.6	r174.1	180.9	180.9	187.7	187.6
3623	Welding apparatus, electric (12/72 = 100)	r239.6	237.6	237.6	237.8	241.6	242.4	242.8	243.0	243.3	r243.3	238.5	238.9	238.3	238.1
3636	Sewing machines (12/75 = 100)	r154.6	154.3	154.3	154.3	154.3	153.6	153.6	154.2	154.2	r154.2	153.6	153.8	154.4	156.1
3641	Electric lamps	294.0	296.6	294.5	293.9	291.8	293.7	296.3	302.9	303.0	r303.8	305.6	311.1	311.4	316.3
3648	Lighting equipment, n.e.c. (12/75 = 100)	170.0	170.9	171.2	171.1	171.1	171.2	171.2	171.3	171.3	r171.4	171.5	171.7	171.7	172.6
3671	Electron tubes, receiving type	r382.1	374.5	374.4	374.5	375.4	375.4	380.2	380.3	414.0	r414.1	431.6	432.0	431.9	431.9
3942	Dolls (12/75 = 100)	r136.7	136.8	136.8	136.8	136.8	136.8	136.8	136.8	136.8	r136.8	136.8	136.5	136.5	137.4
3944	Games, toys, and children's vehicles	r234.0	234.1	234.3	234.3	234.4	234.4	234.8	235.3	235.3	r235.5	232.7	238.6	237.4	237.9
3955	Carbon paper and inked ribbons (12/75 = 100)	140.0	140.3	140.5	140.6	140.4	140.5	139.3	139.3	139.2	139.4	139.2	139.2	139.2	139.2
3995	Burial caskets (6/76 = 100)	148.4	145.3	149.3	149.3	150.8	150.8	150.8	150.8	150.8	150.8	147.0	152.1	152.1	152.1
3996	Hard surface floor coverings (12/75 = 100)	155.9	156.1	156.3	154.3	155.0	155.7	156.9	156.9	156.9	156.8	159.2	159.2	159.2	159.4

[1] Data for December 1982 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.

Note: Indexes which were deleted in the March issue may now be found in Table 4 of the BLS monthly report, *Producer Prices and Price Indexes*.

r = revised.

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

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input,** or labor productivity, measure the value of goods and services produced per hour of 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 cost measures the labor compensation cost required to produce one 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 the current dollar gross domestic product and dividing by output. In these tables, **unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and inventory valuation adjustments per unit of output.

The **implicit price deflator** is derived by dividing the current dollar estimate of gross product by the constant dollar estimate, making the deflator, in effect, a price index for gross product of the sector reported.

The use of the term "man hours" to identify the labor component of productivity and costs, in tables 27 through 30, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

In the business sector and the nonfarm business sector, the basis for the output measure employed in the computation of output per hour is Gross Domestic Product rather than Gross National Product. Computation of hours includes estimates of nonfarm and farm proprietor hours.

Output data are 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 Economic Analysis and the Bureau of Labor Statistics.

Beginning with the September 1982 issue of the *Review,* all of the productivity and cost measures contained in these tables are based on revised output and compensation measures released by the Bureau of Economic Analysis in July as part of the regular revision cycle of the National Income and Product Accounts. Measures of labor input have been revised to reflect results of the 1980 census, and seasonal factors have been recomputed for use in the preparation of quarterly measures. The word "private" is no longer being used as part of the series title of one of the two business sector measures prepared by BLS; no change has been made in the definition or content of the measures as a result of this change.

28. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–82

[1977=100]

Item	1950	1955	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
Business sector:													
Output per hour of all persons	50.4	58.3	65.2	78.3	86.2	94.5	97.6	100.0	100.6	99.6	98.9	100.7	101.0
Compensation per hour	20.0	26.4	33.9	41.7	58.2	85.5	92.9	100.0	108.6	119.1	131.4	144.1	154.5
Real compensation per hour	50.5	59.6	69.5	80.1	90.8	96.3	98.9	100.0	100.9	99.4	96.7	96.0	97.0
Unit labor costs	39.7	45.2	52.0	53.3	67.5	90.5	95.1	100.0	108.0	119.5	132.9	143.1	r 153.1
Unit nonlabor payments	43.4	47.6	50.6	57.6	63.2	90.4	94.0	100.0	106.7	112.8	119.3	135.2	r 138.5
Implicit price deflator	41.0	46.0	51.6	54.7	66.0	90.5	94.7	100.0	107.5	117.2	128.3	140.4	148.1
Nonfarm business sector:													
Output per hour of all persons	56.3	62.8	68.3	80.5	86.8	94.7	97.8	100.0	100.6	99.3	98.5	99.9	100.0
Compensation per hour	21.8	28.3	35.7	42.8	58.7	86.0	93.0	100.0	108.6	118.8	130.9	143.6	154.0
Real compensation per hour	55.0	64.0	73.0	82.2	91.5	96.8	99.0	100.0	100.9	99.2	96.3	95.7	96.7
Unit labor costs	38.8	45.0	52.2	53.2	67.6	90.8	95.1	100.0	108.0	119.6	133.0	143.8	r 154.1
Unit nonlabor payments	42.7	47.8	50.4	58.0	63.7	88.5	93.5	100.0	105.3	110.3	119.1	134.8	r 138.8
Implicit price deflator	40.1	46.0	51.6	54.8	66.3	90.0	94.6	100.0	107.1	116.5	128.3	140.8	149.0
Nonfinancial corporations:													
Output per hour of all employees	(1)	(1)	68.0	81.9	87.4	95.5	98.2	100.0	100.9	100.7	100.3	r 102.1	r 102.9
Compensation per hour	(1)	(1)	37.0	43.9	59.4	86.1	92.9	100.0	108.5	118.7	130.9	r 143.6	r 154.2
Real compensation per hour	(1)	(1)	75.8	84.3	92.7	96.9	98.9	100.0	r 100.7	99.1	r 96.3	r 95.7	96.8
Unit labor costs	(1)	(1)	54.4	53.5	68.0	90.2	94.6	100.0	107.5	117.8	130.5	140.6	r 149.9
Unit nonlabor payments	(1)	(1)	54.6	60.8	63.1	90.8	95.0	100.0	104.2	106.9	117.7	134.8	r 140.0
Implicit price deflator	(1)	(1)	54.5	56.1	66.3	90.4	94.7	100.0	106.4	114.1	126.1	138.6	146.5
Manufacturing:													
Output per hour of all persons	49.4	56.4	60.0	74.5	79.1	93.4	97.5	100.0	r 100.8	101.5	101.7	104.5	r 103.6
Compensation per hour	21.5	28.8	36.7	42.8	57.6	85.4	92.3	100.0	108.3	118.9	132.8	r 146.5	r 158.9
Real compensation per hour	54.0	65.1	75.1	82.3	89.8	96.2	98.3	100.0	100.6	99.2	97.7	r 97.6	r 99.8
Unit labor costs	43.4	51.0	61.1	57.5	72.7	91.5	94.6	100.0	107.4	r 117.0	130.6	140.0	153.4
Unit nonlabor payments	54.3	58.5	61.1	69.3	65.0	87.3	93.7	100.0	102.5	99.9	97.1	108.8	(1)
Implicit price deflator	46.6	53.2	61.1	61.0	70.5	90.3	94.4	100.0	106.0	112.0	120.8	130.8	(1)

1 Not available.   r=revised.

29. Annual changes in productivity, hourly compensation, unit costs, and prices, 1972–82

Item	Year											Annual rate of change	
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1950-82	1972-82
Business sector:													
Output per hour of all persons	3.5	2.6	-2.4	2.2	3.3	2.4	0.6	-0.9	-0.7	1.8	r0.3	2.2	0.9
Compensation per hour	6.5	8.0	9.4	9.6	8.6	7.7	8.6	9.7	10.4	9.6	r7.2	6.6	8.9
Real compensation per hour	3.1	1.6	-1.4	0.5	2.6	1.2	0.9	-1.4	-2.8	-0.7	r1.0	2.1	0.1
Unit labor costs	2.9	5.3	12.1	7.3	5.1	5.1	8.0	10.7	11.2	7.7	r7.0	4.3	7.9
Unit nonlabor payments	4.5	5.9	4.4	15.1	4.0	6.4	6.7	5.7	5.8	13.3	r2.4	3.7	6.9
Implicit price deflator	3.4	5.5	9.5	9.8	4.7	5.6	7.5	9.0	9.4	9.5	5.5	4.1	7.6
Nonfarm business sector:													
Output per hour of all persons	3.7	2.4	-2.5	2.0	3.2	2.2	0.6	-1.3	-0.9	1.4	0.1	1.8	0.7
Compensation per hour	6.7	7.6	9.4	9.6	8.1	7.5	8.6	9.3	10.2	9.7	7.2	6.3	8.7
Real compensation per hour	3.3	1.3	-1.4	0.4	2.2	1.0	0.9	-1.7	-2.9	r-0.6	1.0	1.8	0.0
Unit labor costs	2.9	5.0	12.2	7.5	4.7	5.2	8.0	10.7	11.2	8.1	7.1	4.4	r8.0
Unit nonlabor payments	3.2	1.3	5.9	16.7	5.7	6.9	5.3	4.7	8.0	13.1	3.2	3.7	7.0
Implicit price deflator	3.0	3.8	10.2	10.3	5.0	5.7	7.1	8.8	10.2	9.7	5.8	4.2	7.6
Nonfinancial corporations:													
Output per hour of all employees	2.9	2.4	-3.7	2.9	2.9	1.8	0.9	-0.2	-0.4	r1.8	r0.8	(1)	0.9
Compensation per hour	5.7	7.5	9.4	9.6	7.9	7.6	8.5	9.4	10.3	r9.7	7.4	(1)	8.7
Real compensation per hour	2.4	1.2	-1.5	0.4	2.0	1.1	r0.7	-1.7	r-2.8	r-0.6	1.2	(1)	0.0
Unit labor costs	2.8	4.9	13.6	6.5	4.9	5.7	7.5	9.6	10.7	7.8	r6.6	(1)	r7.8
Unit nonlabor payments	2.7	1.5	7.1	20.1	4.6	5.3	4.2	2.6	10.1	14.6	r3.8	(1)	r7.2
Implicit price deflator	2.8	3.8	11.4	10.9	4.8	5.6	6.4	7.2	10.5	10.0	5.7	(1)	7.6
Manufacturing:													
Output per hour of all persons	5.0	5.4	-2.4	2.9	4.4	2.5	r0.8	0.7	0.2	r2.9	-1.0	2.3	1.6
Compensation per hour	5.4	7.2	10.6	11.9	8.0	8.3	8.3	9.7	11.8	r10.3	8.5	6.5	9.5
Real compensation per hour	2.0	0.9	-0.3	2.5	2.1	1.8	0.6	-1.4	r-1.5	r-0.1	2.2	1.9	0.7
Unit labor costs	0.3	1.7	13.3	8.8	3.4	5.7	7.4	9.0	11.6	7.2	9.6	r3.9	7.7
Unit nonlabor payments	0.8	-3.3	-1.8	25.9	7.4	6.7	2.5	-2.6	-2.7	12.0	(1)	(1)	(1)
Implicit price deflator	0.5	0.3	9.0	13.1	4.6	6.0	6.0	5.7	7.8	8.4	(1)	(1)	(1)

[1] Not available.
r= revised.   p= preliminary.

30. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted
[1977=100]

Item	Annual average		Quarterly indexes										
			1980		1981				1982				1983
	1981	1982	III	IV	I	II	III	IV	I	II	III	IV	I
Business sector:													
Output per hour of all persons	100.7	101.0	98.9	r99.4	100.7	100.7	101.0	r100.3	r100.1	r100.4	r101.3	r102.0	p102.6
Compensation per hour	144.1	r154.5	133.1	r136.2	140.0	142.5	r145.7	148.3	r151.1	r153.5	155.9	r158.0	p159.8
Real compensation per hour	96.0	97.0	96.9	r96.3	r96.5	r96.3	95.7	r95.7	r96.8	97.1	r96.7	r97.6	p98.8
Unit labor costs	143.1	r153.1	134.7	137.0	139.0	141.5	144.2	147.9	150.9	152.9	153.8	r154.9	p155.8
Unit nonlabor payments	135.2	r138.5	120.6	124.6	r131.7	133.4	137.4	r138.4	r136.3	137.0	r139.9	r140.7	p145.4
Implicit price deflator	140.4	148.1	129.9	132.8	136.5	138.8	141.9	144.6	r145.9	147.5	149.1	150.1	p152.3
Nonfarm business sector:													
Output per hour of all persons	99.9	r99.9	98.4	99.2	100.4	r100.1	100.0	99.1	r99.3	r99.5	r100.4	r100.4	p101.6
Compensation per hour	143.6	154.0	132.6	135.7	r139.6	142.0	145.1	147.7	r150.6	r152.8	r155.3	r157.4	p159.7
Real compensation per hour	95.7	96.7	96.5	r95.9	r96.2	96.0	r95.3	95.3	r96.5	96.6	96.4	r97.2	p98.8
Unit labor costs	143.8	r154.1	134.7	136.8	r139.1	141.9	145.1	149.0	151.6	153.5	154.7	r156.7	p157.2
Unit nonlabor payments	134.8	r138.8	120.3	124.4	131.5	r132.9	136.7	r138.3	136.7	137.2	140.1	r141.2	p146.0
Implicit price deflator	140.8	149.0	129.9	132.7	136.5	138.9	142.3	145.5	146.6	148.1	149.8	r151.5	p153.4
Nonfinancial corporations:													
Output per hour of all employees	r102.1	r102.9	100.6	101.1	102.3	102.2	r102.3	101.7	r101.8	r102.4	r103.6	p103.7	(1)
Compensation per hour	r143.6	r154.2	132.6	135.6	139.6	r142.0	r144.9	147.8	r150.9	153.2	r155.4	p157.4	(1)
Real compensation per hour	r95.7	96.8	96.6	95.8	r96.3	r95.9	95.2	r95.4	r96.7	r96.9	96.4	p97.2	(1)
Total unit costs	143.4	r154.4	132.9	135.8	138.3	141.7	144.7	149.1	151.8	153.8	154.8	p157.3	(1)
Unit labor costs	140.6	r149.9	131.9	134.1	136.5	138.9	141.7	145.4	148.3	149.5	150.0	p151.8	(1)
Unit nonlabor costs	151.4	r167.2	135.7	140.7	143.4	149.6	153.7	159.6	161.8	166.0	168.3	p172.9	(1)
Unit profits	101.6	r85.3	87.8	90.5	104.7	98.8	105.2	97.6	86.1	82.3	89.6	p83.1	(1)
Implicit price deflator	138.6	146.5	127.7	130.6	134.5	136.8	140.2	143.2	144.3	145.6	147.3	p148.8	(1)
Manufacturing:													
Output per hour of all persons	r104.6	r103.6	100.3	r103.7	105.2	r105.1	r105.1	103.0	r102.4	r102.6	r104.4	104.7	p106.5
Compensation per hour	r146.5	r158.9	r135.3	r138.5	142.6	145.0	r147.4	151.0	r155.1	158.1	160.5	162.2	p164.7
Real compensation per hour	r97.6	r99.8	98.5	r97.9	98.4	r98.0	96.8	r97.4	99.4	100.0	r99.6	100.2	p101.9
Unit labor costs	140.0	153.4	134.9	133.6	135.5	138.0	140.3	146.6	151.5	154.0	153.6	r155.0	p154.7

[1] Not available.
r= revised.   p= preliminary.

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

[1977=100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago.					
	III 1981 to IV 1981	IV 1981 to I 1982	I 1982 to II 1982	II 1982 to III 1982	III 1982 to IV 1982	IV 1980 to I 1981	IV 1980 to IV 1981	I 1981 to I 1982	II 1981 to II 1982	III 1981 to III 1982	IV 1981 to IV 1982	I 1982 to I 1983
Business sector:												
Output per hour of all persons	r-2.8	r-0.8	r1.3	r3.7	r2.6	2.2	r1.0	r-0.6	r-0.3	r0.3	r1.7	p2.5
Compensation per hour	r7.5	r7.6	r6.7	r6.3	r5.5	r4.7	8.9	r7.9	r7.7	r7.0	6.5	p5.8
Real compensation per hour	r-0.2	r4.5	r1.3	-1.4	r3.5	r5.1	-0.6	r0.2	0.8	1.1	1.9	p2.1
Unit labor costs	10.6	r8.5	r5.3	2.4	r2.9	r2.4	7.9	8.6	r8.0	6.7	r4.7	p3.3
Unit nonlabor payments	2.9	r-5.9	r2.1	8.9	r2.3	r13.8	11.0	3.5	2.7	r1.8	r1.7	p6.7
Implicit price deflator	8.0	r3.7	4.3	4.4	2.7	r5.9	8.9	6.9	6.3	5.1	3.8	p4.3
Nonfarm business sector:												
Output per hour of all persons	-3.4	r0.7	r0.9	r3.4	r0.4	4.8	r-0.0	-1.1	-0.6	r0.4	r1.3	p2.3
Compensation per hour	7.4	r7.9	r6.0	6.6	r5.5	r6.1	r8.9	r7.9	r7.6	r7.0	6.5	p6.1
Real compensation per hour	-0.2	r4.8	r0.7	r-1.1	r3.5	r-6.5	-0.6	r0.2	r0.7	1.1	1.9	p2.4
Unit labor costs	11.2	r7.2	r5.1	3.1	r5.1	r1.3	8.9	9.0	8.2	6.6	r5.1	p3.6
Unit nonlabor payments	r5.0	r-4.8	r1.6	r8.8	r3.0	r14.3	11.2	4.0	3.3	r2.5	r2.0	p6.8
Implicit price deflator	9.2	3.3	4.0	4.9	r4.5	r5.2	9.6	7.4	6.6	5.3	4.1	p4.6
Nonfinancial corporations:												
Output per hour of all employees	r-2.3	r0.4	2.7	4.6	p0.4	(1)	0.5	r-0.5	0.2	1.3	p2.0	(1)
Compensation per hour	r8.3	r8.6	6.2	5.9	p5.4	(1)	r9.0	r8.1	r7.9	7.2	p6.5	(1)
Real compensation per hour	r1.0	r5.4	r0.9	r-1.8	p3.3	(1)	-0.5	r0.4	r1.0	r1.4	p1.9	(1)
Total unit costs	12.8	7.4	5.4	2.5	p6.8	(1)	9.8	9.7	8.5	7.0	p5.5	(1)
Unit labor costs	10.9	8.1	3.4	1.2	p5.0	(1)	8.4	8.6	7.6	5.8	p4.4	(1)
Unit nonlabor costs	17.8	5.7	10.7	5.9	p11.4	(1)	13.4	12.8	10.9	9.9	p8.4	(1)
Unit profits	-25.9	-39.4	-16.7	40.8	p-25.9	(1)	7.9	-17.8	-16.7	-14.8	p-14.8	(1)
Implicit price deflator	8.9	3.0	3.8	4.7	p4.2	(1)	9.6	7.3	6.4	5.1	p3.9	(1)
Manufacturing:												
Output per hour of all persons	r-7.9	r-2.1	r0.9	7.3	r1.0	r7.1	r-0.7	r-2.7	r-2.4	r-0.6	r1.7	p4.0
Compensation per hour	r9.9	r11.5	7.8	6.2	4.5	r6.3	r9.0	r8.7	r9.0	r8.9	r7.5	p6.2
Real compensation per hour	r2.5	r8.3	r2.4	r-1.5	r2.4	r-6.7	r-0.5	1.0	r2.1	r2.9	r2.9	p2.5
Unit labor costs	19.4	13.9	6.9	-1.0	r3.5	r-0.8	9.8	r11.8	11.6	9.5	r5.7	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 non-farm 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.

32. Employment Cost Index, total compensation, by occupation and industry group

[June 1981=100]

Series	1981				1982				1983	Percent change	
										3 months ended	12 months ended
	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	March 1983	
Civilian nonfarm workers[1]	—	100.0	102.6	104.5	106.3	107.5	110.1	111.4	113.2	1.6	6.5
Workers, by occupational group											
White-collar workers	—	100.0	102.7	104.9	106.5	107.7	110.7	111.9	113.7	1.6	6.8
Blue-collar workers	—	100.0	102.3	104.1	105.7	107.1	109.2	110.5	112.3	1.6	6.2
Service workers	—	100.0	102.8	104.2	107.2	108.3	110.8	112.4	114.3	1.7	6.6
Workers, by industry division											
Manufacturing	—	100.0	102.1	104.0	106.0	107.2	109.3	110.4	112.5	1.9	6.1
Nonmanufacturing	—	100.0	102.8	104.8	106.4	107.7	110.5	111.8	113.5	1.5	6.7
Services	—	100.0	104.4	107.1	108.2	109.2	113.5	115.0	116.6	1.4	7.8
Public administration[2]	—	100.0	104.3	106.0	108.1	109.1	112.8	113.6	116.2	2.3	7.5
Private nonfarm workers	98.1	100.0	102.0	104.0	105.8	107.2	109.3	110.7	112.6	1.7	6.4
Workers, by occupational group											
White-collar workers	98.3	100.0	101.8	104.0	105.8	107.2	109.5	110.8	112.8	1.8	6.6
Blue-collar workers	97.8	100.0	102.2	104.0	105.6	107.0	109.0	110.3	112.1	1.6	6.2
Service workers	99.3	100.0	101.9	103.1	106.7	107.9	109.6	111.8	113.8	1.8	6.7
Workers, by industry division											
Manufacturing	98.0	100.0	102.1	104.0	106.0	107.2	109.3	110.4	112.5	1.9	6.1
Nonmanufacturing	98.2	100.0	102.0	103.9	105.7	107.1	109.3	110.8	112.6	1.6	6.5
State and local government workers	—	100.0	105.3	107.4	108.8	109.3	114.3	115.1	116.5	1.2	7.1
Workers, by occupational group											
White-collar workers	—	100.0	105.7	107.8	109.1	109.5	114.9	115.8	117.0	1.0	7.2
Blue-collar workers	—	100.0	104.2	105.9	108.2	108.9	112.7	113.0	114.9	1.7	6.2
Workers, by industry division											
Services	—	100.0	105.8	107.9	109.0	109.4	114.9	115.9	116.8	.8	7.2
Schools	—	100.0	106.0	107.9	108.9	109.1	114.8	115.8	116.6	.7	7.1
Elementary and secondary	—	100.0	106.3	108.3	109.3	109.5	115.6	116.6	117.2	.5	7.2
Hospitals and other services[3]	—	100.0	105.0	107.8	109.5	110.3	115.3	116.0	117.5	1.3	7.3
Public administration[2]	—	100.0	104.3	106.0	108.1	109.1	112.8	113.6	116.2	2.3	7.5

[1] Excludes household and Federal workers.
[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] Includes, for example, library, social, and health services.
NOTE: Dashes indicate data not available.

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

[June 1981 = 100]

Series	1981 March	1981 June	1981 Sept.	1981 Dec.	1982 March	1982 June	1982 Sept.	1982 Dec.	1983 March	Percent change 3 months ended March 1983	Percent change 12 months ended March 1983
Civilian nonfarm workers [1]	—	100.0	102.5	104.4	106.3	107.3	109.7	110.9	112.2	1.2	5.6
Workers, by occupational group											
White-collar workers	—	100.0	102.6	104.7	106.7	107.6	110.4	111.4	113.0	1.4	5.9
Blue-collar workers	—	100.0	102.4	104.0	105.5	106.7	108.6	109.8	110.8	.9	5.0
Service workers	—	100.0	102.5	103.6	106.8	107.9	110.1	111.8	113.2	1.3	6.0
Workers, by industry division											
Manufacturing	—	100.0	102.1	104.0	105.9	107.0	108.8	109.8	111.0	1.1	4.8
Nonmanufacturing	—	100.0	102.7	104.5	106.5	107.5	110.1	111.3	112.7	1.3	5.8
Services	—	100.0	104.4	106.6	108.6	109.5	113.2	114.4	115.8	1.2	6.6
Public administration [2]	—	100.0	103.8	105.5	107.5	108.4	111.9	112.6	114.6	1.8	6.6
Private nonfarm workers	98.0	100.0	102.0	103.8	105.9	107.1	109.0	110.3	111.6	1.2	5.4
Workers by occupational group											
White-collar workers	98.1	100.0	101.8	103.9	106.2	107.3	109.4	110.6	112.2	1.4	5.6
Professional and technical workers	98.2	100.0	103.3	105.5	108.0	109.4	111.8	112.9	114.8	1.7	6.3
Managers and administrators	98.6	100.0	101.6	102.8	105.8	107.2	108.5	109.3	112.0	2.5	5.9
Salesworkers	96.2	100.0	98.0	101.9	102.2	101.8	104.5	106.2	105.7	−.5	3.4
Clerical workers	98.6	100.0	102.7	104.2	107.0	108.3	110.3	111.6	113.4	1.6	6.0
Blue-collar workers	97.7	100.0	102.3	103.9	105.4	106.6	108.5	109.7	110.7	.9	5.0
Craft and kindred workers	97.8	100.0	102.9	104.3	106.2	107.6	109.6	111.2	112.2	.9	5.6
Operatives, except transport	97.8	100.0	102.1	104.1	105.4	106.6	108.3	109.3	110.0	.6	4.4
Transport equipment operatives	96.8	100.0	101.0	102.7	103.2	104.1	106.0	106.9	108.0	1.0	4.7
Nonfarm laborers	97.5	100.0	101.5	103.3	104.1	105.1	106.5	107.8	109.0	1.1	4.7
Service workers	99.2	100.0	101.8	102.7	106.7	107.9	109.3	111.4	112.9	1.3	5.8
Workers, by industry division											
Manufacturing	97.9	100.0	102.1	104.0	105.9	107.0	108.8	109.8	111.0	1.1	4.8
Durables	97.9	100.0	102.1	104.5	106.3	107.4	109.0	110.3	111.1	.7	4.5
Nondurables	97.8	100.0	102.0	103.1	105.3	106.3	108.5	109.1	110.9	1.6	5.3
Nonmanufacturing	98.1	100.0	102.0	103.8	105.9	107.1	109.1	110.5	112.0	1.4	5.8
Construction	97.6	100.0	103.0	104.3	105.9	107.3	109.1	109.7	110.4	.6	4.2
Transportation and public utilities	97.7	100.0	102.0	103.6	105.7	106.9	109.5	111.1	112.9	1.6	6.8
Wholesale and retail trade	98.2	100.0	101.3	102.3	103.9	105.8	106.5	107.2	108.5	1.2	4.4
Wholesale trade	98.5	100.0	102.0	103.4	106.3	108.9	109.0	109.8	111.8	1.8	5.2
Retail trade	98.1	100.0	101.0	101.9	103.0	104.5	105.5	106.1	107.2	1.0	4.1
Finance, insurance, and real estate	95.7	100.0	98.3	102.3	103.7	102.4	106.1	109.0	110.6	1.5	6.7
Services	99.6	100.0	103.6	105.8	108.8	110.0	112.5	114.3	116.0	1.5	6.6
State and local government workers	—	100.0	105.0	107.0	108.2	108.7	113.5	114.0	115.1	1.0	6.4
Workers, by occupational group											
White-collar workers	—	100.0	105.4	107.5	108.5	108.9	114.2	114.6	115.6	.9	6.5
Blue-collar workers	—	100.0	103.9	105.5	107.5	107.9	111.5	112.0	113.3	1.2	5.4
Workers, by industry division											
Services	—	100.0	105.5	107.6	108.4	108.8	114.2	114.6	115.5	.8	6.5
Schools	—	100.0	105.7	107.7	108.3	108.5	114.2	114.5	115.2	.6	6.4
Elementary and secondary	—	100.0	106.0	107.9	108.7	108.8	114.9	115.1	115.6	.4	6.3
Hospitals and other services [3]	—	100.0	104.6	107.3	108.8	109.5	114.3	114.9	116.5	1.4	7.1
Public administration [2]	—	100.0	103.8	105.5	107.5	108.4	111.9	112.6	114.6	1.8	6.6

[1] Excludes household and Federal workers.
[2] Consists of legislative, judicial, administrative, and regulatory activities.
[3] Includes, for example, library, social, and health services.

NOTE: Dashes indicate data not available.

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

[June 1981=100]

| Series | 1981 | | | | 1982 | | | | 1983 | Percent change | |
| | | | | | | | | | | 3 months ended | 12 months ended |
	March	June	Sept.	Dec.	March	June	Sept.	Dec.	March	March 1983	
COMPENSATION											
Workers, by bargaining status [1]											
Union	97.6	100.0	102.5	104.8	106.5	108.4	110.6	112.3	114.5	2.0	7.5
Manufacturing	—	100.0	102.3	104.6	106.3	108.0	110.3	111.8	114.0	2.0	7.2
Nonmanufacturing	—	100.0	102.7	105.0	106.8	108.7	111.0	112.8	114.9	1.9	7.6
Nonunion....................................	98.4	100.0	101.7	103.5	105.3	106.5	108.5	109.7	111.5	1.6	5.9
Manufacturing	—	100.0	101.8	103.5	105.7	106.6	108.4	109.2	111.2	1.8	5.2
Nonmanufacturing	—	100.0	101.7	103.5	105.2	106.4	108.6	109.9	111.6	1.5	6.1
Workers, by area size [1]											
Metropolitan areas.............................	98.1	100.0	102.1	104.1	105.7	107.2	109.4	110.9	112.9	1.8	6.8
Other areas	98.1	100.0	101.8	103.2	106.2	107.0	108.6	109.1	110.8	1.6	4.3
WAGES AND SALARIES											
Workers, by bargaining status [1]											
Union	97.4	100.0	102.7	105.0	106.5	108.1	110.3	111.8	112.9	1.0	6.0
Manufacturing	97.7	100.0	102.6	104.7	105.9	107.3	109.5	110.8	111.4	.5	5.2
Nonmanufacturing	97.1	100.0	102.8	105.2	107.0	108.8	111.1	112.7	114.3	1.4	6.8
Nonunion....................................	98.2	100.0	101.6	103.2	105.6	106.5	108.3	109.5	110.9	1.3	5.0
Manufacturing	97.9	100.0	101.7	103.3	105.9	106.7	108.2	109.1	110.7	1.5	4.5
Nonmanufacturing	98.3	100.0	101.6	103.2	105.5	106.4	108.3	109.6	111.0	1.3	5.2
Workers, by region [1]											
Northeast	98.3	100.0	101.7	104.4	106.1	106.7	109.7	111.5	112.0	.4	5.6
South	98.0	100.0	101.9	102.8	105.7	107.4	108.8	109.8	111.4	1.5	5.4
North Central	98.1	100.0	101.6	103.3	104.7	106.1	107.6	108.6	110.1	1.4	5.2
West	97.9	100.0	103.2	105.1	107.9	108.6	110.7	112.0	114.1	1.9	5.7
Workers, by area size [1]											
Metropolitan areas.............................	97.9	100.0	102.1	104.0	105.9	107.1	109.1	110.5	111.9	1.3	5.7
Other areas..................................	98.3	100.0	101.8	103.1	106.0	106.8	108.3	108.8	110.1	1.2	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.

35. Wage and compensation change, major collective bargaining settlements, 1978 to date

[In percent]

Measure	Annual average					Quarterly average							
						1981			1982				1983 P
	1978	1979	1980	1981	1982	II	III	IV	I	II	III	IV	I
Total compensation changes covering 5,000 workers or more, all industries:													
First year of contract	8.3	9.0	10.4	10.2	3.2	11.6	10.5	11.0	1.9	2.6	6.2	r3.3	−1.8
Annual rate over life of contract . .	6.3	6.6	7.1	8.3	r2.8	10.8	8.1	5.8	1.2	r2.1	4.7	r4.8	1.4
Wage rate changes covering at least 1,000 workers, all industries:													
First year of contract	7.6	7.4	9.5	9.8	3.8	11.8	10.8	9.0	3.0	3.4	5.4	3.8	−1.4
Annual rate over life of contract . .	6.4	6.0	7.1	7.9	3.6	9.7	8.7	5.7	2.8	3.2	4.5	4.8	2.2
Manufacturing:													
First year of contract	8.3	6.9	7.4	7.2	2.8	8.2	9.0	6.6	2.5	1.8	5.1	4.1	−3.5
Annual rate over life of contract . .	6.6	5.4	5.4	6.1	2.6	6.7	7.5	5.4	2.7	1.7	3.9	4.5	.8
Nonmanufacturing (excluding construction):													
First year of contract	8.0	7.6	9.5	9.8	4.3	11.8	8.6	9.6	2.7	6.6	5.5	3.6	3.8
Annual rate over life of contract . .	6.5	6.2	6.6	7.3	4.1	9.1	7.2	5.6	2.1	6.1	4.8	5.2	5.9
Construction:													
First year of contract	6.5	8.8	13.6	13.5	6.5	12.9	16.4	11.4	8.6	6.2	6.3	3.4	−.2
Annual rate over life of contract . .	6.2	8.3	11.5	11.3	6.3	11.1	12.4	11.7	8.2	6.3	5.9	2.9	2.6

p= preliminary. r= revised.

36. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1978 to date

Measure	Year					Year and quarter							
						1981			1982				1983 P
	1978	1979	1980	1981	1982	II	III	IV	I	II	III	IV	I
Average percent adjustment (including no change):													
All industries	8.2	9.1	9.9	9.5	6.8	3.2	3.3	1.5	1.0	2.0	2.4	1.3	0.3
Manufacturing	8.6	9.6	10.2	9.4	5.2	2.4	3.1	1.9	.9	1.0	1.7	1.5	−.4
Nonmanufacturing	7.9	8.8	9.7	9.5	7.9	3.8	3.4	1.1	1.1	2.7	2.9	1.2	.8
From settlements reached in period	2.0	3.0	3.6	2.5	1.7	1.1	.5	.4	.2	.4	.5	.6	−.2
Deferred from settlements reached in earlier period	3.7	3.0	3.5	3.8	3.6	1.4	1.5	.4	.6	1.4	1.3	.4	.4
From cost-of-living clauses	2.4	3.1	2.8	3.2	1.4	.7	1.2	.6	.3	.2	.6	.3	.1
Total number of workers receiving wage change (in thousands)[1]	—	—	—	8,648	7,852	4,701	4,364	3,225	2,878	3,423	3,760	3,441	2,927
From settlements reached in period	—	—	—	2,270	1,907	909	540	604	204	511	620	825	412
Deferred from settlements reached in earlier period	—	—	—	6,267	4,846	2,055	3,023	882	1,001	1,594	2,400	860	819
From cost-of-living clauses	—	—	—	4,593	3,830	2,669	2,934	2,179	1,920	1,568	2,251	1,970	2,005
Number of workers receiving no adjustments (in thousands)	—	—	—	145	483	4,092	4,428	5,568	5,457	4,912	4,575	4,895	5,364

[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 measures 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 6 workers or more was discontinued with the December 1981 data.

37. 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
1982 January	2	4	6.1	11.4	202.8	.01
February	3	7	3.9	15.3	241.1	.01
March	4	9	13.3	26.1	357.0	.02
April	14	21	59.5	79.1	533.1	.03
1983 ᵖ January	1	3	1.6	38.0	794.8	.04
February	5	7	14.0	50.4	844.4	.05
March	ʳ4	ʳ9	ʳ9.0	ʳ53.4	ʳ1,127.0	.05
April	2	9	2.8	52.4	789.5	.04

p=preliminary.   r=revised.

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SALES PUBLICATIONS

BLS Bulletins

Children of Working Mothers. Bulletin 2158, 13 pp. $3 (GPO Stock No. 029-001-02751-6). Part of the Special Labor Force Report series, this bulletin discusses the increase in the number of children with working mothers and the two major reasons for this growth. It consists of an article first published in the *Monthly Labor Review*, February 1982, additional tables providing more detailed data, and explanatory notes.

Women at Work: A Chartbook. Bulletin 2168, 29 pp. $4 (GPO Stock No. 029-001-02750-8). Focuses on women's economic activity—labor force trends, occupational and industrial employment patterns, unemployment, and market work of women in a family context.

Area Wage Survey Bulletins

These bulletins cover office, professional, technical, maintenance, custodial, and material movement occupations in major metropolitan areas. The annual series of 70 is available by subscription for $115 per year. Individual area bulletins are also available separately. The following were published in April:

Pittsburgh, Pennsylvania, Metropolitan Area, January 1983. Bulletin 3020-3, 42 pp., $4.50 (GPO Stock No. 029-001-90194-1).

Portland, Maine, Metropolitan Area, December 1982. Bulletin 3015-70, 28 pp., $3.50 (GPO Stock No. 029-001-90191-7).

Sacramento, California, Metropolitan Area, December 1982. Bulletin 3015-71, 26 pp., $3.50 (GPO Stock No. 029-001-90195-0).

Seattle-Everett, Washington, Metropolitan Area, December 1982. Bulletin 3015-72, 41 pp., $4.50 (GPO Stock No. 029-001-90196-8).

York, Pennsylvania, Metropolitan Area, February 1983. Bulletin 3020-4, 28 pp., $3.50 (GPO Stock No. 029-001-90197-6).

Periodicals

CPI Detailed Report. February issue provides a comprehensive report on price movements for the month, a description of the change in the CPI homeownership component to rental equivalence, statistical tables, charts, and technical notes. 149 pp., $5 ($28 per year).

Current Wage Developments. March issue includes Employment Cost Index, December 1982; State and local government collective bargaining settlements, 1982; selected employee wage and benefit changes; major collective bargaining agreements expiring in April; and statistics on work stoppages and compensation changes. 49 pp., $4.50 ($23 per year).

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Mailgram Service

Consumer price index data summary by mailgram within 24 hours of the CPI release. Provides unadjusted and seasonally adjusted U.S. City Average data for All Urban Consumers (CPI-U) and for Urban Wage Earners and Clerical Workers (CPI-W). (NTISUB/158). $125 in contiguous United States.

Telephone Summary

A recorded summary of principal CPI, PPI, and Employment Situation numbers is available 24 hours a day on (202) 523-9658.

FREE PUBLICATIONS

Area Wage Survey Summaries

Alexandria-Leesville, La., February 1983. 6 pp.
Birmingham, Ala., March 1983. 3 pp.
Clarksville-Hopkinsville, Tenn.-Ky., March 1983. 3 pp.
El Paso-Alamogordo-Las Cruces, Tex.-N. Mex., March 1983. 3 pp.
New Bern-Jacksonville, N.C., March 1983. 2 pp.
New Hampshire, November 1982. 7 pp.
Pine Bluff, Ark., January 1983. 6 pp.
Tocoma, Wash., January 1983. 6 pp.
Virgin Islands of the U.S., December 1982. 6 pp.
Western and Northern Massachusetts, January 1983. 3 pp.

BLS Reports

Evaluating Your Firm's Injury and Illness Record, 1981: Construction Industries, Report 679, 9 pp.; Manufacturing Industries, Report 680, 29 pp.; Transportation and Public Utilities Industries, Report 682, 11 pp. These reports provide a means of comparing a firm's safety record with the record of other firms of similar size and with the industry as a whole. They present tabulations of occupational injury and illness incidence rates for the subject industry by employment size and quartile distribution.

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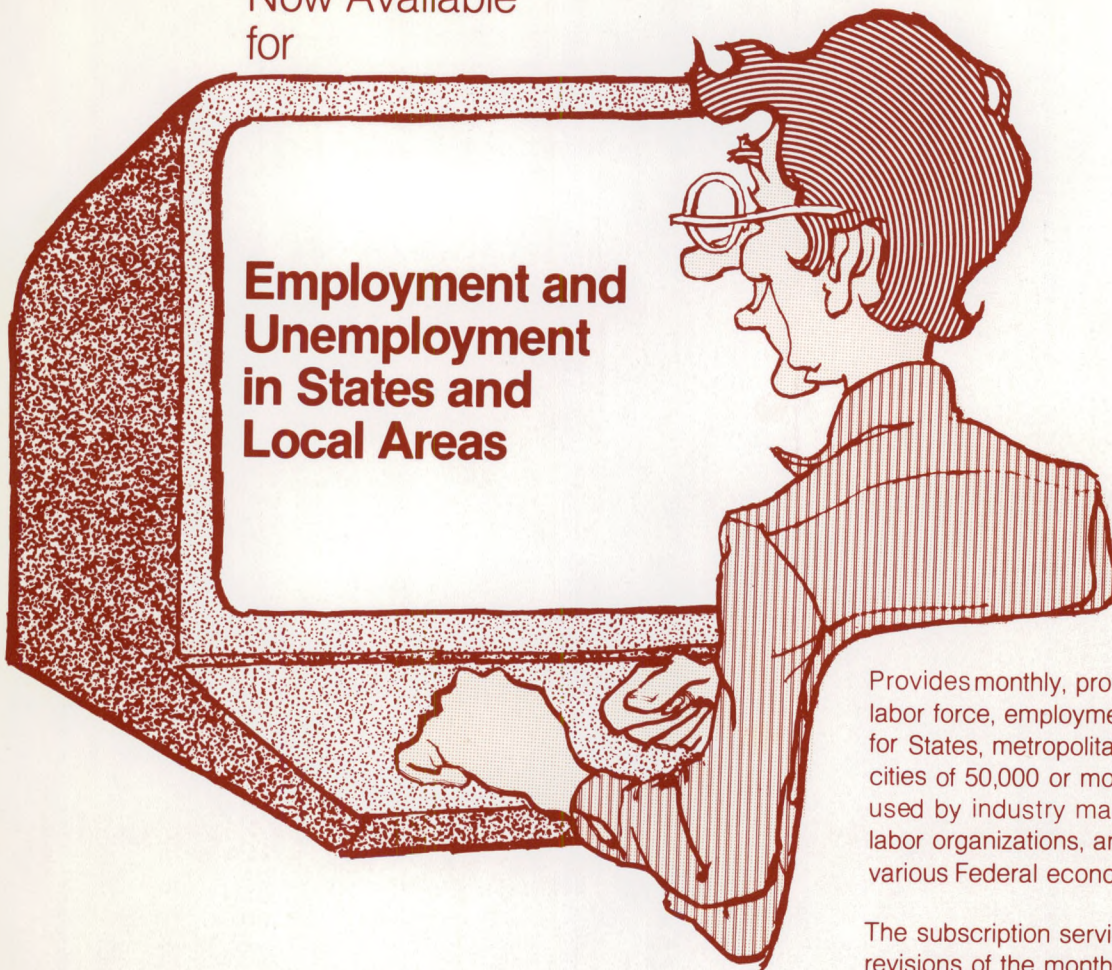
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