MONTHLY LABOR REVIEW

U.S. Department of Labor
Bureau of Labor Statistics
September 1984

In this issue:
Labor organization mergers

September cover:

Detail from the American Federation of Labor
and Congress of Industrial Organizations seal.

Cover design by Richard L. Mathews.

MONTHLY LABOR REVIEW

Digitized for FRASER
https://fraser.stlouisfed.org
Federal Reserve Bank of St. Louis

Labor Month In Review

CENTENNIAL. The 144th annual meeting of the American Statistical Association, August 13-16 in Philadelphia, helped mark the BLS Centennial with a session that explored the contribution of outside review committees to the development of labor force and price statistics. The session was chaired by Commissioner Janet L. Norwood and featured papers by BLS Associate Commissioners Thomas L. Plewes and Kenneth V. Dalton and comments by Margaret E. Martin, a past president of the ASA; Morris H. Hansen, senior vice president, Westat, Inc.; and David A. Worton of Statistics Canada. Here are excerpts from the comments:

Margaret E. Martin. It is gracious of the BLS to commemorate its centennial by concentrating on the contributions of outside review committees rather than by beating its own collective breast on the glories of staff accomplishments. The Bureau can view with pride its long history of producing relevant and effective research reports and of developing and maintaining singularly important and current economic time series. It is an enviable record.

The major function of review committees is to stand off from a set of statistics, to look at both the uses of the data and at the techniques employed in producing them in relation to fundamental principles and considerations. The review committee is likely to ask more searching questions than staff concerned with daily operating pressures, to bring in new viewpoints regarding substance and method, and possibly will reflect new uses. The review should either provide guidelines for new directions or reinforce the old.

Let me relate this to the BLS 790 series—the cooperative program with the States in which employment, hours, and earnings data are collected from employers.

A number of proposals to improve the 790 series concern the sample design and the estimation procedures. Admittedly, the present system does not fully employ currently accepted probability sampling procedures and does not use the latest in estimating techniques. Before BLS hastens to adopt without question accepted statistical procedures I would urge, at the risk of being accused of heresy, that BLS balance prospective advantages and costs and seek to develop new statistical methods and principles in the process.

Morris H. Hansen. I have personally had the opportunity to consult with the BLS on some of the developments of the Consumer Price Index program, especially in connection with the CPI revision during the 1970's, and am greatly impressed with what BLS has accomplished. My special interaction was in extending probability sampling beyond the selection of primary sampling units and item specifications to be priced.

My reaction in working with the BLS staff in this area was one of great respect for their willingness to consider and adopt new methods and procedures; indeed, I was concerned sometimes that they might be moving too fast in adopting methods that had not been adequately tested under the practical circumstances of data collection and processing. However, they demonstrated that they could experiment, evaluate, and adapt under difficult conditions of time schedule and resources. They rapidly proceeded to incorporate proposed methods into the price index as a part of the revision, and shortly thereafter into the Producer Price Index and other price programs. I can only commend them and express my admiration for the insight they have had and for their success in achieving major advances under difficult time and cost restraints.

David A. Worton. Both Tom Plewes and Ken Dalton have pointed out the very intense official interest which centers upon measures of unemployment and price change by virtue of their uses in such areas as the determination of transfer payments, and in the formulation of public policy.

These statistics strike home to the ordinary citizen as perhaps no others do, for they constitute regular progress reports on two very fundamental issues, namely the ability of society to provide jobs, and the extent to which levels of living are being enhanced or eroded.

That is why public confidence is so important to a statistical agency. And public confidence turns on two kinds of questions, the first being concerned with whether one is 'doing the right things,' and the second with whether one is 'doing them right.' Some issues straddle both sides of this division.

I think the first of these questions is the more fundamental, and I would further argue that *public understanding* is the critical factor. If, for instance, statisticians are agreed among themselves that such-and-such concept is sound, internally consistent, and so on, but persistently encounter problems in explaining it to the lay public, then maybe they ought to shift gears and suboptimize with a concept more capable of commanding public understanding. This is a good illustration, I think, of the old saw about war being too important to be left to the generals.

As to the subsequent question of how to implement a chosen concept, it seems to me that the public is much less inclined to challenge technical judgments, provided, of course, that there exists some basic confidence in the professional integrity of the statisticians, and evidence that they are willing to—and do in fact from time to time—subject themselves to independent peer review. □

Postretirement increases under private pension plans

*Forty percent of pension participants had plans
providing benefit increases for retirees
during 1978–81; increases were usually
less than half the rise in the Consumer Price Index*

DONALD G. SCHMITT

Rapid inflation over a short time span can substantially reduce the purchasing power of fixed retirement incomes. For example, over the 1978–81 period, when consumer prices rose 51 percent,[1] retirees with fixed private pensions experienced a one-third decline in the buying power of these annuities.

A lower rate of inflation—but continuing over a longer period—may have still greater effects on today's retirees, who often will receive pension benefits for 15 years or more.[2] An inflation rate of 5 percent a year would, after 15 years, cut in half the purchasing power of the original pension benefit, and a 7.5-percent annual rate of price increase would result in a two-thirds reduction. Thus, even without "double-digit" inflation, the value of a fixed pension can be seriously eroded during retirement. To offset part of this loss, many employers grant pension increases to retirees or their beneficiaries.[3]

Information on the extent of these postretirement pension increases is available from the Bureau's annual survey of the incidence and provisions of employee benefit plans.[4] This survey is conducted in the United States—excluding Alaska and Hawaii—in private sector establishments employing at least 50, 100, or 250 workers, depending on the industry. Industrial coverage includes mining; construction; manufacturing; transportation, communications, electric, gas,

and sanitary services; wholesale trade; retail trade; finance, insurance, real estate; and selected services. The 1982 survey sample comprised 1,516 establishments, designed to represent 21 million employees in 44,288 establishments. Excluded from the survey were executive management employees (those whose decisions have direct and substantial effects on an organization's policymaking) and part-time, temporary, seasonal, and traveling operating employees, such as airline flight crews and long-distance truckdrivers.

Data for the survey were obtained on the number of full-time active employees covered by pension plans, but not the number of retirees or beneficiaries actually receiving annuities. Consequently, it cannot yield direct information on either the proportion of annuitants receiving postretirement pension increases or the average amount of their benefit improvements. However, the magnitude of both can be roughly indicated by weighting the information collected on postretirement increases by the number of active workers participating in plans that granted such increases. This approach was followed to develop the data for this article.

Survey parameters

In 1982, 17.6 million full-time workers participated in private pension plans of medium and large firms; 40 percent were covered by plans which gave annuitants at least one postretirement increase during 1978 through 1981. Three percent of the participants were in plans providing these increases automatically. The remainder were under plans with formulas that determined initial pension levels—for

Donald G. Schmitt is an economist in the Office of Wages and Industrial Relations, Bureau of Labor Statistics.

example, years of service times a flat dollar amount or a percent of average earnings—but were silent as to postretirement adjustments. In these situations, increases, when made, were on an ad hoc, or discretionary, basis.

This information comes from the Bureau's 1982 survey, the first since the program began in 1979 to include questions on ad hoc postretirement adjustments. Firms were asked to provide information on all such adjustments made during the 1978–81 period. This article examines the extent, value, and methods of determining the adjustments.

Survey respondents supplied information on the effective dates of postretirement pension adjustments, formulas used to determine the amounts of increase, and provisions relating to minimum or maximum increases. Many of the formulas varied the size of the increase according to the pension amount or the date of retirement. Thus, for this analysis, adjustments were determined for four monthly pension values ($250, $500, $750, and $1,000) and three retirement dates (December 31, 1967, 1972, and 1977). The four pension values represent the benefit payable as of December 31, 1977, the day before the period studied for postretirement increases. The three retirement dates are for persons who had retired 10 years, 5 years, and immediately prior to the period studied. The pension adjustments for individual plans were then averaged using the number of active worker participants as weights to provide surveywide estimates for each example.

The analysis showed that automatic adjustments between 1978 and 1981 averaged 13.4 to 15.2 percent among the four pension values studied. Ad hoc adjustments averaged 8.8 to 24.3 percent, depending on the pension value in 1977 and the employee's retirement date. The largest percentage increases under both methods went to retirees with the smallest pensions. This resulted from a variety of factors, such as the use of flat dollar increases, specified minimum and maximum increases, and restriction of percentage increases to a portion of the original pension. Ad hoc adjustments also commonly provided greater increases to those retired the longest.

Despite these increases, the purchasing power of the annuities rarely was maintained. For all but one of the groupings studied, average postretirement increases were less than half the rise in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) during the 4 years under examination.

Ad hoc adjustments

Postretirement annuity adjustments typically are made on a nonautomatic (discretionary or ad hoc) basis (table 1). Such increases may be granted at irregular intervals and their size is at the discretion of the employer (and union),[5] based on such factors as pension fund investment performance, the firm's financial position, and general economic conditions.

Ad hoc adjustments were granted by some employers

Table 1. Percent of full-time participants in pension plans granting postretirement annuity increases, medium and large firms, 1978–81

Characteristic	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Participants in plans with one or more postretirement increases[1]	40	43	38	40
Automatic only[2]	2	3	2	2
Ad hoc only[3]	37	39	34	38
Automatic and ad hoc . .	1	1	1	(4)
Participants in plans without postretirement increases	60	57	62	60

[1]Participants are active workers covered by pension plans granting annuity increases to retirees during the period studied.

[2]Automatic adjustments usually are geared to changes in a designated statistical series, most commonly the Consumer Price Index. Provisions for adjustments are included in the pension plan.

[3]Ad hoc adjustments are given at the discretion of the employer (and union if collectively bargained)—both as to timing and amount—and are not required by the pension plan.

[4]Less than 0.5 percent.

NOTE: Data exclude supplemental and defined contribution pension plans. Because of rounding, sums of individual items may not equal totals.

during the 1950's and 1960's, but became more prevalent during the 1970's.[6] The 1978–81 period studied by the Bureau probably experienced a higher-than-normal incidence of such adjustments, as accelerating inflation focused attention on the adequacy of fixed retirement income. Nearly two-fifths of the pension plan participants covered by the Bureau's 1982 survey were in plans that gave at least one ad hoc increase to retirees during the 1978–81 period. Of the participants in pension plans granting discretionary increases, nearly half were in plans paying more than one increase during the 4 years (table 2). Although there was no sharp difference in the incidence of ad hoc increases among the three occupational groups presented, production workers were the most likely to be in plans with multiple increases.

Ad hoc increases were more widespread during 1980 and 1981 than in the previous two years. This is illustrated in the following tabulation, which provides a percentage distribution of participants in plans granting discretionary increases by year of adjustment. Half or more were in plans paying increases in 1980 and 1981, compared with about one-third in 1978 and 1979:[7]

	1978	1979	1980	1981
All participants.	32.8	34.3	49.2	60.7
Professional and administrative participants.	30.9	30.2	42.1	52.6
Technical and clerical participants. .	26.5	22.8	44.1	49.0
Production participants	36.8	41.9	55.4	70.5

As described later in this article, nearly all pension plans with automatic adjustment provisions gave annual increases; however, relatively few plans provided discretionary increases in each of the 4 years studied.[8]

Funds needed to finance these ad hoc annuity improvements come either from assets of a pension (or related welfare) fund or wholly or partly from general assets of a business firm.[9] A 1981 study of pension increases indicates that some large corporations elect the latter approach.[10]

Methods of calculating increases. Table 2, which summarizes information on benefit formulas for the most recent ad hoc increase, shows the variety of techniques used to determine the adjustments. Forty-one percent of the participants in pension plans granting discretionary increases were under plans which provided specified increases per year of retirement. Such plans, more common among white- than blue-collar workers, provided percentage increases per year of service that ranged from less than 2 percent to more than 5 percent; frequently, however, there was a ceiling placed on the total amount provided.

A second approach, in plans covering 36 percent of the participants, called for flat increases, either in dollars or, more commonly, percentage. The incidence of this type of formula was fairly consistent across the three occupational groups shown in table 2. White-collar employees, however, were more likely to receive percentage increases, while flat-dollar increases were more likely for blue-collar workers. These plans often recognized length of retirement by varying the flat amount or percentage depending on the employee's date of retirement. For example, ad hoc increases might be based on the following formula:

Year of retirement	*Percent increase in benefits*
Prior to 1970	30
1970 or 1971	25
1972 or 1973	20
1974 or 1975	15
1976 or 1977	10
1978 or 1979	5

The third basic approach, covering 20 percent of the participants, tied the pension increase to the retiree's length of service. For example, monthly pension checks might be increased by 75 cents per year of service. Such adjustments were common among production workers, who, more often than white-collar employees, have their initial pension determined as a specified dollar amount multiplied by years of service;[11] many of these adjustments were collectively bargained, and increases for retirees were related to improvements in pension accruals of active employees.

Ad hoc adjustment formulas occasionally specify minimum or maximum annuity improvements. Eighteen percent of the participants were under plans whose adjustment formulas provided minimum benefit increases (table 3). Minimums typically were small, usually between $5 and $15 a month among the plans analyzed. Maximums on benefit improvements were twice as common as minimums. These caps typically were specified in percentage terms, and most often were less than 10 percent of current annuities.

Table 2. Percent of full-time participants in pension plans granting ad hoc postretirement annuity increases by adjustment formulas, medium and large firms, 1978–81

Characteristic	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Number of increases granted, 1978–1981[1]				
Total	100	100	100	100
One	52	57	67	43
Two	23	27	20	22
Three	10	9	8	11
Four	15	6	5	24
Benefit formula for most recent increase				
Total	100	100	100	100
Increase per year of retirement	41	49	49	33
Monthly dollar amount	(2)	—	—	1
Percent of present benefit	41	49	49	32
Less than 2.0	2	3	2	1
2.0	6	7	8	5
2.1–2.5	3	3	2	3
3.0	7	11	9	3
4.0–4.9	3	4	4	3
More than 5.0	20	22	23	17
Flat increase	36	33	39	35
Monthly dollar amount	6	2	1	11
Less than $10	(2)	(2)	(2)	1
$10	3	(2)	(2)	7
More than $10	1	—	(2)	3
Varies by date of retirement	1	1	1	1
Percent of present benefit	29	31	38	24
Less than 5	2	3	5	1
5	1	1	1	2
5.1–9.9	3	5	4	2
10	3	3	5	2
More than 10	2	2	1	1
Varies by date of retirement	18	16	21	17
Increase per year of service	20	12	9	30
Monthly dollar amount	19	11	8	29
$.50 or less	3	2	2	5
$.51–$.99	12	7	5	18
$1 or more	3	2	2	3
Varies by date of retirement	1	(2)	(2)	2
Percent of present benefit	1	1	(2)	2
Other types of formulas[3]	1	(2)	(2)	1
Combination of two or more benefit formulas	2	4	2	1
Data not available	1	1	1	(2)

[1]A few plans granted two increases in a single year. Such increases were consolidated and treated as a single increase in preparing this table.

[2]Less than 0.5 percent.

[3]Includes plans which specified a minimum level of benefits, raising all annuities below that level.

NOTE: Data exclude supplemental and defined contribution pension plans. Because of rounding, sums of individual items may not equal totals. Dash indicates no participants in this category.

Average increases. The amount of ad hoc adjustments generally depends on one or both of the following factors: the size of the annuity prior to the adjustment and the date of retirement. Table 4 presents data on the average 1978–81 increases developed from the survey, given varying assumptions regarding these two factors. (When formulas took

5

length of service into account, 25 years' service was assumed.)

For the particular combinations of annuity size and length of retirement studied, average increases over the 4-year period ranged from $35 to $161 a month, or from 8.8 to 24.3 percent. On average, the greatest dollar increases went to retirees with the highest pensions. In percentage terms, however, the reverse was true, reflecting the influence of flat dollar adjustment formulas and limits on the size of increases.

Three-fifths of the participants in pension plans with ad hoc increases were under plans varying adjustments by length of retirement. The effect of these plans is evident in table

table 4. During the 1978–81 period, employees who retired in 1967 received increases averaging nearly twice as much as those who retired in 1977. By granting larger increases to those who retired earlier, employers recognized that their initial pensions had lost the most purchasing power to inflation. In addition, the earlier the retirement date, the greater the likelihood of a relatively small, initial pension.

Frequency of individual adjustments also influenced the size of increases. Thus, plans providing two or more increases yielded smaller gains, on average, in each of the individual adjustments, but a higher total improvement over the 1978–81 period (table 5).[12]

Automatic adjustments

As noted, 3 percent of the pension plan participants in 1982 could expect automatic benefit adjustments after retirement. Of those, 2 percent were under plans that granted only automatic adjustments to retirees in the 1978–81 period, while plans covering the other 1 percent gave ad hoc increases in addition to the automatic adjustments (table 1).[13]

Automatic adjustment formulas usually tie into changes in designated statistical series, most often the CPI. Of the 880 defined benefit pension plans[14] examined in the 1982 survey, 23 included provisions for automatic adjustments, and all but one of these plans tied into the CPI. The exception gave automatic 2-percent pension increases each year, independent of price changes. Automatic pension adjustment provisions linked to wage rather than price indexes do exist, but none appeared in the survey sample.[15]

Eleven of the 23 plans called for an annual increase equal to the percentage rise in the CPI, up to a maximum of 3 percent. Other plans in the sample gave pension increases that were less than the full CPI increase, but often had caps higher than 3 percent. In some instances, adjustment provisions were not triggered until the CPI had risen a specified percent, such as 3 percent. Some of the plans restricted the percentage adjustments to the first $500 or other initial level of the pension.

Three-fifths of the plans with automatic adjustment provisions allowed for decreases in the CPI. Most of these, however, prevented annuities from being reduced below the initial pensions.

Among the four pension values analyzed, automatic adjustments averaged between 13.4 and 15.2 percent over the 1978–81 period (table 6). The most common increase was 12.6 percent—the result of compounding annual increases of 3 percent over the 4 years. The average increases, however, were raised largely by one plan, which granted uncapped increases equal to 100 percent of the rise in the price index.[16]

The infrequency of automatic adjustment provisions can be attributed mainly to cost considerations. When a firm ties pension benefits to a price index without limitations, it assumes a potentially large and indeterminate future obli-

Table 3. Percent of full-time participants in pension plans granting ad hoc postretirement annuity increases by provisions for minimum and maximum increases, medium and large firms, 1978–81

Characteristic	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Provision for minimum increase in most recent adjustment				
Total	100	100	100	100
No minimum	82	78	79	85
With minimum	18	22	21	14
Monthly dollar amount . .	16	19	18	13
Less than $5	(1)	(1)	1	—
$5	2	3	2	2
$6–$9	(1)	(1)	1	(1)
$10	6	8	8	4
$11–$14	2	1	1	2
$15	4	5	4	3
$20	(1)	(1)	(1)	(1)
$25	1	1	1	1
More than $25	(1)	(1)	(1)	1
Varies by date of retirement	1	2	1	(1)
Percent of present benefit	2	3	3	1
Data not available	1	(1)	1	(1)
Provision for maximum increase in most recent adjustment				
Total	100	100	100	100
No maximum	62	54	55	70
With maximum	37	45	45	30
Monthly dollar amount . .	6	9	7	4
$100 or less	2	3	3	(1)
$101–$150	1	1	(1)	2
$151–$200	(1)	1	(1)	(1)
More than $200	3	5	3	1
Percent of present benefit	31	35	37	26
Less than 10	18	16	22	16
10–14	10	13	8	9
15–19	1	1	2	(1)
25–29	(1)	(1)	(1)	(1)
30 or more	2	4	3	(1)
Varies by date of retirement	(1)	(1)	(1)	(1)
Greater of a monthly dollar amount or a percent of present benefit	(1)	1	1	—
Data not available	1	1	1	(1)

[1]Less than 0.5 percent.

NOTE: Data exclude supplemental and defined contribution pension plans. Because of rounding, sums of individual items may not equal totals. Dash indicates no participants in this category.

Table 4. Average ad hoc postretirement annuity increases at selected pension levels by employee group and retirement dates, medium and large firms, 1978–81

Employee group and date of retirement	Monthly pension on December 31, 1977[1]							
	$250		$500		$750		$1,000	
	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81
All full-time participants[3]								
December 31, 1967	$311	24.3	$596	19.1	$879	17.2	$1,162	16.2
December 31, 1972	300	19.9	581	16.2	860	14.6	1,136	13.6
December 31, 1977	285	14.0	553	10.6	820	9.4	1,088	8.8
Professional and administrative participants								
December 31, 1967	319	27.5	614	22.8	908	21.0	1,200	20.0
December 31, 1972	303	21.3	594	18.9	880	17.3	1,165	16.5
December 31, 1977	284	13.4	557	11.4	830	10.7	1,103	10.3
Technical and clerical participants								
December 31, 1967	306	22.6	596	19.3	886	18.1	1,174	17.4
December 31, 1972	295	17.9	582	16.3	864	15.2	1,147	14.7
December 31, 1977	278	11.4	550	9.9	820	9.4	1,092	9.2
Production participants								
December 31, 1967	311	24.3	586	17.2	861	14.8	1,136	13.6
December 31, 1972	300	19.9	574	14.9	846	12.8	1,117	11.7
December 31, 1977	285	14.0	552	10.4	815	8.7	1,078	7.8

[1]The monthly pension immediately prior to the period in which ad hoc increases were studied.

[2]Increased pension benefit payable on December 31, 1981, as a result of ad hoc increases during 1978–81. Pension increases for individual plans were averaged using the number of active worker participants as weights to provide surveywide estimates for each example.

[3]Participants are active workers covered by pension plans granting ad hoc annuity increases to retirees during the period studied.

NOTE: Data exclude supplemental and defined contribution pension plans. For plans varying increases by a retiree's length of service, 25 years of service was assumed.

gation. Thus, most plans with automatic adjustments curb costs by restricting the size of the annual increases. In their book, *Employee Benefit Planning*, Jerry S. Rosenbloom and G. Victor Hallman provide a rule of thumb that says, ". . . pension costs can increase by about 10 percent for each 1 percent increase in benefits provided to pensioners."[17] Employers generally avoid signing a "blank check" for pension increases by providing ad hoc improvements, rather than adopting a formula for automatic benefit adjustments.

Benefit adjustments and inflation

The CPI-W rose 51 percent between December 1977 and 1981. Although this index may not be an accurate gauge of changes in retirees' purchasing power (retirees may not have the same spending patterns as active workers) it provides statistical evidence that the real value of retirees' private annuities generally declined over the 4 years. Even for the retiree group associated with the largest percentage increase in annuities during this period, professional and administrative workers retiring in 1967 and having a $250 monthly pension in 1977, the rate of increase was not much more than half the rise in the price index (table 4).[18] Total purchasing power of retirees, however, did not necessarily fall to the degree that the comparison would suggest; most of those with private pension benefits also received social security payments, which are adjusted to take account of changes in the CPI-W.[19]

Which method of adjustment—automatic or ad hoc—provided retirees with the greater degree of protection against inflation? Comparison of table 4 and 6 shows that employees who retired in December 1977, just prior to the 4-year period

studied, fared better with automatic increases. The average annuity increase under plans providing automatic adjustments varied between 13.4 and 15.2 percent, while the average ad hoc increase ranged from 8.8 to 14.0 percent. Although individual ad hoc increases were generally larger than individual automatic increases, the latter were granted annually, whereas most plans providing discretionary adjustments gave only one such increase during the entire 4-year period.

A contrary picture emerges when we focus on 1967 and 1972 retirees. For these individuals, comparisons of tables 4 and 6 favor retirees receiving discretionary increases. Do

Table 5. Average of total ad hoc postretirement adjustments, 1978–81, by number of increases and retirement date, medium and large firms

Monthly pension on December 31, 1977 and retirement date	Number of increases			
	1	2	3	4
$250:				
December 31, 1967	$47	$72	$93	$72
December 31, 1972	37	57	69	72
December 31, 1977	21	32	41	66
$500:				
December 31, 1967	78	125	145	96
December 31, 1972	58	101	117	96
December 31, 1977	29	55	63	86
$750:				
December 31, 1967	124	183	188	119
December 31, 1972	95	146	160	119
December 31, 1977	52	70	86	106
$1,000:				
December 31, 1967	160	243	220	143
December 31, 1972	123	191	190	143
December 31, 1977	66	90	111	125

7

Table 6. Average automatic postretirement annuity increases at selected pension levels, by employee group, medium and large firms, 1978–81

Employee group	Monthly pension on December 31, 1977[1]							
	$250		$500		$750		$1,000	
	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81	Average monthly pension on Dec. 31, 1981[2]	Percent increase, 1978–81
All full-time participants[3]	$288	15.2	$571	14.1	$853	13.7	$1,134	13.4
Professional and administrative participants	286	14.4	568	13.6	850	13.3	1,131	13.1
Technical and clerical participants	288	15.2	572	14.4	855	14.0	1,139	13.9
Production participants	290	15.9	572	14.4	853	13.7	1,134	13.4

[1] The monthly pension immediately prior to the period in which automatic increases were studied.

[2] Increased pension benefit payable on December 31, 1981 as a result of automatic increases during 1978–81. Pension increases for individual plans were averaged using the number of active worker participants as weights to provide surveywide estimates for each example.

[3] Participants are active workers covered by pension plans granting automatic annuity increases to retirees during the period studied.

NOTE: Data exclude supplemental and defined contribution pension plans.

those contrasting results come about because ad hoc increases tend to favor those who retired earlier or because possibly fewer discretionary increases were granted before 1978, encouraging larger catch-up payments? An answer to this question is not possible from the data collected in this study.

IN ANY EVENT, a minority of pension plan participants were under plans providing for either automatic or ad hoc adjustment. Three-fifths of all participants within scope of the Bureau's employee benefit study were under plans that did not make postretirement pension adjustments in the 1978–81 period.[20] □

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

[1] The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) rose from 186.1 in December 1977 to 281.1 four years later (1967 = 100).

[2] The average 65-year-old man can now expect to live until age 80, and the average 65-year-old woman's life expectancy extends beyond age 83. *Vital Statistics of the United States: 1980* (National Center for Health Statistics, U. S. Department of Health and Human Services, 1984).

[3] Such postretirement increases also reduce the growing spread between fixed pensions and rising earnings of current workers.

[4] Major findings of the 1982 survey are reported in *Employee Benefits in Medium and Large Firms, 1982*, Bulletin 2176 (Bureau of Labor Statistics, 1983). For 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.

[5] Employer and union, if collectively bargained.

[6] Ad hoc increases offered by a selected group of large firms since the early 1970's are listed in *Top 50–A Survey of Retirement, Thrift, and Profit Sharing Plans Covering Salaried Employees of 50 Large U.S. Industrial Companies as of January 1, 1982* (New York, The Wyatt Company, 1982), pp. 48–54.

[7] In this tabulation, the total of the percentages for 1978 through 1981 exceeds 100 because many participants were in plans that granted multiple increases.

[8] Fifteen percent of the participants in plans that gave discretionary increases were under plans providing this benefit in each of the 4 years.

[9] In 1980, the Employee Retirement Income Security Act (ERISA) was amended to allow employers to treat supplemental benefits paid to retirees as if they were paid under a welfare plan. This made it easier for employers to supplement the annuities of retirees because welfare plans are subject to less stringent requirements under ERISA than pension plans. For example, welfare plans are not subject to vesting or funding standards.

[10] *Pension Increases for Retired Employees* (New York, Towers, Perrin, Forster, and Crosby, 1981), p. 3.

[11] *Employee Benefits in Medium and Large Firms*, p. 40 (table 35).

[12] Of the 239 plans analyzed for this tabulation, 155 provided 1 increase,

56 provided 2 increases, 19 provided 3, and 9 provided 4. The averages are the unweighted dollar amounts that these plans would yield given the pension and retirement date assumptions indicated.

[13] Automatic adjustment procedures are more common in the public sector, which is excluded from this study. Both the Federal Civil Service Retirement System and the Military Retirement System provide automatic cost of living adjustments, as does the Social Security System.

[14] Defined benefit plans contain a formula for calculating retirement benefits and obligate the employer to provide the benefits so determined. Employer contributions are not fixed, but are whatever is needed, together with earnings of pension fund investments, to finance the required benefits.

The Bureau's 1982 study of employee benefit plans reviewed 921 pension plans. Forty-one were money purchase or supplemental plans, which were excluded from this analysis.

[15] Similarly, no variable annuity plan appeared in the sample of defined benefit plans. Variable annuity arrangements, by tying pensions to earnings of investments in common stock, are designed to achieve results similar to those under plans indexing benefits to CPI movements.

[16] As of October 1980, this plan applied the annual automatic cost-of-living adjustment only to that portion of pension benefits accrued prior to October 1980.

[17] Jerry S. Rosenbloom and G. Victor Hallman, *Employee Benefit Planning* (Englewood Cliffs, N.J., Prentice-Hall, 1981), p. 290.

[18] Accepting the CPI-W as an appropriate index for retirees, it is possible to determine the combined effect of price and annuity increases on retirees' purchasing power. For the professional-administrative employees retired in 1967 and with $250 annuities in 1977, on the average, pensions by the end of 1981 had lost 16 percent of their purchasing power 4 years earlier. For other retiree groups shown in table 4, the loss was greater.

[19] For a comparison of changes in combined private pension and social security income and the inflation rate, see *Pension Increases for Retired Employees*, p. 7.

[20] Preliminary data from the 1983 BLS survey of employee benefits indicate that about half of the pension plan participants had plans which provided at least one postretirement increase for retirees during the 5-year period 1978–82. Survey results will appear in the BLS bulletin, *Employee Benefits in Medium and Large Firms, 1983*.

State and regional employment and unemployment in 1983

*In 1983, unemployment declined most in those States
which had the largest increases in joblessness previously,
and least in States dependent on the oil market;
regionally, the most rapid job expansion occurred
in the South and the West where the majority of new jobs
came from the services and trade industries*

GEORGE D. STAMAS

During 1983, the United States recovered from one of the
longest and deepest recessions since World War II. At the
end of 1982, employment had reached its recession low and
the civilian worker unemployment rate had climbed 2.2
percentage points over the year. In marked contrast, data
for 1983 document one of the most dramatic recoveries since
employment and unemployment statistics have been col-
lected, as the national civilian unemployment rate fell 2.5
percentage points during the year to 8.0 percent in December
(not seasonally adjusted).[1]

This brightening economic situation at the national level
was also apparent in most States. Between the fourth quarter
of 1982 and that of 1983, only seven States reported over-
the-year declines in nonagricultural employment. Many of
those decreases were small, and all States reported either
improvements or no change in unemployment. However,
just as all industries and occupations have not participated
equally in the current recovery, some States also have been
slow to benefit from the upturn.

This article concentrates on employment and unemploy-
ment[2] for States between the fourth quarters of 1982 and
1983. Unlike national data, State and area data are not

adjusted for seasonality. Because month-to-month changes
are subject to seasonal influences that can obscure cyclical
developments and the underlying economic trends, the pre-
sentation is limited to changes from the same quarter a year
earlier, because they are not affected by seasonal move-
ments.[3]

National recovery

Propelled by a recovery led by consumer expenditures,
U.S. nonagricultural payroll employment rose by 3.0 mil-
lion persons from the fourth quarter of 1982 to the fourth
quarter of 1983. Total employment (as measured by the
Current Population Survey) rose 3.9 million.

More than 90 percent of the jobs lost during the recession
resulted from employment cutbacks in goods-producing in-
dustries. By contrast, this sector contributed a third of the
job growth in the recovery. Within the goods-producing
sector, manufacturing regained about half of the jobs it had
lost with durable goods employment growing at a rate of
6.5 percent between the fourth quarters of 1982 and 1983.
Employment in mining, including oil and gas extraction
activities, declined over the year as energy prices remained
below previous highs. National employment in construction
continued to drop during the first quarter of 1983, reaching
a cyclical low in March. This decrease was followed by
strong recovery, with employment in general contracting

George D. Stamas is an economist in the Office of Employment and
Unemployment Statistics, Bureau of Labor Statistics.

and special trades climbing sharply, while employment in heavy construction was stable.

Service-producing industries added more jobs to the economy over the year than goods-producing industries, but grew at a slower rate. Employment growth in this sector was greatest in industries of the services division, such as business services. Trade and finance, insurance, and real estate also experienced over-the-year job gains. Conversely, transportation and public utilities and government showed little or no growth.

An analysis by State

Among the States with the largest decreases in unemployment over 1983 were many of those that had the largest increases in joblessness over the previous year or the longer 1979–82 period. They encompass the industrial heart of the Nation, including six East Central States—Alabama, Illinois, Indiana, Michigan, Ohio, and Tennessee. The key to the recovery in most of these States was a cyclical upswing in manufacturing. This upswing usually was accompanied by recovery in the construction, trade, and services industries. The following tabulation shows the percentage point changes in the unemployment rate by State:

	Fourth quarter, 1982–83	Fourth quarter, 1981–82	Annual averages, 1979–82
Michigan	−4.2	3.5	7.7
Alabama	−4.1	4.5	7.3
Indiana	−3.7	2.1	5.5
Arizona	−3.6	4.3	4.8
New Hampshire	−3.5	2.3	4.3
Tennessee	−3.4	3.1	6.0
South Carolina	−3.2	2.5	5.8
Rhode Island	−3.2	2.3	3.6
Illinois	−3.1	3.9	5.8
Ohio	−3.0	2.8	6.6

States which produce oil predominated in the 13 States with small declines in unemployment (1 percent or less over the year). The small improvements seen in their labor markets are associated with the continued shortfall of demand in the oil market. Though increasing over the year, non-communist country daily petroleum consumption in 1983 remained below the already depressed levels of 1982.[4]

With the exceptions of Alaska and New Hampshire, the States with the fastest employment growth were in the country's Southern half. However, large employment increases did not always coincide with large declines in unemployment rates. Only three States with rapidly growing employment were also included in the list of the 10 States having the largest reductions in their rate of joblessness. Labor force expansion in these States outpaced the Nation by 2 to 1 or more in all but North and South Carolina and Arkansas. The following tabulation gives the over-the-year employment change and the change in the unemployment rate between the fourth quarters of 1982 and 1983, by State:

	Percent change in employment	Percentage point change in unemployment rate
Arizona	6.2	−3.6
Florida	6.1	−1.3
New Hampshire	6.1	−3.5
Nevada	5.6	−2.6
Alaska	5.5	−0.1
Arkansas	5.4	−2.2
Georgia	5.0	−1.5
North Carolina	4.6	−2.5
South Carolina	4.4	−3.2
Virginia	3.9	−2.6

Most of these "fastest growing" States have underlying trends of rapid growth and did not suffer the same increase in unemployment incurred by other States during the recession. This relates directly to their industrial composition.

The labor market performance of these rapidly expanding States was characterized, in general, by growth in all industry divisions. Growth in construction employment ranged from two to six times the national average in all States except Alaska and New Hampshire. All 10 States had service-producing sectors that grew faster than the national average and all but Alaska reported the same for manufacturing.

Recovery by region

As is apparent from the rankings of States by improvement in unemployment and employment growth, no one region of the country dominated the economic recovery. The nature of the recovery in each region depended on its economic base. The major geographic regions designated by the Bureau of Census are used to present a regional picture of the recovery.[5] (See chart 1.)

North Central States. The North Central States, with their concentration of durable goods employment, experienced the steepest rise in unemployment of any of the four Census regions over the year ending in the fourth quarter of 1982. However, with a 2.9-percentage-point drop in unemployment, the region also experienced the largest over-the-year decline in joblessness between the fourth quarter of 1982 and that of 1983. (See table 1.) The largest improvements in the unemployment rate were made in its Eastern States (East North Central division). Each of these States had greater declines than the average 2.1-percentage-point reduction recorded for the Nation. Michigan had one of the largest reductions in joblessness in the Nation (4.2 points). However, declining numbers of workers in the labor force, partly because of outmigration but also because of withdrawal from the labor force perhaps caused by discouragement and other factors, contributed to the reduction in unemployment in all East North Central States except Ohio.[6] The North Central region was the only Census region to report an overall decline in labor force size.

In the northern States west of the Mississippi (West North Central States), the unemployment rate fell less than half

Chart 1. Percentage point decrease in unemployment by region and State between fourth-quarter 1982 and fourth-quarter 1983

Legend:
- More than 3.0%
- 2.1% to 3.0%
- 1.1% to 2.0%
- Up to 1.0%
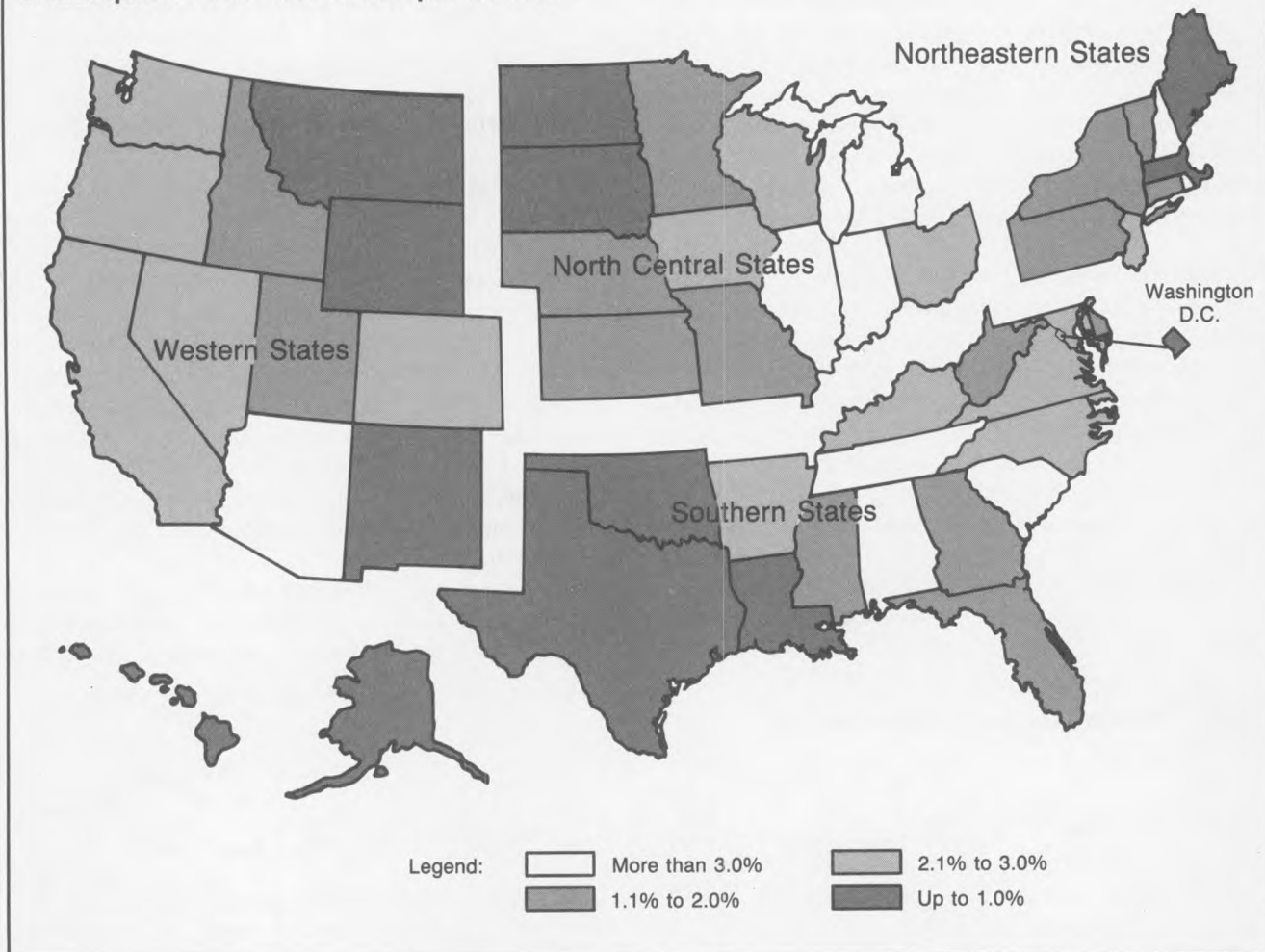
as many points as in the Eastern half of the region. At the same time the labor force grew slightly. In these West North Central States, proportionally fewer jobs depend on cyclically sensitive manufacturing industries.

The North Central State's nonagricultural payroll employment rose by about 1.5 percent over the year, the slowest rate of growth for any of the four Census regions. (See table 2.) Minnesota recovered fastest (3.5 percent), followed by Michigan (2.9 percent), while Illinois and Iowa registered declines. Ohio and Michigan added the most jobs in this region. Employment growth in durable goods outpaced that in nondurable goods in every North Central State. Increased production of transportation equipment was the key to the recovery. In most States, related employment gains took the form of recalls or hiring of workers for motor vehicles and parts production, resulting from increased automobile sales. Kansas, where the aircraft industry accounted for most of the transportation gain, was the exception. While Michigan was the major benefactor of increased au-

tomobile sales, other States—particularly those in the East Central division—also benefited either because of their own automobile production or because of their production of parts for automobiles. In Indiana, Michigan, Ohio, and, to a lesser extent, Illinois and Wisconsin, employment levels in primary and fabricated metals rose more rapidly than in other regions. Like automobile production, employment in the Nation's primary and fabricated metals and nonelectrical machinery industries is concentrated in the North Central States. Though these industries did recover over the year, the performance was not as dramatic as that in transportation equipment. Despite the strong recovery in durable goods production, at the close of 1983, manufacturing employment levels in nearly every North Central State were from 10 to 20 percent *below* fourth-quarter 1979, prerecession levels.

When compared with the rest of the Nation, over-the-year performance in construction employment among States in the region was more modest than that in manufacturing. Only in Minnesota and North Dakota did the gain surpass

the national growth rate. Five of the twelve States had over-the-year declines. The North Central was the only region with a net over-the-year loss in construction employment.

Employment in the service-producing sector in this region grew over the year by only half a percent. Gains in trade and in finance, insurance, and real estate were nearly offset by losses in transportation and public utilities and in government. While losses in transportation and public utilities were widespread, government cutbacks were concentrated in Illinois (29,000), Michigan (11,000), and Indiana (3,000).

Northeastern States. Unemployment fell 1.9 percentage points and nonagricultural payroll employment rose 2.1 percent over the year in the Northeast, putting this region in third place among the four regions in both of these measures of economic performance. The largest improvements in unemployment were in New Hampshire (3.5 percentage points) bringing its rate down to the lowest in the country (3.8 percent) and in Rhode Island (3.2 percentage points). Maine registered the smallest improvement in the region (0.5 percentage points).

New Hampshire also had the largest increase in nonagricultural employment (6.1 percent), followed by New Jersey (3.5 percent). Employment in all of the New England

States expanded at rates of 2 percent or more while Pennsylvania grew at 1.1 percent and New York at 1.6 percent. In contrast to the North Central States, recovery in the Northeast was concentrated in the service-producing sector. Every State gained in trade; finance, insurance, and real estate; and services. The rate of expansion for the region approached the national average increase in these industries. Trade and services provided most of the additional jobs. Each State also had higher levels of construction employment than a year earlier, showing percentage gains about equal to the national average for that industry.

Employment in manufacturing averaged a gain of less than 1 percent. Manufacturing registered little change in Connecticut, New York, and Pennsylvania. Counter to the national trend, durable goods employment fell over the year in Connecticut and New York. The strength of the region's electronic equipment industry—especially in New Jersey and New England—accounted for most of the job gains in manufacturing. Textiles and apparel, though slow-growing among manufacturing industries nationwide, also added jobs in the Northeast.

In the Northeast, primary and fabricated metals manufacturing and nonelectrical machinery manufacturing industries, which provided about one-fourth of this region's

Table 1. Civilian labor force, fourth quarter, 1983

[In thousands]

| Region and State | Labor force | Unemployment | | | | Region and State | Labor force | Unemployment | | | |
| | | Number | Rate | Percentage-point change | | | | Number | Rate | Percentage-point change | |
				1982–83	1981–82					1982–83	1981–82
North Central	28,370.6	2,564.0	9.0	−2.9	2.9	South Atlantic	18,541.0	1,345.6	7.3	−2.0	2.0
East North Central	19,847.1	2,004.8	10.1	−3.4	3.3	Delaware	298.5	20.5	6.9	−1.2	0.1
Illinois	5,532.8	517.2	9.3	−3.1	3.9	District of Columbia	321.9	34.9	10.8	−0.4	2.2
Indiana	2,562.4	229.3	8.9	−3.7	2.1	Florida	5,046.4	406.6	8.1	−3.1	1.8
Michigan	4,213.2	506.7	12.0	−4.2	3.5	Georgia	2,732.6	176.5	6.5	−1.5	1.3
Ohio	5,115.2	546.8	10.7	−3.0	2.8	Maryland	2,218.3	128.1	5.8	−2.3	0.6
Wisconsin	2,423.4	204.8	8.5	−2.8	3.4	North Carolina	2,948.2	206.5	7.0	−2.5	3.0
						South Carolina	1,470.5	118.5	8.1	−3.2	2.5
West North Central	8,523.5	559.1	6.6	−1.5	2.1	Virginia	2,748.4	140.9	5.1	−2.6	1.4
Iowa	1,404.9	88.8	6.3	−2.2	1.8	West Virginia	756.3	113.0	14.9	−1.7	7.2
Kansas	1,181.6	58.9	5.0	−1.9	2.7						
Minnesota	2,178.0	149.7	6.9	−1.5	2.7	West South Central	12,147.4	936.0	7.7	−0.8	2.9
Missouri	2,337.1	193.5	8.3	−1.3	1.9	Arkansas	1,028.4	86.6	8.4	−2.2	1.9
Nebraska	785.2	38.0	4.8	−1.4	1.9	Louisiana	1,906.2	200.4	10.5	−0.9	3.3
North Dakota	307.0	14.3	4.7	−0.9	0.9	Oklahoma	1,527.2	115.2	7.5	−0.3	4.1
South Dakota	329.6	15.8	4.8	−0.9	0.5	Texas	7,685.7	533.7	6.9	−0.6	2.6
Northeast	23,705.3	1,730.5	7.3	−1.9	1.9	West	22,471.3	1,813.3	8.1	−2.4	2.5
Middle-Atlantic	17,266.0	1,367.4	7.9	−2.0	2.2	Mountain	5,976.8	427.3	7.1	−2.3	3.0
New Jersey	3,699.5	235.6	6.4	−2.4	1.9	Arizona	1,398.9	100.5	7.2	−3.6	4.3
New York	7,996.3	583.7	7.3	−1.7	1.8	Colorado	1,678.4	93.6	5.6	−2.5	2.5
Pennsylvania	5,570.1	548.2	9.8	−2.0	2.9	Idaho	456.7	37.0	8.1	−1.6	1.9
						Montana	389.3	30.4	7.8	−0.8	1.8
New England	6,439.3	363.0	5.6	−1.6	0.8	Nevada	491.8	41.1	8.4	−2.6	3.4
Connecticut	1,620.6	78.8	4.9	−1.9	0.9	New Mexico	610.2	55.3	9.1	−0.9	2.8
Maine	532.3	39.8	7.5	−0.5	1.1	Utah	694.6	51.8	7.5	−1.4	2.6
Massachusetts	3,030.0	179.8	5.9	−1.0	0.3	Wyoming	256.9	17.6	6.9	−0.3	3.3
New Hampshire	511.7	19.5	3.8	−3.5	2.3						
Rhode Island	476.8	30.5	6.4	−3.2	2.3	Pacific	16,494.5	1,386.0	8.4	−2.5	2.4
Vermont	267.9	14.7	5.5	−1.3	1.5	Alaska	228.7	22.8	10.0	−0.1	0.6
						California	12,400.3	1,004.4	8.1	−2.7	2.8
South	37,390.0	2,953.3	7.9	−1.8	2.6	Hawaii	471.1	28.9	6.1	−0.8	1.1
East South Central	6,701.6	671.8	10.0	−3.0	3.5	Oregon	1,332.8	123.9	9.3	−2.2	0.7
Alabama	1,752.6	202.2	11.5	−4.1	4.5	Washington	2,061.6	206.0	10.0	−2.5	2.0
Kentucky	1,695.2	158.3	9.3	−2.2	3.0						
Mississippi	1,056.7	108.6	10.3	−1.8	3.7						
Tennessee	2,197.1	202.7	9.2	−3.4	3.1						

manufacturing employment, either registered no significant change or declined during the period.

Southern States. The Southern States displayed an improvement in unemployment over the period that was similar to that shown by the Northeast. Unemployment fell 1.8 percentage points over the year to a fourth-quarter 1983 average of 7.9 percent. Over the same period, however, the South's labor force expanded faster than in any other Census region (1.5 percent). The rate of growth in nonagricultural employment was nearly 1 percent faster than that of the Northeast.

The three Southern States with the largest declines in joblessness were Alabama (4.1 percentage points), South Carolina (3.2 percentage points), and Tennessee (3.4 percentage points). The smallest unemployment declines were in the District of Columbia (0.4 percentage points) and the oil-producing States of the West South Central—Louisiana (0.9 points), Oklahoma (0.3 points), and Texas (0.6 points).

While the South's overall labor force expanded, Kentucky, Mississippi, South Carolina, and West Virginia had fewer labor force participants in the fourth quarter of 1983 than they had a year earlier.

Over the year, nonagricultural payroll employment rose 2.9 percent with increases about evenly split between the goods-producing and the service-producing sectors. Although 6 of the 10 fastest growing States were in the South, the region also had 3 of the 7 States with net job losses. Employment changes ranged from a 6.1-percent increase in Florida to a decline of 1.4 percent in Oklahoma, with the fastest growing States being those along the South Atlantic Coast.

Most additional jobs (61 percent) came from the trade or services industries which—along with finance, insurance, and real estate—had employment levels of 4 percent above those of fourth-quarter 1982. Construction grew faster (5 percent) than other industries, accounting for about 10 percent of the region's net employment gain. Half of the Nation's 1983 construction job gains were in this region. The South Atlantic States, particularly Florida, accounted for most of these increases.

Manufacturing accounted for one-fifth of the region's net gain in jobs, with about seven-tenths of those in durable goods industries. Durable goods employment outperformed nondurable goods in every State but Louisiana and Texas. Durable goods added more jobs than nondurables even in those States where durables was a smaller proportion of employment. This occurred despite significant employment increases in textiles and apparel. The recovery in construction across the country, and particularly in the South, fueled an expansion in the lumber industries throughout the region. In addition, metal products and machinery, major industry classes that showed little improvement throughout the North Central and the Northeast, and electrical equipment showed some recovery in the East Central and South Atlantic segments of the Southern region.

The worldwide decline in demand for energy resources, the result of worldwide recession and, to some extent, energy conservation efforts, cut deep into mining employment in the coal-producing States of Kentucky and West Virginia and the oil-producing States of Louisiana, Oklahoma, and Texas. Louisiana, Oklahoma, and West Virginia were the only Southern States with over-the-year declines in total nonagricultural employment.

This decline in demand not only brought down employment in mining but also employment in production of mining equipment and in services used for locating and extracting energy resources. The biggest declines in the oil States of the West South Central came in the fourth quarter of 1982, the starting point for comparisons here. While employment levels were down over the year at that time, looking back to fourth-quarter 1981 gives a better picture of where fourth-quarter 1983 employment levels were. Over the 2 years, employment in the manufacture of oil field machinery was cut in half in Texas and by more than a third in Oklahoma. Compared with 1981, manufacturing employment was about 15 percent lower in Texas and Oklahoma and 20 percent lower in Louisiana. The devaluation of the Mexican peso, also related to the slack in world oil markets, had an impact on labor markets on the Texas side of the Mexican border. At yearend 1983, retail trade employment in border areas remained well below its year-earlier level. Unemployment rates in these metropolitan areas were among the highest in the United States.

Western States. As one of the faster growing regions over the last decade, the West appears to have taken the fast track again in 1983. Unemployment retreated an average 2.4 percentage points while the labor force expanded. Nonagricultural payroll employment rose faster in the West than in any of the other Census regions.

Between the fourth quarters of 1982 and 1983, Arizona had the largest decline in unemployment of the Western States (3.6 percentage points). However, between the fourth quarter of 1981 and that of 1982, it had the largest increase in unemployment—4.3 percentage points. Improvement in unemployment between the fourth quarters of 1982 and 1983 among five other Western States matched or exceeded the national change over this period. The smallest changes in jobless rates were registered in Alaska and Wyoming, each essentially unchanged.

With the exception of Montana and Wyoming, every State in the West reported higher employment levels at the close of 1983 than they did a year earlier. As in the South, both the goods- and the service-producing sectors grew at approximately the same rate (3 percent). The most rapid expansion took place in Arizona (6.2 percent), Nevada (5.6 percent), and Alaska (5.5 percent). In each of these States and in the region overall, construction posted the most rapid gains of the major industries. Construction gains in the

13

West, with about two-thirds concentrated in California, accounted for more than one-third of the national increase in construction employment. (Except for California, it should be noted that these States have relatively small populations.) Services; trade; and finance, insurance, and real estate were the next fastest growing.

The nationwide resurgence in construction activity brought recovery to the lumber industry of the Pacific Coastal States and those Mountain States engaged in lumber production. In another major source of employment for the region, air-

Table 2. Over-the-year change in nonagricultural payroll employment, fourth quarter, 1983

[In percent]

Region and State	Total	Goods-producing sector						Service-producing sector					
		Total	Mining	Con-struc-tion	Manu-factur-ing	Durable	Non-durable	Total	Trans-porta-tion and public utilities	Trade	Finance, insurance, and real estate	Services	Govern-ment
North Central	1.5	4.2	-3.6	-0.9	5.2	6.9	2.2	0.5	-1.1	0.4	0.7	1.9	-0.6
East North Central	1.4	4.5	-4.3	-2.2	5.6	7.2	2.4	0.2	-1.5	0.5	0.1	1.8	-1.6
Illinois	-0.4	1.0	-6.0	-4.9	2.1	3.1	0.7	-0.9	-1.8	0.0	-1.8	1.0	-4.1
Indiana	1.3	3.8	-6.3	-8.7	5.7	6.8	2.9	0.1	-0.7	-0.1	-0.7	1.6	-1.0
Michigan	2.9	9.6	-3.3	-1.1	11.0	13.1	3.6	0.1	-2.4	0.5	0.4	1.8	-1.8
Ohio	2.4	4.8	-5.0	2.0	5.5	6.5	3.4	1.3	-1.2	1.0	2.6	2.8	0.2
Wisconsin	1.6	3.4	33.3	2.1	3.5	4.3	2.2	0.9	-1.2	0.9	1.6	1.6	0.3
West North Central	1.6	3.3	-2.3	1.6	3.9	5.6	1.7	1.1	-0.4	0.4	1.9	2.1	1.3
Iowa	-0.1	1.4	1.9	-2.7	2.2	2.0	2.6	-0.5	-5.2	-1.7	1.8	-0.6	1.6
Kansas	1.3	4.7	-0.4	0.2	6.3	9.5	1.9	0.2	2.0	-0.4	0.1	0.9	-0.1
Minnesota	3.5	4.8	10.6	7.7	4.2	5.5	2.3	3.0	1.5	2.8	4.3	4.8	1.2
Missouri	1.2	3.1	-6.6	2.3	3.5	5.4	1.1	0.6	-0.5	0.1	0.6	1.2	1.1
Nebraska	0.9	-1.0	-13.6	-10.3	-2.0	5.3	-1.2	1.4	-1.2	-0.6	0.6	2.2	4.0
North Dakota	1.3	2.1	-13.0	7.3	4.5	6.8	3.0	1.1	-0.6	-0.3	1.4	2.7	1.6
South Dakota	2.3	8.2	2.6	1.1	11.3	17.6	5.4	1.3	-0.8	0.2	6.4	2.9	0.3
Northeast	2.1	1.3	-2.9	4.4	0.8	0.8	0.9	2.4	0.3	3.5	2.6	3.4	0.0
Middle Atlantic	1.8	0.8	-2.6	3.9	0.4	0.2	0.6	2.2	0.1	3.0	2.6	3.3	0.1
New Jersey	3.5	2.5	-7.7	8.6	1.6	2.4	0.9	3.8	3.1	4.7	3.4	4.9	1.6
New York	1.6	0.5	9.5	3.5	-0.1	-0.8	0.7	1.9	-1.0	2.3	2.8	3.2	0.1
Pennsylvania	1.1	0.2	-4.3	1.3	0.2	0.2	0.4	1.5	-0.5	2.8	1.6	2.4	-1.1
New England	2.8	2.3	-5.8	6.0	1.8	1.8	1.8	3.0	1.2	4.8	2.6	3.9	-0.5
Connecticut	2.4	0.9	-10.2	8.0	0.0	-0.9	2.7	3.1	2.1	2.6	4.7	4.7	0.7
Maine	2.4	1.6	100.0	3.0	1.3	1.5	1.1	2.7	1.1	5.5	3.1	3.0	-0.3
Massachusetts	2.6	2.3	3.1	4.3	2.1	2.8	0.7	2.8	0.2	5.5	1.2	3.2	-1.0
New Hampshire	6.1	6.3	0.0	3.4	7.0	7.1	6.9	5.9	5.6	8.7	4.0	9.3	-2.2
Rhode Island	2.7	3.3	-50.0	13.0	2.4	2.7	1.9	2.5	1.3	4.6	0.5	3.4	-1.0
Vermont	2.1	3.0	-15.0	12.3	1.1	1.1	1.2	1.7	1.9	1.5	4.7	2.6	0.3
South	2.9	2.7	-9.4	5.2	3.3	(1)	(1)	3.0	0.6	4.1	4.2	4.4	0.7
East South Central	2.6	4.2	-12.7	2.7	5.6	9.6	2.0	1.9	0.9	3.7	2.1	2.5	-0.5
Alabama	2.7	5.8	-7.6	10.8	5.6	7.2	4.2	1.3	1.5	3.4	1.5	2.0	-1.4
Kentucky	1.3	0.0	-16.1	-4.9	4.4	10.2	-1.6	1.8	0.1	3.3	2.0	2.5	-0.3
Mississippi	2.1	3.1	-12.4	-8.1	6.0	8.5	3.3	1.6	-1.7	2.4	3.7	2.1	0.8
Tennessee	3.6	6.0	-3.1	7.5	6.0	11.8	1.6	2.5	2.3	4.6	1.9	3.1	-0.4
South Atlantic	4.3	5.6	-6.4	11.5	4.4	(1)	(1)	3.9	2.5	5.6	4.4	5.3	0.7
Delaware	3.4	1.7	0.0	2.4	1.5	10.7	-1.7	4.3	3.1	4.4	9.4	7.8	-1.3
District of Columbia	0.8	3.1	0.0	3.8	2.6	(1)	(1)	0.7	1.3	0.1	-0.8	0.2	1.4
Florida	6.1	9.5	5.3	13.6	7.4	8.6	5.7	5.4	1.1	7.7	6.9	7.7	-0.8
Georgia	5.0	7.1	3.7	14.3	5.7	8.3	4.3	4.2	3.0	6.6	3.6	6.6	0.0
Maryland	2.5	3.1	-25.0	8.2	1.2	1.6	0.7	2.4	2.0	3.5	1.3	4.1	-0.2
North Carolina	4.6	5.3	-0.8	10.6	4.6	7.1	3.0	4.1	6.7	5.9	3.6	2.8	2.6
South Carolina	4.4	4.8	2.0	11.9	3.5	7.8	1.6	4.1	3.8	5.6	5.4	5.5	1.5
Virginia	3.9	5.4	-5.0	13.9	3.6	6.7	1.1	3.5	2.3	4.1	3.7	5.0	1.7
West Virginia	-0.8	-5.6	-10.2	-6.8	-2.6	-1.9	-3.3	1.1	-3.1	-0.1	0.5	2.7	2.5
West South Central	0.9	-2.3	-9.4	-1.6	-0.4	-0.8	0.1	2.1	-1.9	2.1	4.6	3.8	1.1
Arkansas	5.4	5.9	-5.4	-2.9	7.6	11.9	3.0	5.1	3.4	5.9	4.6	8.4	2.2
Louisiana	-0.5	-5.4	-9.8	-0.7	-6.3	-9.1	-4.0	1.1	-6.9	2.3	3.7	1.6	1.7
Oklahoma	-1.4	-6.1	-19.1	-6.7	1.1	1.4	0.8	0.3	-3.7	0.6	1.2	1.4	-0.2
Texas	1.2	-1.9	-6.2	-1.2	-1.0	-2.1	0.3	2.4	-0.6	1.9	5.4	4.3	1.2
West	3.1	3.3	-5.2	8.2	2.7	(1)	(1)	3.0	0.4	4.1	3.7	4.4	0.6
Mountain	3.2	3.8	-7.1	7.4	4.8	6.1	2.1	3.1	-0.5	3.0	4.8	5.4	1.4
Arizona	6.2	11.4	-2.1	25.0	6.8	7.8	3.4	4.7	1.1	4.2	6.4	8.7	1.6
Colorado	2.2	1.2	-4.9	0.7	2.8	2.6	3.1	2.5	0.0	2.5	3.2	4.3	1.0
Idaho	3.4	3.9	21.1	-4.3	4.9	12.2	-1.7	3.3	0.0	4.3	3.1	5.5	1.4
Montana	-0.9	-8.5	-23.3	-11.9	-0.3	1.9	-3.9	0.5	-6.9	-0.0	1.3	2.9	1.4
Nevada	5.6	10.3	8.0	12.0	9.3	8.9	9.9	5.0	0.7	5.7	8.6	6.7	-0.1
New Mexico	2.3	-0.3	-10.6	5.5	1.4	1.1	2.1	2.9	-2.8	4.5	6.8	5.0	0.7
Utah	3.8	7.4	-8.7	14.3	8.2	10.2	4.1	2.8	2.8	2.6	6.8	3.5	1.6
Wyoming	-3.6	-10.0	-10.3	-12.0	-5.2	-1.7	-8.4	-1.0	-4.8	-5.3	-2.6	-2.8	5.9
Pacific	3.0	3.2	-0.9	8.6	2.2	(1)	(1)	3.0	0.7	4.5	3.3	4.1	0.3
Alaska	5.5	6.0	0.9	16.4	-8.6	(1)	(1)	5.4	0.7	13.2	9.4	1.6	3.4
California	3.2	3.9	-1.7	11.6	2.7	3.3	1.3	3.0	1.0	4.5	3.4	4.3	-0.4
Hawaii	1.4	2.2	(1)	5.7	-0.5	-5.3	0.6	1.3	-1.4	2.3	0.4	2.9	-0.2
Oregon	2.6	3.4	-2.0	1.2	3.8	5.0	0.8	2.4	-1.2	4.2	3.0	3.4	0.1
Washington	2.5	-1.6	8.8	-3.8	-1.2	-2.7	2.3	3.8	0.9	4.8	3.6	3.4	3.8

[1] Data not available.

craft and parts production has been curtailed and job losses have been severe. Particularly hard-hit was Washington, where the aircraft industry employed about 4 percent of the nonagricultural work force in fourth-quarter 1983. Cutbacks in the industry amount to about 10,000 jobs over the year. Manufacturing employment in Washington fell by more than 3,000. However, because of strong growth in its service-producing sector and despite net job losses in construction, Washington had a 2.5-percent rate of employment growth.

As in several Southern States with appreciable mining employment, depressed market conditions both for metals and energy resources took a toll on employment in nearly every Western State. The largest losses in mining jobs, both in terms of number and rate of decline, occurred in Wyoming, Montana, and New Mexico. Wyoming, which has more of its employment concentrated in mining than any other State, had cutbacks that amounted to about two-fifths of the State's net job loss. Wyoming lost jobs over the year at a rate of 3.6 percent, with government the only industry division reporting increased employment.

THE LARGEST REDUCTIONS in unemployment occurred in the North Central States. However, the reductions appear to be in part the result of declines in their labor forces. Employment growth was generally below average, with the great majority of added jobs occurring in manufacturing. With one exception, fourth-quarter 1983, employment in these States remained below their previous economic peaks. Generally, the most rapid job expansion occurred in the South and the West. While construction and manufacturing recoveries were fast paced in these regions, most new jobs came from services and trade. Still, the recovery in many of the "Sunbelt" States of these regions was dampened by their dependence on income from oil. ☐

———FOOTNOTES———

[1] For a review of the national employment situation in 1983, see Eugene Becker and Norman Bowers, "Employment and unemployment gains widespread in 1983," *Monthly Labor Review*, February 1984, pp. 3–15. For a review of regional developments over the 1970's, see Richard J. Rosen, "Regional variations in employment and unemployment during 1970–82" in the same issue, pp. 38–45.

[2] State and area payroll employment and labor force estimates are a product of two Federal-State cooperative programs: Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS) estimates are produced by State Employment Security Agencies following Bureau of Labor Statistics (BLS) guidelines. CES estimates of nonagricultural employment have been benchmarked to March 1983 levels in all States except Wisconsin. Wisconsin estimates are benchmarked to December 1982. Annual averages for 1982 and 1983 are published in the monthly BLS publication, *Employment and Earnings*, May 1984. LAUS estimates are benchmarked to the 1983 Current Population Survey. Annual averages are published in *Geographic Profile of Employment and Unemployment, 1983* (Bureau of Labor Statistics, forthcoming bulletin). Other CES and LAUS estimates are available on LABSTAT or on request from the Office of Employment and Unemployment Statistics. Because of differences in sources of benchmark data and differences in estimating techniques, State estimates will not necessarily add to national totals. Regional estimates are based on sums of State estimates. When regions or States are compared with the Nation, estimates for the United States are based on the sum of State estimates.

[3] This abrupt cyclical change is almost totally masked, both for employment changes and unemployment rates, if annual averages are used for analysis. On average, the U.S. economy was not much better over 1983 than 1982, with the major difference being that 1983 was on the upswing for the Nation and most States. Rather than concentrate on annual average levels it will be more illustrative to observe over-the-year changes in employment and unemployment for each State or region.

[4] *Short-Term Energy Outlook, May 1984* (Energy Information Administration), pp. 17–18.

[5] The North Central region includes the East North Central division (Illinois, Indiana, Michigan, Ohio, and Wisconsin) and the West North Central division (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota). The Northeast includes the Middle Atlantic (New Jersey, New York, and Pennsylvania) and New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). The South is made up of the East South Central division (Alabama, Kentucky, Mississippi, and Tennessee) the South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia) and the West South Central (Arkansas, Louisiana, Oklahoma, and Texas). The West is made up of the Mountain States (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming) and the Pacific States (Alaska, California, Hawaii, Oregon, and Washington).

[6] Migration estimates are from the Bureau of the Census and are estimated as a residual remaining in estimated population change after accounting for vital statistics. Nationally, the number of discouraged workers, those not looking for work because they believe it is not available, fell from 1,735,000 in fourth-quarter 1982 to 1,387,000 in fourth-quarter 1983. Regional and State estimates are not available.

Trends in employment and earnings in the philanthropic sector

Employment in philanthropic organizations outpaced general labor force growth between 1972 and 1982; in particular, these organizations displayed amazing resiliency during the troubled 1980–82 period

GABRIEL RUDNEY AND MURRAY WEITZMAN

While small, the philanthropic portion of the nonprofit sector is an important and rapidly growing component of the U.S. economy. Philanthropic organizations are those privately controlled, tax-exempt nonprofit institutions to which donor contributions are tax deductible. The classification includes religious, educational, health, scientific, cultural, and social service organizations.[1]

There has been a tendency on the part of analysts and the media to slight the role of philanthropic activities in the employment of human resources and the creation of personal income in the form of wages and salaries. In part, this is because official sources of economic data are dominated by the for-profit and government sectors. This article attempts to fill the knowledge gap by presenting the results of a systematized estimation and analysis of philanthropic employment and earnings for the period 1972–82.[2] The study, based on data from the Bureau of Labor Statistics and from the Bureau of Census special 1977 Census of Services for Tax-Exempt Service Organizations, yielded point estimates and trend information for both the sector and many of its subsectors. It thus allows one to gauge the relative importance of specific philanthropic activities and to make comparisons among them. And because the structure and classification system of the data base are consistent with

those used in other Federal employment and earnings series, it was possible to make comparisons with the for-profit and government sectors. The study covered both full- and part-time employees.

An overview

Philanthropic employment was about 93 percent (6.5 million) of 1982 total private nonprofit employment (7.0 million). (See table 1.) This was about 7 percent of the total U.S. labor force. (See table 2.) The sector paid wages and salaries of $81.7 billion that year, or 5.4 percent of total U.S. payroll.

Like all service industries, philanthropic organizations tend to be labor intensive. Productivity depends heavily on competence, skills, and motivation of employees and volunteers. Labor costs thus account for a substantial portion of the total expenditures of philanthropic organizations: Wages and salaries and supplements ($75 billion) were 58 percent of 1980 total costs in the philanthropic sector, with cost of goods and services bought from other sectors and the cost of capital resources used by the sector accounting for the rest.[3] Labor input was 84 percent of value added by the sector. (Value added excludes goods and services purchased from others, such as energy, materials, and so forth.)

Between 1972 and 1982, the philanthropic labor force grew by 43 percent, outpacing the 35-percent increase in for-profit service industries. (See table 2.) Both increases are rather large compared to those for other industry groups,

Gabriel Rudney is senior research associate at Yale University's Institution for Social and Policy Studies, Program on Non-Profit Organizations. Murray Weitzman was a consultant for the Yale study.

Table 1. Employment in philanthropic organizations and in the parent nonprofit sector, 1982		
Type of organization	Employment (in thousands)	Percent of total
Total nonprofit[1]	7,032	100
Philanthropic	6,523	93
Hospitals	2,593	37
Colleges and universities	753	11
Social service oganizations	959	14
Religious organizations	897	13
All others	1,321	19
Other nonprofit	509	7
Membership organizations	444	6
Business associations	84	1
Professional associations	36	(2)
Labor unions	145	2
Political and other	65	1
Sports and recreation	114	2
Hotels and other lodging places	16	(2)
Sporting and recreation	3	(2)
Membership-based organizational hotels . .	13	(2)
Business services	49	(2)
Commercial research and development laboratories	44	(2)
Commercial testing laboratories	5	(2)

[1]Full- and part-time employment.
[2]Less than 0.5 percent.

reflecting the rapid relative growth of the service economy after World War II in both the profit and nonprofit segments. By comparison, there was virtually no growth in for-profit goods-producing activities.[4] The importance of the philanthropic sector as a job creator is evident in that the 1.9 million new jobs it generated over the study period was greater than the total number of 1982 jobs in such important industries as mining, railroad transportation, trucking, apparel manufacturing, banking, and insurance.

The activities of four subsectors—hospitals, colleges and universities, social service organizations, and religious institutions—accounted for 81 percent (5.2 million) of 1982 philanthropic service jobs, and 82 percent ($66.8 billion) of philanthropic payroll. The average 1982 wage over the four subsectors was $12,841. Employment in nonprofit hospitals was the major share—40 percent—of philanthropic employment. Colleges and universities employed 12 percent, while social service organizations and religious insti-

tutions employed 15 percent and 14 percent, respectively. The remaining 19 percent was distributed widely among the other philanthropic services. (See table 3.)

The relative importance of these services in terms of payroll also varied considerably. Hospitals accounted for 49 percent of total 1982 philanthropic payroll, colleges and universities contributed 13 percent, religious institutions, 11 percent, and social services, 10 percent. The relatively higher hospital payroll reflects not only more jobs in that area, but also higher average 1982 wages and salaries than for the philanthropic sector as a whole. The reverse was true in the social service area.

Hospital employment understandably dominates the health sector. A similar dominance occurs in the area of education; employment in private universities and colleges was 2.3 times greater than in private elementary and secondary schools, but payroll in higher education was 3.2 times that of elementary and secondary schools, reflecting higher average wages and salaries in higher education.

Relationship with for-profits

What is the relative importance of for-profit and philanthropic organizations in the activities in which both operate? A comparison of philanthropic employment with total private employment of sectors in which these nonprofits operate yields some interesting differences from sector to sector. (See table 4.) Many service industries, such as private higher education and elementary and secondary schools, operate overwhelmingly as nonprofit organizations. (In this study, the representation was 100 percent.) On the other hand, correspondence schools and vocational schools had relatively few nonprofit employees. Nonprofit employment accounted for 86 percent of total hospital employment. There was considerable variation within cultural activities, where philanthropic employment in theatre, orchestras, and other performing arts (exclusive of television and radio) was 26 percent of employment. Only 5 percent of employment in radio and television, compared to almost 100 percent of employment in the visual arts, was nonprofit. The study also revealed that philanthropic employees earned substan-

Table 2. U.S. employment by sector, selected years, and change, 1972–82 and 1980–82										
[Numbers in thousands]										
Sector	1972		1980		1982		Employment change—		Percent change—	
	Number	Percent	Number	Percent	Number	Percent	1972–82	1980–82	1972–82	1980–82
Total[1]	73,675	100	90,406	100	89,596	100	15,921	−810	22	−1
Private for-profit	55,375	75	67,488	75	66,761	75	11,386	−727	21	−1
Goods-producing	23,668	32	25,658	28	23,907	27	219	−1,751	1	−7
Services-producing	31,707	43	41,830	47	42,854	48	11,147	1,024	35	2
Private nonprofit	4,966	7	6,677	8	7,032	8	2,066	355	42	5
Philanthropic	4,576	6	6,162	7	6,523	7	1,947	361	43	6
Other	390	1	515	1	509	1	119	−6	31	−1
Governments	13,334	18	16,241	18	15,803	18	2,469	−438	19	−3
Federal	2,684	4	2,866	3	2,739	3	55	−127	2	−4
State	2,859	4	3,610	4	3,632	4	773	22	27	1
Local	7,790	10	9,765	11	9,432	11	1,642	−333	21	−3

[1]Full- and part-time employment.

NOTE: Dashes indicate data not available.

Table 3. Selected employment and earnings estimates for major philanthropic activities, 1972–82

Activity	Employment[1]						Earnings[2]			
	1972		1982		Percentage change		1972		1982	
	Number (thousands)	Share of total	Number (thousands)	Share of total	1972–82	Annual rate	Total (billions)	Average	Total (billions)	Average
Total philanthropic.	4,576	100	6,523	100	42.6	3.6	$25.3	$5,529	$81.7	$12,525
Hospitals.	1,704	37	2,593	40	52.2	4.3	9.4	5,516	39.8	15,349
Colleges and universities	637	14	753	12	18.2	1.7	5.3	8,320	10.3	13,679
Social service organizations	455	10	959	15	110.8	7.7	2.1	4,615	8.0	8,342
Religious organizations	869	19	897	14	3.2	0.3	3.9	4,488	8.7	9,699
All others	911	20	1,321	19	45.0	3.8	4.6	5,049	14.9	11,734

[1]Full- and part-time employment. [2]Wages and salaries.

tially less on average than the rest of the U.S. labor force. The average sector wage, $12,525 in 1982, was less than three-fourths the average for all employees, $16,797.

Comparison with government

Because philanthropic services are public goods provided by private organizations, it is useful to compare employment in government—the major provider of public goods—with that of the philanthropic sector, the private provider. Overall, governments employ 2.4 times as many workers as the philanthropic sector. Philanthropic employment, at 6.5 million in 1982, substantially exceeded the numbers of Federal workers (2.7 million) and State employees (3.6 million). Employment in local governments, however, at 9.4 million, was much greater than total philanthropic employment. In 1982, all levels of government had combined payrolls of $266 billion, or more than 3 times that of the philanthropic sector. But the philanthropic payroll (excluding religious organizations) of $73 billion more than matched the $69 billion Federal outlay.

Comparative growth analysis

Philanthropy versus the total economy.   Between 1972 and 1982, philanthropic employment grew at a 3.6-percent annual rate, compared with increases of 2 percent for all wage and salary workers in the economy; 0.1 percent for goods-producing industries; 3.1 percent in for-profit service industries; and 1.7 percent in government. Accordingly, the philanthropic sector's share of employment increased from nearly 20 percent of that of the goods-producing sector in 1972 to slightly more than 27 percent by 1982. The differential growth rate between the philanthropic sector and its parent service-producing sector (private and government) over the same period translated into a moderate increase in the employment representation of the philanthropic sector among service industries from 9.2 percent in 1972 to 9.9 percent by 1982. Similarly, the philanthropic sector's annual rate of employment growth was higher than that recorded for government over the decade.

Looking at recent experience, philanthropic employment

has fared better than employment generally, despite the severe 1980–82 recessionary period and Federal budget cuts in social programs. A reasonable explanation is that philanthropic activities, like other service industries, are not prone to the swings in output that result from changes in the rate at which businesses and consumers add to or diminish their inventories of goods. Although its rate of employment growth declined, the philanthropic sector actually expanded its labor force by some 350,000, or 6 percent, between 1980 and 1982, so that its share of total nonfarm wage and salary workers increased from 6.8 percent to 7.3 percent. And the decline in the rate of change in employment, 1980–82, was about four times as great for the total economy than among philanthropic organizations.

Much less fortunate was the goods-producing sector, which experienced a 7-percent drop (1.8 million) in employment from 1980 to 1982. The back-to-back 1980 and 1981–82 recessions speeded up the already declining trend in the sector's employment, which fell from 28 percent of the labor force in 1980 to 27 percent in 1982. The precipitous drop in the goods-producing sector could not be offset by the 2-percent employment increase in the for-profit service-producing industries. Consequently, total U.S. employment declined from 90.4 million in 1980 to 89.6 million in 1982.

Within-sector comparisons.   The philanthropic sector experienced differential growth among its four major component industries between 1972 and 1982. Together, hospitals, colleges and universities, social services, and religious organizations accounted for about 80 percent of total sector employment growth. Over the period, however, hospitals and social services increased their employment shares, while those of colleges and universities and religious organizations declined. (See table 3.)

An aging population, increased availability of private health insurance, and Federal financial support for the medicaid and medicare programs bolstered demand for hospital services between 1972 and 1982. This, in turn, stimulated the expansion of employment in hospitals. In 1972, hospital

employment was 1.7 million, 37 percent of the philanthropic labor force. By 1982, employment had reached 2.6 million, and accounted for 40 percent of the sector total. This represents an increase of 52.2 percent over 1972, or average annual growth of 4.3 percent.

Between 1972 and 1982, employment in social services more than doubled from 455,000 to about 935,000, reflecting growth of 9.4 percent per year. This trend slowed considerably from 1980 to 1982, with employment increasing only slightly to around 960,000. Despite the recent slowdown, significant 1972–82 increases were recorded among all components of social services.

The problems faced by colleges and universities over the study period, which included declining enrollments and ris-

ing operating costs, are apparent in employment trends. The labor force in these institutions grew very modestly from some 640,000 in 1972 to about 755,000 in 1982, or by only around 1.7 percent per year.

Religious organizations constitute the other major group with a declining relative employment position over the study period. All told, employment increased from just under 870,000 in 1972 to nearly 900,000 in 1982. This translates into a growth rate of only 0.3 percent per annum.

Earnings growth

Total earnings, or the "wage bill," for the philanthropic sector more than tripled, from an estimated $25.3 billion in 1972 to $81.7 billion in 1982. This increase of 222.9 percent (41.2 percent in constant 1972 dollars) is related to changes in both employment and average annual wages. However, while the 1.9 million new jobs in the sector accounted for part of the change, much of the growth in total payroll resulted from the rising average earnings of philanthropic workers.

Average annual wages and salaries in the sector rose from $5,529 in 1972 to $12,525 in 1982. (See table 3.) This increase was 10.4 percent greater than that for all nonfarm wage and salary workers, with the result that the average philanthropic wage grew from 67.9 percent to 74.6 percent of the nonfarm average over the study period. (However, it should be noted that when this 126.3 percent current-dollar increase in average wages is stated in constant 1972 dollars, it amounts to no real gain at all.)

As one would expect, hospitals were a major factor in the increase in total philanthropic payroll. While hospital employment grew faster than the average for the sector, average relative wages and salaries rose even faster. Conversely, both employment and earnings in private higher education grew more slowly than the sector averages.

THE ESSENTIAL VALUE of employment and earnings data for significant segments of the economy is indisputable. The need for such information on the philanthropic sector will increase if the sector continues to grow in line with predications by Victor Fuchs in his seminal study of the service economy.[5] According to Fuchs, the outcome of the growth of nonprofit enterprise and government is indeterminate, as such growth will give rise to costs as well as benefits. Unless we prepare for the future with measurement systems and methods of analysis, which will require the support of both the private and government organizations, some of these costs and benefits may not be identifiable, much less quantifiable. We believe our study represents a major step forward in the derivation and presentation of such information on the philanthropic labor force. □

Table 4. Philanthropic employment as a percent of total private employment in service-producing activities, 1982
[Employment in thousands]

Service-producing activities	Total employment[1]	Philanthropic employment	
		Number	As a percent of total
Total	49,886.0	6,523.1	13
Activities with a philanthropic component.	8,974.6	6,523.1	73
Health services	4,411.8	3,052.5	69
Nursing and personal care . .	1,064.4	255.5	24
Hospitals	3,013.9	2,593.2	86
Other health services.	333.5	203.6	61
Education and research.	1,274.9	1,212.5	95
Elementary and secondary education	322.1	322.1	100
Colleges and universities . . .	752.6	752.6	100
Libraries and information centers	12.4	12.4	100
Correspondence and vocational schools.	50.7	13.0	26
Other educational, scientific, and research organizations.	137.1	112.4	82
Social services	1,166.6	959.2	82
Individual and family services.	230.4	220.7	96
Job training and related services	191.4	183.0	96
Child day care services	289.0	163.2	56
Residential care	237.1	181.6	77
Other social services.	218.7	210.7	96
Culture, entertainment, recreation.	338.1	79.7	24
Theater, orchestra, and other performing arts	86.0	22.4	26
Radio and television broadcasting	216.4	11.6	5
Visual arts (museums and botanical and zoological gardens)	35.7	35.7	100
Membership organizations. . . .	1,198.7	1,198.7	100
Civic, social, and fraternal associations.	301.6	301.6	100
Religious organizations	897.1	897.1	100
Legal services.	565.4	12.4	2
Educational, religious, and charitable trusts	18.3	18.3	100

[1]Includes full- and part-time employment.

19

——FOOTNOTES——

[1] This summary is excerpted from our monograph entitled *Significance of Employment and Earnings in the Philanthropic Sector, 1972–82*, ISPS Working Paper 2077 (New Haven, Conn., Yale University, Institution for Social and Policy Studies, Program on Non-Profit Organizations, November 1983). The monograph presents additional employment and earnings estimates, along with a description of the data structure and classification system used, and a disscussion of the strengths and weaknesses of the estimating procedures.

In addition to philanthropic organizations, the nonprofit sector includes private nonprofit commercial enterprises and membership groups (social clubs, fraternal organizations, labor unions, chambers of commerce, trade associations, and business leagues) that are organized largely to provide mutual benefits to their members. Although nonprofit commercial enterprises and membership groups are tax-exempt under Federal law, donations to such organizations are not tax deductible.

[2] The terms "philanthropic employment," "philanthropic labor force," and "philanthropic jobs" have the same definition and are used interchangeably. Included are all persons employed for pay by philanthropic organizations, either on a full- or part-time basis. (This is consistent with BLS and Bureau of Census definitions.) Excluded are self-employed workers, farmworkers, private household workers, and the military, including the Coast Guard. The terms "payroll," "earnings," and "wages and salaries" are also used interchangeably. Compensation in the form of pensions or other deferred payments or in the form of fringe benefits is not included.

[3] See Gabriel Rudney, *A Quantitative Profile of the Nonprofit Sector*, Working Paper 40 (New Haven, Conn., Yale University, Institution for Social and Policy Studies, Program on Nonprofit Organizations, November 1981), p. 7, t. 2.

[4] It is noteworthy that 1982 was a recession year. But the choice of initial and terminal years is not of critical importance for long-run growth comparisons.

[5] Victor Fuchs, *The Service Economy* (Cambridge, Mass., National Bureau of Economic Research, 1968).

Satisfaction is not an absolute

Not only . . . is job satisfaction part of an unbounded continuum, it is also a personal state, as opposed to a group state, and its goals will vary from person to person, from circumstance to circumstance and from time to time in the same person. Furthermore, it is at least as much a function of the individual as of the job, with connotations of positive well-being which are barely consistent with reality and probably attainable at best by only a few. The majority of people, the majority of the time, are neither particularly satisfied nor particularly dissatisfied. They occupy some shifting range in between, satisfied about some things, dissatisfied about others, dynamically adjusting to each change in their individual homeostatic equilibria. Thus, data pertaining to the level of job satisfaction of groups have to be interpreted with caution. At best, they are statistical indices which have often little or no application to the individual.

—T. M. FRASER
*Human Stress, Work and Job Satisfaction:
A Critical Approach* (Washington, International
Labor Office, 1983), p. 56.

Labor organization mergers 1979–84: adapting to change

The merger pace accelerates
as unions, employee associations
unite in the face of shrinking
membership and dues income

Larry T. Adams

More labor organizations merged between January 1979 and June 1984 than in any similar period since the American Federation of Labor and the Congress of Industrial Organizations joined to form the AFL–CIO in December 1955. Since that time, there have been 86 mergers with approximately 35 percent taking place in the last 5½ years.[1]

Although the constitution of the AFL–CIO strongly endorses the "elimination of conflicting and duplicating organizations and jurisdictions through the process of . . . voluntary mergers," only 20 mergers took place between 1955 and 1965. Disappointed at the slow rate of amalgamation, George Meany declared in December 1965, "I . . . strongly suggest that the responsible officers of many unions, who by all logic and commonsense should merge, might well take a broader look at the union as an instrument of progress for working people rather than an institution devoted to its own perpetuation for the sake of sentiment and tradition."[2] The pace of mergers remained slow for the next 2 years, but became brisk between 1968 and 1972, with 19 mergers occurring. Six years of modest merger activity followed. However, the pace picked up again in 1979 and continued through April 1984. Furthermore, merger negotiations are currently taking place among a number of unions and some may end successfully.

Although unity has always been a philosophical goal of

organized labor, practical considerations usually provide the impetus for merger. Some labor organizations merge because of costly jurisdictional disputes or the need to gain a strong and united voice in collective bargaining. Others choose merger because they cannot survive in the face of dwindling membership and dues income stemming from employment loss resulting from import competition, recession, technological change, or employer relocation.

A few mergers involve relatively equal organizations joining to form a new entity, but most are the result of an absorption of a small labor organization by a much larger one. But regardless of the type of merger, an agreement of affiliation must be reached regarding organizational structure, election and terms of office, bylaws, and union dues that will accommodate the individual functions and philosophies of the organizations. An acceptable means of sharing authority and control by officers of both organizations must be determined. For organizations with strong craft traditions, the issues of craft identify and jurisdiction must be dealt with. When these and other issues are not resolved, potential mergers fail. Merger is a difficult process requiring delicate negotiations, patience, and sensitivity to personal and institutional sensibilities. Although mergers may be good for the labor movement in general, they usually occur when the economic and institutional problems that create the need to merge outweigh the problems of satisfying that need.

Mergers involving employee associations occur, in part, for reasons similar to those influencing mergers by traditional labor unions, but there are significant historical and

Larry T. Adams is an economist in the Division of Developments in Labor-Management Relations, Bureau of Labor Statistics. Evelyn Traylor, an economic assistant in the same division, assisted in gathering data for this article.

legal differences. Between 1960 and mid-1984, when State and local government employment more than doubled, many States passed laws granting public employees the right to organize and bargain collectively. Expanding their functions beyond the traditional lobbying and merit system activities, many national professional groups and State employee associations[3] began to organize workers, petition for representation elections, and engage in collective bargaining. The blessings of these changes were mixed. Even where the legal right to organize and negotiate collective bargaining agreements had been conferred, many State labor laws did not provide for or proscribed requirements that workers represented by an association for bargaining join and pay dues or a service charge. As a result, many associations were required to represent all workers in a bargaining unit while operating on a limited budget. Other associations, covered by stronger security provisions, were able to secure adequate financial resources only to be confronted with costly jurisdictional challenges from stronger national labor organizations. For many of these public employee associations, merger with a national labor organization is the most effective way to increase their strength and ensure their future.

Mergers of labor organizations (both unions and employee associations) are, in general, precipitated and molded by a broad set of economic, institutional, legal, and social factors. The blend of these issues is unique to each merger situation, and the resulting amalgamation is also unique. The following discussion highlights the significant aspects of almost all mergers that occurred between January 1979 and April 1984. Organizations are ranked first by the number of mergers they were involved in, and then by the number of members they gained through amalgamation. (See table 1 for a complete list of all mergers which occurred between January 1979 and April 1984.)

Organizations involved in more than one merger

The United Food and Commercial Workers. The largest merger in the history of the American labor movement occurred on June 7, 1979, when the Amalgamated Meat Cutters and Butcher Workmen of North America joined with the Retail Clerks International Union to become the United Food and Commercial Workers International Union. Culminating 14 years of sporadic merger discussions and 6 years of final negotiations, the joining of 500,000 Meat Cutters and 735,000 Retail Clerks established the Food and Commercial Workers as one of the largest labor organizations in the United States.

Membership of the two unions moved in opposite directions with the Meat Cutters losing 25,000 members and the Retail Clerks gaining 85,000 between 1974 and 1978. In addition to providing a unified voice in bargaining with common employers, the merger ended a long history of jurisdictional disputes in retail and wholesale trade and the meat products industries.

In the 4 years following its consolidation, the Food and Commercial Workers absorbed three other labor organizations. In September 1980, the Barbers, Beauticians and Allied Industries International Association merged with the Food and Commercial Workers to become the Barbers and Cosmetologists Division. With the advent of "the 'chain store' operation of barber-stylists and beautician-hairdressers,"[4] the Barbers and Beauticians suffered severe membership losses during the 1970's. With rapidly dwindling financial resources, the union was "unable to cope with the problem" of organizing "people who are unaware of the necessity to organize."[5]

The United Retail Workers Union, a 22,000-member organization (95 percent in Illinois and 5 percent in Indiana), joined the Food and Commercial Workers in November 1981. Encountering difficulties as a small, geographically concentrated labor organization dealing with national food chains, the rank and file voted to become Local 881, the Food and Commercial Workers fifth largest local.

The Insurance Workers International Union, following two attempts to merge with the United Steelworkers of America (in 1980 and 1982), joined the Food and Commercial Workers in October 1983 as the Professional Insurance and Finance Division. With membership down to 15,000 in 1983 from 24,000 in 1970, the Insurance Workers entered the merger as a first step towards "a full scale organizing effort in the insurance and finance industry."[6]

Service Employees International Union. One of the largest AFL–CIO affiliates, the Service Employees International Union absorbed four labor organizations beginning in 1980. Commenting on the union's mergers, Service Employees Union President George Hardy declared, ". . . In the past 10 years our 'reach out' program has resulted in 22 affiliations by independent and other AFL–CIO unions . . . Each affiliation has fully protected the autonomy and the contracts of the [incoming] group."[7]

The International Jewelry Workers Union joined the Service Employees in July 1980. Chartered by the AFL in 1912 with locals dating back to 1882, it was one of the oldest labor organizations in the United States. The Jewelry Workers locals became separate chartered local unions in the newly created Service Employees Jewelry Division. While the Jewelry Workers maintained membership at about 10,000 in the 1970's, it had "been finding it increasingly difficult to protect . . . members against the conglomerates who are buying up America's century old jewelry and watch companies. [The Jewelry Workers need] the size and strength of a union like [Service Employees] to get on equal footing with these industrial giants."[8]

The Oregon Service Employee Association chose to merge with the Service Employees in December 1980 after considering merger with the Communications Workers of America and the American Federation of State, County and Municipal Employees. In the 2 years prior to the merger, Oregon

Table 1. Chronology of labor organization mergers, January 1979 to April 1984

Date	Organization and affiliation[1]	Membership at time of merger
1979:		
January	International **Typographical Union** (AFL–CIO)	81,300
	International **Mailers** Union (Ind.)	3,100
March	Amalgamated **Clothing and Textile Workers** Union (AFL–CIO)	475,000
	United Shoe Workers of America (AFL–CIO)	25,000
June	**Retail Clerks** International Union (AFL–CIO)	735,000
	Amalgamated **Meat Cutters** and Butcher Workmen of North America (AFL–CIO)	500,000
	Formed the United **Food and Commercial Workers** International Union (AFL–CIO)	
	International Union, United **Automobile**, Aerospace and Agricultural Implement **Workers** of America (AFL–CIO)	1,499,000
	Distributive Workers of America (Ind.)	35,000
August	International Brotherhood of **Carpenters** and Joiners of America (AFL–CIO)	750,000
	The Wood, Wire and Metal **Lathers** International Union (AFL–CIO)	11,000
1980:		
January	**Tile, Marble and Terrazzo Finishers** and Shopmen International Union (AFL–CIO)	7,000
	The **Granite Cutters** International Association of America (AFL–CIO)	2,300
June	Brotherhood of **Railway**, Airline and Steamship **Clerks**, Freight Handlers, Express and Station Employees (AFL–CIO)	170,000
	The American **Railway and Airway Supervisors** Association (AFL–CIO)	8,000
July	**Service Employees** International Union (AFL–CIO)	625,500
	International **Jewelry Workers'** Union (AFL–CIO)	10,000
September	United **Food and Commercial Workers** International Union (AFL–CIO)	1,300,000
	Barbers, Beauticians and Allied Industries International Association (AFL–CIO)	27,000
October	International **Longshoremen's and Warehousemen's** Union (Ind.)	64,000
	Inland **Boatmen's Union** of the Pacific (Ind.)	4,000
November	**Service Employees** International Union (AFL–CIO)	635,500
	Oregon State Employees Association (AGE)[2]	14,500
1981:		
January	International Organization of **Masters, Mates and Pilots** (Marine Division—ILA[3] (AFL–CIO))	9,000
	American **Radio Association** (AFL–CIO)	473
September	**Aluminum Workers** International Union (AFL–CIO)	27,000
	The United **Brick and Clay Workers** of America(AFL–CIO)	15,000
	Formed the **Aluminum, Brick and Clay Workers** International Union (AFL–CIO)	
November	United **Food and Commercial Workers** International Union (AFL–CIO)	1,300,000
	United **Retail Workers** Union (Ind.)	22,000
1982:		
July	**Glass Bottle Blowers** of the United States and Canada (AFL–CIO)	80,000
	International Brotherhood of **Pottery and Allied Workers** (AFI.–CIO)	11,000
September	**Aluminum, Brick and Clay Workers** International Union (AFL–CIO)	40,000
	United **Glass and Ceramic Workers** of North America (AFL–CIO)	28,000
	Formed the **Aluminum, Brick and Glass Workers** International Union (AFL–CIO)	
October	American Federation of **State, County and Municipal Employees** (AFL–CIO)	1,100,000
	Arizona Public Employees Association (AGE)	7,500
November	**Hotel Employees and Restaurant Employees** International Union (AFL–CIO)	400,000
	International **Production, Service and Sales** Union (Ind.)	18,000
December	**Service Employees** International Union (AFL–CIO)	650,000
	National Association of **Government Employees** (Ind.)	100,000
	Amalgamated **Clothing and Textile Workers** Union (AFL–CIO)	410,000
	United **Hatters**, Cap and Millinery Workers International Union (AFL–CIO)	8,000
1983:		
May	American Federation of **State, County and Municipal Employees** (AFL–CIO)	1,130,000
	Ohio Civil Service Employees Association, Inc. (AGE)	17,000

23

Table 1.   Continued—Chronology of labor organization mergers, January 1979 to April 1984

Date	Organization and affiliation[1]	Membership at time of merger
July:	**International Printing and Graphic** Communications Union (AFL–CIO)	112,000
	Graphic Arts International Union (AFL–CIO)	82,500
	Formed the **Graphic Communications** International Union	
August	Brotherhood of **Railway**, Airline and Steamship **Clerks**, Freight Handlers, Express and Station Employees (AFL–CIO)	178,000
	Western Railway Supervisors Association (Ind.)	325
October	United **Food and Commercial Workers** International Union (AFL–CIO)	1,300,000
	Insurance Workers International Union (AFL–CIO)	15,000
December	American Federation of **Government Employees** (AFL–CIO)	255,000
	National Association of **Government Inspectors** and Quality Assurance Personnel (Ind.)	800
1984:		
February	**Service Employees** International Union (AFL–CIO)	750,000
	California State Employees Association (AGE)	50,000
	American Federation of **State, County and Municipal Employees** (AFL–CIO)	1,130,000
	Ohio Association of **Public School Employees** (Ind.)	25,000
March	International Union, United **Automobile**, Aerospace and Agricultural Implement **Workers** of America (AFL–CIO)	1,100,000
	Brewery Workers Local 9 (A directly affiliated local of the AFL–CIO)	2,400
April	International Brotherhood of **Boilermakers**, Iron Ship Builders, Blacksmiths, Forgers and Helpers (AFL–CIO)	134,000
	United **Cement**, Lime and Gypsum **Workers** International Union (AFL–CIO)	29,000
	Communications Workers of America (AFL–CIO)	550,500
	West Virginia Public Employees Association (Ind.)	1,500

[1]Affiliations are designated as (AFL–CIO); Ind. (independent); and AGE (Assembly of Government Employees).
[2]These organizations disaffiliated with the AGE just prior to, or at the time of, merging.
[3]International Longshoremen's Association.
NOTE: This table reflects all mergers known to the Bureau as of June 30, 1984.

Service Employee membership had declined 16 percent to 14,500, in part, the result of State budget restrictions that reduced employment and jurisdictional disputes with the Teamsters. The granting of complete local autonomy— including a guarantee never to be placed in trusteeship— was cited by Oregon Service Employees as the major reason for choosing to join the Service Employees.

On December 1, 1982, the National Association of Government Employees—a public sector labor organization with 70 percent of its membership in the Federal Government and 30 percent in State government—merged with the Service Employees. Membership of Government Employees dropped from its peak of 200,000 in 1978 to 100,000 in December 1982.

The California State Employees Association, following merger talks with four other unions, joined the Service Workers in February 1984.[9] The California Employees faced intense raiding after the January 1983 enactment of a State labor law allowing agency shop provisions in public sector collective bargaining agreements.[10] Rather than expend a large portion of its resources defending against the raids, the California Employees chose to merge with an AFL–CIO affiliate, thereby securing the protection of article 20 of the AFL–CIO constitution prohibiting raids among member unions.

In announcing the decision to merge his unions's 50,000 members with the Service Workers 750,000 membership, the president of the California Employees Association stated that "because [the California State Employees Association] will come under the no-raiding provision of the AFL–CIO constitution, [it] will no longer have to divert precious resources to fight off other unions."[11]

The American Federation of State, County and Municipal Employees.   Three State employee associations were absorbed by the American Federation of State, County and Municipal Employees (AFSCME): The Arizona Public Employee Association, the Ohio Civil Service Employee Association, and the Ohio Association of Public School Employees. The Arizona Association, struggling with a 38-percent membership decrease in the 8 years prior to the merger, the lack of a State labor law conferring the right of collective bargaining to public employees, and the existence of a State right-to-work law, joined with existing State, County and Municipal Employees locals in October 1982 to form Arizona Public Employee Association/Council 97, the largest public sector labor organization local in Arizona.

The Ohio Civil Service Employees, suffering a 50-percent

membership loss of 17,000 members between 1976 and 1983, merged with the State, County and Municipal Employees on May 25, 1983, after a raiding dispute between the State, County and Municipal Employees and the Communication Workers of America. The Ohio Public School Employees, representing 25,000 nonprofessional public school employees, joined the State, County and Municipal Employees on February 11, 1984. These two affiliates will operate under Ohio's new State labor law, which became effective in April 1984, and provides State and local government workers with the right to negotiate wages, hours, working conditions, and agency shop.

The Aluminum, Brick and Glass Workers International Union. The first step in what would become a three-party merger among labor organizations of comparable size took place on September 1, 1981, when the Aluminum Workers International Union merged with the United Brick and Clay Workers of America to become the Aluminum, Brick and Clay Workers International Union. Both organizations incurred significant membership losses in the years preceding the merger. Membership of the Aluminum Workers decreased from 32,000 in 1974 to 27,000 in 1981. The decrease was generally caused by cutbacks in domestic automobile production and building construction—industries which consume a large proportion of domestic aluminum production. In 1981, the Brick and Clay Workers membership, 18 percent lower than in 1970, reflected the slowdown in building construction as well as a shift from brick and clay to less expensive construction materials.

On September 1, 1982, the newly formed Aluminum, Brick and Clay Workers merged with the United Glass and Ceramic Workers of North America to form the Aluminum, Brick and Glass Workers International Union. With membership having declined to 15,000 from 43,000 in 1972, the Glass and Ceramic Workers' president declared, "Membership is the foundation and you cannot continue to funnel money in forever if . . . membership continues to decline. We have not been successful in organizing . . . [and] that is the key to survival . . . We will reach a point where we will not be able to function as we have in the past if we do not merge."[12] Earlier in the year, the Glass and Ceramic Workers terminated negotiations with the International Brotherhood of Pottery and Allied Workers and the Glass Bottle Blowers of the United States and Canada in disagreement over dues structure. The Pottery Workers and the Glass Bottle Blowers subsequently merged.

The International Union, United Automobile, Aerospace and Agricultural Implement Workers of America. The International Union, United Automobile, Aerospace and Agricultural Implement Workers of America absorbed the Distributive Workers of America in 1979. The Distributive Workers union was organized in 1933 and comprised mainly immigrant workers in wholesale trade. The Distributive

Workers and the Automobile Workers have a history of mutual support on social and economic issues. While both organizations lost a significant proportion of their membership in the years preceding the June 1979 merger, the Distributive Workers, with 35,000 members, had been successful in expanding their jurisdiction to represent clerical workers in universities, professional and nonprofessional law office employees, and retail store employees. In March 1984, the Automobile Workers also absorbed Brewery Workers Local 9, a directly affiliated local of the AFL–CIO.

The Amalgamated Clothing and Textile Workers Union. In a further consolidation of labor organizations representing workers in the apparel and textile industries, the United Shoe Workers of America and the United Hatters, Cap and Millinery Workers International Union were absorbed by the Amalgamated Clothing and Textile Workers Union in 1979 and 1982, respectively. Membership in each of these organizations had declined sharply in the 1970's. Employment in the apparel and textile industries has been declining, in large measure the result of import competition, recession, and laborsaving changes in technology. In addition, the general demand for apparel and textiles has been diminished by less frequent style changes and more durable fabrics.

Prior to joining the Clothing and Textile Workers, the United Shoe Workers held merger discussions with the Brotherhood of Shoe and Allied Craftsmen (BSAC-Ind.). The organization resulting from the proposed merger was slated to merge with the Retail Clerks International Union as the RCIU/Shoe Division. However, there was disagreement over the division of power within the proposed shoe division. Negotiations became more difficult when, in 1978, the Shoe and Craftsmen unilaterally merged with the Retail Clerks. Believing it was no longer possible to gain parity with the Shoe and Craftsmen within the Retail Clerks Shoe Division, the United Shoe Workers sought merger talks with, and ultimately merged into, the Clothing and Textile Workers.

The Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees. Citing the need for additional collective bargaining efforts, the American Railway and Airway Supervisors Association merged with the Railway Clerks on August 6, 1980. While membership in the Railway-Airway Supervisors Association rose from 6,200 to 8,000 during the 1970's, the Railway Clerks' membership fell from 275,000 to 170,000 between 1970–80. In August 1983, the Western Railway Supervisors Association, with fewer than 500 members, joined the Railway Clerks as a member of the Professional Employees Department.

Other selected mergers

On July 1, 1983, in one of the largest printing union mergers in the history of the industry, the International Printing and Graphic Communication Union and the Graphic

Arts International Union joined to become the Graphic Communication International Union. Both organizations had sizable membership decreases in the 10 years prior to the merger, but they remained the two largest printing industry labor organizations. As changes in printing technology have continued to blur or eliminate craft distinctions and erode employment, the Printing and Graphic union and the Graphic Arts union, both products of previous mergers, affiliated to end costly jurisdictional disputes and to gain a large, single voice in collective bargaining.

Encouraging the membership to ratify the merger, a Printing and Graphic union leader reminded the rank and file that "we have seen industry merge from the individual owner to the corporation, to the conglomerate, to the multinational corporation." He further stated that "each union has squandered untold thousands of dollars in contested organizing drives, in raids on each other's shops, in crossing each others picket lines, even performing each others struck work . . . Such . . . acts would cease under merger."[13]

On April 1, 1984, the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers absorbed the United Cement, Lime and Gypsum Workers International Union. Both organizations had membership decreases in the 6 years prior to the merger. While the Boilermakers and the Cement Workers did not negotiate with the same employers or represent workers in related occupations, the organizational structure and operation of the two unions were similar. As a result, the Cement Workers joined the Boilermakers as the Cement, Lime and Gypsum Allied Workers Division with only minor modification to the Boilermakers constitution.

In 1982, the Glass Bottle Blowers Association of the United States and Canada absorbed the 11,000 member International Brotherhood of Pottery and Allied Workers to form the Glass, Pottery, Plastics and Allied Workers Union. Both the Pottery and Allied Workers and the Glass Bottle Blowers had been actively seeking merger since 1970. In 1976, the Pottery Workers, following a substantial membership loss, affiliated with the Seafarers International Union of North America expecting that the benefits of merger would include increased membership. When the Pottery Workers membership failed to increase after 18 months, the merger was dissolved. From 1978 to 1981, the Pottery Workers conducted unsuccessful merger talks with both the Brick and Clay Workers and the Glass and Ceramic Workers. Commenting on the necessity of a merger, the president of the Pottery Workers declared, "It is nearly impossible for small unions to survive today, and it is inevitable [that] the small labor unions spread over the country must unite for strength . . . "[14]

With changes in construction methods making the lath and plaster crafts virtually obsolete, membership in the International Union of Wood, Wire and Metal Lathers declined from 14,600 in 1970 to 11,000 in 1979. To maintain employment, the lathers used substitute construction methods which replaced the lath craft. However, the new methods were as closely related to other construction crafts as to lathing, and jurisdictional disputes ensued. Consequently, in 1979, the Lathers affiliated with the Carpenters, with each craft having priority for available work within its historical jurisdictions.

The current merger environment

Merger is perhaps the most efficient method for a labor organization to increase membership and financial resources. Many organizations that have traditionally represented workers in industries and occupations now adversely affected by recession, imports, plant relocation, technological change, and other disruptions are actively seeking to absorb small related organizations. They also seek to expand their jurisdictions to the growing or stable areas of the economy such as service industries and the public sector. However, these unions may experience conflict with organizations that already represent workers in these areas and are eager to maintain and expand their own jurisdictions. With many large labor organizations representing both public and private sector workers actively courting a limited number of merger partners, rivalries have developed.

Merger negotiations are frequently kept secret. When negotiations fail, the fact that they took place may never become known. When they lead to initial agreement by the leadership, they may be rejected by the rank and file. Following are brief descriptions of some of the merger talks now taking place.

Following the rejection of a merger between the International Typographical Union and The Newspaper Guild by delegates attending the International Typographical convention, the International Typographical Union undertook merger discussions with the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America and the Graphic Communications International Union. Teamsters President Jackie Presser and AFL–CIO President Lane Kirkland have questioned the merits of joining the largest independent union in the United States or merging with the smaller AFL–CIO affiliate. There has been considerable debate on this issue within the Typographical union. Discussions have been intensified by a contested presidential election in which the incumbent has favored joining the Teamsters and the challenger has endorsed merging with the Graphic Communications union.

In February 1984, the Telecommunications International Union, an independent labor organization with 50,000 members in seven States (the majority in New York and Connecticut), reviewed merger proposals by the American Federation of State, County and Municipal Employees (AFSCME), the Communications Workers of America (CWA), and the International Brotherhood of Electrical Workers (IBEW). Earlier in the month, the Telecommunications union had convened a special convention to vote on a possible merger with the State, County and Municipal Employees.

However, a Federal judge, holding that the delegates had insufficient information regarding merger proposals, ordered the vote postponed until the membership could receive adequate information to choose among the merger candidates. As a result, the Telecommunications union plans to distribute merger information to its membership that will be provided by State, County and Municipal Employees, Communications Workers, and the Electrical Workers. The Telecommunications union plans to conduct a membership referendum to select a merger partner; the leadership has formally endorsed the State, County and Municipal Employees.

In March 1984, the membership of the Screen Actors Guild rejected a merger with the Screen Extras Guild, as they had done 2 years earlier. As a result, the Screen Actors Guild leadership reopened suspended merger discussions with the American Federation of Television and Radio Artists.

Two of the AFL-CIO's largest white-collar labor organizations, the Office and Professional Employees International Union and the International Federation of Professional and Technical Engineers are engaged in merger talks. The Office and Professional Employees and the Professional and Technical Engineers, both with moderate membership gains in recent years, cite the increased organizing ability of a single, larger white-collar labor organization and "the overwhelming need to organize the unorganized white-collar sector"[15] as principal reasons for the proposed merger.

The process of labor organizations striving to adapt, survive, and prosper within the changing configuration of the U.S. economy is likely to keep merger activity fast-paced and highly competitive.   □

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

[1] The Bureau of Labor Statistics reported on this subject in "Union mergers in the 1980's: a look at the reasons and results," *Monthly Labor Review*, October 1978, pp. 13–23 and "Union merger pace quickens," *Monthly Labor Review*, June 1971, pp. 63–70.

[2] *Proceedings of the Sixth Constitutional Convention of the AFL-CIO*, Dec. 9, 1965, p. 21.

[3] The American Nurses Association and the Arizona Public Employees Association are examples of national professional and State employee associations.

[4] *Journeyman Barber and Beauty Culture*, Barbers, Beauticians and Allied Industries International Association, June 1980, p. 2.

[5] *Ibid*, December 1980, p. 5.

[6] *AFL-CIO News*, American Federation of Labor and Congress of Industrial Organizations, Sept. 10, 1983, p. 1.

[7] *Service Employee*, Service Employees International Union, June 1980, p. 3.

[8] *Ibid*.

[9] The other unions were: the American Federation of State, County and Municipal Employees; the Communications Workers of America; the International Union of Operating Engineers; and the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America.

[10] An agency shop requires all employees in the bargaining unit who do not join the union to pay a fixed amount monthly, usually the equivalent of union dues, as a condition of employment, to help defray the union's expenses in acting as a bargaining agent.

[11] *White Collar Report* (Washington, The Bureau of National Affairs, Inc., 1984), Vol. 55, p. 73.

[12] *Aluminum Light*, Aluminum Brick and Clay Workers International Union, May–June 1982, p. 3.

[13] *News and Views*, International Printing and Graphic Communications Union, May 1983, p. 7.

[14] *Potters Herald*, International Brotherhood of Pottery and Allied Workers, August 1982, p. 2.

[15] *Government Employee Relations Report* (Washington, The Bureau of National Affairs, Inc., 1984), Vol. 22, p. 340.

NOTE: The requirement for inclusion in this and the previous studies was affiliation with the AFL-CIO or, for unaffiliated unions, the existence of collective bargaining agreements with different employers in more than one State (except those meeting requirements for exclusive recognition). Professional or State employee associations were included if they reported that they engaged in collective bargaining or representational activities and claimed membership in more than one State or, if claiming membership in only one State, they represented employees in two counties or more within the State. Every effort was made to include all unions and associations meeting these standards.

Worker participation and productivity change

*A careful assessment
of the available evidence
casts doubt on the viability of grafting
industrial relations practices from abroad
onto the U.S. scene*

SAR A. LEVITAN AND DIANE WERNEKE

In the past several years, there has been increasing speculation that the decisionmaking patterns of foreign business firms hold the key to improving U.S. productivity performance, reflecting greater recognition of institutional and cultural influences on productivity. In particular, the industrial practices found in West Germany and Japan, the United States' strongest competitors, have been cited as models to be emulated to achieve optimal productivity. Pointing to the traditional relationship between U.S. management and labor as well as the failure of many business leaders to properly manage and motivate their employees, proponents of reforming the workplace have stressed the potential of raising productivity through better labor-management communications and the establishment of programs of greater worker participation.[1]

Rejecting the prevailing U.S. economic doctrine, which tends to view the firm as a machine that maximizes short-run profits, students of organizational behavior regard an enterprise as a social system with gaps between actual and optimum performance. An organization may be resistant or unresponsive to management goals. Jobs may be incom-

patibly designed, given the existing skills of employees, or they may be inappropriately meshed. Information may be lacking, thereby forestalling smooth and coordinated work processes. The consequence is deficient control over the quality and quantity of production. Management can set its goals in broad terms, but at the lower levels there is considerable room for variation both in the interpretation of goals and in the effort made to meet them. To achieve greater productivity, according to this view, management needs to share authority with workers by giving the employees a greater voice in determining production processes.

Job satisfaction may also play a major role in worker productivity. One of the principal arguments advanced in favor of worker participation is that giving employees a greater share in decisionmaking can reduce alienation and, with it, nonproductive practices such as absenteeism, turnover, and poor-quality work. Workers are viewed as being less willing to accept authoritarian decisions just because they have stepped within the factory, office, or shop.

The evidence that workers' participation plans result in greater productivity is far from conclusive, however. Generalizing on the basis of case studies is unwarranted because it is difficult to identify the nature and extent of worker participation and because it is hard to isolate the impact of workers' participation from other organizational and technological changes affecting productivity. Moreover, whatever the merits of the practices are in foreign countries, they may prove unsuitable for the American environment. Sys-

tems of industrial relations are specific to each country, reflecting the customs, attitudes, and traditions of the society, and they are not easily transferable across continents.

Experiences from abroad

The West German and Japanese systems of worker participation have been touted as models for achieving organizational efficiency.

West Germany. In West Germany, participatory mechanisms have been established at two levels within the company: at the top and on the shop floor.[2] By law, workers have equal representation with shareholders on the supervisory boards of companies employing 2,000 or more workers. These boards approve major decisions about investments, loans, and other activities affecting the company's balance sheet. In addition, they select managers responsible for day-to-day decisionmaking. Thus, in principle, West German workers' representatives share with owners the power to set policy. Also, through their right to select a labor director to sit on the management board, workers share in the day-to-day implementation of these policies. However, in practical terms, in the majority of companies, workers' representatives play little more than an advisory role, as the chairman of the board is elected by the stockholders and retains control of the board and the real authority to run the company.

On the shop floor, workers' councils are elected by all employees. These councils have a voice in virtually all aspects of performance on the job, and they have, in consequence, greater authority than American shop stewards or business agents. Although worker representation on company boards has received the most attention in the United States, workers' councils are the key element of the West German work force's participation in company operations.

In addition to the labor-management system, the government has promoted a number of programs to improve working conditions by reorganizing jobs to expand worker discretion in, and responsibility for, daily work and quality control. In such cases, the organization of work has been reoriented around autonomous work groups, each of which is responsible for part of the production process; this arrangement gives every worker a voice in the performance of their work.

Have worker participation efforts in West Germany improved that nation's productivity performance? The Biedenkopf Commission, established to review the system of worker participation, found that worker participation had served industry well and had not reduced the competitiveness of companies as some employers had feared.[3] The commission concluded that board representation had provided both employees and management with information that facilitated change within the company. Management found it useful to have a mechanism for informing employees of the company's situation and for encouraging

cooperation. Employees believed that communication had been increased.

The chief contribution of worker participation in West German productivity seems to be that it has promoted industrial peace and acceptance of change. Workers' councils have provided a mechanism for handling grievances and disputes and have helped to prevent management decisions that could cause employee dissatisfaction. With respect to shop floor experiments, however, little hard evidence is available on contributions to productivity.

Japan. In Japan, worker participation is less institutionalized and instead is derived from the unique system of industrial relations that characterizes many large Japanese companies.[4] Lifetime employment is reinforced by a seniority-based system that establishes a steady progression for workers in status and pay, a system that is based on the age of the employee rather than on the precise work done. The result is a flexible work force that is willing to perform a variety of tasks and to accept technological change.

The organization of unions on a company basis rather than by occupation or industry, as is the case in most other countries, tends to stimulate cooperation between the unions and management. It is in the interest of both labor and management for the company to perform well. This commonality of interests is underpinned by a bonus system whereby as much as 6 months of wages are paid to employees on the basis of the company's performance.

In many Japanese companies, before any decision is made, consensus is sought at all levels of the company, a procedure known as *ringi*. Although time-consuming, the process stimulates an exchange of information and fosters cohesion, ultimately resulting in decisions being implemented with speed and broad support within the enterprise. This is reinforced in many companies by an extensive labor-management consultation system. Employee representatives have no formal veto power, but in practice many exercise considerable informal influence in company decisionmaking.

Shop-floor participation takes a concrete form in Japan. Adapted from the ideas of an American scientist, William Deming, quality control circles have proliferated in Japan, currently involving more than one worker in every eight. Part of the reason they have caught on is that as a concept, quality control corresponds well to the attitudes fostered by the system of industrial relations: cooperation for the common purpose of achieving company goals.

The Japanese system of industrial relations has nourished industrial harmony. Damaging strikes are rare. However, the most persuasive evidence of the positive relationship between productivity and employee participation comes from the quality control circles. With the establishment of these circles, responsibility for quality control shifted from engineers with limited shop-floor experience to employees working in teams with engineers. Numerous examples have been cited of employee suggestions that, when imple-

29

mented, improved productivity.[5]

It has also been suggested that because of the quality control circles, Japanese workers accept changes in the production process more willingly than workers in environments where solutions are handed down by management. This is particularly important in consumer durable industries, where changes in models require frequent alterations in the production process. Quality control circles also have an impact on the efficiency of production. Because far fewer inspectors are needed, one layer of bureaucracy is substantially reduced. For example, Japanese auto assembly plants have one inspector for every twenty employees; in the United States the ratio is one in seven. Moreover, because there is greater confidence that components are not defective (suppliers, too, are required to achieve rigorous quality standards), many companies can keep minimal inventories. As a result, the need for stock rooms and warehousing is reduced, production costs are lower, and the efficiency of assembly-line operations is increased.

The Japanese system reportedly promotes productivity in other ways. Lifetime employment, although it covers only employees of large firms, or about one-third of the work force, has been credited with reducing employee resistance to the introduction of new technology; workers have cooperated with management in seeking ways to increase productivity without fear of being displaced by machines or robots. Lifetime employment has also encouraged employers to invest heavily in the training and retraining of their employees, which has been reported to enhance the overall technical ability of the nation's work force.

The role of management

Much of the literature on linking worker participation with productivity growth has focused on harnessing workers' ideas and efforts to perform more effectively. The standard underlying assumption for many American productivity models has been that managers are inadequately motivated and need no advice to improve their performance. More recently, however, students of organizational behavior have shifted their attention to examining how employer actions promote or retard productivity growth.

Using West Germany and Japan as models, analysts have found that employers in the United States do not provide as much training for their employees. In West Germany, about half the youth leave school at age 15 or 16. Most are admitted to a 3-year apprenticeship system provided by employers. This practice reportedly produces a work force with a high level of technical competency and resulted, until the 1982 recession, in low unemployment among young people. German employers are also willing to provide necessary retraining because they have found that apprentices tend to adapt well to different work environments.[6]

In Japan, employer investments in training are substantial. Many workers are recruited directly from high school before they have had a chance to acquire specific job skills.

Once in the company, they undergo training not only to perform particular tasks but also to prepare them for other jobs in the company.[7] The Japanese approach has two implications for productivity: flexible employment of the work force and acceptance by employees of technological change. Because the employee is trained for the company rather than for the job, narrow occupational lines are obliterated. Also, due to job security in large firms, resistance on the part of employees to technological changes and burdensome work rules are not as pronounced as in the United States.

In the United States, employers do provide considerable resources for employee training, estimated by the American Society for Training and Development at $7 billion in 1983.[8] However, in contrast to the West German and Japanese systems, the bulk of the training effort has focused on management and technical personnel; programs for manual workers are much rarer.

Some observers fault American employers for their short-term perspective as evidenced by the relative lack of training for production workers, claiming that it adversely affects the long-term performance of companies.[9] This perspective is said to be a function of the high rate of turnover among managers and of management's preoccupation with short-term profits. Because managers are often rewarded with bonuses or other forms of compensation largely based on short-term profits, it is argued that they fail to plan and develop strategies for the long run. For example, capital invested in the upgrading of plants and equipment may reduce paper profits in the short run, while acquisition of established companies may result in immediate gains regardless of the long-run effects. Others fault U.S. managers who often have financial and legal backgrounds for their limited grasp of the production process and for their consequent misallocation of the investments that are needed to improve productivity over the longer term.

American managers tend to approach sales through market research and responding to customer complaints, but too much attention devoted to the current demands of customers in an effort to increase sales may frequently result in sacrificing product quality. This affects productivity in subtle but direct ways: by wasting materials and increasing the frequency of recalls to fix defective parts.[10]

American managers have also been criticized for failing to motivate production workers. By establishing layers of bureaucracy between workers and managers, the latter do not work as closely as their Japanese or West German counterparts do with those on the shop floor or in the office. This separation is reinforced by the wide salary disparity between American managers and blue-collar workers, a differential which far exceeds comparable pay differences abroad. And, as proponents of workers' participation would argue, American managers are less likely to provide channels for meaningful communication and involvement. Consequently, American workers are much less likely to identify with company goals than are employees abroad.

30

Models from abroad?

Even if American labor-management relations have serious deficiencies and the problems are compounded by inappropriate management incentives and objectives, it does not follow that a system that is effective in a foreign country would necessarily prove effective if imported to the United States. Industrial relations are most often shaped by the broader cultural forces that mold a society. The style of American management and the tenor of U.S. industrial relations are deeply embedded in the values and traditions of our society.

Despite the success attributed to the Japanese and West German systems of worker participation and the advocacy of these systems by observers in this country, these systems are unlikely to proliferate here. In West Germany, as elsewhere in Europe, worker participation is viewed in political terms as an extension of democracy which grants workers the right to participate in the organization that employs them. Such motivation is largely absent from the American labor movement, which is less doctrinaire and tends to focus more on bread-and-butter issues of pay, benefits, and working conditions.

West Germans' acceptance of the notion of workers' rights to participate in management decisions has been fostered by the relatively high unionization rates across the economy together with the strong political affiliations of the unions. Collective bargaining in European countries tends to be highly centralized, and it is often carried out on an industry-wide basis. Consequently, until workers' councils were established, there was little scope for worker participation at the company level. In contrast, bargaining at the plant level is characteristic of American industrial relations.

The idea of direct participation by labor representatives in corporate management has not been well received by either American management or labor. It has been rejected by managers concerned with their loss of control and by many union leaders who fear losing bargaining effectiveness through shared responsibility. Glenn E. Watts, president of the Communication Workers of America, put the union position succinctly: "I don't want to sit on the board and be responsible for managing the business. I want to be free as a unionist to criticize management."[11]

Although most of U.S. organized labor also appear to prefer this adversarial relationship, the one prominent example of worker representation on a corporate board of directors in the United States also reflects the trade union dilemma. In response to their dire economic circumstances and the union "give-backs," the Chrysler Corporation invited the president of the United Auto Workers, Douglas Fraser, to serve on its board of directors so as to improve labor-management relations during a difficult restructuring period. This arrangement came to an end abruptly when Chrysler workers failed to agree on a new contract. Fraser resigned from the board before renegotiation of the contract began, citing conflict of interest (though he later returned after the contract had been signed). This would not happen in the West German context because bargaining is centralized and labor representatives seated on company boards are proscribed by law from participating in collective bargaining. Apart from these legal and organizational distinctions, it is clear that the leaders of American labor unions are wary of being co-opted by management in matters they perceive to be of doubtful advantage to themselves or to their members.

It is equally unlikely that the Japanese model of worker participation would be readily accepted in the United States, despite the outpouring of articles from business schools and assorted experts praising the advantages of Japanese labor-management relations. Again, management seems to be opposed to diluting its authority. Perceiving the process to be slow and cumbersome, American management tends to regard these practices as inimical to efficiency. More fundamentally, Japanese practices are foreign to American culture and traditions. Consensus decisionmaking in Japan derives from a system of hierarchical relations governed by a paternalism in which the leader is responsible for all members of the group. Worker participation in Japan is integral to that country's unique system of industrial relations: Lifetime employment, seniority wages, and enterprise unions interact to harmonize individual and company goals, thereby laying the foundation on which meaningful communication and participation can be built.

Whatever the merits of the much-publicized Japanese system of industrial relations, it applies only to large companies, which employ about one-third of the work force.[12] This leaves a sizable secondary labor market of women and temporary part-time workers who have little or no say about the terms and conditions of their work or in the management decisions that affect them.

Borrowing from other industrial countries might remove some impediments to productivity growth. Adoption of desired reforms must be preceded, however, by a change in attitudes. Large-scale borrowing from successful practices abroad does not seem likely, nor could these practices be easily adopted. Traditions, norms, and legal arrangements differ too much among countries for such practices to be imported, as the limited success of experimental U.S. programs tends to demonstrate.

U.S. experiments

Major portions of foreign industrial relations models may not be transferable to the American context, but experiments have been undertaken to implement some salient features from the foreign models. Quality-of-worklife programs became a growth industry in the United States during the 1970's. These experiments fit better with U.S. traditions than the more legalistic West German or culturally different Japanese approaches. Advocates have asserted that work reform—either through job enrichment or participatory management—would make jobs more satisfying and would

31

usher in a new era of labor-management cooperation. This, in turn, would lead to increased productivity. In the inflationary, high-interest environment of the late 1970's, the idea of investing in participatory management as a means to improve productivity proved attractive.

The results of these experiments are far from conclusive. Several studies have reported on the experiences of some 200 American corporations experimenting with quality-of-worklife programs. These ranged from changes in individual job design (enlargement, rotation, or enrichment) to more sophisticated meshings of technology and group-work design (the socio-technical approach). On the basis of these experiments, proponents were quick to claim that the quality-of-worklife movement was gaining momentum. The hope, expressed or implied, was that encouraging employees to participate in decisions that affect their day-to-day work patterns would lead to an increase in their productivity. Drawing upon their creativity and expertise in helping to redesign jobs and improve the efficiency of the work process also would enhance productivity.

Despite all the claims surrounding the establishment of these programs there is little persuasive evidence that changes in the work environment improve productivity. According to a Work in America Institute report summarizing the literature on productivity and quality-of-worklife programs in the 1970's, "In isolated situations improved quality of work life can result in increases in productivity. We cannot, however, surmise that this is a direct cause-effect relationship."[13]

A New York Stock Exchange study was equally inconclusive. It reported that corporations which had established worker participation or related programs used them sparingly and that the programs involved only a fraction of the corporations' employees.[14] Expressing hope for the future, the researchers suggested that human-resource programs might eventually be effective in raising productivity, but they noted that most of the efforts covered by their study had been in place for no more than 2 years, and thus many may have been producing a short-run improvement that would be difficult to sustain—the familiar "Hawthorne effect." Although some U.S. companies have recently been highly successful in this area, a reliable and adequate sample of corporate experience is hard to come by. Firms are not prone to report failures, and researchers are dependent upon company-released data that generally put experiments in the best possible light.

The idea of increasing productivity by means of greater participation at the workplace is deceptively simple. Evidently, workers have productive potential that is not being tapped. "Turning on" their creative energies would no doubt improve the performance of many companies. Worker participation could also provide the basis for a new spirit of cooperation, which would make it easier for management and labor to set goals and work toward them collectively. As a practical matter, however, the hoped-for reforms run

counter to deeply embedded authoritarian norms and American cultural values of individualism and competitive struggle. These values translate into adversarial and hierarchical relations at the workplace.

The real problem with establishing meaningful worker participation programs that contribute to greater productivity is that they require a redistribution of power within the workplace.[15] The traditional management perspective is that the retention of control and final decisionmaking authority is essential to profit maximization. Although some employers may seek the advice of their employees in order to solve production problems, management in general is more likely to want workers to "feel" involved rather than actually to help make policy.

It is also not clear that American workers want far-reaching changes in their worklife or that management wants to encourage such changes. To workers, greater productivity may represent a threat to jobs. Conversely, management sees improving productivity as a process of gaining from labor greater flexibility in job assignment, production standards, crew sizes, and other elements over which labor has gained control.[16]

Organized labor has been wary of work-reform proposals. Skeptical unionists believe that many experiments at the workplace are designed to raise production standards, thereby eliciting greater work effort and circumventing seniority systems. Unions fear that these initiatives will become a means of avoiding fair compensation and will leave workers no real ability to influence key corporate decisions or to exercise greater control over their work lives.

Even the limited cooperation and consultation associated with quality control circles, a concept originally developed in the United States, is viewed with suspicion by American management and unions. Proposals by employees are not readily accepted by supervisors, who are concerned about their loss of authority, or by production engineers, who may have little direct contact with the workers making the suggestions. Consequently, many of the existing American circles tend to provide a more narrow scope for participation and for potential productivity gains. There are, of course, a number of exceptions and a number of reports of successful experiments, but the limited adoption of quality control techniques reflects continued union and management ambivalence toward these programs.[17]

It is therefore unrealistic to assume that in assessing existing relationships, labor and management are going to focus on cooperation and productivity considerations at the expense of traditional interests and motivations. This statement applies not only to situations where relations are governed by collective bargaining agreements but also in the nonunion sector, where management's power is often greater. Consequently, any effort to encourage greater cooperation will have to focus on working within the traditional system, rather than on building parallel but often ephemeral structures. □

[1] John F. Tomer, "Worker Motivation: A Neglected Element in Micro-Micro Theory," *Journal of Economic Issues*, June 1981, pp. 351–62; Richard D. Rosenberg and Eliezer Rosenstein, "Participation and Productivity: An Empirical Study," *Industrial and Labor Relations Review*, April 1980, pp. 355–67; and Kenneth Walker, "Workers' Participation in Management," *International Institute for Labour Studies Bulletin, no. 12, 1974*.

[2] Johannes Schregle, "Codetermination in the Federal Republic of Germany: A Comparative View," *International Labour Review*, January–February 1978, pp. 81–90.

[3] Benjamin C. Roberts and others, *Collective Bargaining and Employee Participation in Western Europe, North America, and Japan* (New York, Trilateral Commission, 1979), pp. 41 ff.

[4] Organisation for Economic Co-operation and Development, *The Development of Industrial Relations Systems: Some Implications of Japanese Experience* (Paris, 1977).

[5] Robert E. Cole, *Work, Mobility, and Participation* (Berkeley, University of California Press, 1979), p. 166.

[6] Organisation for Economic Co-operation and Development, *Youth Without Work* (Paris, 1981), pp. 88–190.

[7] Organisation for Economic Co-operation and Development, *The Development of Industrial Relations Systems*, p. 17.

[8] Anthony P. Carnevale and Harold Goldstein, *Employee Training: Its Changing Role and an Analysis of New Data* (Washington, D.C., American Society for Training and Development, 1983), pp. 44–60.

[9] Robert H. Hayes and William J. Abernathy, "Managing Our Way to Economic Decline," *Harvard Business Review*, July–August 1980. A contrary view is presented by Richard R. West and Dennis E. Logue in "The False Doctrine of Productivity," *The New York Times*, Jan. 9, 1983.

[10] Committee for Economic Development, *Productivity Policy: Key to the Nation's Economic Future* (Washington, D.C., 1983), pp. 42 ff.

[11] *Business Week*, May 11, 1981, p. 86.

[12] Robert Cole, *Work, Mobility, and Participation*, p. 166.

[13] Steven Parnes, *Productivity and the Quality of Working Life* (Scarsdale, NY, Work in America Institute, 1978), p. 4.

[14] New York Stock Exchange, Office of Economic Research, *People and Productivity: A Challenge to Corporate America* (New York, New York Stock Exchange, 1982).

[15] Sar A. Levitan and Clifford M. Johnson, *Second Thoughts on Work* (Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, 1982), pp. 173–199.

[16] Archie Kleingartner and Ross E. Azevedo, "Productivity Bargaining and Organizational Behavior," in *Collective Bargaining and Productivity* (Madison, Wis., Industrial Relations Research Association, 1975), pp. 119–39.

[17] Irving H. Siegel and Edgar Weinberg, *Labor-Management Cooperation: The American Experience* (Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, 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.

Work-sharing approaches: past and present

*Short workweeks tied to jobless aid
can be an alternative to layoffs,
although the concept and circumstances today
differ markedly from those of the 1930's*

MARTIN NEMIROW

Short-time compensation (STC) is a program voluntarily entered into by an employer (and by the union, where present) whereby, in lieu of extensive layoffs due to economic conditions, some or all employees work a partial workweek (usually 4 days), and receive a partial, prorated unemployment benefit (usually for 1 day). For example, an employer would adopt a 4-day workweek for 6 months, rather than laying off 20 percent of the workers for that period. Because the unemployment benefit would replace about one-half of the lost wages, workers would get about 90 percent of their regular income. Few added costs are involved because about the same total amount of benefits is used as for layoffs, but they are spread among more people. The program is temporary—usually lasting 6 months, although in California, it can last up to a year if high unemployment prevails. Six States—California, Arizona, Oregon, Washington, Florida, Maryland—have amended their unemployment insurance benefits to permit short-time compensation for reduced workweeks.[1] A seventh State, Illinois, has a short-time compensation plan, but it is not part of the regular unemployment insurance trust fund. Canada has a similar program, and

most of Western Europe and Japan have some form of short-time compensation program.

Initial policy development on the concept in the United States began in 1974, in the Office of the Secretary of Labor, as the recession of that year worsened. However, work sharing, or reduced hours of work without the short time benefit, is not new—there was extensive experience with it in the Great Depression. Although work sharing in the Great Depression involved a much different set of economic circumstances than modern-day recessions, it is useful to understand the Nation's early experience with work sharing because it has left an emotional legacy of ambivalence that affects even today's perceptions of short-time compensation.

A comparative view

For example, one feeling expressed is that work sharing was tried by President Herbert Hoover and is no better an idea now as short-time compensation than it was then as work sharing. The comparison is instructive. Critics felt that work sharing under Hoover represented an attempt to avoid fiscal or monetary Federal intervention as well as to avoid public assistance. Instead, voluntary employer action was encouraged in the form of work sharing, not only to spread the work but to do so without cutting hourly wages. (Hoover felt wage cutting would compound the problem.)

Such work sharing (usually imposed by the employer) subsequently came to be seen by labor as a poor alternative to President Franklin D. Roosevelt's later New Deal meas-

Martin Nemirow is a social science adviser in the Office of State Liaison and Legislative Analysis, Employment Standards Administration, U.S. Department of Labor. An earlier discussion of this subject by the author appears in Ramelle MaCoy and Martin J. Morand, eds., *Short-Time Compensation: A Formula for Worksharing* (Pergamon Press/Work in America Institute, copyright 1984). The views expressed in this article are those of the author and do not represent the official views of the U.S. Department of Labor or any government agency.

ures. Short-time compensation, the current form of work sharing, is a supplement, not a replacement, for macroeconomic policy, transfer payments, and social insurance. There are other differences. President Hoover's work sharing, sometimes used through the early New Deal years, often involved working half time simply because output was so low. Short-time compensation does not permit employees to work fewer than 3 days a week and has typically involved 4 days. Work sharing was often at poverty-level weekly earnings: there was no minimum wage. Industrial wages are incomparably higher today. Work sharing was often in unorganized plants: the National Labor Relations Act had not yet been enacted, so unions had minimal power. Today, roughly half of all manufacturing sites, where work sharing has its greatest potential, are organized, and unions would have to agree to short-time compensation. And, of course, the Hoover approach did not include partial unemployment insurance, as does the current concept of short-time compensation.[2]

Despite these differences, work sharing under President Hoover did save jobs. It seems certain that manufacturing employment might have dropped more than it did in the short term if the workweek had not been sharply reduced from 44.2 to 38.3 hours during 1929–32.[3] This was a 13-percent drop, accompanying a 33-percent drop in employment. Because total production decreased by 48 percent, it seems evident that a larger downward adjustment of labor than 33 percent was needed in one form or another. In his memoirs, President Hoover said 2 million workers had been helped by either work sharing or private relief by employers.[4] Of course, weekly hours would have dropped regardless of President Hoover's efforts. However, it is unlikely that hours would have dropped so sharply. The lower fixed costs of that period facilitated work sharing, of course.

The fact that Federal-State unemployment insurance did not exist at that time not only had dire human consequences but also precluded the countercyclical use of unemployment insurance to offset part of the purchasing power lost by both the fully and partially unemployed.

Second depression effort

The second big work-sharing effort came in mid-1933, 6 months into President Roosevelt's New Deal. The success of voluntary, private work sharing in providing some visible relief had led to demands for more of the same but without weekly pay reductions.

Where President Hoover had tried to prevent the loss of some jobs by persuading industry leaders to cut hours, President Roosevelt tried, with some success, to reemploy many of those who had lost jobs by cutting hours still further and establishing minimum wages. His goal was to increase purchasing power while spreading the increased work—in a deflationary, not inflationary, economy.

The National Industrial Recovery Act, enacted in 1933, was an attempt to increase production, prices, and employ-

ment by increasing labor protection and reducing price-cutting competition. The act created the National Recovery Administration and the Public Works Administration. The act lasted only 2 years, because it was ruled unconstitutional in 1935. Under the National Recovery Administration (NRA), which administered part of the law, business adopted voluntary codes, including minimum wages and maximum hours. These foreshadowed the Fair Labor Standards Act of 1938.

The NRA helped decrease the workweek to 34.6 hours in 1934—it was now 22 percent below pre-1929 levels. This figure reflected a reduction in hours in many low-wage, soft-goods firms from 50 to 60 hours to 40 to 48 hours, and even fewer in some higher-wage, durable goods industries. Higher hourly productivity from less fatigued workers, more efficient use of workers, and increased plant utilization (for example, two 8-hour shifts, rather than one 10-hour shift as output expanded) accompanied these hours cuts.

The ratio of jobs to production was increased in part because of NRA workweek reductions, which took effect in mid-1933. The ratio of employment to production was quite low in the pre-NRA upturn of March through June 1933 and much higher in a similar upturn in early 1934.

Thus, in May 1933, 2 months after a sharp upturn in production, the ratio of jobs to output was about .78. In February 1934, 2 months after an upturn in production, this ratio was about .93. This 19-percent increase in the number of jobs created per unit of output was due in good part to the 12-percent decrease in average weekly hours during this period.[5] (The output levels were also about the same in February 1934 and May 1933.)

Although it is a subject of debate, some economic historians credit the NRA with significant job creation due to work sharing, even while faulting it on other economic and constitutional grounds.[6]

Work sharing phased out

However, the work-sharing effect faded as recovery continued. Because of weak enforcement of the NRA, its many exemptions, and finally its demise in 1935, average weekly hours had moved back up to 38.6 by 1937, reflecting hours well above 40 in some firms and much lower in others. Partly as a result, the accelerating increases in output between 1934 and 1937 were accompanied by decelerating increases in employment. While rapid increases in wages may have been one reason behind this increasing gap between output growth and employment growth, longer hours also seem to have contributed.[7]

By 1937, output was back up to its 1929 level, and employment was almost so; however, because of the steady growth of the labor force, about 21 percent of the nonfarm labor force were still unemployed in 1937. In the 1937–38 "Roosevelt" depression, weekly hours again dropped sharply. This occurred once again in 1945–46, as the United States demobilized. Since 1945, work sharing on such a national scale has not been used.

The Fair Labor Standards Act was not passed until 1938; like the NRA, it contained a work sharing measure in the form of an overtime penalty for weekly hours more than 40. The original 1938 ceiling was 44 hours; the 40-hour week was not phased in until 1940. The effect of work sharing was submerged by the oncoming full employment of World War II.

If work sharing had some beneficial effects during the Depression, why are there some negative memories of it, even under President Roosevelt? One reason is that neither the Hoover nor Roosevelt administrations used modern-day fiscal and monetary measures in a consistent way to deal with the massive unemployment they faced; as a result, work sharing in the 1930's was given a role it could not fulfill.

To some, President Hoover's work sharing attempts also symbolized cuts in earnings and the failure of voluntary, private sector-oriented policies to deal with the Great Depression; under the the early New Deal, work sharing symbolized to some the unconstitutional and big-business oriented approach of the NRA codes. Moreover, most of the early major experiments in work sharing occurred *before* passage of the Social Security Act of 1935, which brought with it mandatory unemployment insurance, and the 1935 Wagner Act (the National Labor Relations Act), which gave unions a legal framework for organization (although the NRA also provided the right to organize). With strong unions came strong seniority systems, not only to protect workers against arbitrary dismissal by employers, but to protect them *against unilaterally imposed work sharing*, for it was the practice of many employers not to guarantee a steady amount of work from 1 week to the next. Employees often showed up at their jobs only to be told there was no work that day. With unemployment insurance came the assurance that low-seniority workers would not starve if they were laid off, and that work sharing, which only "spread the misery," would no longer be needed.

The current use of work sharing, on a micro rather than a macro scale, is taking place within a framework of basic protections for workers, unlike earlier efforts. However, the full economic effects of short-time compensation, which is a preventive rather than a reemployment measure, in a completely different economy, more than 50 years later, have yet to be determined.

The revival of work sharing

With the relatively low unemployment rates of the post-World War II era, work sharing was rarely discussed or used. It was not until the 1974–75 recession, at the time of the steepest downturn since the Depression, that work sharing began to be considered again.

In a paper in 1976, I wrote:

Two major conclusions can be drawn from a comparison of 1974–75 European with U.S. experience: (1) The portion of unemployment that takes the form of part-time unemployment is higher than in the United States. The result would seem to be decreased social costs, increased purchasing power and greater equity, compared to the United States. (2) The number of U.S. workers who were put on part-time unemployment even in the absence of partial [unemployment insurance] benefits is nevertheless not trivial. This suggests that the potential for more work sharing is significant if European-type incentives were instituted.

These conclusions had been reinforced by the New York City Conference on "Alternatives to Layoffs" held in April 1975: representatives of labor, management, and academia reviewed alternatives besides work sharing and found them wanting.[8] Some firms reported mandatory cuts in pay, but there was resistance by labor. Cutting health and welfare benefits was ruled out. Voluntary furloughs were found effective by some firms, but they appealed mainly to younger, education-minded workers; older workers nearing retirement; and some working mothers. There was also disillusionment about early retirement, due to inflation.

Work sharing was found to be more effective than these other alternatives. However, the case studies presented at the conference showed that work sharing without government incentives was usually atypical.

In fact, an underlying crisis for the firm—whereby its very existence was threatened—was a common theme in bringing about work sharing. This was true of Pan Am and the *Washington Star* (the *Star* did go out to business eventually). Union leadership also had to be unusually good in terms of communication with rank and file. (Once unions were convinced the crisis was real, there were often unusual efforts by union leaders to get the rank and file to discuss alternatives to layoffs in meetings and votes.)

The firms were often marked by an unusual degree of labor-management cooperation, with management often opening its books. Pan Am went "beyond union contract requirements to develop worker involvement in difficult decisions."

Nor were the firms especially typical of the average work force. Highly skilled workers were often involved, such as Pan Am flight crews or Newspaper Guild members. It was in the company's interest that young, highly trained people not be lost. There was a team spirit—born of the flight cabin or city room—among the workers. Large numbers of women, many of them the family's second earners, may have also facilitated work sharing in firms such as the New York Telephone Company.

The question was how to create incentives to encourage work sharing in more typical layoff situations as well as in those with the unique chemistry described above.

The New York conference found that work sharing in the form of "a shorter workweek, or rotating and staggered shifts, or any other method by which average work hours are reduced" emerged as the "alternative to layoffs with the widest potential application to recession-based economic problems and to almost all types of business and industry." It also found, however, that work sharing is "not a panacea. Its use is limited by the necessity of providing a living

wage.'' Thus, the conference found that anything more than a 20-percent reduction in hours would create too much hardship. Nor would it work when an entire shift must be eliminated, or conversely, only marginal reductions are contemplated—for example, work sharing would not succeed for 20 of 1,000 employees.[9]

Short-time compensation in the 1980's

The early 1980's have been a period of anti-inflationary restraint, in which planned use of macroeconomic "fine-tuning" through countercyclical monetary and fiscal policy has been more limited than in the past. Even those who favor micro job-creation tools, such as public jobs programs, usually advocate targeting them to the structurally unemployed—the disadvantaged and long-term unemployed. The disillusion with countercyclical public policies may argue for at least experimenting with policies for the cyclically unemployed that are rooted in the private sector and based to some extent on redistribution of employment rather than solely on countercyclical economic stimuli and public spending.

Moreover, while past efforts to deal with cyclical unemployment have included large public jobs programs, expanded budgets, tax cuts, or new investment, these solutions have not usually had an early impact on recessions or acted as preventatives. To the extent that they have been successful, it has often not been until after, rather than before, layoffs occurred. Job saving has not been a feature of such policies, as it is of short-time compensation.

Equity is the major benefit of short-time compensation. The economic and social costs of full-time unemployment are distributed more evenly across all workers in a plant (or plant unit) rather than among a small minority of workers.

Some economists have argued that it is the total decline of hours of employment that counts, not its distribution. They see work sharing as a "diversion," a waste of time and resources that could be spent on other countercyclical measures.

However, they may be ignoring the social costs of full-time unemployment, which increases the costs of public assistance, food stamps, and other transfer programs during a recession. Many studies suggest that full-time unemployment also increases the incidence of alcoholism, drug abuse, child abuse, and other social problems, which translate into additional public costs, human costs, and suffering. Distributing the same total hours of unemployment among many people on a 4-day workweek may decrease the social costs. It might also help public policy deal in a more rational way with the problem of health insurance for the unemployed, because workers now often lose their health insurance soon after layoff. And, if it were ever adopted on a wide scale, it might also redistribute work and income in a way that bolsters confidence and slows down the decline in consumption during a downturn.

Short-time compensation might also help provide a frame-

work for developing constructive activities, such as education and training, during a downturn. It is unrealistic to think that all workers in a work-sharing program would meaningfully enroll in education or training. However, it would be productive for some. The broad distribution of downtime among the work force would also enable employers to provide training on a part-time basis to any workers they feel need it, not just those laid off. (Such training would have to be voluntary on the part of workers, of course.) Public-private mechanisms under the Job Training Partnership Act might conceivably be used for potentially dislocated workers.

In general, the meshing of short-time compensation with retraining and education is an area deserving further thought. With hundreds of community colleges and technical schools now operating throughout the Nation, it is possible to imagine large numbers of workers who are put on 4-day weeks or 6-hour days for a 2- to 6-month period, using that time to attend classes.[10]

Work sharing in Germany versus the U.S.

Some economists have expressed fear that use of work sharing will lead to a hoarding of underutilized labor and thus lower productivity. The following discussion suggests that short-time compensation may not only decrease layoffs but also may improve cyclical productivity. These examples are illustrative; more in-depth research is needed on these and other issues. The following tabulation shows percent changes in economic indicators for manufacturing and for the mechanical engineering sector in Germany, 1981–82:[11]

	Manufacturing	Mechanical engineering
Average hours	−1.0	−2.0
Employment	−4.5	−3.3
Total hours	−5.1	−4.9
Output	−2.4	−2.3
Output per hour	2.0	2.0

Because the mechanical engineering sector used short-time compensation more heavily than did manufacturing industries as a whole, we would expect mechanical engineering to show a much heavier use of short weeks and, thus, less decline in employment. Indeed, while mechanical engineering reduced total hours about the same percentage as did manufacturing, it reduced employment much less than manufacturing. Average hours declined twice as much in mechanical engineering, and mainly reflect changes in weekly hours.

Output per hour (productivity) increased by the same percent in both cases because total hours were cut back faster than output. In mechanical engineering, this productivity increase was partly because of work sharing augmenting layoffs.

Is the job-saving effect as dramatic as it seems at first glance? Mechanical engineering has more skilled workers than the average manufacturing industry, and is less labor

37

intensive. Cost savings from layoffs might be less feasible, making layoffs less likely. Moreover, employers face a greater risk of permanently losing skilled workers. So it is not clear that the mechanical engineering sector would have lost 2.0 percent more jobs in the absence of a 2.0-percent workweek reduction. Without short-time compensation, there might have been more hoarding of labor.

Nevertheless, the figures suggest significant job-saving effects from work sharing, without the productivity loss that hoarding of full-time, underutilized workers brings in the United States. The following tabulation shows percent changes in economic indicators for the mechanical engineering industry in Germany and its counterpart industry in the United States, nonelectrical machinery, 1974–75:[12]

	United States	Germany
Weekly hours	−1.9	−5.3
Employment	−7.5	−4.5
Total hours	−9.3	−9.5
Output	−13.8	−5.7
Output per hour	−4.9	4.3
Ratio of total hours to output	0.66	1.67

The U.S. industry did hoard more labor relative to Germany in the absence of short-time compensation.[13] Total hours did not decline as fast as output in the United States, whereas it decreased faster than output in Germany. Part of the reason was that average weekly hours decreased by 5.3 percent in Germany, compared with a 1.8-percent decline in the United States; when combined with the reduction in full-time employment, the totals were 9.3 percent for the United States and 9.5 percent for Germany. Thus Germany reduced total hours relatively more, even though it reduced the number of employees relatively less. Because output declined approximately 4.9 percent more than total hours in the United States, but 4.3 percent less than total hours in Germany, the change in output per hour was negative (−4.9) percent for the United States and positive (4.3 percent) in Germany during the 1974–75 period.

That this United States–Germany productivity gap is "artificially" widened during a downturn is evident from the fact that the U.S. rate of productivity increase was actually higher (4.0) in the overall growth period, 1969–77,

than the German rate (3.3) in an essentially comparable period, 1970–78.[14] These are the rates that measure the real differences in technology and other efficiencies between the same industry in the two countries. The 1974–75 gap, therefore, was partly because of the added flexibility in hours cuts afforded by heavy use of short weeks. (Comparative data for the 1982 downturn is not available.)

These data suggest that work sharing may bring with it more total hours of unemployment in Germany, even while decreasing layoffs, because employers can not only eliminate some jobs but also work some of the remaining employees on a part-time basis. However, some of Germany's decrease in employees should be discounted because it reflects continuation of a longer-term trend of sharply shrinking employment in manufacturing, unlike in the United States. Also, Germany's lack of experience-rated tax contributions by employers (different from that in the United States) may induce some added hours of unemployment because employers do not bear the added cost. All these factors may contribute to a "surplus" or induced unemployment effect, whereby not all hours of work sharing are substituted for jobs saved, but instead may be in addition to layoffs. Nevertheless, as long as there is some appreciable effect on layoffs, the social costs of such "surplus" work sharing may be small when compared with the benefits of fewer layoffs and higher cyclical productivity. The latter brings with it less increase in unit labor costs, and thus less increase in prices, which stimulates demand, speeding economic recovery.

This may even have implications in terms of international competition. The mechanical engineering industry is export-oriented. Short-time compensation probably helped German manufacturers in the mechanical engineering industry to compete with U.S. manufacturers in the nonelectrical machinery industry during the 1974–75 period. As demand declined, the Germans could muster both heavy work sharing and some reduction in force to maintain productivity, allowing them to retain skilled personnel without adding to the unemployment insurance taxes. U.S. manufacturers not only faced higher unemployment taxes for whatever layoffs occurred, but also had less flexibility to maintain productivity through work sharing as a supplemental labor adjustment tool.[15] □

————FOOTNOTES————

[1] See Fred Best and James Mattesich, "Short-time compensation systems in California and Europe," *Monthly Labor Review*, July 1980, pp. 13–22. The Department of Labor's evaluation of existing State programs is scheduled for completion in 1985, pursuant to the Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97–248, Part III, Subtitle 6) which also requires the Department to give technical assistance to States with short-time compensation programs.

[2] Irving Bernstein, *The Lean Years: A History of the American Worker, 1920–33* (Boston, Mass., Houghton Mifflin, 1960), pp. 306–07 and 476–84, provides a detailed account of Herbert Hoover's President's Emergency Committee on Employment, which urged voluntary work sharing efforts.

[3] All historical data in this section are from the *Bicentennial Edition of Historic Statistics of the United States, Parts I and II* (Washington, U.S. Department of Commerce, Bureau of the Census, September 1975). Production data (FRB) is found on p. 667; labor force and unemployment data, pp. 126–27; manufacturing employment data, p. 137; earnings and hours data, p. 170; productivity data (National Bureau of Economic Research), p. 162; and Consumer Price Index data, p. 210. Data in these volumes are from the Current Population Survey and the Bureau of Labor Statistics unless otherwise noted.

[4] Herbert Hoover, *The Memoirs of Herbert Hoover: The Great Depression, 1929–41* (New York, MacMillan, 1952), p. 45.

⁵ Data based on graph (p. 1020) in "Employment, hours, earnings and production under NRA," *Monthly Labor Review*, May 1934, pp. 1013– 36. The article notes that "from July 1933 to March 1934 the production index declined 12 percent and yet the employment index increased 13 percent."

⁶ "The President's 'Re-Employment Agreement' gave jobs to about 2,462,000 persons between June and October 1933 through reducing weekly hours of work. Industrial activity in this period declined, hence, the increase in employment was the result of shorter hours. However, the National Recovery Administration codes, after they substantially superseded the President's Re-Employment Agreement, added very little to the number of jobs between October 1933 and the first 5 months of 1935, in spite of a gain in manufacturing production of 14 percent . . . due to tolerances, exceptions and exemptions. In 64 percent of the codes, covering 61 percent of employees in codified industries, provisions permitted a workweek of 48 hours or longer for many of these workers. The abuse in the application of loosely drawn provisions reduced the reemployment." From Broadus Mitchell, *Depression Decade*, Vol. IX of *The Economic History of the U.S.* (New York, Rinehart, 1947), pp. 283–84.

⁷ The ratio of the increase in manufacturing jobs to the increase in output was .79 in the 1933–35 NRA period; the ratio decreased to .68 in the 1935– 37 post-NRA period. In both periods, output growth was about 28 percent, but in 1933–35, weekly hours decreased 3.9 percent, while in 1935–37, they increased 5.5 percent. (See footnote 3 for data sources.)

⁸ Edith Lynton, "Alternatives to Layoffs," a paper prepared for a conference convened by the New York City Commission on Human Rights, April 3–4, 1975.

⁹ See Robert Bednarzik, "Short workweeks during economic downturns," *Monthly Labor Review*, June 1983, pp. 3–11.

¹⁰ Affirmative action, labor-management relations, and other potential benefits of short-time compensation are discussed in more detail in the book from which part of this article is excerpted, as are unanswered questions about possible costs or adverse effects of short-time compensation. Further research is needed on such benefits and costs. For example, the potential role of work sharing as a solution to preserving the affirmative action gains of minorities and women was enlarged as a result of the recent Supreme Court ruling that affirmative action could not be used as the basis for not laying off by seniority. Employers wishing to prevent layoffs from having a disparate impact on recently hired minority groups may have to use short-time compensation. But the question arises as to whether employers sometimes lay off lower seniority or less-skilled workers—perhaps disproportionately minority group members—before implementing short-time compensation. Suggestions have been made to prohibit such practices.

These and other issues are discussed in the chapter on which this article is based: replacement rates, effect on wage bill, use of countercyclical triggers, windfall effect, and the effect of the incentive to work. The book was supported in part by the German Marshall Fund of the United States.

¹¹ German data are based on published and unpublished data of Deutsche Bundesbank, transmitted to the Bureau of Labor Statistics on Apr. 14, 1983. Percentages apply to wage earners. Output per hour and average hours are the author's estimates. Change in average hours in a short period (that is, 1 year) are almost totally the result of shortened weekly hours.

¹² In the United States, the industry is SIC 35; in Germany, the industry is Maschinebau, MAB, DIW 32—Mechanical Engineering. Percentages apply to wage and salary earners. German data are from Deutsches Institut for Wirtsschaft Forschung, Berlin, May 1980. U.S. data are unpublished BLS data.

¹³ Research by John Duke and Horst Brand shows that productivity growth in the machine tool industry (part of the nonelectrical machinery sector) was slow in 1958–80 in good part because during downturns skilled workers were hoarded. For example, in 1974–76, output declined almost 10 percent faster than hours of work, resulting in a 10-percent decline in productivity. (See John Duke and Horst Brand, "Cyclical behavior of productivity in the machine tool industry," *Monthly Labor Review*, November 1981, pp. 27–34.) Employers in Germany can hoard skilled workers without using them full-time if output does not warrant it; that is, they hoard workers but not total hours of labor. This contributes to their better productivity. Also, Duke and Brand found cyclical declines probably aggravated the industry's perennial skill shortages because, despite hoarding, it took time to bring back laid-off workers or find replacements for those no longer available. This problem, too, is minimized by short-time compensation's effect in keeping more workers attached to the payroll, ready to move to full-time work in an upswing. In both the downturns of 1973– 75 and the overall downturn period of 1979–82, two-fifths of Germany's decrease in total hours in manufacturing was composed of decreases in average weekly hours (the rest was decreases in employment), whereas in the United States, only one-fifth of the total decrease in hours in manufacturing was composed of the decline in average weekly hours. (See "International Comparisons of Manufacturing and Labor Cost Trends: Preliminary Measures for 1983," USDL News Release 84–245, May 31, 1984.)

¹⁴ See footnote 12 for sources. Because accurate measurement of long-term productivity trends requires that the first and last years not be recession years, the time frames for the two countries slightly differ.

¹⁵ See footnote 13.

Research Summaries
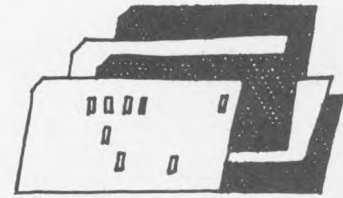
Pay in data processing services by occupation and urban area

Top level systems analysts and systems programmers were usually the highest paid workers in the computer and data processing services industries, according to a Bureau of Labor Statistics survey conducted in October 1982. The survey, limited to 18 metropolitan areas, found these workers frequently averaging more than $700 a week.[1]

The survey included establishments primarily engaged in providing computer and data processing services. Computer services include systems analysis and design, program or system development, programming services, and systems engineering. Data processing services firms offer complete processing and preparation of reports from data supplied by the customer, or specialized services, such as key entry or provision of data processing equipment to others on an hourly or time-sharing basis. The survey also included establishments that manage or operate computer facilities for others on a continuing basis. Companies primarily providing accounting, auditing, and bookkeeping services, and those repairing or maintaining computer and data processing equipment were excluded.

Eight occupations, accounting for just under one-half of the 86,736 professional, technical, and clerical workers in the survey, were selected to represent the pay structure of office workers in the computer and data processing services industries. Six of the occupations were subdivided by work level based on duties and responsibilities—six levels of computer operators, five of programmer/programmer analysts, four of systems programmers, three each of systems analysts and electronics technicians, and two levels of key entry operators. Two occupations—data librarians and peripheral equipment operators—were limited to one level.

Systems programmers develop and modify programs making up the system software (such as operating systems) which provides basic services for computer installations. Average earnings for level IV systems programmers—the highest level surveyed for this occupation—ranged from $591 per week in Newark to $846 in San Francisco-Oakland.

Most commonly, the programmers averaged between $700 and $800 a week for the nine areas providing publishable data.

Level III systems analysts—the highest level surveyed for this occupation—examine complex computer systems with minimal supervision. Their average weekly earnings ranged from $516.50 in Kansas City to $783 in Dallas-Fort Worth. In the other nine areas for which averages for this job could be published, earnings were usually in the $700 to $750 range.

Programmer/programmer analysts, the largest occupational group studied with more than 14,000 employees, provide programming services to customers. Weekly pay averages for level I, consisting of trainees whose assignments are designed to develop their skills, were lowest in Chicago ($273) and highest in San Francisco-Oakland ($372.50) and Houston ($373). Level V, typically supervisors, team leaders, or staff specialists performing both analysis and programming, had averages ranging from $593 a week in Kansas City and $595 in Detroit to $735 in Houston. In general, these workers averaged about twice the earnings of level I.[2] Level III workers, the fully experienced and most numerous of the five levels, averaged between $445 and $486 in 12 of the 18 areas.

Average wages for level I key entry operators, the lowest paid occupation in 11 areas, ranged from $182 a week in Boston to $249.50 in Houston. Data librarians and level I computer operators also were at the low end of the pay scale, typically within the $200 to $250 range.

Where comparisons were possible, occupational pay levels were generally highest in Dallas-Fort Worth or Los Angeles-Long Beach. The lowest occupational pay levels were often found in Boston, Cleveland, Kansas City, Newark, and Philadelphia. Area pay relationships among occupations, however, varied substantially. For example, the Boston averages for both levels of key entry operators were about 75 percent of the corresponding averages in Houston; for the five levels of programmer/programmer analysts, Boston averages were between 94 and 100 percent of those in Houston; and for level III systems analysts, the Boston average was 125 percent of Houston's average.

All of the professional, technical, and clerical workers

were in establishments providing paid holidays (typically 9 to 11 days annually) and paid vacations. Vacation payments varied according to length of service; most common were 2 weeks after 1 year of service, 3 weeks after 5 years, and 4 weeks after 15 or 20 years. With relatively few exceptions, office workers were also provided at least part of the cost of life insurance and of hospitalization, surgical, and basic and major medical insurance. Income protection against short-term disabilities (sick leave or sickness and accident insurance, or both) covered three-fourths of the workers or more in each area. Long-term disability insurance was not as prevalent, usually applying to one-half to three-fourths. Retirement pension plans applied to between one-half and four-fifths of the office workers in all but Detroit, Phoenix, and San Jose. In these areas, fewer than half of the workers were covered. Typically, health, insurance, and pension plans were financed entirely by the employer.

The 1,732 computer services and data processing establishments within the scope of the survey employed a total of 114,653 workers in October 1982. Executives and managers were excluded from the 86,736 workers covered by the survey. Employment was highest in Washington (17,703), Dallas-Fort Worth (10,071), and Los Angeles-Long Beach (8,401). Boston, Chicago, and Philadelphia also recorded more than 5,000 office employees, while fewer than 1,500 were found in Cleveland and Phoenix. Relatively few of the workers were in establishments operating under labor-management agreements.

The survey provided earnings distributions for the occupations studied and percent distributions of office workers by type of service offered and by the primary source of revenue (type of customer) for the establishment, such as banks, private schools and hospitals, and government. A comprehensive report on the survey findings, *Industry Wage Survey: Computer and Data Processing Services, October 1982* (Bulletin 2184), is for sale at $4.50 a copy from the Government Printing Office, or from any of the Bureau's regional offices. □

──────FOOTNOTES──────

[1] Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Average weekly earnings relate to salaries paid for normal (standard) workweeks, and average weekly hours correspond to these earnings. The survey excluded establishments employing fewer than eight workers.

Areas studied are Standard Metropolitan Statistical Areas as defined by the U.S. Department of Commerce through October 1979. The 18 areas: Northeast—Boston, Newark, New York, Philadelphia; South—Atlanta, Dallas–Forth Worth, Houston, Washington; North Central—Chicago, Cleveland, Detroit, Kansas City, Minneapolis-St. Paul, and St. Louis; and West—Los Angeles–Long Beach, Phoenix, San Francisco-Oakland, and San Jose.

[2] The programmer/programmer analyst group, as defined for this survey, includes both business and scientific applications programmers. Only a few of the establishments employed both business and scientific programmers or systems analysts in October 1982, and none had pay differentials based on this distinction.

Future of collective bargaining probed in ILO report

Throughout the industrialized world, labor organizations are facing difficult choices between lower pay and fewer jobs, and many are asking if "concession bargaining" has come to stay. Are we entering a new era of industrial relations, or do negotiated short workweeks, jobsharing provisions, and other forms of concession bargaining represent only a temporary, pragmatic union response to the economic uncertainties of the past decade? In a recent report, analysts with the International Labour Organization attempted to answer these questions on the basis of a study of more than 400 key labor contracts in industrial nations.

The "stagflation" dilemma. The economic position of most major market economies has declined markedly over the last 10 to 15 years. Accelerating rates of inflation caused by supply shocks, inappropriately timed economic policies, and disorder in the foreign exchange markets have proved alarmingly impervious to an array of monetary and fiscal strategies. At the same time, unemployment rates in many nations have reached highs not witnessed since the 1930's.

Worsening stagflation has presented the large market economies with enormous challenges. Employers and unions face stark realities of adjustment and lower expectations, armed, for the most part, with industrial relations tools appropriate to earlier decades of relative growth and prosperity. The complexities of the new economic environment and the magnitude of the adjustments needed imply that considerable tensions will continue to arise, and appear to call for painful sacrifices by all parties concerned. Stagflation is a stiff test of the ability of developed economies to devise more sophisticated and mature industrial relations systems, to which those economies have begun to respond in a number of ways.

Tripartite approaches. Given the magnitude of the crisis, an increasing number of countries have tried or stepped up the use of tripartite approaches, which combine the efforts of government, business, and labor. Underlying such approaches is the realization that no one of the parties by itself may have the capacity to resolve the problem, including the eliciting of cooperation from the other two.

Tripartite approaches combine industrial relations and non-industrial relations elements to alleviate or diminish the crisis. As a rule, fiscal measures, social security benefits, and increased public investment are offered to workers and employers in order to secure wage moderation. The package of tradeoffs is intended to lower the level of unemployment and average price increases.

Some industrialized nations have a tradition of tripartite response to economic problems. These countries—among them Austria, Japan, and Switzerland—have tended to react to the recent troubles by accentuating the use of existing

41

formal and informal machinery. More important are developments in such countries as Ireland, Spain, and Italy, where tripartite agreements were concluded during the 1980–81 period. In these countries, neither idiosyncratic factors, the structure of collective bargaining, nor the orientation of the trade union movement seemed to favor the implementation of a tripartite approach. Yet, faced with a critical unemployment and inflationary situation, governments, employers, and unions saw fit to agree on a series of tradeoffs to help weather the crisis.

Neither the United States nor the United Kingdom has been able to articulate a tripartite response to stagflation. In the United States, a 1979 attempt by President Carter to conclude a National Accord among government and employers' and workers' organizations failed. In the United Kingdom, political circumstances have precluded a repetition of the Social Pact operation of 1973. It should also be noted that a longstanding tradition of tripartite cooperation and industrial peace has not prevented the economies of Denmark and Sweden from showing the strain imposed by stagflation.

Government policies.   In some cases, national governments have acted unilaterally to create jobs and contain inflation, with varying degrees of success. Most problematical has been the task of balancing the two conflicting objectives. Austerity measures implemented by some governments provide a glaring example of the difficulties involved, for while curbs on spending by the central government may dampen inflation, they impair the government's ability to function as a short-term buffer against rising unemployment. Such measures also caused massive public-sector labor unrest in Belgium, Canada, the Netherlands, and the United Kingdom during 1983.

In a number of countries, the government has coupled austerity programs with direct intervention in the labor relations scene, aimed at adapting collective bargaining to the new economic reality. Incomes policies have been adopted in a few cases. General economic policies have also been geared to influence certain aspects of industrial relations. An important exception to this pattern is the United States, where the current administration has, for the most part, elected a policy of nonintervention.

During 1980–82, nations such as Denmark, Belgium, Canada, and France legislated anti-inflationary wage or wage and price controls for one or more sectors of their economies. At the same time, other government decisions, particularly in European countries, focused attention on the need to promote employment by cutting hours of work through reduced legal workweeks, extended paid annual leave, and incentives for early retirement. "Worksharing" is not a new idea, but recent measures adopted in this respect have formally and drastically changed well-entrenched standards, and implicitly subordinated collective bargaining to government dicta. The most visible and elaborate programs to "spread the work" currently are found in Belgium and France. However, other nations (the Federal Republic of Germany, the Netherlands, Spain, the United Kingdom, Japan, and Australia) either already have similar, but less comprehensive, job generation plans or are considering implementing them.

Collective bargaining.   A question of interest for the future is how stagflation is affecting the structure and process of collective bargaining. With regard to structure, it is frequently stated that in times of crisis, unions prefer to move the level of bargaining up to whole branches of the economy so as to find protection in class solidarity, while employers have a corresponding desire for decentralization. The outcome of the current clash between these conflicting interests will probably be determined by the consistency of previous bargaining structures and the balance of power between the parties.

Recent evidence on changes in bargaining structures shows a mixed picture. It appears that high levels of unemployment have served to further decentralize bargaining in countries where this was already the prevailing pattern (United States) or where structures had been edging toward decentralization over the past two decades (United Kingdom). In some European countries, private-sector bargaining currently takes place at all levels (Spain), while in others, it occurs at the industry level (Belgium and Ireland). Recent history also suggests that it is unwise to generalize about employers' vested interest in bargaining at the lowest possible level, as illustrated by Nordic employers' opposition to decentralization of negotiations.

In some countries, stagflation has affected the process of collective bargaining. Specifically, employers have been forced to accept certain forms of worker participation in the enterprise while unions have forgone some of their more militant activities as protest organizations. However, labor-management cooperation to keep companies alive is likely to be temporary, lasting only until economic recovery sets in.

Some of the most interesting effects of the current economic conditions are found in the contents of labor agreements. For example, both parties have felt the need to contractually specify certain changes in working conditions and in the rules governing their relations. And as the priorities of the parties have changed, emphasis has been shifted from economic benefits to workers' job or income security and their right to participate in decisions about the operations of the firm.

There is, however, an important difference between the United States and other nations in the way in which labor and management have tried to save jobs. In the United States, the parties have negotiated reductions in compensation, while those in other countries have shown a preference for contractual reductions in hours of work (worksharing). Experts have linked the extent of compen-

42

sation concessions in the United States to a variety of factors favoring employers, including the pattern of enterprise-level negotiations in that country, the relatively high initial level of wages, and the availability of an alternative nonunion labor force which does not exist in most of the other nations studied.

Agreements negotiated in recent years also reflect the need for greater flexibility in the organization of work. Some agreements include plans for the rationalization of troubled enterprises or industrial sectors. And some individual provisions have been altered to accommodate changes in workloads, work assignments, and production patterns.

Finally, there has been no substantial increase in worker representation on company boards in recent years. In several European countries, employers seeking reductions in labor costs have consented to furnish more of their financial information to unions and to consult with labor before important decisions are made. But there have been few changes in the arrangements for minority or quasi-parity worker representation on company boards that predate the current economic crisis. Likewise, there has been little change in the U.S. industrial climate regarding this form of worker participation, with managers preferring quality circles and other forms of worker participation in the organization of work.

Employer responses. Over the past few years, major initiatives for industrial relations change have come from employers, rather than from unions. One analyst notes that it is typical for management to become more assertive under special economic and political conditions, and then to revert to a more passive or reactive mode when the environment changes again.

During economic downturns, enterprises—particularly those employing highly paid personnel—have an incentive to cut labor costs through work force reductions. But when business picks up, such enterprises often find that the cost of hiring and training new workers offsets much of the financial advantage gained from the earlier layoffs. As part of the recent spate of management activism, employers have increasingly elected to transfer the production process from high-wage areas to those in which a relatively stable work force may be maintained on a much lower total payroll.

Where such "restructuring" takes place between countries, as is often the case in Europe, there is little that labor unions or individual governments can do to intervene. However, in the United States, which is not hampered by internal boundaries, transfer of work among regions has given rise to new legal problems. One issue before the courts is whether employers can terminate a labor contract in a high-wage area before it is due to expire, simply by relocating operations to a low-wage site.

To date, the approach of the courts has been that work transfers undertaken solely to avoid the provisions of a valid agreement are illegal. But "mixed motive" situations are the much more difficult—and typical—case. The position taken by the courts in such cases could have a profound influence on future collective bargaining agreements, insofar as the agreements specify which transfers are management prerogatives and which must be negotiated with the union. Provisions along these lines already appear in a few U.S. agreements.

Another recent form of restructuring in the United States involves employers' use of the provisions of Chapter 11 of the Bankruptcy Code to terminate their unionized work forces and then rehire some or all of the workers at lower rates of pay. In these controversial cases, workers essentially must choose between having a job without a union agreement or having a union agreement without a job.

The status of unions. Official statistics show that there has been a significant drop in membership in the major U.S. industrial unions. Although unemployment is obviously the major cause, one could also assume that various crisis-linked readjustments have contributed to the drop. And, while there is no evidence that concession bargaining alone has been a critical factor in the decline, such bargaining may have reduced the appeal of unions to their rank and file.

The drop in union membership has been less steep in other industrialized market economies. Trade unions in these countries have traditional formal links with recognized political parties which give them access to machinery other than the collective bargaining process to achieve their goals. This probably makes their membership levels less sensitive to the economic gains or losses resulting from periodic contract renegotiations.

WHILE INFLATION HAS SLOWED in most industrialized market economies over the last year, growth and employment generally have not yet reached satisfactory levels. It is thus too early to determine whether recent patterns of industrial relations can be expected to continue. However, with signs of economic recovery high in the United States, it is likely that the answer to this question will soon be reflected in collective bargaining.

The full ILO report, entitled *Collective bargaining: A response to the recession in industrialised market economy countries*, presents a detailed analysis of collective bargaining agreements by selected characteristics, and a series of articles on various bargaining issues by noted industrial relations experts. The foregoing summary is based on the introduction by Efrén Córdova and David Dror of the ILO's Labour Law and Labour Relations Branch. Copies of the 1984 report may be obtained from ILO local offices, or directly from ILO Publications, International Labour Office, CH–1211 Geneva, Switzerland. Price: $11.40. □

Major Agreements Expiring Next Month

This list of selected collective bargaining agreements expiring in October 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
Southeastern States Boilermakers Employers (Interstate)[2]	Construction	Boilermakers	3,050
Bendix Corp., Kansas City Division (Missouri)	Ordnance	Machinists	3,600
Washable Suits, Novelties and Sportswear Association (New York, NY)	Apparel	Clothing and Textile Workers	2,500
Infant and Juvenile Manufacturers Association, Inc. (Interstate)	Apparel	Clothing and Textile Workers	3,000
Union Carbide Corp., Nuclear Division (Oak Ridge, TN)	Chemicals	Oil, Chemicals and Atomic Workers	1,900
ITT Grinnell Corp., Columbia Plant (Pennsylvania)	Fabricated metal products	Molders	1,000
Massey-Ferguson, Inc. (Interstate)	Machinery	Auto Workers	1,100
Manitowoc Co., Inc., Manitowoc Engineering Co. Division (Wisconsin)	Machinery	Machinists	1,050
Borg-Warner Corp. (York, PA)	Machinery	Auto Workers	1,600
Atlas Crankshaft Corp. (Fostoria, OH)	Machinery	Auto Workers	1,250
The Stackpole Corp. (Pennsylvania)	Electrical products	Electronic Workers (IUE)	1,100
General Motors Corp., Plant protection employees (Interstate)	Transportation equipment	Plant Guard Workers (Ind.)	2,600
Mack Trucks, Inc., Master Shop agreement (Interstate)	Transportation equipment	Auto Workers	4,200
Hughes Aircraft Co., Tucson Manufacturing Division (Arizona)	Transportation equipment	Machinists	1,700
Hawaiian Electric Co., Inc. (Honolulu, HI)	Utilities	Electrical Workers (IBEW)	1,000
Southwestern Public Service Co. (Interstate)	Utilities	Electrical Workers (IBEW)	2,300
Associated Liquor Wholesalers of Metropolitan New York, Inc., two agreements (New York and New Jersey)	Wholesale trade	Distillery Workers; and Teamsters (Ind.)	2,000
Acme Markets, Inc., Division #7 (Whippany, NJ)	Retail trade	Food and Commercial Workers	2,300
Kroger Co., Charleston Division (West Virginia)	Retail trade	Food and Commercial Workers	3,400
Kroger Co., Cincinnati-Dayton Marketing Area (Ohio)	Retail trade	Food and Commercial Workers	3,150
Restaurant League of New York, Inc. (New York)	Restaurants	Hotel Employees and Restaurant Employees	3,800
Building Operators Labor Relations, Inc. (Pennsylvania)	Services	Service Employees	2,600
Elevator Industries Association, Inc. (New York)	Services	Electrical Workers (IBEW)	1,500
Washington Hospital Center (Washington, DC)	Hospitals	Service Employees	1,650

	Government activity	Labor organization[1]	Number of workers
Pennsylvania: Pittsburgh Board of Education, Teachers	Education	Teachers	3,500
Pittsburgh Board of Education	Education	State, County and Municipal Employees	1,050
Ohio: University of Cincinnati, University Hospital and Holmes Division	Services	State, County and Municipal Employees	1,800
Washington: Seattle Metropolitan Transit Division	Transportation	Amalgamated Transit	2,650

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

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

Developments in
Industrial Relations
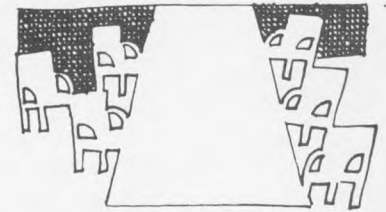
Federal Bankruptcy Code modified

Organized labor, which had been disappointed by the Supreme Court's ruling liberalizing the right of employers entering bankruptcy to abrogate union contracts, got some relief from recent legislation which modified the Federal Bankruptcy Code. Under the new approach, a firm or bankruptcy trustee must attempt "to reach mutually satisfactory [contract] modifications" before coming to the court. If the bargainers are unable to agree on modifications, the judge may put the employer's proposal into effect only if the union has rejected it "without good cause" and "the balance of the equities [among the union, management, and other vested parties] clearly favors" the proposal.

Earlier, the Supreme Court held that an employer filing for reorganization under the Bankruptcy Code could temporarily void or alter a contract even before the case was heard by a bankruptcy judge and that the judge could make the action permanent if the employer proved that the contract "burdens" chances of recovery. (See *Monthly Labor Review*, April 1984, p. 48.)

AFL–CIO President Lane Kirkland said the legislated changes in the Bankruptcy Code "takes collective bargaining out of the courts and returns it to the negotiating table where these issues should be handled . . ." and "closes the door on the use of bankruptcy laws by unscrupulous employers."

Two of the cases leading to the changes in the Bankruptcy Code involved Continental Airlines and Wilson Foods Corp. (See *Monthly Labor Review* November 1983, p. 73, and September 1983, p. 40.)

Aerospace accord

The round of settlements in the aerospace industry continued, as the Auto Workers agreed with Rockwell International Corp. on a 3-year contract that included two provisions designed to moderate labor cost increases. One provides that new employees will have to wait longer before attaining the maximum pay progression step for their job grade. The other provides that new workers will not receive

quarterly cost-of-living pay adjustments during their first year on the job. Thereafter, they will receive the full adjustment, but will not receive retroactive payment of any lost amount. Both provisions were apparently less detrimental to workers than those in some earlier aerospace accords, which called for new employees to be paid less than incumbents in all steps of the progression schedule for their grade and for current employees in lower grades to receive smaller wage increases that current employees in other grades. Two such settlements involved the Boeing Co. and the Machinists and McDonnell Douglas Corp.'s Long Beach, CA, operations and the Auto Workers. (See *Monthly Labor Review*, December 1983, p. 55, and April 1984, p. 49.)

Other terms of the agreement, which covered 16,000 workers in California, Oklahoma, and Ohio called for annual lump-sum payments in August of 1984 and 1985 equal to 3 percent of earnings during the preceding 12 months; a 3-percent pay increase in July 1986; and a pension rate of $17 a month for each year of credited service effective October 1, 1984, and a $19 rate 2 years later (the prior rate was $15); three $200 lump-sum payments to current retirees over the contract terms; and revision of the health program to give employees a choice among health maintenance organizations, preferred provider organizations, and "traditional" coverage, with each plan now covering 90 percent of costs (was 100 percent), and to require second medical opinions for surgery.

Airline update

In the airline industry, Air Florida ceased operations, filed for protection from its creditors under Chapter 11 of the Bankruptcy Code, and began negotiations with its employees on cost-reducing changes in their contracts as part of an effort to resume flying. Initially, Air Florida flight attendants had agreed to a 25-percent pay cut and its pilots to a 50-percent cut.

At the cessation of operations, the air carrier had 1,200 employees, down from a peak of 2,700 in 1981. It also reported debts of $221.4 million and assets of $145.2 million. The 12 year-old airline's difficulties have been attributed to rapid expansion and to fare wars, as well as to the deregulation and economic difficulties that have affected the entire industry.

United Airlines and the Machinists negotiated a 3-year contract for 14,500 mechanics and related employees. It provides for pay increases of 3.7 percent retroactive to November 1, 1983 (the date the prior agreement was subject to modification), 0.9 percent in July and 2.1 percent in November of 1984, 2.9 percent in November 1985, and 2.9 percent in September 1986. The final increase will bring the top mechanic pay rate to $18 an hour, from $15.91.

The contract featured a two-tier pay system under which new employees will have to wait 5 years before attaining pay equality with employees already on the payroll. New mechanics will start at $12 an hour, compared with $15.62 for those in the first step of the progression schedule for workers already on the payroll. New food service workers will be consolidated into a single job category paying $5.40 an hour and they will have to wait 10 years before attaining pay equality with incumbent employees.

At Republic Airlines, 6,500 members of the Air Line Employees Association joined 6,000 members of five other unions in accepting an extension of a 15-percent pay cut that had been instituted in November 1983. The cut had been scheduled to end in May 1984 but was extended on a day-to-day basis pending completion of the round of bargaining with the unions. Under the settlements, the cut will extend through 1986. The unions also agreed to increase productivity by 8 percent, with details be worked out by the company and the individual unions. In return, Republic agreed to establish employee stock ownership and profit-sharing plans.

The other unions that settled earlier were the Air Line Pilots Association, the American Airway Supervisors Association, the International Association of Machinists, the Association of Flight Attendants, and the Transport Workers.

At Frontier Airlines, members of the Association of Flight Attendants agreed to a 2-year contract that called for an 11-percent pay cut. A company representative said this was part of an overall "20 percent cost reduction through . . . savings, wages, work rules" and a two-tier pay system cutting the earnings of new employees. Frontier claimed the moves were needed to improve its ability to compete with United Airlines and Continental Airlines, its main rivals operating out of Denver.

The 11-percent pay cut resulted in pay progression rates for current employees ranging from $14.36 for each flight hour during the first 6 months of service to $25.11 after 11 years of service. Under the new two-tier system, employees hired after April 30, 1983, will progress to the $17.94 per flight hour rate that applies to all employees at the start of their third year of service. Beginning with the fourth year, the new employees will receive $17.94 or 65 percent of the progression rate for current employees, whichever is larger.

Other terms for the 800 employees included a new early retirement provision permitting 13-year employees to receive a lump-sum payment equal to the actuarial value of their accrued benefits and to continue group health insurance at their own expense but at group rates; extension of permanent employment status to temporary employees; a profit-sharing plan; and a pending employee stock ownership plan.

AT&T freezes pay of nonunion workers

In the latest of several cost containment moves, American Telephone & Telegraph Co. froze the salary structure for 114,000 nonunion employees. The company's efforts, which earlier included closing of some facilities and offering early retirement to employees, were part of its plan for adapting to the more competitive business climate resulting from the court-ordered divestiture of its operating companies.

The freeze, scheduled to last through 1985, was expected to save the company $184 million, or 4 percent, in salary expenses in that year. Actually, the employees will continue to be eligible for annual increases, but they will not be as large as usual. The salary system consists of about five informal yearly "steps" within each of 10 salary grades. In the April 1985 salary review, deserving employees will move up one step, an increase of about 4 percent. Previously, such employees also benefitted from annual increases in the level of each step.

Employees will continue to be eligible for promotions, which means that they move up one grade or more. Incentive bonus programs, which cover more than half of the 114,000 workers, also were continued.

Chrysler completes 4-year stock plan

Chrysler Corp. completed its 4-year employee stock ownership plan by distributing 1,661,691 shares of common stock to more than 80,000 employees, including 63,000 members of the United Auto Workers union. The distribution amounted to 19 shares per worker at an average market value of $24.45 per share.

Chrysler has contributed $162.5 million worth of stock, or 15,251,891 shares, to the plan since its inception in 1980. Eligible employees who received shares during all of the plan years now hold $4,500 worth of company stock, or 179 shares each, including shares purchased with dividends paid in April 1984. The shares will continue to earn dividends and will be kept in trust for employees until they retire or otherwise terminate employment.

The employee stock ownership plan was mandated in the Chrysler Corp. Loan Guarantee Act of 1979 in return for a Government guarantee of repayment of up to $1.5 billion of loans Chrysler could obtain from private lenders. Chrysler actually borrowed $1.2 billion and completed repayment in 1983.

Relocation loans available for Ford workers

At Ford Motor Co., laid-off workers who relocate to another company plant will be eligible for low cost loans

to help meet moving and living expenses. Ford and the Auto Workers union said that the loan plan was established because many employees lacked the resources to take advantage of the preferential placement program negotiated in 1982.

The loans range from $500 to $1,000, repayable in 12 to 18 months, for eligible workers who transfer to other Ford facilities at least 50 miles away. Since adoption of the preferential placement program, more than 3,500 laid-off Ford workers with dim recall prospects at their home plants have been hired at other Ford plants.

Job security featured in nurses' contract

The results of widespread efforts to moderate or reduce medical care costs were particularly apparent in the Minneapolis–St. Paul, MN, area, where 6,000 registered nurses struck 15 hospitals for 5 weeks to enforce their demands for increased job security in the face of a continuing decline in hospital utilization. Reportedly, only about 30 percent of the nurses were working full time prior to the work stoppage, the largest recorded strike by nurses in the Nation's history.

Much of the drop in utilization rates of hospitals throughout the Nation has resulted from cuts in Federal medicare payments to hospitals, adoption of Health Maintenance Organizations (HMO's) and other alternatives to "traditional" insurance plans, and revisions in insurance plans requiring individuals to pay a larger percentage of costs and to seek second medical opinions before certain procedures are undertaken.

One provision of the new contract protects nurses' jobs by providing that cuts in work time be distributed among all nurses in a department on a seniority basis before any jobs can be eliminated. This will be accomplished by reducing biweekly work hours to 32 for the least senior nurse in a department, then applying the same reduction to other nurses in seniority order.

In another move to increase job security, nurses will be permitted to use $250 of the existing $500 a year tuition reimbursement fund for retraining offered by a variety of institutions. The remaining money will be available only for training offered by the previously specified types of institutions.

Another provision specifies that displaced nurses in any other department for which they are qualified will be given a 3-week orientation. Previously, they were given a 2-week orientation.

Other contract terms negotiated by Health Employers, Inc., the hospitals' bargaining organization, and the Minnesota affiliate of the American Nurses Association included 4 percent salary increases on July 9, 1984, and June 1, 1985; a provision for reopening wage negotiations in the third year; 80-cent-an-hour premium pay for weekend work (formerly 65 cents); 72 days maximum accumulation of sick leave (formerly 65 days); and $80-a-month employer payment for dependents health insurance coverage (formerly $65).

One reason the Minneapolis–St. Paul hospitals have been particularly hard hit by reductions in hospital use is because a third of the area's population belong to HMO's, which seek to moderate costs by holding hospital stays to a minimum and having hospitals compete for business.

Insurance agents contract provides for pay raise

John Hancock Mutual Life Insurance Co. and the Food and Commercial Workers negotiated a 3-year nationwide contract for 5,000 agents. A union official valued the package at $214.62 a week, including an earnings increase of $124.39.

The earnings increase included a new provision for annual lump-sum payments ranging from 1 week of pay for agents with 1 to 5 years of service to 3 weeks of pay for those with 10 years of service or more. The commission that agents receive during the first year of new policies was raised to 55 percent of the premiums, from 52.5 percent. The fee paid to agents for servicing policies sold by others now begins when a policy is 1 year old, instead of the previous 5-year requirement.

Annual pensions were raised from 1 to 1.25 percent of average annual earnings during the highest six of the last 8 years prior to retirement. A supplemental pension plan also was established, financed by a company obligation equal to 5.5 percent of the agent's earnings on casualty policies.

All agents were brought under John Hancock's comprehensive and dental plan effective January 1, 1985, and the annual out-of-pocket expense per family was raised to $2,000, from $1,000. Previously, some agents were covered by the company plan and the others were covered by a "basic" plan. The major medical limit for retirees was raised to $150,000, from $100,000.

Power company workers get new contract

In New York State, 8,000 employees of Niagara Mohawk Power Corp. negotiated a 2-year contract. Hourly pay, which averaged $13.331, was increased 5.25 percent retroactive to June 1 and 5.5 percent on June 1, 1985. Benefit revisions included a change in the pension calculation method that will result in increased benefits, and a $100,000 increase (to $400,000) in lifetime major medical coverage for employees. In an unusual provision, employees will receive payments equal to half of any erroneous overcharges they discover in their medical bills.

The International Brotherhood of Electrical Workers represents virtually all of the workers, with 11 other unions representing the balance. □

Book Reviews

Perspective on a current issue

White Collar Productivity. Edited by Robert N. Lehrer. New York, McGraw-Hill Book Co., 1983. 362 pp.

Concern with the productivity of the white-collar work force has intensified over recent decades. Industries staffed principally by white-collar employees have expanded more rapidly than others. Between 1973 and 1983, employment in commercial banking gained 41 percent; in finance, insurance, and real estate exclusive of banking, 32 percent; in State and local administration, and legislative and judicial branches, 29 percent, in contrast to a 17-percent rise in total payroll employment. In manufacturing, the number of production workers declined 14 percent over the decade, but that of nonproduction workers—mostly white-collar staff—increased 12 percent. The expansion of white-collar work has insistently raised questions of how productively white-collar workers are employed. In turn, such questions have generated efforts to measure the productivity of white-collar workers.

The book, *White Collar Productivity*, features essays on a wide range of topics bearing on white-collar productivity. The authors address the problems and practices of measuring office productivity and office work, as well as management by objectives, control of overhead, human resource planning, paperwork reduction, and work unit analysis. They are concerned, then, primarily with the organizational and managerial foundations upon which efforts to improve productivity must build. They leave aside larger questions, such as the economic significance of growth in the white-collar work force, and the possible employment impacts of office technology. The relation of office productivity to office technology receives but cursory treatment. This review will focus upon some productivity issues raised by the book.

One of the chapters, written by Carl G. Thor of the American Productivity Center, deals with productivity measurement in white-collar groups. Two basic problems are addressed—the definition of output, and the acceptance of measuring productivity by "knowledge" workers (that is, professional and technical personnel). Output here is not construed as the final production or service of a firm. Instead, it is an intermediate activity. It relates to the work process or activity in which the white-collar employee is engaged. The relation between input processes and this in-

termediate output must be homogeneous, writes Thor. The work of typists in a steel mill cannot or should not be measured in terms of the steel tonnage the mill fabricates. Measurement of the typists' work must be linked to the process of typing by which a certain quantity of documents is produced.

Determining the productivity of an establishment's intermediate activities is akin to the measurement of the productivity of higher economic aggregates in that it may reflect changes in underlying factors—for example, a switch from manual to electric typewriters or word processors. Yet, reading Thor, the measurement of white-collar productivity seems basically to prepare for the formulation of work standards. This is implied by his discussion of task analysis of "knowledge" work, as well as of performance measures in a computer center. Task analysis requires the breakdown of given jobs, which may then be simplified and standardized for work measurement. Performance (or work) measures assume standards linked with a given technology; they are changed when the technology changes. Thor's productivity concept comes close to, although it is not identical with, work measurement. The book includes a chapter on work measurement, and more will be said about it further on.

A broader question might be raised here. Productivity measurement has traditionally had a variety of purposes, but these have differed in importance. Central to government and academic measurement efforts of the post-World War II era has been "to learn something of the process by which production is raised," as Solomon Fabricant put it in "Meaning and Measurement of Productivity." (John T. Dunlop and Vasilii P. Diatchenko, eds., *Labor Productivity* New York, McGraw-Hill, Inc., 1964, p. 20.)

This means that the host of factors that underlie productivity growth must be analyzed. A productivity measure may be based on one or more inputs—for example, labor, capital, materials. But also it is bound to reflect factors which affect input use, such as the way resources are combined, organizational changes, advances in knowledge, and know-how. For such factors to be properly evaluated, output must be defined at a reasonably aggregative level, such as an industry, or even an establishment, producing a group of cognate products or services. Otherwise, the processes by which productivity—or "the power to produce"—is raised (or retarded) do not fully come into play. This also means

that homogeneity of input processes with output is not a prerequisite for productivity measurement. Such homogeneity has only technical meaning, in the sense that workers in a given field depend upon specific tools and materials to produce an output. Their productivity hinges to a large extent upon nontechnical factors, such as the ones mentioned, and on developments in unrelated fields.

When such broader questions are addressed, output defined at highly disaggregated levels cannot yield productivity measures that are economically meaningful (although for purposes of work measurement such definitions may be serviceable). Let us again look at the example of typists at a steel mill. Does their work have meaning without the steel that the mill produces? No. Can the steel be made and marketed without the overhead represented in part by the typists? No. Overhead embodies the social nexus of production—payroll, marketing, purchasing, and accounting. Production cannot be carried on without the overhead activities, and overhead activities are meaningless without the production with which they are linked. The output of an economic unit results from combining the resources and operations of the two entities.

Thor briefly addresses the "sensitivity" of professional and technical workers to productivity measurement at the intermediate level. He recognizes that blue-collar workers may be equally sensitive. But blue-collar workers' output, Thor says, unlike white-collar workers', is "tangible," easily countable. Moreover, blue-collar workers have long experienced productivity measurement, they are accustomed to it. Thor does not tell us why blue-collar workers have indeed been so sensitive to productivity measurement, and why white-collar workers may be equally or even more sensitive to it. The reasons have been discussed in the industrial relations literature; they relate to fear of job loss if the standards which productivity measurement generates are not met; the frequent downgrading of jobs where jobs have been simplified; and the pressure to perform beyond specified standards. Productivity measurement and the task analysis to which, according to Thor, it gives rise, thus promotes the *industrialization* of white-collar work. "In countless banks and insurance companies a traditional clerical job with some variety—typing, correspondence, scheduling, filing, phoning—is broken down into its smallest component parts. One person then performs one small task over and over, often at a pace set by the computer and monitored electronically," writes Karen Nussbaum of the National Association of Working Women (*In These Times*, May 24–30, 1983). Similarly, A. B. Cherns, writing in the *International Labour Review* (December 1980) on the social effects of microelectronic technology, states that "Banks, insurance companies, and government offices, and many other organizations have . . . used [the computer] in such a way as to fragment jobs and reduce the employee's autonomy." It is not surprising then that white-collar employees may be quite as "sensitive" to productivity

measurement of disaggregated activities as blue-collar workers.

Some writers see diseconomies in the office organized along industrial lines. Workers are dissatisfied, they become bored and tire easily; absenteeism and quit rates rise. In "Mechanization of Office Work" (*Scientific American*, September 1982), V. Giuliana urges that the "information office," with work stations where workers handle all aspects of accounts, replace the "industrialized" office. He would measure productivity in terms of worker effectiveness in satisfying customers. This approach does not seem to be the prevailing trend in the work organization of offices. But in the chapter on work measurement in *White Collar Productivity*, Robert E. Nolan appears to suggest this approach.

It seems puzzling why, when technology changes rapidly and chiefly in the direction of saving labor, work measurement remains so prominent a tool of productivity improvement. However, work measurement conceptually abstracts from changes in technology and other factors underlying productivity change. These changes engender new work standards, and work measurement is the means by which these standards may be implemented. The spread of work measurement to white-collar work has been spurred by the diffusion of data processing by computer. The computer can be keyed to generate performance data and to monitor adherence to performance standards. Nolan claims that the state of the art of white-collar work measurement is now such as to make it possible "to establish a form of accountability for virtually every job in the office," including jobs at technical and professional levels.

Does work measurement improve white-collar productivity? We cannot be sure. Office efficiency has been estimated to be as low as 50 percent by some industrial engineers (Delmar Karger and Franklin Bayha, *Engineered Work Measurement*, 3d ed., New York, Industrial Press, 1977, p. 739), hence even if work standards are not fully met, productivity gains result as performance approaches standards. (Nolan claims that costs may be reduced "to the tune of 20–40 percent of payroll costs.") However, efficiency gains from the elimination of slack cannot be repeated. Furthermore, problems associated with work measurement assert themselves. Nolan writes, "There are negative connotations . . not the least of which is getting people to work harder, [or] getting more work out of fewer people. Positive aspects are that work measurement is essential to high performance and high productivity."

Thus, there is a disjunction between the interest of employees and the interest of management. Nolan would overcome this disjunction by involving employees in setting standards. He is emphatic about this in discussing standards for the work of technicians and professionals who, he suggests, should set their own standards rather than have them set by specialists. However, work measurement inherently contributes to the routinization of work; and routinization is like a railroad tract, tolerating no deviation from gauge.

49

This tendency is reinforced by Nolan's advocacy of the Methods-Time-Measurement System—a procedure which, as defined by its originator, "analyzes any manual operation or method into the basic motions required to perform it, and assigns to each motion a predetermined time standard, which is determined by the nature of the motion and the conditions *under which it is* made." Such a system leaves little discretion to the worker whose output is thus paced.

Work measurement systems have since their inception aroused the resistance of organized labor. In significant instances, unions have declined to recognize management prerogatives in this area, and insisted upon the cooperative setting of work standards and methods. The setting of work standards has been implicitly if conditionally accepted by labor, but work measurement has almost invariably remained a controversial practice, whose scientific value, where claimed, has been persistently questioned. Nolan deals with this problem quite gingerly, pointing to first-line supervisors rather than to rank-and-file workers as displaying "poor attitudes" in respect to work measurement, and presenting obstacles to installing work measurement systems. He writes that these supervisors do not wish to be burdened with the recordkeeping tasks such systems require. It seems likely, however, that supervisors are less concerned with the paperwork than with employee resentment and the deterioration in the ambiance of the workplace which work measurement systems may bring on. Quantity of white-collar output may rise at the expense of quality of service and of a spirit of teamwork and cooperation. To paraphrase Cherns, work measurement fragments tasks to a degree that any imbecile can perform them; it should then not be surprising that only an imbecile will be happy performing such tasks.

The book is a valuable practical guide to current management thinking about how to deal with problems of white-collar output and productivity. But its approach is narrow in that it fails to deal with the broader meaning of productivity. It does not examine the effect of changes in white-collar technology on employment and productivity. Most important in terms of its frame of reference, it fails in pointing to ways of involving white-collar workers in structuring their own work and in initiating their own paths to higher productivity.

—HORST BRAND
Office of Productivity and Technology
Bureau of Labor Statistics

Publications received

Agriculture and natural resources

Buttel, Frederick H., Charles C. Geisler, Irving W. Wiswall, comps., *Labor and the Environment: An Analysis of and Annotated Bibliography on Workplace Environmental Quality in the United States*. Westport, CT, Greenwood Press, 1984, 155 pp. $29.95.

Great Britain, Department of Employment, "Agricultural Workers in Great Britain: Earnings and Hours in 1983," *Employment Gazette*, June 1984, pp. 265–68.

Economic and social statistics

Carson, Carol S., "The Underground Economy: An Introduction," *Survey of Current Business*, May 1984, pp. 21–37.

Debreu, Gerard, "Economic Theory in the Mathematical Mode," *The American Economic Review*, June 1984, pp. 267–78.

Ehrenberg, Ronald G. and Daniel Sherman, *Optimal Financial Aid Policies for a Selective University*. Reprinted from the *Journal of Human Resources*, Vol. 19, No. 2, 1984, pp. 202–30. Cambridge, MA, National Bureau of Economic Research, Inc., 1984. (NBER Reprint, 483.) $1.50, paper.

Griliches, Zvi and Jerry A. Hausman, *Errors in Variables in Panel Data*. Cambridge, MA, National Bureau of Economic Research, Inc., 1984, 32 pp. (NBER Technical Paper Series, 37.) $1.50, paper.

Gustman, Alan L., *Modeling Individuals' Behavior: Evaluation of a Policymaker's Tool*. Reprinted from the *Journal of Policy Analysis and Management*, Winter 1984, pp. 191–205. Cambridge, MA, National Bureau of Economic Research, Inc., 1984. (NBER Reprint, 484.) $1.50, paper.

Howland, Marie, "Age of Capital and Regional Business Cycles," *Growth and Change*, April 1984, pp. 29–37.

Robey, Bryant, "The 1990 Census: A View from 1984," *American Demographics*, July 1984, beginning on p. 24.

Economic growth and development

Aziz, Sartaj, "Rural Development—Some Essential Prerequisites," *International Labour Review*, May–June 1984, pp. 277–85.

Cooter, Robert and Peter Rappoport, "Were the Ordinalists Wrong About Welfare Economics?" *The Journal of Economic Literature*, June 1984, pp. 507–30.

Davidson, Paul, "Reviving Keynes's Revolution," *Journal of Post Keynesian Economics*, Summer 1984, pp. 561–75.

Dembinski, Pawel H., Economic Policy—Social Policy: A Dilemma?" *Labour and Society*, April–June 1984, pp. 193–209.

Mellor, John W. and Bruce F. Johnston, "The World Food Equation: Interrelations Among Development, Employment, and Food Consumption," *The Journal of Economic Literature*, June 1984, pp. 531–74.

"Special Issue on Development and the Rural-Urban Divide," *The Journal of Development Studies*, April 1984, pp. 1–166.

Steinnes, Donald N., "Business Climate, Tax Incentives, and Regional Economic Development," *Growth and Change*, April 1984, pp. 38–47.

Weitzman, Martin L., *The Share Economy: Conquering Stagflation*. Cambridge, MA, Harvard University Press, 1984, 167 pp. $15.

Education

Dean, Edwin, ed., *Education and Economic Productivity*. Cambridge, MA, Ballinger Publishing Co., 1984, 223 pp. $29.95.

Polzin, Paul E., "The Impact of Economic Trends on Higher Education Enrollment," *Growth and Change*, April 1984, pp. 18–22.

Tucker, Jan L. and Eugene Gilliom, "Education in China Today: Social and Moral Preparation for the Year 2000," *Social Education*, May 1984, pp. 312–23.

Health and safety

Engler, Rick, *A Job Safety and Health Bill of Rights*. Philadelphia, PA, Philadelphia Area Project on Occupational Safety and Health (PHILAPOSH), 1984, 32 pp. $3, prepaid.

Great Britain, Department of Employment, "The Control of Major Hazards," by Mike Peters, *Employment Gazette*, June 1984, pp. 269–72.

Hodgson, Thomas A. and Andrea N. Kopstein, "Health Care Expenditures for Major Diseases in 1980," *Health Care Financing Review*, Summer 1984, pp. 1–12.

Jarmul, David, "Taking Primary Health Care to the Local Community," *News Report*, National Academy of Sciences, July 1984, pp. 4–8.

Levi, L., *Stress in Industry: Causes, Effects and Prevention*. Geneva, International Labour Office, 1984, 70 pp. $7.15. Available in the United States from the Washington Branch of ILO.

Rohan, Paul C. and Bernard Brody, "Frequency and Costs of Work Accidents in North America, 1971–80," *Labour and Society*, April–June 1984, pp. 165–76.

Walsh, Diana Chapman, "Is There a Doctor In-House?" *Harvard Business Review*, July–August 1984, pp. 84–94.

Industrial relations

"A Labor Perspective on QWL," *QWL Focus*, Spring 1984, entire issue.

Bogue, Bonnie G., "State Merit Vs. Bargaining: First Bout Goes to Bargaining," *California Public Employee Relations*, June 1984, pp. 21–26.

Brody, Michael, "The Labor Showdown of the Decade," *Fortune*, Apr. 16, 1984, pp. 128–33.

Dickens, Linda and others, "The British Experience Under a Statute Prohibiting Unfair Dismissal," *Industrial and Labor Relations Review*, July 1984, pp. 497–514.

Flax, Steven, "Pay Cuts Before the Job Even Starts," *Fortune*, Jan. 9, 1984, pp. 75–77.

Hill, Herbert, *The Crippled Giant: Organized Labor in Decline*. Madison, University of Wisconsin, Industrial Relations Research Institute, 1984. (Reprint 253.) Reprinted from *Critical Perspectives of Third World America*, Vol. 1, No. 1, Fall 1983.

Hunt, James W., *The Law of the Workplace: Rights of Employers and Employees*. Washington, The Bureau of National Affairs, Inc., 1984, 159 pp. $15, paper.

McKenzie, Richard B., *Fugitive Industry: The Economics and Politics of Deindustrialization*. San Francisco, CA, Pacific Institute for Public Policy Research, 1984, 279 pp. $29.95, cloth; $11.95, paper.

"Recent Trends in Collective Bargaining: In the United Kingdom," by B. C. Roberts; "In Japan," by Taishiro Shirai; "In Belgium," by R. Blanpain, *International Labour Review*, May–June 1984, pp. 287–332.

Industry and government organization

Cifelli, Anna, "Rolling Back the Freedom to Manage," *Fortune*, Jan. 9, 1984, pp. 90–94.

Gagnon, Jean-Marie and Benoît Papillon, *Financial Risk, Rate of Return of Canadian Firms, and Implications for Government Intervention*. Ottawa, Ontario, Economic Council of Canada, 1984, 105 pp., bibliography. $8.95, Canada; $10.75, other countries. Available from Canadian Government Publishing Center, Supply and Services Canada, Ottawa.

International economics

Berlew, F. Kington, "The Joint Venture—a Way Into Foreign Markets," *Harvard Business Review*, July–August 1984, beginning on p. 48.

Charnovitz, Steve, *Trade Adjustment Assistance: What Went Wrong?* Reprinted from *The Journal* of the Institute for Socioeconomic Studies, Spring 1984, pp. 26–39.

"Developing Countries' Debt in 1983 and Beyond," *The OECD Observer*, May 1984, pp. 7–10.

Fairlamb, David, "Comback in East-West Trade," *Dun's Business Month*, July 1984, beginning on p. 38.

Huntington, Samuel P., "Will More Countries Become Democratic?" *Political Science Quarterly*, Summer 1984, pp. 193–218.

Lennep, Emile van, "North-South Interdependence and Economic Reform," *The OECD Observer*, May 1984, pp. 3–6.

Marris, Stephen, "East-West Economic Relations: A Longer-Term Perspective," *The OECD Observer*, May 1984, pp. 11–17.

"Obstacles to International Trade Services: Banking," *The OECD Observer*, May 1984, pp. 21–24.

Schumacher, Dieter, North-South Trade and Shifts in Employment: A Comparative Analysis of Six European Community Countries," *International Labour Review*, May–June 1984, pp. 333–48.

Windmuller, John P. and Alan Gladstone, eds., *Employers Associations and Industrial Relations: A Comparative Study*. New York, The Clarendon Press, Oxford University Press, 1984, 370 pp. $39.95.

Labor and economic history

Jensen, Joan M. and Sue Davidson, eds., *A Needle, A Bobbin, A Strike: Women Needleworkers in America*. Philadelphia, PA, Temple University Press, 1984, 304 pp. $29.95.

Steffen, Charles G., *The Mechanics of Baltimore: Workers and Politics in the Age of Revolution, 1763–1812*. Urbana, University of Illinois Press, 1984, 296 pp. $24.95.

Labor force

Great Britain, Department of Employment, "Non-working Women: Evidence from the 1980 Women and Employment Survey," by Jean Martin and Ceridwen Roberts, *Employment Gazette*, June 1984, pp. 273–78.

Jacobson, Louis, "A Tale of Employment Decline in Two Cities: How Bad Was the Worst of Times?" *Industrial and Labor Relations Review*, July 1984, pp. 557–69.

Kahn, Lawrence M. and Stuart A. Low, "An Empirical Model of Employed Search, Unemployed Search, and Nonsearch," *The Journal of Human Resources*, Winter 1984, pp. 104–17.

Leonard, Jonathan S., *What Promises Are Worth: The Impact of Affirmative Action Goals*. Cambridge, MA, 1984, 29 pp. (NBER Working Paper Series, 1346.) $1.50, paper.

Maillat, Denis, "Mobility Channels: An Instrument for Analyzing and Regulating the Local Labour Market," *International Labour Review*, May–June 1984, pp. 349–62.

51

Paukert, Liba, *The Employment and Unemployment of Women in OECD Countries*. Paris, France, The Organization for Economic Co-Operation and Development, 1984, 88 pp. $11, paper. Available in the United States from the Washington Branch of OECD Publications and Information Center.

Rima, Ingrid H., "Involuntary Unemployment and the Respecified Labor Supply Curve," *Journal of Post Keynesian Economics*, Summer 1984, pp. 540–50.

U.S. Bureau of Labor Statistics, *Linking Employment Problems to Economic Status*. Washington, 1984, 46 pp. (Bulletin 2201.) Stock No. 029–001–02811–3. $2, Superintendent of Documents, Washington 20402.

——*Workers, Jobs, and Statistics*. Prepared by Diane M. Nilsen. Washington, 1984, 39 pp. (Report 698,)

Management and organization theory

Bolton, Robert and Dorothy Grover Bolton, *Social Style/Management Style: Developing Productive Work Relationships*. New York, AMACOM, American Management Associations, 1984, 171 pp. $19.95.

Fraker, Susan, "Why Women Aren't Getting to the Top," *Fortune*, Apr. 16, 1984, pp. 40–45.

Weiss, Andrew, "Simple Truths of Japanese Manufacturing," *Harvard Business Review*, July–August 1984, pp. 119–25.

Monetary and fiscal policy

Chand, Sheetal K., "A Keynesian Fiscal Policy and the New Classical Macroeconomics," *Journal of Post Keynesian Economics*, Summer 1984, pp. 509–22.

Jeffrey, Robert H., "The Folly of Stock Market Timing," *Harvard Business Review*, July–August 1984, pp. 102–10.

Pindyck, Robert S., "Risk, Inflation, and the Stock Market," *The American Economic Review*, June 1984, pp. 335–51.

Salisbury, Dallas L., ed., *Why Tax Employee Benefits?* Washington, Employee Benefit Research Institute, 1984, 105 pp. $14.

Prices and living conditions

Minsky, Hyman P. and Piero Ferri, "Prices, Employment, and Profits," *Journal of Post Keynesian Economics*, Summer 1984, pp. 489–99.

Sellekaerts, Willy and Brigitte Sellekaerts, "Both Anticipated and Unanticipated Inflation Determine Relative Price Variability," *Journal of Post Keynesian Economics*, Summer 1984, pp. 500–08.

Productivity and technological change

"Artificial Intelligence Is Here," *Business Week*, July 9, 1984, pp. 54–62.

Blanchard, Francis, "Technology, Work and Society: Some Pointers from ILO Research," *International Labour Review*, May–June 1984, pp. 267–76.

Darby, Michael R., "The U.S. Productivity Slowdown: A Case of Statistical Myopia," *The American Economic Review*, June 1984, pp. 301–22.

Hyer, Nancy L. and Urban Wemmerlov, "Group Technology and Productivity," *Harvard Business Review*, July–August 1984, pp. 140–49.

Ichniowski, Casey, *Micro-Production Functions Aren't Pretty: Firm-Level and Industry-Level Specification for Inputs and Outputs* (34 pp); *Fuzzy Frontiers of Production: Evidence of*

Persistent Inefficiency in Safety Expenditures (25 pp.); *Industrial Relations and Economic Performance Grievances and Productivity* (32 pp.); *Ruling Out Productivity? Labor Contract Pages and Plant Performance* (18 pp.). Cambridge, MA, National Bureau of Economic Research, Inc., 1984, (NBER Working Paper Series, 1365–68.) $1.50 each, paper.

Van Patten, James J., "Future of Science, Technology and Society," *Revista Internacional de Sociologia*, October–December 1983, pp. 665–69.

Social institutions and social change

"Baby Boomers Push for Power," *Business Week*, July 2, 1984, pp. 52–62.

Fricker, Yves, "The Working Class in the Nineteen Eighties," *Labour and Society*, October–December 1983, pp. 403–15.

Wilson, Barbara Foley, "Marriage's Melting Pot," *American Demographics*, July 1984, beginning on p. 34.

Wages and compensation

Berkowitz, Edward and Monroe Berkowitz, "The Survival of Workers' Compensation," *Social Service Review*, June 1984, pp. 259–80.

Bianchi, Suzanne M., "Wives Who Earn More Than Their Husbands," *American Demographics*, July 1984, beginning on p. 18.

Grenier, Gilles, "The Effects of Language Charcteristics on the Wages of Hispanic-American Males," *The Journal of Human Resources*, Winter 1984, pp. 35–52.

Johnson, William G. and Edward Heler, "Compensation for Death from Asbestos," *Industrial and Labor Relations Review*, July 1984, pp. 529–40.

Kaufman, Roger T. and Geoffrey Woglom, "The Effects of Expectations on Union Wages," *The American Economic Review*, June 1984, pp. 418–32.

Shapiro, David, "Wage Differentials Among Black, Hispanic, and White Young Men," *Industrial and Labor Relations Review*, July 1984, pp. 570–81.

Siegers, Jacques, "Equality of the Sexes in the Distribution of Labour: Is the Goal in Sight? The Case of the Netherlands," *Labour and Society*, April–June 1984, pp. 151–63.

U.S. Bureau of Labor Statistics, *Industry Wage Survey: Oil and Gas Extraction, June 1982*. Prepared by Kathleen MacDonald. Washington, 1984, 67 pp. (Bulletin 2193.) Stock No. 029–001–02810–5. $3, Superintendent of Documents, Washington 20402.

Williams, Robert E. and Lorence L. Kessler, *A Closer Look at Comparable Worth: A Study of the Basic Questions to be Addressed in Approaching Pay Equity*. Washington, National Foundation for the Study of Equal Employment Policy, 1984, 84 pp. $15, paper.

Welfare programs and social insurance

Brown, J. Douglas, *The Genesis of Social Security in America*. Princeton, NJ, Princeton University, Industrial Relations Section, Department of Economics, 1969, 18 pp. (Reprinted in 1984.)

Danielson, William F., "Up and Down the Staircase: Multi-Tier Retirement Systems," *California Public Employee Relations*, June 1984, pp. 2–20. □

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 1984 issue of the *Review,* to reflect experience through 1983.

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 July 1984 using the X-11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 29 and 30 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average. All Items CPI. Only seasonally adjusted percent changes are available for this series. **Adjustments for price changes.** Some data are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is $2 ($3/150 × 100 = $2). The resulting values are described as "real," "constant," or "1967" dollars.

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

Symbols

p = preliminary. To improve the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.

r = revised. Generally, this revision reflects the availability of later data but may also reflect other adjustments.

n.e.c. = not elsewhere classified.

Schedule of release dates for BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	September 7	August	October 5	September	November 2	October	1–11
Producer Price Index	September 14	August	October 12	September	November 9	October	23–27
Consumer Price Index	September 21	August	October 24	September	November 21	October	19–22
Real earnings	September 21	August	October 24	September	November 21	October	12–16
Productivity and costs:							
Nonfarm business and manufacturing . . .	. . . .	. . . .	October 29	3rd quarter	. . . .	. . . .	29–32
Nonfinancial corporations	. . . .	. . . .	. . . .	. . . .	November 28	3rd quarter	29–32
Major collective bargaining settlements	. . . .	. . . .	October 26	1st 9 months	. . . .	. . . .	36–37
Employment Cost Index	. . . .	. . . .	October 30	3rd quarter	. . . .	. . . .	33–35
Occupational injuries and illnesses	. . . .	. . . .	. . . .	. . . .	November 14	1983	. . . .

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 unemployed as a percent of the civilian labor force.

The **labor force** consists of all employed or unemployed civilians plus members of the Armed Forces stationed in the United States. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons who are retired, those engaged in their own housework, those not working while attending school, those unable to work because of long-term illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy, and members of the Armed Forces stationed in the United States. The **labor force participation rate** is the proportion of the noninstitutional population that is in the labor force. The **employment-population ratio** is total employment (including the resident Armed Forces) as a percent of the noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the preceding years. These adjustments affect the comparability of historical data presented in table 1. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings*.

Data in tables 2–8 are seasonally adjusted, based on the seasonal experience through December 1983.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–83

[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 industries			
1950	106,164	63,377	59.7	60,087	56.6	1,169	58,918	7,160	51,758	3,288	5.2	42,787
1955	111,747	67,087	60.0	64,234	57.5	2,064	62,170	6,450	55,722	2,852	4.3	44,660
1960	119,106	71,489	60.0	67,639	56.8	1,861	65,778	5,458	60,318	3,852	5.4	46,617
1965	128,459	76,401	59.5	73,034	56.9	1,946	71,088	4,361	66,726	3,366	4.4	52,058
1966	130,180	77,892	59.8	75,017	57.6	2,122	72,895	3,979	68,915	2,875	3.7	52,288
1967	132,092	79,565	60.2	76,590	58.0	2,218	74,372	3,844	70,527	2,975	3.7	52,527
1968	134,281	80,990	60.3	78,173	58.2	2,253	75,920	3,817	72,103	2,817	3.5	53,291
1969	136,573	82,972	60.8	80,140	58.7	2,238	77,902	3,606	74,296	2,832	3.4	53,602
1970	139,203	84,889	61.0	80,796	58.0	2,118	78,678	3,463	75,215	4,093	4.8	54,315
1971	142,189	86,355	60.7	81,340	57.2	1,973	79,367	3,394	75,972	5,016	5.8	55,834
1972	145,939	88,847	60.9	83,966	57.5	1,813	82,153	3,484	78,669	4,882	5.5	57,091
1973	148,870	91,203	61.3	86,838	58.3	1,774	85,064	3,470	81,594	4,355	4.8	57,667
1974	151,841	93,670	61.7	88,515	58.3	1,721	86,794	3,515	83,279	5,156	5.5	58,171
1975	154,831	95,453	61.6	87,524	56.5	1,678	85,845	3,408	82,438	7,929	8.3	59,377
1976	157,818	97,826	62.0	90,420	57.3	1,668	88,752	3,331	85,421	7,406	7.6	59,991
1977	160,689	100,665	62.6	93,673	58.3	1,656	92,017	3,283	88,734	6,991	6.9	60,025
1978	153,541	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	65.2	102,042	59.4	1,645	100,397	3,368	97,030	8,273	7.5	61,460
1982	173,939	111,872	64.3	101,194	58.2	1,668	99,526	3,401	96,125	10,578	9.5	62,067
1983	175,891	113,226	64.4	102,510	58.3	1,676	100,834	3,383	97,450	10,717	9.5	62,665

55

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		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
TOTAL															
Noninstitutional population[1,2]	173,939	175,465	175,970	176,122	176,297	176,474	176,636	176,809	177,219	177,363	177,510	177,662	177,813	177,974	178,138
Labor force[2]	111,872	112,646	113,489	113,799	113,924	113,561	113,720	113,824	113,901	114,377	114,598	114,938	115,493	115,567	115,636
Participation rate[3]	64.3	64.2	64.5	64.6	64.6	64.3	64.4	64.4	64.3	64.5	64.6	64.7	65.0	64.9	64.9
Total employed[2]	101,194	101,277	102,889	103,166	103,571	103,665	104,291	104,629	104,876	105,576	105,826	106,095	106,978	107,438	107,093
Employment-population rate[4]	58.2	57.7	58.5	58.6	58.7	58.7	59.0	59.2	59.2	59.5	59.6	59.7	60.2	60.4	60.1
Resident Armed Forces[1]	1,668	1,671	1,664	1,682	1,695	1,695	1,685	1,688	1,686	1,684	1,686	1,693	1,690	1,690	1,698
Civilian employed	99,526	99,606	101,225	101,484	101,876	101,970	102,606	102,941	103,190	103,892	104,140	104,402	105,288	105,748	105,395
Agriculture	3,401	3,392	3,499	3,449	3,308	3,240	3,257	3,356	3,271	3,395	3,281	3,393	3,389	3,403	3,345
Nonagricultural industries	96,125	96,214	97,726	98,035	98,568	98,730	99,349	99,585	99,918	100,496	100,859	101,009	101,899	102,344	102,050
Unemployed	10,678	11,369	10,600	10,633	10,353	9,896	9,429	9,195	9,026	8,801	8,772	8,843	8,514	8,130	8,543
Unemployment rate[5]	9.5	10.1	9.3	9.3	9.1	8.7	8.3	8.1	7.9	7.7	7.7	7.7	7.4	7.0	7.4
Not in labor force	62,067	62,819	62,481	62,323	62,373	62,913	62,916	62,985	63,318	62,986	62,912	62,724	62,320	62,407	62,503
Men, 16 years and over															
Noninstitutional population[1,2]	83,052	84,064	84,099	84,173	84,261	84,344	84,423	84,506	84,745	84,811	84,880	84,953	85,024	85,101	85,179
Labor force[2]	63,979	64,580	64,840	64,807	64,877	64,709	64,846	64,838	64,930	65,093	65,156	65,212	65,307	65,452	65,362
Participation rate[3]	77.0	76.8	77.1	77.0	77.0	76.7	76.8	76.7	76.6	76.8	76.8	76.8	76.8	76.9	76.7
Total employed[2]	57,800	58,320	58,592	58,607	58,828	58,950	59,389	59,580	59,781	60,147	60,290	60,293	60,629	60,923	60,607
Employment-population rate[4]	69.6	69.4	69.7	69.6	69.8	69.9	70.3	70.5	70.5	70.9	71.0	71.0	71.3	71.6	71.2
Resident Armed Forces[1]	1,527	1,533	1,521	1,538	1,549	1,543	1,534	1,537	1,542	1,540	1,542	1,548	1,545	1,545	1,551
Civilian employed	56,271	56,787	57,071	57,069	57,279	57,407	57,855	58,043	58,239	58,607	58,748	58,745	59,084	59,378	59,056
Unemployed	6,179	6,260	6,248	6,200	6,049	5,759	5,457	5,258	5,149	4,946	4,867	4,919	4,678	4,529	4,756
Unemployment rate[5]	9.7	9.7	9.6	9.6	9.3	8.9	8.4	8.1	7.9	7.6	7.5	7.5	7.2	6.9	7.3
Women, 16 years and over															
Noninstitutional population[1,2]	90,887	91,827	91,871	91,949	92,036	92,129	92,214	92,302	92,474	92,552	92,630	92,709	92,789	92,873	92,958
Labor force[2]	47,894	48,646	48,649	48,992	49,047	48,852	48,874	48,986	48,971	49,283	49,442	49,725	50,186	50,115	50,273
Participation rate[3]	52.7	53.0	53.0	53.3	53.3	53.0	53.0	53.1	53.0	53.2	53.4	53.6	54.1	54.0	54.1
Total employed[2]	43,395	44,190	44,297	44,559	44,743	44,715	44,902	45,049	45,094	45,429	45,536	45,802	46,350	46,515	46,486
Employment-population rate[4]	47.7	48.1	48.2	48.5	48.6	48.5	48.7	48.8	48.8	49.1	49.2	49.4	50.0	50.1	50.0
Resident Armed Forces[1]	139	143	143	144	146	152	151	151	144	144	144	145	145	145	147
Civilian employed	43,256	44,047	44,154	44,415	44,597	44,563	44,751	44,898	44,950	45,285	45,392	45,657	46,205	46,370	46,339
Unemployed	4,499	4,457	4,352	4,433	4,304	4,137	3,972	3,937	3,876	3,855	3,905	3,924	3,836	3,600	3,787
Unemployment rate[5]	9.4	9.2	8.9	9.0	8.8	8.5	8.1	8.0	7.9	7.8	7.9	7.9	7.6	7.2	7.5

[1] The population and Armed Forces figures are not adjusted for seasonal variation.
[2] Includes members of the Armed Forces stationed in the United States.
[3] Labor force as a percent of the noninstitutional population.

[4] Total employed as a percent of the noninstitutional population.
[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

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

[Numbers in thousands]

Employment status	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
TOTAL															
Civilian noninstitutional population[1]	172,271	174,215	174,306	174,440	174,602	174,779	174,951	175,121	175,533	175,679	175,824	175,969	176,123	176,284	176,440
Civilian labor force	110,204	111,550	111,825	112,117	112,229	111,866	112,035	112,136	112,215	112,693	112,912	113,245	113,803	113,877	113,938
Participation rate	64.0	64.0	64.2	64.3	64.3	64.0	64.0	64.0	63.9	64.1	64.2	64.4	64.6	64.6	64.6
Employed	99,526	100,834	101,225	101,484	101,876	101,970	102,606	102,941	103,190	103,892	104,140	104,402	105,288	105,748	105,395
Employment-population ratio[2]	57.8	57.9	58.1	58.2	58.3	58.3	58.6	58.8	58.8	59.1	59.2	59.3	59.8	60.0	59.7
Unemployed	10,678	10,717	10,600	10,633	10,353	9,896	9,429	9,195	9,026	8,801	8,772	8,843	8,514	8,130	8,543
Unemployment rate	9.7	9.6	9.5	9.5	9.2	8.8	8.4	8.2	8.0	7.8	7.8	7.8	7.5	7.1	7.5
Not in labor force	62,067	62,665	62,481	62,323	62,373	62,913	62,916	62,985	63,318	62,986	62,912	62,724	62,320	62,407	62,502
Men, 20 years and over															
Civilian noninstitutional population[1]	73,644	74,872	74,927	75,012	75,115	75,216	75,327	75,433	75,692	75,786	75,880	75,973	76,073	76,176	76,269
Civilian labor force	57,980	58,744	58,982	58,954	59,012	58,949	59,053	59,050	59,299	59,394	59,388	59,480	59,546	59,726	59,694
Participation rate	78.7	78.5	78.7	78.6	78.6	78.4	78.4	78.3	78.3	78.4	78.3	78.3	78.3	78.4	78.3
Employed	52,891	53,4897	53,765	53,804	53,947	54,140	54,457	54,658	54,999	55,266	55,368	55,385	55,685	55,970	55,789
Employment-population ratio[2]	71.8	71.4	71.8	71.7	71.8	72.0	72.3	72.5	72.7	72.9	73.0	72.9	73.2	73.5	73.1
Agriculture	2,422	2,429	2,521	2,475	2,431	2,376	2,336	2,374	2,356	2,409	2,364	2,453	2,451	2,469	2,455
Nonagricultural industries	50,469	51,058	51,244	51,329	51,516	51,764	52,121	52,284	52,643	52,857	53,004	52,932	53,234	53,501	53,334
Unemployed	5,089	5,257	5,217	5,150	5,065	4,809	4,596	4,392	4,300	4,128	4,020	4,095	3,861	3,755	3,906
Unemployment rate	8.8	8.9	8.8	8.7	8.6	8.2	7.8	7.4	7.3	7.0	6.8	6.9	6.5	6.3	6.5
Women, 20 years and over															
Civilian noninstitutional population[1]	82,864	84,069	84,122	84,224	84,333	84,443	84,553	84,666	84,860	84,962	85,064	85,168	85,272	85,380	85,488
Civilian labor force	43,699	44,636	44,647	44,896	45,062	44,936	44,953	45,024	44,981	45,258	45,459	45,703	46,222	46,101	46,261
Participation rate	52.7	53.1	53.1	53.3	53.4	53.2	53.2	53.2	53.0	53.3	53.4	53.7	54.2	54.0	54.1
Employed	40,086	41,004	41,123	41,298	41,550	41,570	41,738	41,843	41,798	42,138	42,315	42,517	43,098	43,146	43,088
Employment-population ratio[2]	48.4	48.8	48.9	49.0	49.3	49.2	49.4	49.4	49.3	49.6	49.7	49.9	50.5	50.5	50.4
Agriculture	601	620	613	627	581	597	638	653	625	640	574	619	610	623	573
Nonagricultural industries	39,485	40,384	40,510	40,671	40,969	40,973	41,100	41,190	41,174	41,498	41,741	41,898	42,487	42,523	42,515
Unemployed	3,613	3,632	3,524	3,598	3,512	3,366	3,215	3,181	3,182	3,120	3,144	3,186	3,124	2,955	3,173
Unemployment rate	8.3	8.1	7.9	8.0	7.8	7.5	7.2	7.1	7.1	6.9	6.9	7.0	6.8	6.4	6.9
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,763	15,274	15,257	15,204	15,154	15,120	15,072	15,022	14,981	14,931	14,880	14,828	14,778	14,728	14,683
Civilian labor force	8,526	8,171	8,196	8,267	8,155	7,981	8,029	8,062	7,935	8,041	8,065	8,062	8,034	8,050	7,982
Participation rate	54.1	53.5	53.7	54.4	53.8	52.8	53.3	53.7	53.0	53.9	54.2	54.4	54.4	54.7	54.4
Employed	6,549	6,342	6,337	6,382	6,379	6,260	6,411	6,440	6,392	6,488	6,457	6,500	6,505	6,631	6,518
Employment-population ratio[2]	41.5	41.5	41.5	42.0	42.1	41.4	42.5	42.9	42.7	43.5	43.4	43.8	44.0	45.0	44.4
Agriculture	378	334	365	347	296	267	283	329	290	346	343	321	327	311	317
Nonagricultural industries	6,171	6,008	5,972	6,035	6,083	5,993	6,128	6,111	6,102	6,142	6,114	6,179	6,178	6,320	6,201
Unemployed	1,977	1,829	1,859	1,885	1,776	1,721	1,618	1,622	1,543	1,553	1,608	1,562	1,529	1,419	1,464
Unemployment rate	23.2	22.4	22.7	22.8	21.8	21.6	20.2	20.1	19.4	19.3	19.9	19.4	19.0	17.6	18.3
White															
Civilian noninstitutional population[1]	149,441	150,805	150,959	151,003	151,021	151,175	151,324	151,484	151,939	152,079	152,285	152,178	152,229	152,295	152,286
Civilian labor force	96,143	97,021	97,255	97,498	97,507	97,339	97,559	97,724	97,813	98,167	98,424	98,495	98,853	98,770	98,710
Participation rate	64.3	64.3	64.4	64.6	64.6	64.4	64.5	64.5	64.4	64.6	64.6	64.7	64.9	64.9	64.8
Employed	87,903	88,893	89,260	89,503	89,693	89,851	90,430	90,779	91,044	91,544	91,845	91,933	92,505	92,697	92,430
Employment-population ratio[2]	58.8	58.9	59.1	59.3	59.4	59.4	59.8	59.9	59.9	60.2	60.3	60.4	60.8	60.9	60.7
Unemployed	8,241	8,128	7,995	7,995	7,814	7,488	7,129	6,945	6,768	6,623	6,580	6,562	6,348	6,072	6,280
Unemployment rate	8.6	8.4	8.2	8.2	8.0	7.7	7.3	7.1	6.9	6.7	6.7	6.7	6.4	6.1	6.4
Black															
Civilian noninstitutional population[1]	18,584	18,925	18,942	18,966	18,994	19,026	19,057	19,086	19,196	19,222	19,248	19,274	19,302	19,330	19,360
Civilian labor force	11,331	11,647	11,741	11,724	11,720	11,565	11,623	11,650	11,660	11,881	11,867	11,934	12,008	11,962	12,076
Participation rate	61.0	61.5	62.0	61.8	61.7	60.8	61.0	61.0	60.7	61.8	61.7	61.9	62.5	61.9	62.4
Employed	9,189	9,375	9,443	9,408	9,504	9,449	9,563	9,582	9,707	9,958	9,896	9,923	10,105	10,168	10,041
Employment-population ratio[2]	49.4	49.5	49.9	49.6	50.0	49.7	50.2	50.2	50.6	51.8	51.4	51.5	52.4	52.6	51.9
Unemployed	2,142	2,272	2,298	2,316	2,216	2,116	2,060	2,068	1,953	1,923	1,972	2,011	1,903	1,795	2,035
Unemployment rate	18.9	19.5	19.6	19.8	18.9	18.3	17.7	17.8	16.7	16.2	16.6	16.8	15.8	15.0	16.9
Hispanic origin															
Civilian noninstitutional population[1]	9,400	12,771	9,640	9,690	9,700	9,745	9,677	9,735	9,778	9,906	10,080	10,072	10,026	9,824	9,738
Civilian labor force	5,983	8,119	6,090	6,145	6,202	6,165	6,232	6,267	6,336	6,292	6,484	6,378	6,332	6,298	6,293
Participation rate	63.6	63.6	63.2	63.4	63.9	63.3	64.4	64.4	64.8	63.5	64.3	63.3	63.2	64.1	64.6
Employed	5,158	6,995	5,339	5,350	5,392	5,398	5,463	5,540	5,627	5,652	5,751	5,643	5,666	5,669	5,626
Employment-population ratio[2]	54.9	54.8	55.4	55.2	55.6	55.4	56.5	56.9	57.6	57.1	57.1	56.0	56.5	57.7	57.8
Unemployed	825	1,124	751	795	810	767	769	727	708	639	733	735	666	629	667
Unemployment rate	13.8	13.8	12.3	12.9	13.1	12.4	12.3	11.6	11.2	10.2	11.3	11.5	10.5	10.0	10.6

[1] The population figures are not seasonally adjusted.

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

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

4. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average 1982	1983	1983 July	Aug.	Sept.	Oct.	Nov.	Dec.	1984 Jan.	Feb.	Mar.	Apr.	May	June	July
CHARACTERISTIC															
Civilian employed, 16 years and over	99,526	100,834	101,225	101,484	101,876	101,970	102,606	102,941	103,190	103,892	104,140	104,402	105,288	105,748	105,395
Men	56,271	56,787	57,071	57,069	57,279	57,407	57,855	58,043	58,239	58,607	58,748	58,745	59,084	59,378	59,056
Women	43,256	44,047	44,154	44,415	44,597	44,563	44,751	44,898	44,950	45,285	45,392	45,657	46,205	46,370	46,339
Married men, spouse present	38,074	37,967	38,254	38,281	38,232	38,240	38,388	38,494	38,682	38,911	38,927	39,062	39,159	39,072	39,121
Married women, spouse present	24,053	24,603	24,618	24,905	24,921	24,953	25,057	25,140	24,947	25,212	25,239	25,457	25,722	25,786	25,716
Women who maintain families	5,099	5,091	5,071	5,096	5,124	5,172	5,236	5,254	5,293	5,346	5,444	5,491	5,668	5,688	5,662
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,505	1,579	1,631	1,628	1,572	1,505	1,481	1,512	1,443	1,560	1,515	1,661	1,610	1,604	1,513
Self-employed workers	1,636	1,565	1,573	1,564	1,515	1,527	1,556	1,572	1,613	1,609	1,580	1,534	1,537	1,570	1,559
Unpaid family workers	261	240	252	240	236	227	224	265	233	232	198	207	246	212	230
Nonagricultural industries:															
Wage and salary workers	88,462	89,500	89,687	90,032	90,743	90,617	91,094	91,422	91,641	92,379	92,819	92,931	93,928	94,040	93,841
Government	15,562	15,537	15,593	15,671	15,560	15,578	15,585	15,481	15,535	15,822	15,813	15,784	15,761	15,685	15,604
Private industries	72,945	73,963	74,094	74,361	75,183	75,039	75,509	75,941	76,106	76,557	77,006	77,147	78,167	78,355	78,236
Private households	1,207	1,247	1,276	1,270	1,279	1,278	1,216	1,241	1,197	1,219	1,155	1,296	1,347	1,329	1,239
Other	71,738	72,716	72,818	73,091	73,904	73,761	74,293	74,700	74,909	75,339	75,851	75,851	76,820	77,026	76,997
Self-employed workers	7,262	7,575	7,595	7,641	7,656	7,695	7,800	7,734	7,936	7,849	7,755	7,834	7,707	7,828	7,717
Unpaid family workers	401	376	322	375	380	405	474	450	364	330	326	338	311	348	306
PERSONS AT WORK[1]															
Nonagricultural industries	90,552	92,038	92,126	91,953	93,322	93,273	93,834	94,173	94,707	95,067	94,982	96,918	96,523	96,500	96,848
Full-time schedules	72,245	73,624	73,844	73,499	74,666	75,047	75,398	75,802	76,237	76,715	77,004	78,276	78,280	78,496	78,659
Part time for economic reasons	5,852	5,997	5,700	5,866	6,027	5,724	5,848	5,712	5,943	5,808	5,463	5,593	5,353	5,491	5,300
Usually work full time	2,169	1,826	1,781	1,742	1,771	1,617	1,719	1,672	1,771	1,611	1,472	1,530	1,549	1,654	1,589
Usually work part time	3,683	4,171	3,919	4,124	4,256	4,107	4,129	4,040	4,172	4,197	3,991	4,063	3,804	3,837	3,711
Part time for noneconomic reasons	12,455	12,417	12,582	12,588	12,629	12,502	12,588	12,659	12,527	12,545	12,515	13,049	12,889	12,514	12,889

[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	1983 July	Aug.	Sept.	Oct.	Nov.	Dec.	1984 Jan.	Feb.	Mar.	Apr.	May	June	July
CHARACTERISTIC															
Total, all civilian workers	9.7	9.6	9.5	9.5	9.2	8.8	8.4	8.2	8.0	7.8	7.8	7.8	7.5	7.1	7.5
Both sexes, 16 to 19 years	23.2	22.4	22.7	22.8	21.8	21.6	20.2	20.1	19.4	19.3	19.9	19.4	19.0	17.6	18.3
Men, 20 years and over	8.8	8.9	8.8	8.7	8.6	8.2	7.8	7.4	7.3	7.0	6.8	6.9	6.5	6.3	6.5
Women, 20 years and over	8.3	8.1	7.9	8.0	7.8	7.5	7.2	7.1	7.1	6.9	6.9	7.0	6.8	6.4	6.9
White, total	8.6	8.4	8.2	8.2	8.0	7.7	7.3	7.1	6.9	6.7	6.7	6.7	6.4	6.1	6.4
Both sexes, 16 to 19 years	20.4	19.3	19.4	19.5	18.2	18.5	17.2	17.0	16.2	16.5	17.1	16.2	16.2	15.5	15.3
Men, 16 to 19 years	21.7	20.2	20.3	20.7	18.9	19.8	17.6	17.5	17.8	16.4	17.3	16.6	16.8	16.5	17.8
Women, 16 to 19 years	19.0	18.3	18.4	18.2	17.4	16.9	16.6	16.5	14.5	16.7	16.8	15.7	15.5	14.5	12.6
Men, 20 years and over	7.8	7.9	7.7	7.7	7.7	7.3	6.9	6.7	6.3	6.1	5.8	5.9	5.6	5.3	5.5
Women, 20 years and over	7.3	6.9	6.8	6.7	6.6	6.3	6.0	5.9	6.0	5.8	5.9	6.0	5.8	5.6	5.9
Black, total	18.9	19.5	19.6	19.8	18.9	18.3	17.7	17.8	16.7	16.2	16.6	16.8	15.8	15.0	16.9
Both sexes, 16 to 19 years	48.0	48.5	48.4	51.4	51.1	48.7	47.3	49.0	47.9	43.5	46.7	44.8	44.1	34.3	42.4
Men, 16 to 19 years	48.9	48.8	48.3	53.7	52.7	45.6	44.9	46.4	47.1	46.7	44.4	42.8	40.9	35.3	42.6
Women, 16 to 19 years	47.1	48.2	48.4	48.8	49.2	52.2	50.0	51.9	48.8	39.9	49.6	47.1	48.2	33.1	42.1
Men, 20 years and over	17.8	18.1	18.6	18.2	16.9	16.3	15.6	15.1	14.8	14.1	15.4	16.0	14.1	14.8	15.7
Women, 20 years and over	15.4	16.5	16.2	16.4	16.1	15.9	15.6	15.9	14.3	14.4	13.5	13.4	13.6	12.4	14.0
Hispanic origin, total	13.8	13.8	12.3	12.9	13.1	12.4	12.3	11.6	11.2	10.2	11.3	11.5	10.5	10.0	10.6
Married men, spouse present	6.5	6.5	6.2	6.3	6.1	5.7	5.5	5.2	5.0	4.9	4.7	4.7	4.5	4.5	4.6
Married women, spouse present	7.4	7.0	7.0	6.9	6.8	6.3	6.0	6.1	6.0	5.9	5.8	5.8	5.8	5.6	5.9
Women who maintain families	11.7	12.2	11.8	11.8	12.0	11.4	10.5	10.9	10.7	11.0	11.0	10.5	9.8	9.6	9.6
Full-time workers	9.6	9.5	9.4	9.3	9.1	8.7	8.2	8.0	7.8	7.5	7.5	7.6	7.2	6.7	7.2
Part-time workers	10.5	10.4	10.2	10.2	10.1	10.0	9.8	9.8	9.2	9.3	9.2	9.1	9.3	10.3	9.6
Unemployed 15 weeks and over	3.2	3.8	3.9	3.6	3.5	3.3	3.1	3.0	2.9	2.6	2.5	2.5	2.5	c2.3	2.4
Labor force time lost[1]	11.0	10.9	10.7	10.7	10.5	10.0	9.7	9.4	9.2	8.9	8.8	8.9	8.5	8.3	8.7
INDUSTRY															
Nonagricultural private wage and salary workers	10.1	9.9	9.7	9.8	9.4	9.0	8.6	8.3	7.9	7.8	7.6	7.7	7.2	7.0	7.4
Mining	13.4	17.0	16.6	14.9	16.9	12.1	12.8	12.4	10.9	12.2	11.2	10.3	8.9	7.1	7.5
Construction	20.0	18.4	18.0	17.9	18.1	15.8	15.6	16.3	15.0	15.1	13.3	14.3	14.8	14.8	14.7
Manufacturing	12.3	11.2	10.7	11.2	10.2	9.6	8.9	8.3	8.4	7.5	7.5	7.7	7.1	7.2	7.5
Durable goods	13.3	12.1	11.4	11.7	10.9	10.2	9.0	8.3	8.0	7.3	7.8	7.5	7.0	7.2	6.7
Nondurable goods	10.8	10.0	9.7	10.5	9.3	8.7	8.7	8.2	8.9	7.8	7.2	8.0	7.1	7.3	8.6
Transportation and public utilities	6.8	7.4	7.3	7.7	7.4	7.2	6.7	6.5	5.1	5.9	5.0	5.4	5.5	5.2	6.1
Wholesale and retail trade	10.0	10.0	9.8	9.8	9.5	9.8	9.1	8.8	8.4	8.3	8.3	8.7	7.9	7.2	7.8
Finance and service industries	6.9	7.2	7.3	7.2	7.0	6.9	6.7	6.6	6.3	6.3	6.4	6.1	5.5	5.4	5.9
Government workers	4.9	5.3	5.4	5.1	5.0	5.1	4.9	5.0	5.0	4.5	4.4	4.4	4.7	4.1	4.5
Agricultural wage and salary workers	14.7	16.0	15.0	15.1	16.5	16.2	15.7	15.6	15.5	14.0	14.6	12.2	13.9	11.8	14.6

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

c = corrected.

6. Unemployment rates by sex and age, seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Total, 16 years and over	9.7	9.6	9.5	9.5	9.2	8.8	8.4	8.2	8.0	7.8	7.8	7.8	7.5	7.1	7.5
16 to 24 years	17.8	17.2	16.8	17.2	16.5	16.3	15.4	14.9	14.8	14.2	14.4	14.6	14.0	13.0	13.6
16 to 19 years	23.2	22.4	22.7	22.8	21.8	21.6	20.2	20.1	19.4	19.3	19.9	19.4	19.0	17.6	18.3
16 to 17 years	24.9	24.5	25.1	24.8	24.0	24.0	21.9	22.9	21.9	22.1	23.1	22.3	20.2	19.7	20.5
18 to 19 years	22.1	21.1	20.8	21.6	20.5	20.3	19.3	18.8	17.6	17.5	18.1	17.5	18.2	16.3	16.7
20 to 24 years	14.9	14.5	13.9	14.4	13.8	13.6	13.0	12.2	12.5	11.6	11.6	12.2	11.5	10.7	11.3
25 years and over	7.4	7.5	7.4	7.3	7.2	6.8	6.5	6.4	6.2	6.1	5.9	6.0	5.7	5.6	5.9
25 to 54 years	7.9	8.0	7.9	7.8	7.7	7.2	6.9	6.8	6.5	6.4	6.3	6.3	6.0	5.7	6.2
55 years and over	5.0	5.3	5.3	5.1	5.2	5.0	4.9	4.9	4.7	4.3	4.3	4.2	4.4	4.6	4.4
Men, 16 years and over	9.9	9.9	9.9	9.8	9.6	9.1	8.6	8.3	8.1	7.8	7.7	7.7	7.3	7.1	7.5
16 to 24 years	19.1	18.4	18.4	18.6	17.6	17.3	15.9	15.6	15.6	14.6	14.6	15.0	14.0	13.7	14.6
16 to 19 years	24.4	23.3	23.8	24.3	22.8	22.5	20.2	20.4	20.8	19.7	20.0	19.7	19.4	18.5	20.6
16 to 17 years	26.4	25.2	27.3	26.0	23.9	24.3	22.0	23.3	21.6	21.6	23.0	23.7	21.3	22.7	23.0
18 to 19 years	23.1	22.2	21.2	23.2	22.2	21.6	19.6	18.9	19.6	18.1	18.2	17.3	18.3	16.1	18.8
20 to 24 years	16.4	15.9	15.8	15.7	15.0	14.7	13.8	13.3	13.1	12.1	11.9	12.7	11.5	11.4	11.7
25 years and over	7.5	7.8	7.6	7.5	7.5	7.0	6.8	6.5	6.2	6.1	5.9	5.9	5.7	5.4	5.7
25 to 54 years	8.0	8.2	8.1	8.0	8.0	7.4	7.1	6.7	6.6	6.4	6.1	6.2	5.9	5.6	5.9
55 years and over	5.1	5.6	5.5	5.4	5.6	5.4	5.4	5.4	4.8	4.5	4.6	4.4	4.5	4.3	4.6
Women, 16 years and over	9.4	9.2	9.0	9.1	8.8	8.5	8.2	8.1	7.9	7.8	7.9	7.9	7.7	7.2	7.6
16 to 24 years	16.2	15.8	15.0	15.7	15.2	15.1	14.7	14.0	13.9	13.7	14.2	14.1	14.0	12.2	12.5
16 to 19 years	21.9	21.3	21.5	21.1	20.6	20.5	20.1	19.8	18.0	18.9	19.8	19.0	18.6	16.7	15.9
16 to 17 years	23.2	23.7	22.6	23.4	24.0	23.6	21.8	22.5	22.2	22.6	23.1	20.8	19.0	16.4	17.9
18 to 19 years	21.0	19.9	20.5	19.9	18.5	18.8	19.0	18.7	15.4	16.9	18.1	17.8	18.1	16.5	14.4
20 to 24 years	13.2	12.9	11.7	12.8	12.5	12.3	12.0	11.0	11.7	11.0	11.3	11.6	11.6	9.9	10.8
25 years and over	7.3	7.2	7.1	7.0	6.9	6.5	6.2	6.3	6.2	6.1	6.0	6.0	5.8	5.8	6.1
25 to 54 years	7.7	7.7	7.6	7.5	7.3	7.0	6.6	6.8	6.5	6.5	6.5	6.4	6.1	5.8	6.5
55 years and over	4.8	4.7	5.1	4.7	4.5	4.4	4.1	4.3	4.5	4.0	3.9	3.9	4.3	5.0	4.2

7. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Job losers	6,258	6,258	6,235	6,133	5,938	5,601	5,226	5,017	4,825	4,737	4,614	4,527	4,327	4,220	4,511
On layoff	2,127	1,780	1,735	1,660	1,562	1,392	1,321	1,283	1,238	1,272	1,254	1,108	1,192	1,166	1,164
Other job losers	4,141	4,478	4,500	4,473	4,376	4,209	3,905	3,734	3,588	3,465	3,360	3,419	3,134	3,055	3,346
Job leavers	840	830	752	799	858	866	868	855	809	772	756	781	804	800	865
Reentrants	2,384	2,412	2,415	2,479	2,362	2,322	2,250	2,246	2,192	2,153	2,208	2,308	2,178	1,968	2,091
New entrants	1,185	1,216	1,229	1,214	1,234	1,127	1,154	1,150	1,175	1,092	1,213	1,216	1,186	1,136	1,092
PERCENT DISTRIBUTION															
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	58.7	58.4	58.6	57.7	57.1	56.5	55.0	54.1	53.6	54.1	52.5	51.3	50.9	51.9	52.7
On layoff	19.9	16.6	16.3	15.6	15.0	14.0	13.9	13.8	13.7	14.5	14.3	12.5	14.0	14.4	13.6
Other job losers	38.8	41.8	42.3	42.1	42.1	42.4	41.1	40.3	39.9	39.6	38.2	38.7	36.9	37.6	39.1
Job leavers	7.9	7.7	7.1	7.5	8.3	8.7	9.1	9.2	9.0	8.8	8.6	8.8	9.5	9.8	10.1
Reentrants	22.3	22.5	22.7	23.3	22.7	23.4	23.7	24.2	24.4	24.6	25.1	26.1	25.6	24.2	24.4
New entrants	11.1	11.3	11.6	11.4	11.9	11.4	12.1	12.4	13.1	12.5	13.8	13.8	14.0	14.0	12.8
PERCENT OF CIVILIAN LABOR FORCE															
Job losers	5.7	5.6	5.6	5.5	5.3	5.0	4.7	4.5	4.3	4.2	4.1	4.0	3.8	3.7	4.0
Job leavers	.8	.7	.7	.7	.8	.8	.8	.8	.7	.7	.7	.7	.7	.7	.8
Reentrants	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.7	1.8
New entrants	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0

8. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Less than 5 weeks	3,883	3,570	3,529	3,633	3,740	3,504	3,328	3,382	3,233	3,359	3,386	3,438	3,238	3,174	3,462
5 to 14 weeks	3,311	2,937	2,841	2,951	2,784	2,725	2,616	2,504	2,556	2,484	2,539	2,493	2,433	2,294	2,490
15 weeks and over	3,485	4,210	4,398	4,078	3,889	3,655	3,527	3,369	3,201	2,984	2,873	2,855	2,851	2,619	2,689
15 to 26 weeks	1,708	1,652	1,794	1,597	1,383	1,372	1,337	1,284	1,166	1,173	1,114	1,111	1,186	1,008	1,100
27 weeks and over	1,776	2,559	2,604	2,481	2,506	2,283	2,190	2,085	2,035	1,810	1,759	1,744	1,664	1,611	1,589
Mean duration in weeks	15.6	20.0	21.3	19.9	20.2	20.1	20.2	19.6	20.5	18.8	18.8	18.5	18.4	18.6	18.1
Median duration in weeks	8.7	10.1	10.1	9.4	9.4	9.5	9.4	9.0	9.2	8.3	8.3	8.1	8.7	7.2	7.6

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 195,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

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

Production workers in manufacturing include blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 12–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities; in wholesale and retail trade; in finance, insurance, and real estate; and in services industries. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums

in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries.

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received and are different from standard or scheduled hours. **Overtime hours** represent the portion of gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

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

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of May 1984 data, published in the July 1984 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Unadjusted data have been revised back to April 1982; seasonally adjusted data have been revised back to January 1979. Unadjusted data from April 1983 forward, and seasonally adjusted data from January 1980 forward are subject to revision in future benchmarks. Earlier comparable unadjusted and seasonally adjusted data are published in a *Supplement to Employment and Earnings* (unadjusted data from April 1977 through February 1984 and seasonally adjusted data from January 1974 through February 1984) and in *Employment 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,* Bulletin 2134-1 (Bureau of Labor Statistics, 1982).

9. Employment, by industry, selected years, 1950–83

[Nonagricultural payroll data, in thousands]

Year	Total	Private sector	Goods-producing				Service-producing						Government			
			Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Total	Federal	State	Local
1950	45,197	39,170	18,506	901	2,364	15,241	26,691	4,034	2,635	6,751	1,888	5,357	6,026	1,928	(¹)	(¹)
1955	50,641	43,727	20,513	792	2,839	16,882	30,128	4,141	2,926	7,610	2,298	6,240	6,914	2,187	1,168	3,558
1960²	54,189	45,836	20,434	712	2,926	16,796	33,755	4,004	3,143	8,248	2,629	7,378	8,353	2,270	1,536	4,547
1964	58,283	48,686	21,005	634	3,097	17,274	37,278	3,951	3,337	8,823	2,911	8,660	9,596	2,348	1,856	5,392
1965	60,765	50,689	21,926	632	3,232	18,062	38,839	4,036	3,466	9,250	2,977	9,036	10,074	2,378	1,996	5,700
1966	63,901	53,116	23,158	627	3,317	19,214	40,743	4,158	3,597	9,648	3,058	9,498	10,784	2,564	2,141	6,080
1967	65,803	54,413	23,308	613	3,248	19,447	42,495	4,268	3,689	9,917	3,185	10,045	11,391	2,719	2,302	6,371
1968	67,897	56,058	23,737	606	3,350	19,781	44,160	4,318	3,779	10,320	3,337	10,567	11,839	2,737	2,442	6,660
1969	70,384	58,189	24,361	619	3,575	20,167	46,023	4,442	3,907	10,798	3,512	11,169	12,195	2,758	2,533	6,904
1970	70,880	58,325	23,578	623	3,588	19,367	47,302	4,515	3,993	11,047	3,645	11,548	12,554	2,731	2,664	7,158
1971	71,214	58,331	22,935	609	3,704	18,623	48,278	4,476	4,001	11,351	3,772	11,797	12,881	2,696	2,747	7,437
1972	73,675	60,341	23,668	628	3,889	19,151	50,007	4,541	4,113	11,836	3,908	12,276	13,334	2,684	2,859	7,790
1973	76,790	63,058	24,893	642	4,097	20,154	51,897	4,656	4,277	12,329	4,046	12,857	13,732	2,663	2,923	8,146
1974	78,265	64,095	24,794	697	4,020	20,077	53,471	4,725	4,433	12,554	4,148	13,441	14,170	2,724	3,039	8,407
1975	76,945	62,259	22,600	752	3,525	18,323	54,345	4,542	4,415	12,645	4,165	13,892	14,686	2,748	3,179	8,758
1976	79,382	64,511	23,352	779	3,576	18,997	56,030	4,582	4,546	13,209	4,271	14,551	14,871	2,733	3,273	8,865
1977	82,471	67,344	24,346	813	3,851	19,682	58,125	4,713	4,708	13,808	4,467	15,303	15,127	2,727	3,377	9,023
1978	86,697	71,026	25,585	851	4,229	20,505	61,113	4,923	4,969	14,573	4,724	16,252	15,672	2,753	3,474	9,446
1979	89,823	73,876	26,461	958	4,463	21,040	63,363	5,136	5,204	14,989	4,975	17,112	15,947	2,773	3,541	9,633
1980	90,406	74,166	25,658	1,027	4,346	20,285	64,748	5,146	5,275	15,035	5,160	17,890	16,241	2,866	3,610	9,765
1981	91,156	75,126	25,497	1,139	4,188	20,170	65,659	5,165	5,358	15,189	5,298	18,619	16,031	2,772	3,640	9,619
1982	89,566	73,729	23,813	1,128	3,905	18,781	65,753	5,082	5,278	15,179	5,341	19,036	15,837	2,739	3,640	9,458
1983	90,138	74,288	23,394	957	3,940	18,497	66,744	4,958	5,259	15,545	5,467	19,665	15,851	2,752	3,660	9,439

¹ Not available.
² Data include Alaska and Hawaii beginning in 1959.

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

10. Employment, by State

[Nonagricultural payroll data, in thousands]

State	June 1983	May 1984	June 1984ᵖ	State	June 1983	May 1984	June 1984ᵖ
Alabama	1,331.6	1,348.8	1,361.2	Montana	276.1	274.2	275.9
Alaska	224.6	218.5	227.0	Nebraska	611.8	627.9	630.2
Arizona	1,053.1	1,140.9	1,124.5	Nevada	407.5	416.8	421.8
Arkansas	738.7	774.2	767.2	New Hampshire	416.9	418.9	431.8
California	9,993.6	10,301.3	10,387.7	New Jersey	3,200.1	3,260.4	3,315.6
Colorado	1,334.9	1,358.0	1,369.4	New Mexico	481.6	496.3	500.6
Connecticut	1,459.4	1,486.1	1,499.0	New York	7,369.0	7,476.8	7,545.2
Delaware	270.0	274.2	273.7	North Carolina	2,421.6	2,485.7	2,499.3
District of Columbia	599.8	595.6	601.3	North Dakota	254.4	253.3	254.1
Florida	3,886.8	4,119.3	4,122.6	Ohio	4,116.8	4,200.0	4,216.9
Georgia	2,287.6	2,386.9	2,410.3	Oklahoma	1,174.0	1,183.8	1,184.8
Hawaii	403.9	406.8	406.9	Oregon	988.9	993.9	1,006.4
Idaho	322.2	325.8	328.7	Pennsylvania	4,562.2	4,633.8	4,666.6
Illinois	4,528.7	4,568.5	4,592.6	Rhode Island	399.8	404.5	407.0
Indiana	2,009.9	2,069.6	2,064.1	South Carolina	1,193.7	1,234.6	1,239.9
Iowa	1,023.3	1,041.9	1,036.3	South Dakota	240.1	243.2	250.3
Kansas	922.0	946.3	944.6	Tennessee	1,723.1	1,811.9	1,827.3
Kentucky	1,166.6	1,189.2	1,202.6	Texas	6,176.8	6,337.6	6,347.9
Louisiana	1,567.7	1,574.4	1,575.6	Utah	564.3	592.6	598.5
Maine	430.6	427.6	440.8	Vermont	205.1	206.5	207.6
Maryland	1,716.3	1,750.8	1,770.4	Virginia	2,232.1	2,286.1	2,315.5
Massachusetts	2,711.8	2,741.5	2,762.7	Washington	1,611.9	1,635.0	1,653.5
Michigan	3,190.4	3,292.7	3,302.7	West Virginia	581.9	593.8	594.4
Minnesota	1,735.6	1,814.6	1,832.1	Wisconsin	1,866.8	1,902.9	1,929.7
Mississippi	795.3	805.6	799.8	Wyoming	208.5	204.0	209.2
Missouri	1,933.3	1,962.8	1,966.4				
				Virgin Islands	36.0	34.7	34.5

p = preliminary.

11. Employment, by industry, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June^p	July^p
TOTAL	89,566	90,138	90,274	89,918	91,018	91,345	91,688	92,026	92,391	92,846	93,058	93,449	93,768	94,076	94,378
PRIVATE SECTOR	73,729	74,288	74,452	74,110	75,083	75,481	75,814	76,157	76,533	76,971	77,185	77,546	77,864	78,203	78,448
GOODS-PRODUCING	23,813	23,394	23,414	23,532	23,669	23,895	24,058	24,198	24,383	24,577	24,595	24,760	24,851	24,989	25,126
Mining	1,128	957	946	950	952	965	967	969	975	978	978	984	995	1,002	1,002
Oil and gas extraction	708	600	590	590	594	600	603	607	608	607	607	612	619	623	625
Construction	3,905	3,940	3,947	3,985	4,019	4,044	4,073	4,086	4,154	4,226	4,151	4,246	4,286	4,348	4,380
General building contractors	991	1,015	1,024	1,037	1,043	1,053	1,064	1,077	1,100	1,111	1,099	1,110	1,126	1,138	1,137
Manufacturing	18,781	18,497	18,521	18,597	18,698	18,886	19,018	19,143	19,254	19,373	19,466	19,530	19,570	19,639	19,744
Production workers	12,742	12,581	12,612	12,679	12,759	12,928	13,048	13,145	13,234	13,326	13,388	13,443	13,465	13,504	13,600
Durable goods	11,039	10,774	10,781	10,846	10,923	11,071	11,170	11,266	11,343	11,440	11,513	11,551	11,598	11,661	11,730
Production workers	7,311	7,151	7,165	7,224	7,289	7,421	7,511	7,585	7,643	7,718	7,769	7,799	7,826	7,866	7,933
Lumber and wood products	598	658	665	675	680	690	695	698	702	706	712	714	711	714	709
Furniture and fixtures	432	447	454	453	456	462	467	470	475	480	483	482	482	484	487
Stone, clay, and glass products	577	573	573	578	581	587	589	592	595	604	606	604	605	606	608
Primary metal industries	922	838	838	840	849	863	869	877	871	877	877	879	887	885	888
Blast furnaces and basic steel products	396	343	344	344	346	351	351	352	347	348	347	345	347	345	343
Fabricated metal products	1,427	1,374	1,369	1,384	1,389	1,408	1,420	1,431	1,440	1,447	1,456	1,459	1,469	1,479	1,489
Machinery, except electrical	2,244	2,038	2,039	2,051	2,058	2,077	2,106	2,122	2,137	2,151	2,166	2,189	2,203	2,227	2,246
Electrical and electronic equipment	2,008	2,024	2,024	2,022	2,062	2,086	2,109	2,132	2,152	2,175	2,202	2,212	2,228	2,239	2,261
Transportation equipment	1,735	1,756	1,757	1,776	1,780	1,820	1,832	1,855	1,876	1,898	1,905	1,905	1,906	1,919	1,926
Motor vehicles and equipment	699	758	756	779	783	810	823	843	858	865	863	857	848	855	857
Instruments and related products	716	695	690	694	698	702	705	707	711	715	718	719	722	723	729
Miscellaneous manufacturing	382	371	372	373	370	376	378	382	384	387	388	388	385	385	387
Nondurable goods	7,741	7,724	7,740	7,751	7,775	7,815	7,848	7,877	7,911	7,933	7,953	7,979	7,972	7,978	8,014
Production workers	5,431	5,430	5,447	5,455	5,470	5,507	5,537	5,560	5,591	5,608	5,619	5,644	5,639	5,638	5,667
Food and kindred products	1,636	1,622	1,626	1,621	1,624	1,624	1,629	1,631	1,638	1,637	1,638	1,648	1,643	1,646	1,649
Tobacco manufactures	69	69	69	66	68	68	66	67	66	65	66	67	67	66	66
Textile mill products	749	744	745	751	753	758	760	762	768	767	769	766	762	760	759
Apparel and other textile products	1,161	1,164	1,171	1,170	1,174	1,186	1,195	1,202	1,207	1,213	1,218	1,226	1,217	1,208	1,222
Paper and allied products	662	662	661	663	666	669	671	675	676	680	680	680	681	686	689
Printing and publishing	1,272	1,296	1,297	1,302	1,305	1,311	1,317	1,321	1,328	1,333	1,339	1,348	1,356	1,361	1,365
Chemicals and allied products	1,075	1,047	1,046	1,046	1,047	1,049	1,050	1,052	1,053	1,054	1,054	1,057	1,057	1,063	1,063
Petroleum and coal products	201	195	195	194	194	192	192	191	191	190	190	189	188	188	187
Rubber and miscellaneous plastics products	697	718	723	730	735	748	758	766	774	784	790	790	795	796	805
Leather and leather products	219	208	207	208	209	210	210	210	210	210	209	208	206	204	209
SERVICE-PRODUCING	65,753	66,744	66,860	66,386	67,349	67,450	67,630	67,828	68,008	68,269	68,463	68,689	68,917	69,087	69,252
Transportation and public utilities	5,082	4,958	5,001	4,369	5,046	5,053	5,043	5,055	5,095	5,105	5,112	5,129	5,144	5,151	5,179
Transportation	2,789	2,739	2,751	2,751	2,768	2,776	2,763	2,776	2,816	2,828	2,839	2,862	2,871	2,882	2,912
Communication and public utilities	2,293	2,219	2,250	1,618	2,278	2,277	2,280	2,279	2,279	2,276	2,273	2,267	2,273	2,269	2,267
Wholesale trade	5,278	5,259	5,256	5,277	5,301	5,322	5,344	5,371	5,406	5,438	5,457	5,473	5,492	5,501	5,511
Durable goods	11,039	10,774	10,781	10,846	10,923	11,071	11,170	11,266	11,343	11,440	11,513	11,551	11,598	11,661	11,730
Nondurable goods	7,741	7,724	7,740	7,751	7,775	7,815	7,848	7,877	7,911	7,933	7,953	7,979	7,972	7,978	8,014
Retail trade	15,179	15,545	15,580	15,626	15,671	15,737	15,805	15,857	15,914	15,980	16,030	16,095	16,166	16,234	16,264
General merchandise stores	2,184	2,161	2,164	2,169	2,171	2,179	2,195	2,189	2,210	2,211	2,230	2,251	2,273	2,291	2,290
Food stores	2,478	2,560	2,558	2,563	2,568	2,587	2,594	2,600	2,618	2,626	2,626	2,635	2,630	2,639	2,644
Automotive dealers and service stations	1,632	1,667	1,673	1,679	1,685	1,695	1,703	1,710	1,725	1,740	1,748	1,743	1,751	1,751	1,760
Eating and drinking places	4,831	5,007	5,025	5,043	5,058	5,071	5,082	5,095	5,111	5,121	5,136	5,154	5,183	5,199	5,213
Finance, insurance, and real estate	5,341	5,467	5,478	5,498	5,503	5,512	5,530	5,546	5,573	5,593	5,613	5,640	5,662	5,676	5,677
Finance	2,646	2,740	2,749	2,749	2,763	2,769	2,777	2,789	2,797	2,812	2,831	2,851	2,863	2,860	2,860
Insurance	1,714	1,721	1,719	1,724	1,725	1,725	1,728	1,730	1,737	1,741	1,742	1,742	1,746	1,752	1,755
Real estate	981	1,005	1,010	1,025	1,015	1,018	1,025	1,027	1,039	1,040	1,041	1,047	1,053	1,064	1,062
Services	19,036	19,665	19,723	19,808	19,893	19,962	20,034	20,130	20,162	20,278	20,378	20,449	20,549	20,652	20,692
Business services	3,286	3,539	3,577	3,599	3,636	3,672	3,703	3,758	3,798	3,845	3,875	3,912	3,979	4,013	4,036
Health services	5,812	5,973	5,981	5,988	6,003	6,007	6,016	6,026	6,030	6,040	6,052	6,062	6,073	6,065	6,088
Government	15,837	15,851	15,822	15,808	15,935	15,864	15,874	15,869	15,858	15,875	15,873	15,903	15,904	15,873	15,931
Federal	2,739	2,752	2,744	2,747	2,774	2,760	2,759	2,762	2,760	2,763	2,770	2,771	2,767	2,765	2,767
State	3,640	3,660	3,662	3,668	3,672	3,667	3,669	3,668	3,670	3,682	3,686	3,693	3,699	3,680	3,695
Local	9,458	9,439	9,416	9,393	9,489	9,437	9,446	9,439	9,428	9,430	9,417	9,439	9,438	9,428	9,469

p = preliminary.

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

12. Average hours and earnings, by industry 1968–83

[Production or nonsupervisory workers on nonagricultural payrolls]

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

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

13. Average weekly hours, by industry, seasonally adjusted

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1983						1984						
	1982	1983	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June^p	July^p
PRIVATE SECTOR	34.8	35.0	35.0	35.0	35.2	35.2	35.2	35.2	35.4	35.3	35.3	35.4	35.3	35.3	35.3
MANUFACTURING	38.9	40.1	40.2	40.3	40.7	40.6	40.6	40.6	40.9	40.9	40.7	41.1	40.6	40.5	40.6
Overtime hours	2.3	3.0	3.0	3.0	3.2	3.3	3.3	3.4	3.5	3.5	3.5	3.7	3.3	3.3	3.4
Durable goods	39.3	40.7	40.8	40.8	41.4	41.2	41.3	41.3	41.6	41.7	41.4	41.8	41.3	41.2	41.4
Overtime hours	2.2	3.0	3.0	3.0	3.3	3.4	3.5	3.5	3.7	3.8	3.7	4.0	3.5	3.5	3.6
Lumber and wood products	38.0	40.1	40.0	40.2	40.4	40.5	40.0	40.0	40.6	40.4	40.1	40.4	39.6	39.4	39.4
Furniture and fixtures	37.2	39.4	39.7	39.7	40.0	39.8	39.8	40.1	40.0	39.9	39.6	39.7	39.7	39.1	39.7
Stone, clay, and glass products	40.1	41.5	41.6	41.7	42.0	41.8	41.8	41.9	42.1	42.5	41.9	42.3	42.1	41.7	41.9
Primary metal industries	38.6	40.5	40.7	40.9	41.2	41.6	41.7	41.8	41.9	42.0	41.8	42.2	42.1	41.8	41.8
Blast furnaces and basic steel products	37.9	39.5	39.9	40.1	40.5	40.8	40.8	41.2	41.0	41.3	41.2	41.6	41.0	41.3	40.7
Fabricated metal products	39.2	40.6	40.7	40.8	41.4	41.2	41.4	41.4	41.6	41.8	41.3	41.8	41.4	41.3	41.3
Machinery, except electrical	39.7	40.5	40.6	40.6	41.1	41.2	41.3	41.5	41.8	41.9	41.9	42.3	41.9	42.0	41.9
Electrical and electronic equipment	39.3	40.5	40.7	40.7	41.2	41.1	41.1	41.0	41.2	41.2	41.0	41.3	41.0	40.8	41.1
Transportation equipment	40.5	42.1	42.0	41.9	43.3	42.5	42.6	42.4	43.2	43.1	42.9	43.5	42.4	42.3	42.6
Motor vehicles and equipment	40.5	43.3	42.9	43.1	45.1	44.1	44.1	43.9	44.8	44.3	44.4	44.8	42.9	43.1	43.1
Instruments and related products	39.8	40.4	40.5	40.4	40.8	40.7	40.7	40.8	41.3	41.2	41.1	41.4	40.7	41.2	41.1
Nondurable goods	38.4	39.4	39.5	39.6	39.9	39.7	39.8	39.7	39.9	39.9	39.8	40.2	39.6	39.6	39.5
Overtime hours	2.5	3.0	3.0	3.1	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.4	3.1	3.1	3.1
Food and kindred products	39.4	39.5	39.4	39.6	39.8	39.6	39.6	39.5	39.7	39.7	39.8	40.1	39.7	39.8	39.7
Textile mill products	37.5	40.5	40.8	40.9	41.3	40.8	40.6	40.7	40.6	40.8	40.6	41.2	40.0	39.9	39.6
Apparel and other textile products	34.7	36.2	35.9	36.3	36.7	36.6	36.7	36.6	36.6	36.9	36.7	37.4	36.5	36.4	36.0
Paper and allied products	41.8	42.6	42.9	42.9	43.2	43.2	43.1	43.1	43.2	43.2	43.0	43.2	43.1	42.9	43.2
Printing and publishing	37.1	37.6	37.6	37.6	37.8	37.9	37.9	37.7	37.9	37.9	37.9	38.2	38.0	37.7	37.8
Chemicals and allied products	40.9	41.6	41.8	41.7	41.7	41.7	41.9	41.9	42.1	42.1	42.0	42.0	41.8	42.0	41.8
Petroleum and coal products	43.9	43.9	43.8	43.5	43.2	43.6	43.7	44.6	44.8	44.5	44.7	43.7	43.5	43.1	43.0
Leather and leather products	35.6	36.8	37.2	37.1	37.8	37.3	37.2	37.1	37.3	37.2	36.7	37.5	36.5	36.5	36.4
TRANSPORTATION AND PUBLIC UTILITIES	39.0	39.0	39.0	39.2	39.3	39.4	39.2	39.4	39.5	39.3	39.2	39.5	39.4	39.5	39.6
WHOLESALE TRADE	38.3	38.5	38.4	38.5	38.6	38.6	38.6	38.6	38.6	38.5	38.5	38.7	38.6	38.6	38.6
RETAIL TRADE	29.9	29.8	29.8	29.8	29.8	30.0	30.0	30.3	30.1	30.0	30.1	30.0	30.1	30.2	30.0
SERVICES	32.6	32.7	32.7	32.6	32.7	32.8	32.7	32.6	32.8	32.7	32.8	32.8	32.7	32.7	32.8

p = preliminary.

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

14. Average hourly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average 1982	Annual average 1983	1983 July	1983 Aug.	1983 Sept.	1983 Oct.	1983 Nov.	1983 Dec.	1984 Jan.	1984 Feb.	1984 Mar.	1984 Apr.	1984 May	1984 June[p]	1984 July[p]
PRIVATE SECTOR	$7.68	$8.02	$8.01	$7.95	$8.12	$8.16	$8.16	$8.16	$8.26	$8.24	$8.24	$8.29	$8.28	$8.30	$8.34
Seasonally adjusted	(1)	(1)	8.04	8.00	8.09	8.13	8.14	8.17	8.21	8.23	8.25	8.31	8.29	8.33	8.37
MINING	10.77	11.27	11.27	11.25	11.33	11.33	11.40	11.41	11.54	11.49	11.60	11.62	11.56	11.58	11.62
CONSTRUCTION	11.63	11.92	11.80	11.86	12.04	12.06	11.91	12.02	12.08	11.99	11.97	11.95	11.99	11.94	11.97
MANUFACTURING	8.49	8.83	8.84	8.78	8.89	8.90	8.97	9.04	9.08	9.06	9.09	9.11	9.11	9.14	9.17
Durable goods	9.04	9.38	9.38	9.32	9.46	9.47	9.53	9.60	9.64	9.63	9.66	9.67	9.66	9.69	9.70
Lumber and wood products	7.43	7.79	7.82	7.82	7.87	7.86	7.79	7.80	7.88	7.88	7.87	7.89	7.92	8.02	8.01
Furniture and fixtures	6.31	6.62	6.65	6.67	6.74	6.71	6.73	6.78	6.76	6.75	6.76	6.76	6.80	6.85	6.86
Stone, clay, and glass products	8.87	9.27	9.33	9.30	9.42	9.38	9.41	9.41	9.42	9.38	9.40	9.51	9.54	9.57	9.63
Primary metal industries	11.33	11.34	11.37	11.29	11.34	11.28	11.32	11.35	11.38	11.49	11.44	11.51	11.49	11.47	11.46
Blast furnaces and basic steel products	13.35	12.89	12.81	12.74	12.79	12.68	12.71	12.71	12.76	13.10	12.97	13.12	13.09	13.03	12.99
Fabricated metal products	8.77	9.11	9.07	9.09	9.18	9.18	9.24	9.35	9.31	9.31	9.31	9.34	9.33	9.32	9.35
Machinery, except electrical	9.26	9.55	9.57	9.54	9.63	9.66	9.74	9.85	9.85	9.87	9.90	9.91	9.90	9.94	9.92
Electrical and electronic equipment	8.21	8.65	8.67	8.62	8.73	8.71	8.77	8.84	8.88	8.86	8.88	8.89	8.89	8.91	8.94
Transportation equipment	11.11	11.66	11.60	11.52	11.80	11.87	12.01	12.04	12.06	12.00	12.12	12.06	12.04	12.13	12.13
Motor vehicles and equipment	11.62	12.12	12.05	11.92	12.31	12.38	12.49	12.47	12.53	12.41	12.62	12.56	12.51	12.67	12.67
Instruments and related products	8.06	8.46	8.49	8.45	8.54	8.54	8.56	8.65	8.68	8.66	8.71	8.73	8.71	8.77	8.79
Miscellaneous manufacturing	6.42	6.80	6.80	6.79	6.83	6.84	6.84	6.95	7.00	6.97	6.97	6.97	6.99	6.98	7.01
Nondurable goods	7.74	8.08	8.12	8.06	8.11	8.12	8.18	8.24	8.27	8.24	8.27	8.29	8.30	8.33	8.41
Food and kindred products	7.92	8.20	8.20	8.15	8.17	8.16	8.26	8.36	8.41	8.37	8.39	8.43	8.43	8.44	8.45
Tobacco manufactures	9.79	10.35	10.90	10.26	9.90	9.65	10.77	10.19	10.77	11.13	11.29	11.43	11.55	11.93	11.68
Textile mill products	5.83	6.18	6.17	6.19	6.23	6.24	6.26	6.31	6.39	6.40	6.41	6.43	6.42	6.44	6.43
Apparel and other textile products	5.20	5.37	5.35	5.35	5.39	5.40	5.43	5.44	5.50	5.46	5.48	5.49	5.48	5.51	5.51
Paper and allied products	9.32	9.94	10.07	10.03	10.11	10.11	10.20	10.24	10.23	10.22	10.25	10.29	10.34	10.42	10.53
Printing and publishing	8.74	9.11	9.09	9.12	9.23	9.23	9.26	9.29	9.26	9.30	9.29	9.29	9.31	9.29	9.35
Chemicals and allied products	9.96	10.59	10.59	10.62	10.70	10.79	10.86	10.90	10.91	10.90	10.95	10.97	11.02	11.05	11.14
Petroleum and coal products	12.46	13.29	13.22	13.17	13.38	13.38	13.45	13.54	13.47	13.43	13.44	13.44	13.32	13.33	13.49
Rubber and miscellaneous plastics products	7.64	7.99	8.02	8.00	8.05	8.08	8.07	8.16	8.17	8.16	8.20	8.25	8.20	8.24	8.31
Leather and leather products	5.33	5.54	5.53	5.52	5.57	5.56	5.57	5.61	5.68	5.67	5.68	5.68	5.68	5.68	5.71
TRANSPORTATION AND PUBLIC UTILITIES	10.32	10.80	10.84	10.69	10.88	10.94	11.01	11.00	11.08	11.01	11.02	11.07	11.03	11.08	11.23
WHOLESALE TRADE	8.09	8.54	8.56	8.54	8.62	8.69	8.68	8.74	8.82	8.79	8.79	8.89	8.86	8.89	8.98
RETAIL TRADE	5.48	5.74	5.73	5.73	5.78	5.79	5.82	5.78	5.89	5.89	5.89	5.90	5.88	5.87	5.87
FINANCE, INSURANCE, AND REAL ESTATE	6.78	7.29	7.29	7.24	7.33	7.45	7.39	7.43	7.55	7.54	7.54	7.62	7.55	7.57	7.63
SERVICES	6.92	7.30	7.24	7.24	7.37	7.43	7.44	7.47	7.57	7.55	7.54	7.60	7.55	7.54	7.59

1 Not available.

p = preliminary.

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

15. The Hourly Earnings Index, by industry

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

Industry	Not seasonally adjusted July 1983	Not seasonally adjusted May 1984	Not seasonally adjusted June 1984	Not seasonally adjusted July 1984[p]	Percent change from: July 1983 to July 1984	Seasonally adjusted July 1983	Seasonally adjusted Mar. 1984	Seasonally adjusted Apr. 1984	Seasonally adjusted May 1984	Seasonally adjusted June 1984	Seasonally adjusted July 1984[p]	Percent change from: June 1984 to July 1984
PRIVATE SECTOR (in current dollars)	155.3	159.6	159.9	160.7	3.5	155.6	159.1	159.9	159.6	160.3	161.1	0.5
Mining	167.3	172.5	173.7	174.9	4.6	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Construction	144.4	146.3	146.2	146.4	1.4	144.5	146.3	147.0	147.2	146.6		-.4
Manufacturing	157.9	161.8	162.2	162.6	3.0	157.9	161.2	161.6	162.0	162.3	162.6	.2
Transportation and public utilities	156.9	160.2	160.8	162.7	3.7	157.9	160.9	161.3	160.9	162.3	163.7	.9
Wholesale trade	158.6	164.1	164.5	166.0	4.7	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Retail trade	150.5	154.0	153.9	153.9	2.2	150.7	153.2	153.7	153.4	153.8	154.0	.2
Finance, insurance, and real estate	158.9	164.2	164.7	166.2	4.6	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Services	155.3	161.6	161.7	163.0	5.0	156.4	160.8	162.3	161.4	162.6	164.2	.9
PRIVATE SECTOR (in constant dollars)	94.5	94.8	94.8	(2)	(2)	94.9	95.1	95.4	94.9	95.2	(2)	(2)

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

2 Not available.

p = preliminary.

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

16. Average weekly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average 1982	1983	1983 July	Aug.	Sept.	Oct.	Nov.	Dec.	1984 Jan.	Feb.	Mar.	Apr.	May	June[p]	July[p]
PRIVATE SECTOR															
Current dollars	$267.26	$280.70	$282.75	$280.64	$286.64	$288.05	$286.42	$289.68	$289.10	$288.40	$288.40	$292.64	$291.46	$294.65	$297.74
Seasonally adjusted	(1)	(1)	281.40	280.00	284.77	286.18	286.53	287.58	290.63	290.52	291.23	294.17	292.64	294.05	295.46
Constant (1977) dollars	168.09	171.37	172.09	170.08	172.99	173.42	172.44	174.40	173.32	172.59	172.59	174.71	173.18	174.66	(1)
MINING	459.88	478.98	474.47	479.25	488.32	489.46	489.06	495.19	499.68	492.92	496.48	499.66	499.39	503.73	501.98
CONSTRUCTION	426.82	443.42	450.76	450.68	456.32	449.84	432.33	442.34	438.50	443.63	439.30	448.13	458.02	462.08	463.24
MANUFACTURING															
Current dollars	330.26	354.08	353.60	352.96	362.71	362.23	365.98	372.45	368.65	368.74	369.96	372.60	369.87	372.91	370.47
Constant (1977) dollars	207.71	216.17	215.22	213.92	218.90	218.08	220.34	224.23	221.01	220.67	221.40	222.45	219.77	221.05	(1)
Durable goods	355.27	381.77	378.95	378.39	390.70	391.11	395.50	403.20	398.13	398.68	399.92	402.27	399.92	402.14	397.70
Lumber and wood products	282.34	312.38	314.36	319.06	320.31	319.12	309.26	311.22	311.26	313.62	314.01	317.18	317.59	323.21	317.20
Furniture and fixtures	234.73	260.83	259.35	267.47	270.95	271.08	269.87	277.98	263.64	263.93	267.02	267.02	268.60	271.26	268.23
Stone, clay, and glass products	355.69	384.71	390.93	391.53	399.41	394.90	395.22	394.28	386.22	389.27	389.16	401.32	404.50	405.77	406.39
Primary metal industries	437.34	459.27	460.49	458.37	469.48	464.74	470.91	478.97	476.82	482.58	480.48	488.02	481.43	481.74	476.74
Blast furnaces and basic steel products	505.97	509.16	514.96	507.05	521.83	508.47	513.48	526.19	521.88	539.72	534.36	549.73	540.62	539.44	533.89
Fabricated metal products	343.78	369.87	364.61	369.96	379.13	379.13	384.38	395.51	385.43	386.37	384.50	387.61	386.26	387.71	381.48
Machinery except electrical	367.62	386.78	383.76	383.51	395.79	396.06	405.18	418.63	411.73	413.55	415.80	417.21	413.82	417.48	410.69
Electrical and electronic equipment	322.65	350.33	349.40	349.11	358.80	357.98	363.08	369.51	364.97	364.15	364.08	364.49	363.60	365.31	363.86
Transportation equipment	449.96	490.89	483.72	474.62	505.04	505.66	515.23	521.33	517.37	514.80	521.16	523.40	514.11	519.16	513.10
Motor vehicles and equipment	470.61	524.80	518.15	503.02	546.56	545.96	550.81	556.16	555.08	544.80	560.33	563.94	546.69	557.48	548.61
Instruments and related products	320.79	341.78	340.45	340.54	349.29	346.72	350.96	357.25	356.75	356.79	358.85	358.80	354.50	361.32	357.75
Miscellaneous manufacturing	246.53	265.88	263.16	264.81	269.10	272.23	272.23	278.00	272.30	276.01	276.01	275.32	274.71	272.92	274.09
Nondurable goods	297.22	318.35	319.93	319.98	325.21	323.99	327.20	330.42	326.67	326.30	327.49	329.94	328.68	331.53	331.35
Food and kindred products	312.05	323.90	323.90	326.00	330.07	324.77	329.57	333.56	331.35	327.27	329.73	332.99	333.83	337.60	336.31
Tobacco manufactures	370.06	387.09	401.12	385.78	380.16	370.56	431.88	385.18	410.34	405.13	416.60	451.49	457.38	489.13	454.35
Textile mill products	218.63	250.29	248.03	254.41	258.55	256.46	256.66	258.71	257.52	259.84	258.96	260.42	257.44	259.53	251.41
Apparel and other textile products	180.44	194.39	193.14	195.81	198.35	198.72	199.82	199.65	198.55	200.38	201.12	202.03	200.02	202.77	199.46
Paper and allied products	389.58	423.44	429.99	429.28	439.79	437.76	440.64	448.51	440.91	438.44	437.68	442.47	443.59	449.10	453.84
Printing and publishing	324.25	342.54	340.88	343.82	350.74	350.74	352.81	356.74	347.25	349.68	353.02	353.02	351.92	349.30	352.50
Chemicals and allied products	407.36	440.54	440.54	439.67	448.33	449.94	457.21	462.16	458.22	457.80	458.81	460.74	460.64	465.21	463.42
Petroleum and coat products	546.99	583.43	585.65	572.90	592.73	586.04	590.46	603.88	594.03	584.21	585.98	590.02	580.75	579.86	586.82
Rubber and miscellaneous plastics products	302.54	329.19	328.02	329.60	337.30	338.55	338.94	345.98	343.14	342.72	341.94	347.33	341.94	344.43	342.37
Leather and leather products	189.75	203.87	206.82	207.00	209.43	206.83	207.76	209.25	208.46	208.66	205.05	210.16	209.59	213.00	209.56
TRANSPORTATION AND PUBLIC UTILITIES	402.48	421.20	424.93	422.26	428.67	432.13	432.69	436.70	434.34	429.39	429.78	435.05	432.38	439.88	446.95
WHOLESALE TRADE	309.85	328.79	330.42	329.64	333.59	336.30	335.92	339.99	338.69	335.78	336.66	342.27	342.00	344.04	348.42
RETAIL TRADE	163.85	171.05	175.34	174.77	172.82	173.12	173.44	178.02	173.17	173.17	174.34	175.82	176.40	178.45	180.80
FINANCE, INSURANCE, AND REAL ESTATE	245.44	263.90	264.63	261.36	264.61	271.18	266.78	268.97	275.58	274.46	273.70	278.13	274.07	274.79	279.26
SERVICES	225.59	238.71	239.64	238.92	241.00	242.96	242.54	243.52	246.78	246.13	245.80	248.52	246.13	248.07	251.99

[1] Not available.

p = preliminary.

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

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

[In percent]

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1982	27.6	47.6	35.7	31.1	41.1	33.5	34.6	32.4	37.3	28.9	32.4	45.7
	1983	54.3	46.5	60.8	68.9	69.5	64.6	74.3	68.6	69.5	75.4	69.7	73.8
	1984	71.1	73.2	67.0	63.8	64.1	p64.1	p66.2	—	—	—	—	—
Over 3-month span	1982	25.1	27.8	27.8	27.3	27.6	28.6	23.5	24.1	26.5	25.9	27.8	41.6
	1983	46.8	57.3	64.1	75.1	75.7	77.8	74.1	81.6	80.8	78.9	79.5	77.6
	1984	82.2	80.5	76.5	71.1	p67.3	p73.0	—	—	—	—	—	—
Over 6-month span	1982	19.2	22.2	21.9	24.6	20.3	21.4	21.4	18.6	23.2	27.3	29.5	35.4
	1983	50.8	63.0	69.2	75.1	80.0	82.4	84.1	82.4	84.6	85.9	86.8	83.8
	1984	81.9	82.7	p80.0	p77.3	—	—	—	—	—	—	—	—
Over 12-month span	1982	21.6	21.4	17.6	18.1	16.2	18.1	21.1	21.1	25.1	31.6	34.1	40.3
	1983	49.5	54.3	61.9	71.1	77.3	79.5	83.8	88.1	86.8	87.3	85.4	p86.2
	1984	p86.5	—	—	—	—	—	—	—	—	—	—	—

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans. See the "Definitions" in this section.

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

UNEMPLOYMENT INSURANCE DATA

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

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under State programs, Unemployment Compensation for Ex-Servicemen, and Unemployment Compensation for Federal Employees, and the Railroad Insurance Act.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed. Persons not covered by unemployment insurance (about 10 percent of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of

work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

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

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

18. Unemployment insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1983							1984					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
All programs:													
Insured unemployment	3,481	3,275	2,917	2,580	2,478	2,620	2,915	3,374	3,174	2,958	2,613	2,290	2,166
State unemployment insurance program:[1]													
Initial claims[2]	1,740	1,804	1,668	1,381	1,522	1,757	2,105	2,356	1,529	1,433	1,465	1,386	1,388
Insured unemployment (average weekly volume)	3,063	3,049	2,766	2,449	2,358	2,508	2,805	3,249	3,056	2,843	2,515	2,215	2,111
Rate of insured unemployment	3.5	3.5	3.2	2.8	2.7	2.9	3.3	3.8	3.6	3.3	2.9	2.6	2.5
Weeks of unemployment compensated	12,819	10,957	11,581	9,383	8,417	9,301	10,168	12,232	11,622	11,339	9,969	9,948	8,228
Average weekly benefit amount for total unemployment	$123.44	$121.53	$121.14	$121.32	$123.00	$122.19	$122.61	$123.60	$124.30	$124.67	$126.15	$124.20	$122.69
Total benefits paid	$1,537,372	$1,297,164	$1,367,186	$1,104,404	$1,002,141	$1,099,862	$1,203,605	$1,457,983	$1,400,458	$1,369,536	$1,215,728	$1,131,347	$975,000
State unemployment insurance program:[1] **(Seasonally adjusted data)**													
Initial claims[2]	1,836	1,723	1,841	1,664	1,656	1,717	1,620	1,606	1,568	1,554	1,619	1,692	1,574
Insured unemployment (average weekly volume)	3,301	3,303	3,026	3,088	2,617	2,677	2,721	2,486	2,416	2,505	2,612	2,324	2,432
Rate of insured unemployment	3.8	3.8	3.5	3.6	3.1	3.1	3.2	2.9	2.8	2.9	3.0	2.7	2.8
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	16	16	19	17	16	15	14	15	13	13	12	12	12
Insured unemployment (average weekly volume)	25	25	26	27	28	28	27	27	24	22	20	18	18
Weeks of unemployment compensated	107	95	110	106	107	116	113	112	96	89	79	80	72
Total benefits paid	$13,588	$12,134	$14,082	$13,531	$14,074	$15,121	$14,815	$14,532	$12,540	$11,813	$10,486	$10,702	$9,633
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	13	12	11	11	15	13	13	16	10	9	13	9	11
Insured unemployment (average weekly volume)	21	23	22	22	25	27	29	32	31	28	23	20	19
Weeks of unemployment compensated	90	84	96	83	88	110	119	133	129	122	98	89	76
Total benefits paid	$10,272	$9,646	$10,982	$9,535	$10,144	$12,415	$13,888	$15,588	$15,003	$14,778	$11,892	$10,535	$9,032
Railroad unemployment insurance:													
Applications	31	55	14	9	7	8	8	10	4	3	2	2	11
Insured unemployment (average weekly volume)	49	49	46	41	48	40	43	51	49	41	27	19	16
Number of payments	123	92	107	103	92	92	95	121	104	99	70	54	38
Average amount of benefit payment	$203.54	$199.87	$214.21	$214.77	$211.41	$212.36	$213.71	$210.73	$209.56	$208.96	$196.32	$188.45	$187.37
Total benefits paid	$14,984	$17,551	$21,789	$20,239	$19,531	$19,536	$19,870	$23,866	$23,228	$20,112	$13,356	$10,233	$7,039
Employment service:[5]													
New applications and renewals	11,987			15,595			4,297			8,231			9,517
Nonfarm placements	1,921			3,012			782			1,469			1,810

[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.

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period (1967 = 100, unless otherwise noted).

Definitions

The Consumer Price Index is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. It introduced a CPI for All Urban Consumers, covering 80 percent of the total noninstitutional population, and revised the CPI for Urban Wage Earners and Clerical Workers, covering about half the new index population. The All Urban Consumers index covers in addition to wage earners and clerical workers, professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Data are collected from more than 24,000 retail establishments and 24,000 tenants in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972–73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

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

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

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

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

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. The detailed data are aggregated to obtain indexes for stage of processing groupings, commodity groupings, durability of product groupings, and a number of special composite groupings.

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

Notes on the data

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

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

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

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

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

19. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–83

[1967 = 100]

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

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						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
All items	298.1	305.2	306.6	307.3	308.8	309.7	310.7	297.2	302.7	303.3	303.3	304.1	305.4	306.2
Food and beverages	284.7	291.6	294.2	294.3	294.5	293.6	294.3	285.0	291.9	294.4	294.5	294.7	293.7	294.3
Housing	323.1	329.2	331.0	331.5	333.2	334.6	336.2	322.3	324.7	324.2	322.9	322.7	325.2	326.2
Apparel and upkeep	195.6	196.4	196.2	198.8	199.2	198.9	197.4	194.7	195.3	195.4	198.0	198.2	197.7	196.1
Transportation	298.3	306.0	305.8	306.9	309.6	312.2	313.1	299.6	307.9	307.7	308.9	311.9	314.6	315.5
Medical care	355.4	369.5	373.2	374.5	375.7	376.8	378.0	353.3	367.5	371.3	372.6	373.9	375.0	376.3
Entertainment	245.4	249.9	251.5	251.7	253.8	253.5	254.5	241.9	246.2	247.7	248.0	249.8	249.6	250.7
Other goods and services	284.5	300.5	301.5	302.1	302.8	303.2	304.4	282.8	298.1	299.2	299.7	300.4	300.8	302.1
Commodities	271.6	276.8	278.3	278.7	280.1	280.4	280.6	273.3	277.3	278.0	278.1	279.2	279.5	279.7
Commodities less food and beverages	260.9	265.2	266.0	266.6	268.7	269.7	269.6	263.7	266.4	266.2	266.4	267.8	268.7	268.7
Nondurables less food and beverages	272.3	272.3	274.0	274.2	275.7	276.1	275.4	274.4	274.2	276.0	276.1	277.5	277.9	277.2
Durables	251.2	261.4	260.9	262.2	265.2	267.0	267.8	252.7	258.4	256.9	257.1	258.5	259.8	260.3
Services	344.0	353.9	355.3	356.5	358.1	359.9	361.9	341.4	349.8	350.1	349.9	350.1	353.4	355.2
Rent, residential	235.9	242.9	243.6	244.8	246.4	247.2	248.4	235.3	242.3	242.9	244.1	245.7	246.5	247.7
Household services less rent of shelter (12/82 = 100)	104.2	105.1	105.7	105.8	106.2	107.4	108.5	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Transportation services	301.4	314.1	314.4	315.4	315.8	317.7	319.6	297.5	310.3	310.6	311.6	312.1	313.9	315.7
Medical care services	384.6	400.2	404.4	405.3	406.3	407.1	408.4	381.7	397.5	401.8	402.7	403.9	404.7	406.1
Other services	275.6	288.0	289.1	290.4	291.3	292.3	293.6	273.5	285.0	286.1	287.6	288.3	289.4	290.9
Special indexes:														
All items less food	297.8	304.8	305.9	306.8	308.6	310.0	311.0	297.2	302.3	302.4	302.4	303.3	305.2	306.0
All items less homeowners' costs	101.9	104.3	104.8	105.1	105.5	105.9	106.2	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
All items less mortgage interest costs	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	284.3	290.0	290.9	291.3	292.4	293.2	294.0
Commodities less food	258.9	263.0	263.8	264.4	266.5	267.4	267.4	261.6	264.2	264.1	264.3	265.7	266.6	266.6
Nondurables less food	267.3	267.4	269.1	269.3	270.7	271.1	270.5	269.3	269.4	271.1	271.3	272.6	273.0	272.4
Nondurables less food and apparel	308.4	308.6	311.2	310.3	312.1	313.0	312.9	309.9	310.0	312.4	311.6	313.5	314.3	314.3
Nondurables	279.7	283.2	285.3	285.5	286.3	286.1	286.0	280.8	284.1	286.3	286.4	287.2	286.9	286.9
Services less rent of shelter (12/82 = 100) . . .	102.7	105.7	106.3	106.5	106.8	107.5	108.3	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Services less medical care	337.4	346.6	347.8	349.0	350.6	352.5	354.5	334.9	342.6	342.4	342.1	342.2	345.8	347.6
Domestically produced farm foods	269.6	277.2	280.7	279.9	279.4	277.4	278.0	268.7	276.0	279.4	278.6	278.1	276.0	276.4
Selected beef cuts	278.5	274.6	280.8	279.7	280.6	278.1	273.7	279.8	275.8	282.1	281.3	282.3	279.3	274.9
Energy	427.3	416.7	420.2	418.1	421.3	426.1	428.5	428.1	417.0	420.2	418.2	421.5	426.0	428.2
Energy commodities	420.7	409.9	414.5	410.7	414.2	416.3	414.4	421.7	410.7	414.7	411.3	414.8	416.9	415.0
All items less energy	288.2	297.0	298.2	299.2	300.5	301.1	301.9	286.5	293.5	293.8	294.0	294.6	295.7	296.3
All items less food and energy	285.5	294.6	295.5	296.7	298.3	299.3	300.2	283.8	290.7	290.4	290.7	291.3	293.0	293.6
Commodities less food and energy	241.5	248.3	248.5	249.9	251.8	252.5	252.8	242.9	247.2	246.6	247.2	248.4	249.1	249.3
Services less energy	336.4	348.1	349.5	350.7	352.2	353.3	354.7	333.2	343.4	343.6	343.3	343.3	346.1	347.2
Purchasing power of the consumer dollar, 1967 = $1	$0.337	$0.328	$0.326	$0.325	$0.324	$0.323	$0.322	$0.336	$0.330	$0.330	$0.330	$0.329	$0.327	$0.327

69

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						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
FOOD AND BEVERAGES	284.7	291.6	294.2	294.3	294.5	293.6	294.3	285.0	291.9	294.4	294.5	294.7	293.7	294.3
Food	292.0	299.4	302.1	302.2	302.3	301.4	302.0	292.2	299.4	302.1	302.1	302.3	301.2	301.8
Food at home	283.0	290.2	293.6	293.1	292.8	290.7	291.4	282.1	289.1	292.4	291.9	291.6	289.4	290.0
Cereals and bakery products	292.4	299.8	300.3	301.5	302.8	303.5	304.9	291.0	298.3	298.9	300.0	301.3	301.9	303.4
Cereals and cereal products (12/77 = 100)	157.9	159.3	160.3	161.9	162.5	163.4	164.2	158.7	160.0	161.0	162.6	163.1	164.1	164.8
Flour and prepared flour mixes (12/77 = 100)	142.2	143.0	143.4	144.6	143.8	144.6	146.2	142.7	143.3	143.8	145.1	144.1	144.8	146.5
Cereal (12/77 = 100)	176.4	178.6	180.4	182.3	183.9	185.1	185.7	178.5	180.8	182.5	184.4	186.1	187.3	188.0
Rice, pasta, and cornmeal (12/77 = 100)	146.2	146.7	147.2	148.8	149.2	150.0	150.1	147.3	147.9	148.4	150.0	150.4	151.1	151.2
Bakery products (12/77 = 100)	153.7	158.4	158.5	158.8	159.4	159.6	160.4	152.4	157.1	157.2	157.5	158.2	158.4	159.1
White bread	253.1	259.1	257.3	258.9	258.2	260.4	260.2	248.8	254.8	253.0	254.6	254.0	256.1	256.0
Other breads (12/77 = 100)	149.8	153.7	153.9	153.0	154.7	154.3	154.8	151.8	155.8	156.0	155.2	156.8	156.6	157.0
Fresh biscuits, rolls, and muffins (12/77 = 100)	151.7	157.9	158.7	158.8	159.2	158.5	158.7	148.0	153.9	154.7	154.9	155.1	154.3	154.5
Fresh cakes and cupcakes (12/77 = 100)	154.6	161.5	160.4	160.0	161.2	160.6	161.3	152.9	159.5	158.6	158.1	159.2	158.7	159.3
Cookies (12/77 = 100)	155.7	161.1	162.6	162.9	163.8	163.9	165.8	156.4	161.9	163.4	163.7	164.8	164.7	166.7
Crackers, bread, and cracker products (12/77 = 100)	149.5	151.2	152.3	153.9	156.6	155.4	157.9	151.0	152.6	153.6	155.2	158.1	156.6	159.2
Fresh sweetrolls, coffeecake, and donuts 912/77 = 100)	153.7	159.7	160.4	160.5	160.1	161.5	162.1	156.6	162.4	163.2	163.3	163.1	164.2	164.9
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	158.8	163.3	163.9	163.8	166.0	164.9	166.6	152.0	156.5	157.1	157.0	159.1	158.1	159.8
Meats, poultry, fish, and eggs	261.5	268.9	273.0	269.6	270.5	266.7	263.9	261.3	268.3	272.4	269.0	270.0	266.1	263.3
Meats, poultry, and fish	268.7	269.8	273.9	272.6	272.7	270.9	270.3	268.3	269.1	273.2	272.0	272.1	270.1	269.6
Meats	270.2	266.4	270.0	268.8	266.9	267.9	266.8	269.7	265.8	269.4	268.3	268.4	267.2	266.1
Beef and veal 1	278.6	274.9	280.9	279.9	280.8	278.3	274.2	279.2	275.4	281.6	280.8	281.7	278.8	274.6
Ground beef other than canned	264.5	256.9	261.1	260.9	262.7	259.7	255.1	265.7	257.7	261.9	262.1	264.0	260.6	256.3
Chuck roast	277.4	282.8	293.1	286.6	286.8	281.0	272.1	285.7	291.6	302.0	295.8	295.8	289.5	280.9
Round roast	245.6	246.2	253.5	251.2	250.9	246.5	238.3	249.1	250.0	257.3	254.5	254.7	250.2	242.6
Round steak	262.1	256.2	264.5	261.6	262.4	261.3	254.2	260.5	253.0	264.0	261.3	261.4	258.7	251.3
Sirloin steak	286.1	265.7	274.6	278.7	284.3	280.0	284.6	287.5	266.0	276.5	280.9	286.4	281.7	285.9
Other beef and veal (12/77 = 100)	170.5	169.7	172.3	172.2	172.1	172.0	170.9	169.1	168.5	170.8	171.0	171.0	170.7	169.3
Pork	254.1	250.8	250.6	248.6	247.7	248.0	250.5	253.9	250.1	250.1	248.0	247.2	247.4	249.9
Bacon	267.4	259.0	267.9	258.9	258.8	262.5	262.8	271.9	262.4	271.6	262.7	262.6	266.3	266.7
Chops	234.3	236.5	230.7	229.6	232.9	227.3	234.4	232.5	234.5	228.7	227.8	231.1	225.2	232.4
Ham other than canned (12/77 = 100)	110.3	113.0	109.8	112.2	109.2	110.2	110.7	107.5	110.0	107.0	109.1	106.3	107.4	107.6
Sausage	326.5	311.0	320.0	315.2	314.8	318.7	319.3	327.3	312.2	321.1	315.6	315.3	319.2	319.8
Canned ham	260.9	252.4	251.1	251.5	246.9	249.7	248.3	266.4	257.5	255.7	256.3	252.1	254.8	253.3
Other pork (12/77 = 100)	141.7	139.7	139.3	137.8	137.3	137.1	139.1	141.1	138.9	138.7	137.1	136.8	136.4	138.3
Other meats	267.4	262.5	265.0	265.1	264.6	265.7	267.5	266.9	262.0	264.4	264.6	263.9	265.1	267.1
Frankfurters	265.8	260.0	263.5	264.2	262.5	264.8	265.8	264.9	258.9	262.0	263.0	261.1	263.4	264.4
Bologna, liverwurst, and salami (12/77 = 100)	155.6	150.6	152.4	153.1	152.9	153.6	155.0	155.6	150.4	152.3	152.9	152.6	153.4	154.7
Other lunchmeats (12/77 = 100)	136.6	135.2	136.2	136.3	135.3	135.9	138.2	134.6	133.2	134.2	134.3	133.4	134.0	136.4
Lamb and organ meats (12/77 = 100)	139.3	137.6	138.2	137.2	138.9	138.5	137.1	142.3	140.9	141.6	140.5	142.1	141.7	140.3
Poultry	193.6	217.5	225.5	223.2	222.3	218.0	219.6	191.8	215.4	223.5	221.2	220.4	216.0	217.7
Fresh whole chicken	192.1	228.7	235.9	232.6	231.2	223.2	223.7	190.4	226.1	233.4	229.8	228.7	221.0	221.5
Fresh and frozen chicken parts (12/77 = 100)	126.3	144.7	152.2	150.7	150.1	145.9	147.6	124.7	142.5	150.2	148.7	148.3	143.9	145.7
Other poultry (12/77 = 100)	125.3	125.4	128.5	127.9	128.0	130.3	131.6	124.7	124.9	127.9	127.6	127.3	129.6	131.0
Fish and seafood	371.2	383.4	386.2	385.3	387.3	380.8	382.3	369.8	382.4	384.6	383.9	385.9	380.0	380.9
Canned fish and seafood	138.6	133.1	132.9	132.1	132.7	132.3	133.0	138.1	132.6	132.4	131.7	132.2	131.9	132.5
Fresh and frozen fish and seafood (12/77 = 100)	143.0	153.7	155.5	155.4	156.3	152.6	153.1	142.5	153.7	155.2	155.2	156.1	152.7	152.9
Eggs	173.8	266.5	270.3	237.2	249.6	218.9	185.8	174.8	268.1	271.8	238.7	251.0	220.0	186.7
Dairy products	249.8	250.8	250.9	250.8	251.5	251.0	251.7	249.1	249.8	250.1	249.8	250.5	250.1	250.6
Fresh milk and cream (12/77 = 100)	136.3	136.4	136.5	136.5	136.8	136.5	136.6	135.9	135.8	136.0	135.8	136.2	135.9	135.9
Fresh whole milk	222.9	222.7	223.3	222.9	223.7	223.0	223.2	222.1	221.7	222.3	221.9	222.6	222.0	222.1
Other fresh milk and cream (12/77 = 100)	136.8	137.3	137.0	137.3	137.3	137.3	137.3	136.3	136.7	136.4	136.7	136.6	136.6	136.6
Processed dairy products	148.1	149.3	149.3	149.2	149.6	149.4	150.2	148.3	149.6	149.5	149.4	149.8	149.7	150.5
Butter	252.7	254.7	253.4	254.4	252.4	254.2	254.1	255.4	257.1	255.9	256.9	254.9	256.8	256.7
Cheese (12/77 = 100)	146.0	147.0	146.8	146.3	146.6	146.2	147.4	146.3	147.3	147.1	146.6	146.9	146.5	147.8
Ice cream and related products (12/77 = 100)	154.0	154.8	155.6	155.3	156.4	156.6	156.6	153.0	153.8	154.4	154.3	155.3	155.5	155.5
Other dairy products (12/77 = 100)	143.1	146.1	146.2	146.9	148.2	146.8	148.5	143.7	146.7	146.7	147.4	148.7	147.3	148.8
Fruits and vegetables	298.2	311.0	321.0	323.2	315.3	310.2	318.1	294.5	307.3	317.2	319.4	311.2	305.6	313.1
Fresh fruits and vegetables	310.9	327.8	342.8	344.3	326.5	316.0	329.7	305.4	322.5	337.4	339.0	321.0	309.5	322.5
Fresh fruits	310.5	289.6	296.0	300.5	304.2	315.2	343.3	299.7	279.5	286.2	290.8	294.0	303.2	328.8
Apples	281.9	277.0	287.9	298.6	299.3	298.8	315.5	283.4	277.6	289.3	298.7	300.4	299.5	315.2
Bananas	318.1	244.3	263.2	264.1	275.2	251.1	277.9	316.7	242.4	260.7	262.2	273.1	248.8	275.5
Oranges	309.1	301.3	303.0	309.6	309.5	344.8	452.5	280.1	275.1	276.2	284.2	283.4	313.9	413.0
Other fresh fruits (12/77 = 100)	166.3	156.9	158.2	159.1	161.5	169.9	169.6	160.0	151.1	152.6	153.4	155.1	163.2	162.6
Fresh vegetables	311.3	363.6	386.6	385.4	347.4	316.8	317.1	310.8	361.4	383.8	382.7	345.4	315.4	316.8
Potatoes	304.7	342.3	359.6	363.5	367.3	372.1	391.4	301.3	337.5	353.2	357.7	360.1	366.0	387.6
Lettuce	363.5	328.3	278.5	290.5	244.4	234.1	262.6	360.8	329.8	280.2	292.6	247.1	236.4	264.6
Tomatoes	262.3	285.6	332.8	318.5	280.4	252.8	262.3	267.1	290.4	337.6	322.7	286.6	257.6	267.4
Other fresh vegetables (12/77 = 100)	169.4	226.1	252.1	249.4	218.9	187.4	174.6	169.5	224.0	249.7	247.0	217.2	186.3	174.1
Processed fruits and vegetables	286.9	295.1	299.9	302.8	305.7	306.5	308.0	284.7	292.9	297.4	300.2	302.9	303.8	305.3
Processed fruits (12/77 = 100)	149.7	152.3	156.8	159.5	161.7	162.1	163.2	149.3	151.9	156.3	159.0	161.2	161.6	162.7
Frozen fruit and fruit juices (12/77 = 100)	140.0	144.7	154.9	159.4	163.2	163.8	164.8	139.0	143.9	154.0	158.6	162.4	163.1	164.1
Fruit juices other than frozen (12/77 = 100)	155.1	155.7	158.4	160.8	163.2	164.1	165.2	154.0	154.7	157.3	159.7	162.2	163.1	164.3
Canned and dried fruits (12/77 = 100)	152.0	155.0	156.8	158.3	158.8	158.6	159.6	152.6	155.3	157.1	158.5	159.0	158.7	159.9

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
Fruits and vegetables—Continued														
Processed vegetables (12/77 = 100)	138.7	144.2	144.6	144.9	145.6	146.0	146.5	137.5	143.0	143.3	143.6	144.3	144.8	145.3
Frozen vegetables (12/77 = 100)	151.4	153.3	154.2	153.5	156.0	155.4	155.6	153.1	154.9	155.8	155.2	157.7	157.1	157.2
Cut corn and canned beans except lima (12/77 = 100)	140.5	145.9	146.2	148.2	148.5	149.3	150.7	138.1	143.3	143.7	145.5	145.8	146.6	148.0
Other canned and dried vegetables (12/77 = 100)	131.2	138.7	138.8	138.8	138.9	139.6	139.8	129.8	137.1	137.1	137.1	137.2	138.0	138.1
Other foods at home	338.8	346.6	348.4	349.7	351.0	350.8	352.1	339.5	374.4	349.1	350.2	351.6	351.3	352.5
Sugar and sweets	374.5	380.0	381.2	384.8	387.7	390.0	391.2	374.1	379.7	380.7	384.5	387.3	389.4	390.5
Candy and chewing gum (12/77 = 100)	151.3	154.0	154.5	156.0	158.6	159.4	160.5	151.2	153.9	154.3	155.9	158.4	159.2	160.3
Sugar and artificial sweeteners (12/77 = 100)	168.5	170.9	171.8	172.5	171.8	172.4	172.4	169.8	172.0	173.0	173.7	173.0	173.6	173.6
Other sweets (12/77 = 100)	152.5	153.9	154.0	156.5	156.9	158.5	158.3	150.2	151.8	151.7	154.2	154.7	156.2	155.8
Fats and oils (12/77 = 100)	258.3	279.7	281.1	280.7	282.4	282.9	285.4	258.0	279.5	280.9	280.2	281.9	282.4	284.9
Margarine	259.3	278.2	280.5	280.1	280.5	282.7	285.6	257.5	276.4	278.8	278.1	278.5	280.3	283.2
Nondairy substitutes and peanut butter (12/77 = 100)	149.4	152.2	153.9	153.7	154.3	153.3	152.3	147.7	150.4	151.9	151.8	152.2	151.5	150.5
Other fats, oils, and salad dressings (12/77 = 100)	130.1	145.4	145.5	145.2	146.7	146.9	149.1	130.7	145.9	146.1	145.6	147.1	147.3	149.4
Nonalcoholic beverages	431.0	439.1	441.8	443.5	443.6	441.7	442.3	432.6	441.1	443.5	444.9	445.2	443.1	443.7
Cola drinks, excluding diet cola	312.3	319.9	318.3	319.1	320.8	316.2	317.1	309.7	317.2	315.8	316.1	318.0	313.5	314.5
Carbonated drinks, including diet cola (12/77 = 100)	146.3	149.1	152.6	153.2	151.3	150.9	150.1	143.9	147.0	150.3	150.7	149.0	148.5	147.6
Roasted coffee	359.3	359.2	364.3	367.6	368.6	368.9	372.8	354.3	353.9	358.9	362.0	363.0	363.4	367.1
Freeze dried and instant coffee	352.2	353.7	357.2	359.8	362.2	362.8	363.5	351.6	353.1	356.5	359.1	361.6	362.1	362.9
Other noncarbonated drinks (12/77 = 100)	140.5	143.8	144.5	144.9	144.7	146.0	146.2	140.7	144.2	144.8	145.2	144.9	146.4	146.4
Other prepared foods	276.1	279.9	281.4	282.1	283.8	283.9	285.3	277.7	281.5	283.0	283.7	285.4	285.4	286.9
Canned and packaged soup (12/77 = 100)	141.6	142.6	143.2	143.6	144.6	144.6	144.6	143.4	144.4	145.2	145.5	246.5	146.5	146.4
Frozen prepared foods (12/77 = 100)	153.8	157.2	156.8	156.0	159.3	158.3	160.4	153.1	156.5	156.1	155.1	258.4	157.3	159.6
Snacks (12/77 = 100)	159.0	159.5	162.8	163.3	163.0	164.7	165.1	161.1	161.6	164.9	165.4	165.2	166.9	167.4
Seasonings, olives, pickles, and relish (12/77 = 100)	158.6	161.6	162.3	162.9	163.5	162.7	163.8	157.6	160.5	161.4	161.9	162.4	161.7	163.0
Other condiments (12/77 = 100)	155.4	156.6	156.6	156.6	157.5	157.8	158.4	157.2	158.4	158.4	158.4	159.4	159.6	160.2
Miscellaneous prepared foods (12/77 = 100)	151.2	154.3	154.6	155.0	155.8	156.0	156.0	151.5	154.5	154.8	155.1	156.0	156.0	156.2
Other canned and packaged prepared foods (12/77 = 100)	146.2	149.1	149.7	151.6	151.7	151.3	152.1	147.6	150.4	150.9	152.8	153.0	152.4	153.2
Food away from home	319.3	327.2	328.5	329.8	330.9	332.6	333.1	322.5	330.4	331.7	333.0	334.1	335.9	336.3
Lunch (12/77 = 100)	154.9	158.0	158.5	159.0	159.6	160.5	160.7	156.5	159.5	160.1	160.6	161.2	162.0	162.3
Dinner (12/77 = 100)	153.1	157.6	158.1	158.9	159.6	160.2	160.3	154.8	159.3	159.9	160.8	161.3	162.0	162.0
Other meals and snacks (12/77 = 100)	158.2	162.0	162.9	163.4	163.7	164.8	165.3	158.7	162.5	163.4	163.9	164.2	165.3	165.8
Alcoholic beverages	217.0	219.0	219.9	220.7	221.3	221.5	222.4	219.6	22.0	223.0	223.8	224.6	224.8	225.6
Alcoholic beverages at home (12/77 = 100)	140.3	140.8	141.5	142.0	142.3	142.3	142.8	142.0	142.8	143.6	144.1	144.5	144.6	145.0
Beer and ale	224.1	225.7	227.7	228.7	229.9	230.6	231.2	222.8	224.9	226.8	227.8	228.9	229.7	230.2
Whiskey	151.6	153.5	153.2	153.6	153.1	153.3	153.8	152.1	153.7	153.5	153.8	153.7	153.7	154.1
Wine	236.3	233.2	232.4	233.6	233.4	231.4	234.0	244.1	241.0	239.8	241.5	241.7	239.3	241.8
Other alcoholic beverages (12/77 = 100)	122.1	121.7	122.8	122.8	122.8	122.3	122.5	122.0	121.6	122.6	122.8	122.7	123.3	122.4
Alcoholic beverages away from home (12/77 = 100)	147.1	151.6	152.0	152.6	153.6	154.2	154.8	148.3	153.0	153.2	153.9	154.8	155.3	155.9
HOUSING	323.1	329.2	331.0	331.5	333.2	334.6	336.2	322.3	324.7	324.2	322.9	322.7	325.2	326.2
Shelter (CPI–U)	343.6	353.2	354.0	355.5	357.8	358.9	360.2	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Renters' costs	102.5	105.7	106.0	106.5	107.4	107.8	108.2	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Rent, residential	235.9	242.9	243.6	244.8	246.4	247.2	248.4	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Other renters' costs	347.9	361.7	362.5	364.5	371.2	371.3	371.5	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Homeowners' costs	102.2	104.9	105.1	105.6	106.2	106.5	106.8	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Owners' equivalent rent	102.2	104.8	105.1	105.5	106.2	106.3	106.8	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Household insurance	102.4	106.6	107.1	106.1	106.1	160.6	106.6	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Maintenance and repairs	345.1	356.7	353.5	355.3	356.3	357.3	358.9	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Maintenance and repair services	381.6	402.4	400.9	405.9	408.1	409.6	409.8	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Maintenance and repair commodities	262.3	264.6	260.4	259.3	259.2	259.7	262.2	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Shelter (CPI–W)	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	343.3	346.1	343.7	342.0	341.3	344.2	344.6
Rent, residential	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	235.3	242.3	242.9	244.1	245.7	246.5	247.7
Other renters' costs	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	345.8	359.1	360.9	363.0	370.7	370.5	370.8
Lodging while out of town	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	363.5	374.0	377.9	381.3	393.8	393.5	393.9
Tenants' insurance (12/77 = 100)	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	153.5	160.4	161.1	161.1	159.8	159.8	160.1
Homeownership	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	381.9	382.9	379.4	376.6	374.9	378.5	378.8
Home purchase	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	303.5	298.0	294.4	292.5	291.7	291.9	291.7
Financing, taxes, and insurance	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	490.0	494.8	490.5	484.8	480.8	490.1	490.6
Property insurance	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	430.6	438.3	439.3	439.9	440.3	441.0	441.5
Property taxes	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	234.6	242.7	243.2	244.1	244.8	245.6	245.9
Contracted mortgage interest costs	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	620.8	624.1	617.2	607.9	601.6	615.5	616.0
Mortgage interest rates	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	203.0	207.6	207.7	205.4	203.9	208.4	209.3
Maintenance and repairs	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	341.0	353.0	351.9	353.8	354.2	355.0	356.0
Maintenance and repair services	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	380.0	397.6	396.8	400.3	401.0	402.6	403.1

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						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
Homeownership—Continued														
Maintenance and repair commodities	....	....	....	....	....	....	....	257.5	259.0	257.4	256.3	255.9	255.6	257.2
Paint and wallpaper, supplies, tools, and equipment (12/77 = 100)	....	....	....	....	....	....	....	149.4	150.8	147.6	147.3	147.3	146.2	148.0
Lumber, awnings, glass, and masonry (12/77 = 100)	....	....	....	....	....	....	....	124.2	125.2	125.6	124.3	124.5	124.2	124.1
Plumbing, electrical, heating, and cooling supplies (12/77 = 100)	....	....	....	....	....	....	....	138.8	139.9	139.4	138.6	140.2	141.9	142.5
Miscellaneous supplies and equipment (12/77 = 100)	....	....	....	....	....	....	....	144.1	143.1	144.3	144.0	141.7	142.4	143.0
Fuel and other utilities	373.6	376.0	383.0	380.1	380.9	385.5	390.0	375.5	377.3	384.2	381.3	382.0	386.6	391.4
Fuels	475.2	470.4	479.6	475.2	476.0	483.5	490.7	475.6	469.9	479.1	474.7	475.4	482.6	490.4
Fuel oil, coal, and bottled gas	620.0	642.8	688.6	660.0	650.7	649.2	646.0	622.4	645.1	691.4	662.4	651.5	648.4
Fuel oil	628.5	652.7	705.0	671.6	660.9	659.9	656.2	630.7	654.9	707.6	673.9	663.1	662.1	658.6
Other fuels (6/78 = 100)	188.6	193.6	197.4	196.4	195.6	194.4	194.1	189.5	194.4	198.1	197.1	196.3	195.1	194.8
Gas (piped) and electricity	437.4	427.3	429.0	429.5	432.3	441.4	450.6	437.4	426.2	427.9	428.4	431.1	439.9	449.7
Electricity	337.4	332.8	334.2	335.8	338.9	343.0	358.6	337.9	331.9	333.3	335.1	338.0	342.2	358.7
Utility (piped) gas	591.8	571.1	573.6	571.4	573.2	591.7	585.9	588.8	568.1	570.1	567.9	569.8	587.2	581.6
Other utilities and public services	213.2	224.6	228.0	227.4	228.2	228.8	229.4	214.1	225.7	229.2	228.5	229.2	229.9	230.4
Telephone services	173.4	183.3	186.8	185.9	186.4	186.7	187.1	173.9	183.9	187.5	186.6	187.0	187.4	187.6
Local charges (12/77 = 100)	141.8	154.3	159.0	157.7	157.8	158.3	160.1	142.2	154.8	159.6	158.4	158.4	159.0	160.8
Interstate toll calls (12/77 = 100)	121.8	121.4	122.4	122.4	122.3	122.6	118.5	122.2	121.9	122.8	122.8	122.7	123.0	118.9
Intrastate toll calls (12/77 = 100)	117.4	122.1	122.1	122.0	123.7	123.1	124.8	117.4	122.2	122.1	122.0	123.6	122.9	124.6
Water and sewerage maintenance	348.9	367.4	369.0	369.5	371.4	373.9	374.6	352.6	371.7	373.2	373.9	375.7	378.2	378.9
Household furnishings and operations	238.6	240.4	240.4	241.2	242.3	242.4	242.3	235.5	237.3	237.4	238.0	238.9	239.1	238.9
Housefurnishings	197.8	197.9	197.6	198.3	199.9	199.8	199.1	195.9	196.3	196.0	196.7	197.7	197.7	196.9
Textile housefurnishings	226.8	227.6	232.0	236.1	235.2	236.6	234.7	230.5	230.9	235.5	240.0	238.6	239.9	238.4
Household linens (12/77 = 100)	135.4	133.0	137.4	140.1	139.0	140.8	138.2	136.4	134.1	138.5	141.2	139.9	141.6	139.4
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	147.7	151.3	152.3	154.6	154.7	154.6	154.9	152.1	155.5	156.6	159.5	159.2	158.9	159.5
Furniture and bedding	220.0	219.5	216.7	218.4	222.8	223.8	223.3	216.5	216.7	213.7	215.3	218.9	220.1	219.5
Bedroom furniture (12/77 = 100)	152.3	154.4	148.7	149.1	154.2	154.3	154.1	148.9	151.1	145.3	145.9	149.6	150.2	149.6
Sofas (12/77 = 100)	118.0	119.4	118.5	119.8	121.2	121.1	121.3	118.3	119.2	118.3	119.7	121.3	121.1	121.6
Living room chairs and tables (12/77 = 100)	124.2	124.8	124.5	124.5	125.5	128.2	126.8	124.9	125.9	125.7	125.7	126.3	129.0	127.6
Other furniture (12/77 = 100)	143.8	139.2	139.7	142.1	144.6	144.7	144.8	139.0	135.4	135.9	137.9	140.2	140.4	140.4
Appliances including TV and sound equipment	151.4	151.0	151.1	150.5	150.1	149.8	148.8	151.9	151.9	152.2	151.9	151.4	151.3	150.1
Television and sound equipment	105.9	104.9	104.5	103.6	103.4	102.9	102.0	105.0	104.0	103.5	102.5	102.4	101.9	101.0
Television	100.8	98.8	98.1	97.9	96.7	96.5	95.9	99.6	97.5	96.7	96.5	95.3	95.1	94.5
Sound equipment (12/77 = 100)	111.6	111.3	111.2	109.7	110.3	109.5	108.4	110.5	110.5	110.2	108.6	109.3	108.5	107.4
Household appliances	188.4	189.5	190.7	191.0	190.4	190.6	189.7	189.5	190.7	192.1	192.8	192.0	192.3	191.0
Refrigerators and home freezers	194.0	196.5	196.2	197.2	195.8	196.2	196.8	200.2	202.1	201.9	203.1	202.2	202.5	202.5
Laundry equipment	144.6	145.7	145.9	147.4	146.7	146.7	145.0	145.2	146.6	147.1	148.6	147.6	147.6	145.8
Other household appliances (12/77 = 100)	124.7	125.2	126.4	126.2	126.1	126.2	125.4	123.2	123.6	125.3	125.2	124.9	125.2	124.2
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	123.9	123.3	127.2	127.1	126.3	126.9	127.0	122.8	122.3	126.4	126.4	125.4	126.2	125.8
Office machines, small electric appliances, and air conditioners (12/77 = 100)	125.7	127.2	126.1	125.8	126.2	125.7	124.4	123.7	125.2	124.0	123.8	124.2	124.1	122.4
Other household equipment (12/77 = 100)	141.2	142.1	141.7	141.6	143.2	142.1	142.2	139.0	140.0	139.5	139.2	140.7	139.4	139.6
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	142.2	145.5	145.9	145.4	147.6	147.5	147.8	134.3	137.5	137.6	137.0	139.0	138.8	138.8
Clocks, lamps, and decor items (12/77 = 100)	133.0	130.9	132.0	132.8	137.4	136.1	134.3	128.8	126.6	128.1	128.5	132.9	131.5	129.7
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	149.2	149.6	148.2	148.2	149.2	147.2	147.9	145.0	145.5	144.1	144.2	145.1	143.0	143.9
Lawn equipment, power tools, and other hardware (12/77 = 100)	135.0	136.9	136.1	135.3	134.9	134.1	134.6	139.9	142.2	141.0	140.1	140.5	139.5	140.0
Housekeeping supplies	296.3	299.4	300.0	300.6	301.8	301.5	303.0	293.2	296.3	296.9	297.1	298.5	298.5	300.1
Soaps and detergents	294.9	296.3	296.5	296.1	297.1	298.2	299.3	290.9	292.2	292.3	291.7	292.8	293.7	294.8
Other laundry and cleaning products (12/77 = 100)	151.5	153.6	154.5	153.7	153.8	153.4	155.1	150.4	152.3	153.2	152.4	152.5	152.0	153.8
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	147.3	149.2	148.8	149.3	151.6	151.7	152.9	147.4	149.4	149.0	149.4	151.6	151.7	152.9
Stationery, stationery supplies, and gift wrap (12/77 = 100)	139.9	141.7	141.7	141.7	142.0	142.5	143.5	142.8	144.8	145.0	144.7	145.1	145.7	146.7
Miscellaneous household products (12/77 = 100)	154.0	157.4	158.3	159.5	159.2	159.8	160.1	148.7	152.0	152.8	154.0	153.7	154.4	154.7
Lawn and garden supplies (12/77 = 100)	145.8	145.0	145.2	146.6	147.5	144.8	144.7	139.4	138.0	138.3	138.9	140.5	138.7	138.7
Housekeeping services	318.5	324.1	324.8	326.1	325.7	326.5	327.0	318.0	324.4	325.3	326.0	326.0	326.9	327.5
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)	162.3	171.0	171.7	171.7	171.8	172.9	173.7	162.3	171.1	171.9	172.0	172.1	173.2	174.1
Appliance and furniture repair (12/77 = 100)	143.3	147.5	148.3	148.8	149.4	150.1	150.2	141.6	145.6	146.5	146.9	147.5	148.1	148.2
APPAREL AND UPKEEP	195.6	196.4	196.2	198.8	199.2	198.9	197.4	194.7	195.3	195.4	198.0	198.2	197.7	196.1
Apparel commodities	183.6	183.6	183.2	185.9	186.3	185.8	184.0	183.2	183.1	183.0	185.8	185.9	185.1	183.3
Apparel commodities less footwear	179.7	179.8	179.3	182.3	182.6	181.7	179.8	179.2	178.9	178.9	181.9	181.9	180.7	178.7
Men's and boys'	189.1	189.7	187.9	189.9	190.6	190.7	190.3	189.0	190.2	188.7	190.5	191.2	191.1	190.3
Men's (12/77 = 100)	118.8	119.3	118.1	119.4	120.2	120.4	120.0	119.2	119.8	118.9	120.1	121.0	121.1	120.3
Suits, sport coats, and jackets (12/77 = 100)	111.2	110.8	107.6	110.6	112.0	111.9	113.0	103.9	104.0	101.2	104.1	105.4	105.2	105.8
Coats and jackets	100.7	101.7	98.1	98.1	99.0	98.2	96.2	103.3	104.3	101.3	101.4	102.4	101.2	99.4
Furnishings and special clothing (12/77 = 100)	144.3	145.9	145.2	146.1	146.0	147.6	148.0	140.3	141.9	141.2	142.1	142.1	143.5	143.8

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

[1967 = 100 unless otherwise specified]

	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1983	1984						1983	1984					
General summary	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
Men's—Continued														
Shirts (12/77 = 100)	122.6	125.7	125.7	127.0	127.3	127.6	126.9	125.8	128.9	128.8	130.0	130.1	130.1	129.2
Dungarees, jeans, and trousers (12/77 = 100)	113.0	111.4	112.1	112.4	113.6	113.5	111.4	118.6	117.1	117.8	118.3	119.9	119.9	117.5
Boys' (12/77 = 100)	123.7	124.0	123.1	124.1	123.2	122.5	123.0	121.6	122.7	121.7	122.8	121.8	121.1	121.6
Coats, jackets, sweaters, and shirts (12/77 = 100)	116.3	118.8	118.4	119.7	119.7	119.4	118.2	116.6	121.1	120.7	122.0	122.0	121.8	120.4
Furnishings (12/77 = 100)	135.8	136.2	136.2	137.9	137.2	136.6	137.1	131.2	132.1	131.9	133.4	132.7	132.2	132.7
Suits, trousers, sport coats, and jackets (12/77 = 100)	124.7	123.3	121.6	122.1	120.3	119.3	121.2	121.9	120.6	119.0	119.6	117.6	116.6	118.4
Women's and girls'	159.7	158.8	159.0	163.3	163.2	161.8	157.9	161.5	160.0	160.7	165.3	164.5	162.7	159.2
Women's (12/77 = 100)	106.1	105.4	105.6	108.7	108.6	107.7	105.2	107.4	106.8	107.2	110.5	109.9	108.6	106.2
Coats and jackets	164.7	162.8	162.9	167.2	164.9	159.7	154.6	171.8	166.9	166.9	172.8	170.1	164.7	159.1
Dresses	164.3	164.1	166.5	175.9	175.0	176.1	172.1	148.8	150.5	153.7	162.9	160.6	162.9	160.5
Separates and sportswear (12/77 = 100)	97.7	94.5	93.0	92.5	92.8	93.4	91.1	98.4	94.7	93.3	93.0	93.5	93.9	91.4
Underwear, nightwear, and hosiery (12/77 = 100)	132.8	134.8	135.5	136.8	136.9	137.5	137.0	132.4	134.4	135.2	136.5	136.6	137.1	136.6
Suits (12/77 = 100)	77.2	75.2	75.2	85.0	85.1	77.3	71.3	93.9	93.9	95.0	106.4	104.2	92.7	85.8
Girls' (12/77 = 100)	106.5	106.6	106.4	108.0	108.2	107.2	104.3	107.4	104.8	105.6	107.4	107.6	106.4	104.3
Coats, jackets, dresses, and suits (12/77 = 100)	96.3	98.1	98.9	100.6	100.6	98.3	95.0	96.5	95.1	96.6	98.3	98.1	96.0	93.7
Separates and sportswear (12/77 = 100)	103.5	102.6	102.2	103.9	104.3	102.7	99.0	106.1	101.4	102.7	104.6	105.2	103.7	100.7
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	128.5	128.0	126.3	128.0	128.1	129.7	129.3	127.5	126.5	125.2	126.9	126.9	128.2	127.8
Infants' and toddlers'	283.0	283.6	286.2	288.0	289.2	283.9	278.3	293.4	292.4	297.0	298.6	299.7	293.0	289.2
Other apparel commodities	214.0	215.5	216.1	217.2	217.6	216.8	217.7	203.0	203.7	204.4	205.3	205.5	205.0	205.7
Sewing materials and notions (12/77 = 100)	122.4	119.8	122.4	120.8	122.6	123.1	122.4	120.5	117.7	121.1	119.7	120.8	121.5	120.9
Jewelry and luggage (12/77 = 100)	145.1	147.6	147.0	148.8	148.3	147.4	148.5	136.2	138.1	137.2	138.7	138.4	137.6	138.5
Footwear	206.8	206.7	206.4	207.7	208.9	210.2	209.6	206.6	207.3	207.0	208.3	209.4	210.7	210.0
Men's (12/77 = 100)	133.7	134.4	135.0	135.2	135.8	137.1	136.7	136.5	135.4	136.9	137.1	137.9	139.2	138.7
Boys' and girls' (12/77 = 100)	130.7	132.6	131.4	131.2	131.4	132.4	132.1	133.1	135.0	133.9	133.8	133.9	134.7	134.5
Women's (12/77 = 100)	125.6	123.7	123.5	125.5	126.7	127.1	126.7	121.3	120.3	120.3	122.3	123.4	123.7	123.2
Apparel services	290.9	298.3	299.7	300.8	301.5	303.7	304.4	289.2	296.1	297.6	298.8	299.4	301.6	302.4
Laundry and drycleaning other than coin operated (12/77 = 100)	173.5	179.0	180.2	180.7	181.0	182.6	182.9	171.9	177.3	178.5	179.1	179.4	180.9	181.2
Other apparel services (12/77 = 100)	152.4	154.2	154.4	155.3	155.7	156.5	157.0	153.7	155.4	155.5	156.5	156.9	157.7	158.3
TRANSPORTATION	298.3	306.0	305.8	306.9	309.6	312.2	313.1	299.6	307.9	307.7	308.9	311.9	314.6	315.5
Private	293.8	300.9	300.8	301.9	304.8	307.4	308.1	296.3	304.1	303.9	305.2	308.3	311.0	311.7
New cars	201.6	207.2	207.2	207.2	207.4	207.6	207.7	201.2	206.7	206.7	206.7	206.9	207.1	207.1
Used cars	322.7	357.3	357.2	362.2	370.0	378.0	382.0	322.7	357.3	357.2	362.2	370.0	378.0	382.0
Gasoline	386.1	370.3	368.8	368.6	374.0	376.7	374.9	387.4	372.1	370.7	370.5	375.7	378.2	376.4
Automobile maintenance and repair	329.5	336.1	337.4	338.3	338.9	340.2	340.7	330.2	336.6	338.1	339.0	339.6	340.8	341.5
Body work (12/77 = 100)	166.4	170.2	170.3	170.7	171.4	172.3	172.6	165.3	168.9	169.0	169.3	170.1	170.9	171.3
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	157.7	163.8	164.4	165.1	165.1	165.8	166.2	161.7	167.6	168.4	169.1	169.2	169.8	170.2
Maintenance and servicing (12/77 = 100)	152.2	152.9	153.5	153.9	154.2	154.8	154.6	151.5	152.0	152.8	153.1	153.4	154.0	153.8
Power plant repair (12/77 = 100)	157.0	160.9	161.8	162.1	162.4	162.6	163.4	156.4	160.4	161.2	161.6	161.9	162.2	163.5
Other private transportation	258.1	267.6	267.7	268.3	269.0	270.4	271.5	258.9	268.4	268.5	269.1	269.9	271.3	272.4
Other private transportation commodities	210.4	203.3	202.8	201.3	202.4	201.7	202.0	212.9	205.6	205.2	203.5	204.8	204.2	204.5
Motor oil, coolant, and other products (12/77 = 100)	156.0	153.3	153.8	152.5	152.7	152.7	154.1	154.8	152.2	152.7	152.3	151.9	152.5	153.5
Automobile parts and equipment (12/77 = 100)	133.2	128.3	127.8	126.9	127.7	127.2	127.3	135.0	130.0	129.6	128.5	129.4	128.9	129.0
Tires	184.3	175.7	174.2	171.8	172.9	172.2	172.0	187.9	178.5	177.9	175.1	176.5	175.7	175.5
Other parts and equipment (12/77 = 100)	132.7	132.1	132.0	133.2	134.0	133.5	134.1	132.5	131.9	131.8	132.7	133.6	133.3	133.9
Other private transportation services	273.3	287.2	287.5	288.7	289.3	291.2	292.5	273.6	287.6	287.7	289.0	289.7	291.6	293.0
Automobile insurance	301.1	318.8	319.8	322.3	321.8	323.7	324.2	300.5	318.0	318.9	321.5	321.0	322.7	323.1
Automobile finance charges (12/77 = 100)	152.2	160.1	159.3	159.2	160.9	162.4	164.1	151.4	159.6	158.7	158.7	160.4	161.9	163.5
Automobile rental, registration, and other fees (12/77 = 100)	144.7	148.9	149.1	149.1	149.5	150.3	151.1	146.0	149.8	150.1	150.1	150.4	151.3	152.4
State registration	192.3	195.1	195.1	195.5	195.7	197.1	199.4	192.1	195.0	195.0	195.4	195.6	197.1	199.6
Drivers' licenses (12/77 = 100)	150.3	158.0	158.0	158.0	158.0	158.0	157.8	150.6	158.3	158.3	158.3	158.3	158.3	158.1
Vehicle inspection (12/77 = 100)	131.2	139.2	139.2	139.2	139.8	139.9	139.9	132.5	139.9	139.9	139.9	140.3	140.4	140.4
Other vehicle-related fees (12/77 = 100)	159.0	163.5	163.9	163.5	164.3	165.2	165.1	167.0	170.4	171.1	170.7	171.5	172.7	172.6
Public	361.2	378.2	377.4	377.4	377.1	379.8	385.2	352.7	371.1	370.1	370.2	370.0	372.2	377.4
Airline fare	415.4	430.3	429.5	429.0	427.7	433.8	442.0	410.9	426.4	425.5	424.9	423.5	430.0	438.2
Intercity bus fare	403.9	425.3	428.2	427.6	428.7	429.9	426.2	405.2	423.9	427.1	426.8	427.6	429.3	425.8
Intracity mass transit	321.7	342.8	341.4	342.0	342.3	342.3	346.5	320.6	342.8	341.3	341.8	342.1	347.1	346.5
Taxi fare	301.0	308.2	308.3	308.5	308.8	309.2	309.7	311.0	317.2	317.5	317.7	317.9	318.3	319.0
Intercity train fare	353.2	373.7	373.5	373.4	373.4	373.5	381.5	353.6	374.0	373.8	373.7	373.7	373.8	381.9
MEDICAL CARE	355.4	369.5	373.2	374.5	375.7	376.8	378.0	353.3	367.5	371.3	372.6	373.9	375.0	376.3
Medical care commodities	223.2	231.2	232.9	235.0	236.9	238.7	239.4	223.6	231.5	233.2	235.3	237.1	238.7	239.5
Prescription drugs	213.7	223.7	226.4	228.2	230.7	233.1	233.5	214.8	225.0	227.9	229.7	232.2	234.5	234.9
Anti-infective drugs (12/77 = 100)	156.6	161.4	163.4	163.9	164.8	165.8	164.9	158.8	164.2	165.8	166.3	167.3	168.3	167.3
Tranquilizers and sedatives (12/77 = 100)	177.0	190.1	193.0	195.5	198.4	202.8	204.0	176.7	190.0	192.9	195.4	198.3	202.7	204.0
Circulatories and diuretics (12/77 = 100)	153.3	161.5	164.7	164.7	166.1	167.4	169.0	153.2	161.1	164.4	164.3	165.5	167.3	168.3
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	198.1	205.8	207.2	209.7	212.5	214.1	214.7	199.9	207.9	209.4	211.9	214.7	216.3	217.0

73

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						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
Prescription drugs—Continued														
Pain and symptom control drugs (12/77 = 100)	173.3	182.1	183.8	185.5	187.7	188.7	188.3	175.1	184.2	185.9	187.7	190.0	191.0	190.3
Supplements, *cough and cold preparations, and* respiratory agents (12/77 = 100)	161.8	167.1	169.8	171.4	173.2	174.6	174.5	162.0	167.4	170.4	172.0	173.9	175.3	176.1
Nonprescription drugs and medical supplies (12/77 = 100)	155.2	159.2	159.6	161.2	162.1	162.8	163.5	156.0	160.1	160.6	162.1	163.0	163.7	164.4
Eyeglasses (12/77 = 100)	135.0	137.9	138.0	138.4	138.9	139.3	140.0	133.9	136.8	137.0	137.3	137.8	138.2	138.8
Internal and respiratory over-the-counter drugs	251.9	259.4	260.1	263.1	264.9	266.6	268.2	253.3	260.6	261.4	264.4	266.1	267.7	269.3
Nonprescription medical equipment and supplies (12/77 = 100)	150.4	153.4	154.6	155.8	156.5	156.5	156.4	151.4	155.0	155.7	157.5	158.0	158.0	157.9
Medical care services	384.6	400.0	404.4	405.3	406.3	407.1	408.4	381.7	397.5	401.8	402.7	403.9	404.7	406.1
Professional services	322.0	335.9	339.8	341.1	342.5	343.8	345.8	322.2	336.3	340.3	341.6	343.0	344.2	346.2
Physicians' services	351.7	366.0	370.4	372.2	373.5	375.2	377.1	355.3	369.9	374.4	376.1	377.5	379.0	381.1
Dental services	301.2	316.0	319.8	321.1	322.5	323.6	326.2	298.9	313.9	317.8	319.0	320.5	321.6	324.0
Other professional services (12/77 = 100)	152.3	157.4	158.7	158.8	159.5	159.7	159.9	148.7	153.8	155.0	155.0	155.8	156.0	156.1
Other medical care services	460.4	477.9	482.5	482.8	483.4	483.6	484.1	456.4	474.1	479.0	479.3	480.0	480.3	480.9
Hospital and other medical services (12/77 = 100)	191.5	204.3	206.4	207.0	207.5	207.9	208.4	189.6	202.1	204.4	204.9	205.6	205.9	206.3
Hospital room	609.6	650.2	657.9	659.4	660.3	660.7	662.0	602.2	641.9	650.4	651.7	652.9	653.3	654.4
Other hospital and medical care services (12/77 = 100)	188.3	200.9	202.7	203.3	204.2	204.8	205.2	186.3	199.1	201.0	201.5	202.4	203.0	203.4
ENTERTAINMENT	245.4	249.9	251.5	251.7	253.8	253.5	254.5	241.9	246.2	247.7	248.0	249.8	249.6	250.7
Entertainment commodities	246.3	248.9	250.7	250.6	253.4	252.2	252.4	240.7	243.6	245.3	245.3	247.7	246.8	246.9
Reading materials (12/77 = 100)	158.5	160.7	164.1	162.4	164.5	163.1	163.7	158.0	160.3	163.4	161.9	164.0	162.6	163.3
Newspapers	302.0	308.6	310.2	311.8	312.6	313.0	313.3	302.0	308.6	310.4	312.0	312.9	313.1	313.4
Magazines, periodicals, and books (12/77 = 100)	164.2	165.0	171.2	166.6	170.7	167.5	168.7	164.2	164.9	171.3	166.5	170.8	167.3	168.7
Sporting goods and equipment (12/77 = 100)	134.0	136.1	135.9	136.1	139.1	138.0	137.5	127.7	130.1	130.3	130.0	132.6	131.7	131.2
Sport vehicles (12/77 = 100)	136.7	139.8	139.5	139.9	144.6	143.0	142.2	126.8	130.5	130.7	130.4	134.1	133.0	132.2
Indoor and warm weather sport equipment (12/77 = 100)	119.9	117.8	117.4	117.1	117.5	117.3	117.7	117.6	115.8	115.3	115.1	115.6	115.5	116.0
Bicycles	199.2	200.1	201.5	201.5	201.1	200.8	201.1	200.2	200.9	202.4	202.5	202.2	201.7	202.0
Other sporting goods and equipment (12/77 = 100)	132.2	135.2	134.6	134.0	135.6	134.6	134.2	132.2	134.6	134.2	133.8	135.3	134.3	134.0
Toys, hobbies, and other entertainment (12/77 = 100)	138.6	139.3	139.8	140.5	141.0	141.0	141.1	137.3	138.2	138.7	139.5	140.0	140.0	140.1
Toys, hobbies, and music equipment (12/77 = 100)	137.4	137.0	137.3	138.6	139.3	139.2	138.8	133.6	133.4	133.8	135.2	135.8	135.8	135.5
Photographic supplies and equipment (12/77 = 100)	131.4	130.1	131.9	132.6	132.9	133.2	133.7	132.4	131.2	133.0	133.8	134.2	134.4	135.0
Pet supplies and expenses (12/77 = 100)	145.9	150.1	149.9	149.7	149.9	149.8	150.5	146.9	151.1	150.9	150.8	151.0	150.9	151.6
Entertainment services	244.7	251.8	253.1	253.8	254.9	255.4	258.1	245.1	252.1	253.2	253.9	254.7	255.8	258.5
Fees for participant sports (12/77 = 100)	151.3	157.8	158.6	158.5	159.5	159.6	159.7	152.5	158.8	159.2	159.2	160.1	160.3	160.7
Admissions (12/77 = 100)	144.7	147.3	148.3	148.9	149.4	151.3	155.3	143.7	146.2	147.2	147.8	148.3	150.2	154.3
Other entertainment services (12/77 = 100)	131.8	132.9	133.4	134.5	134.8	134.9	135.1	132.6	133.9	134.4	135.7	135.7	132.5	135.7
OTHER GOODS AND SERVICES	284.5	300.5	301.5	302.1	302.8	303.2	304.4	282.8	298.1	299.2	299.7	300.4	300.8	302.1
Tobacco products	285.9	304.3	305.4	305.6	305.9	305.9	308.1	285.4	304.0	305.1	305.2	305.6	305.6	307.8
Cigarettes	293.1	312.8	313.8	313.8	314.1	314.0	316.3	292.0	311.8	312.7	312.8	313.1	313.1	315.3
Other tobacco products and smoking accessories (12/77 = 100)	149.9	154.9	156.1	157.0	157.6	157.9	158.9	149.8	154.9	156.0	157.0	157.6	157.9	159.0
Personal care	260.9	266.9	267.9	267.8	268.9	269.5	270.6	259.0	265.0	266.1	265.7	266.9	267.5	268.5
Toilet goods and personal care appliances	261.4	266.8	267.9	265.9	267.3	267.4	268.5	262.1	267.5	268.7	266.6	268.1	268.3	269.3
Products for the hair, hairpieces, and wigs (12/77 = 100)	151.7	154.3	154.7	154.1	154.9	154.1	154.8	150.9	153.2	153.8	153.3	154.1	153.4	154.1
Dental and shaving products (12/77 = 100)	162.5	167.8	168.1	164.6	165.1	166.8	166.5	160.8	166.0	166.3	162.9	163.3	164.9	164.7
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	148.5	150.0	150.6	150.0	151.8	151.5	153.0	149.2	151.1	151.7	150.8	152.7	152.7	154.0
Other toilet goods and small personal care appliances (12/77 = 100)	147.1	151.0	152.4	151.8	151.6	151.7	151.7	150.7	154.8	156.2	155.4	155.2	155.3	155.5
Personal care services	261.6	268.1	269.0	270.4	271.4	272.3	273.4	256.3	263.0	264.0	265.3	266.1	267.1	268.2
Beauty parlor services for women	265.0	271.2	272.3	273.4	274.4	275.0	276.4	258.0	264.5	265.7	266.6	267.5	268.0	269.3
Haircuts and other barber shop services for men (12/77 = 100)	144.4	148.4	148.7	149.9	150.4	151.4	151.7	143.2	147.2	147.5	148.6	149.2	150.2	150.5
Personal and educational expenses	326.0	353.5	354.4	356.4	356.9	357.4	357.9	328.1	355.4	356.4	359.2	359.7	360.3	360.7
Schoolbooks and supplies	293.6	314.4	317.2	317.1	317.6	317.8	318.5	297.1	318.8	321.7	321.6	322.2	322.4	323.1
Personal and educational services	333.8	362.7	363.3	365.7	366.1	366.7	367.1	335.8	364.5	365.2	368.6	369.0	369.7	370.1
Tuition and other school fees	167.6	183.0	183.2	184.3	184.4	184.4	184.5	168.2	183.4	183.5	185.2	185.3	185.3	185.4
College tuition (12/77 = 100)	167.3	182.9	183.0	184.5	184.7	184.7	184.8	167.4	182.7	182.9	185.4	185.5	185.5	185.7
Elementary and high school tuition (12/77 = 100)	168.9	183.9	183.9	183.9	183.9	183.9	183.9	169.9	184.9	184.9	184.9	184.9	185.6	185.0
Personal expenses (12/77 = 100)	186.1	198.6	199.6	201.2	202.0	188.0	204.2	186.2	199.1	200.2	202.1	202.8	204.3	204.8
Special indexes:														
Gasoline, motor oil, coolant, and other products	381.2	366.3	365.1	364.7	369.8	372.4	370.7	382.4	367.9	366.0	366.5	371.4	373.8	372.2
Insurance and finance	....	....	....	....	....	....	....	410.2	418.4	415.7	412.6	410.3	416.9	417.7
Utilities and public transportation	341.5	344.6	346.6	346.5	348.0	352.8	358.0	346.1	343.6	345.5	345.5	347.0	351.6	357.1
Housekeeping and home maintenance services	358.6	366.4	366.9	368.7	368.6	369.5	370.0	360.8	373.9	373.8	376.1	376.6	377.8	378.4

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) 1984 Feb.	Apr.	June	Size class B (385,000–1,250 million) 1984 Feb.	Apr.	June	Size class C (75,000–385,000) 1984 Feb.	Apr.	June	Size class D (75,000 or less) 1984 Feb.	Apr.	June
Northeast												
EXPENDITURE CATEGORY												
All items	159.5	160.7	161.2	165.9	166.3	167.2	170.5	170.9	171.7	164.9	166.3	167.2
Food and beverages	152.4	152.7	153.0	151.8	151.5	151.0	155.0	155.2	156.0	152.4	152.4	152.6
Housing	164.3	165.3	165.9	176.9	175.7	177.3	183.7	183.0	184.0	170.1	172.9	173.4
Apparel and upkeep	121.1	123.8	122.2	124.0	128.5	125.5	128.7	131.8	131.1	132.6	133.6	136.4
Transportation	168.4	170.1	171.4	172.6	174.1	176.2	173.2	174.3	175.5	172.2	173.4	175.1
Medical care	171.8	173.2	174.0	175.1	177.6	179.2	176.5	176.9	177.7	181.1	182.5	183.0
Entertainment	146.6	148.1	146.6	140.3	143.8	143.8	149.9	152.8	152.3	152.4	152.3	153.6
Other goods and services	169.1	170.6	171.1	168.7	169.1	170.0	173.5	174.5	172.5	173.6	173.9	174.6
COMMODITY AND SERVICE GROUP												
Commodities	153.6	154.1	154.2	159.3	159.9	159.8	159.1	159.2	159.8	158.6	158.2	159.1
Commodities less food and beverages	154.0	154.7	154.6	162.5	163.5	163.7	160.7	160.8	161.5	161.1	160.4	160.8
Services	166.9	168.8	169.8	175.8	176.1	178.2	188.6	189.6	190.4	174.4	178.4	179.1
North Central Region												
EXPENDITURE CATEGORY												
All items	168.7	169.9	171.3	165.2	166.8	167.7	162.5	163.4	164.7	163.7	164.5	164.8
Food and beverages	149.4	149.4	149.0	148.0	148.6	148.5	148.6	148.8	149.1	155.9	156.9	156.9
Housing	186.2	187.7	190.7	173.4	175.2	176.7	169.9	169.1	171.6	167.0	167.3	166.4
Apparel and upkeep	116.7	118.2	117.8	126.6	132.8	130.8	129.0	132.6	128.3	123.0	126.1	124.6
Transportation	168.6	170.5	172.3	170.9	172.9	174.1	171.1	173.8	176.2	170.0	172.2	174.7
Medical care	176.2	177.4	178.5	176.9	177.2	179.4	170.2	172.7	172.7	183.2	182.9	184.0
Entertainment	144.6	145.1	145.7	135.7	140.6	140.7	148.3	151.0	152.9	144.2	141.3	140.5
Other goods and services	165.9	165.9	166.8	177.4	178.6	180.5	163.0	163.6	164.3	175.0	176.1	177.4
COMMODITY AND SERVICE GROUP												
Commodities	156.8	158.1	158.0	155.7	157.3	157.5	153.6	155.1	155.4	153.8	154.8	155.6
Commodities less food and beverages	160.0	162.1	162.2	158.6	160.9	161.1	155.7	157.9	158.3	152.7	153.8	155.0
Services	186.3	187.2	190.7	180.4	182.1	184.1	176.8	176.8	179.6	179.3	179.8	179.2
South												
EXPENDITURE CATEGORY												
All items	165.7	166.3	167.6	166.9	168.2	169.1	165.3	166.9	167.1	166.6	168.1	168.4
Food and beverages	156.3	156.3	152.6	154.8	155.6	155.3	153.2	153.0	152.5	157.5	156.6	156.1
Housing	172.4	172.3	174.5	172.0	173.7	174.7	170.7	173.2	172.6	174.2	176.4	176.4
Apparel and upkeep	129.9	131.3	132.2	129.6	128.1	128.3	124.8	127.5	126.4	110.9	114.7	113.6
Transportation	171.0	172.6	173.9	174.1	176.2	178.0	171.8	174.0	176.0	170.2	172.3	174.3
Medical care	176.2	177.1	179.1	177.0	178.5	180.4	186.7	187.5	188.0	193.3	193.7	193.4
Entertainment	142.9	145.2	144.7	157.7	159.6	160.0	151.4	153.2	152.8	148.5	150.5	150.7
Other goods and services	169.6	170.0	170.8	171.5	172.4	173.0	169.5	170.2	172.1	167.9	169.2	169.9
COMMODITY AND SERVICE GROUP												
Commodities	157.9	158.6	159.1	159.2	160.2	160.6	156.5	157.7	158.0	159.9	152.9	158.2
Commodities less food and beverages	158.1	159.4	160.2	160.7	161.8	162.7	157.7	159.7	160.5	156.1	158.1	159.0
Services	176.5	176.8	179.1	178.4	180.1	181.6	178.4	181.2	181.2	181.2	183.4	183.5
West												
EXPENDITURE CATEGORY												
All items	165.7	167.2	168.6	165.3	166.8	169.1	157.6	159.1	160.9	164.8	166.5	167.2
Food and beverages	155.8	155.3	154.6	158.4	158.6	158.8	153.7	155.0	154.5	160.3	160.3	161.6
Housing	171.7	173.7	176.3	168.4	170.4	174.3	154.6	155.8	158.7	165.2	168.0	167.3
Apparel and upkeep	123.8	124.3	121.4	124.9	126.9	127.2	123.8	123.9	122.7	141.2	142.9	142.9
Transportation	172.9	176.4	179.5	175.0	177.5	180.5	170.5	173.5	176.3	168.6	171.1	173.5
Medical care	181.2	182.6	183.3	178.2	179.8	181.5	184.5	185.9	187.5	183.8	184.6	186.6
Entertainment	144.3	144.1	194.9	148.1	148.9	148.9	151.8	154.4	154.8	161.4	160.6	162.0
Other goods and services	171.1	171.5	171.5	171.3	171.3	173.0	166.8	166.5	169.4	175.3	175.1	175.3
COMMODITY AND SERVICE GROUP												
Commodities	154.1	155.9	155.7	157.3	158.7	159.7	155.3	157.1	157.6	154.6	155.6	157.0
Commodities less food and beverages	152.9	156.1	156.3	156.2	158.4	159.9	155.3	157.4	158.8	151.5	153.2	154.6
Services	180.6	181.9	185.0	176.2	178.0	181.8	160.4	161.7	164.6	179.9	182.3	182.2

75

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						
	1983	1984						1983	1984					
	June	Jan.	Feb.	Mar.	Apr.	May	June	June	Jan.	Feb.	Mar.	Apr.	May	June
U.S. city average[2]	298.1	305.2	306.6	307.3	308.8	309.7	310.7	297.2	302.7	303.3	303.3	304.1	305.4	306.2
Anchorage, Alaska (10/67 = 100)	...	271.5	...	274.4	...	275.3	...	...	264.0	...	265.9	...	265.7	...
Atlanta, Ga.	302.3	307.3	...	309.3	...	...	314.0	302.0	309.7	...	309.6	...	...	310.9
Baltimore, Md.	...	...	307.6	...	310.4	311.3	...	...	...	303.8	...	307.2	309.4	...
Boston, Mass.	...	...	296.6	...	302.0	303.1	...	...	...	294.4	...	298.2	300.6	...
Buffalo, N.Y.	284.3	...	290.5	...	293.0	...	292.5	283.3	...	285.9	...	286.6	...	287.3
Chicago, Ill.–Northwestern Ind.	298.6	305.2	305.0	305.4	306.7	306.9	310.0	295.8	298.3	296.9	296.0	296.3	296.3	298.3
Cincinnati, Ohio–Ky.–Ind.	...	318.4	...	320.0	...	321.9	...	...	313.4	...	313.8	...	312.3	...
Cleveland, Ohio	324.4	...	331.1	...	332.8	...	336.7	316.6	...	318.2	...	320.7	...	321.9
Dallas-Ft. Worth, Tex.	314.0	...	322.7	...	323.9	...	325.7	306.3	...	317.7	...	316.5	...	318.7
Denver-Boulder, Colo.	...	343.0	...	344.7	...	346.1	...	...	336.0	...	341.7	...	340.8	...
Detroit, Mich.	296.6	301.3	303.1	304.1	305.6	305.7	306.3	300.7	307.9	304.7	302.9	298.6	298.3	297.0
Honolulu, Hawaii	271.4	...	280.7	...	283.2	...	284.7	273.4	...	284.3	...	289.0	...	290.9
Houston, Tex.	321.3	...	323.6	...	325.7	...	330.5	319.7	...	323.5	...	324.9	...	329.5
Kansas City, Mo.–Kansas	297.5	...	306.4	...	309.1	...	310.8	298.3	...	296.6	...	299.7	...	299.9
Los Angeles-Long Beach, Anaheim, Calif.	293.6	299.1	300.2	300.7	302.8	305.4	305.6	292.1	297.9	299.0	297.9	298.9	303.1	303.4
Miami, Fla. (11/77 = 100)	...	165.0	...	165.6	...	166.4	...	...	165.9	...	166.3	...	167.2	...
Milwaukee, Wis.	...	314.0	...	316.8	...	320.5	...	...	327.5	...	335.3	...	338.2	...
Minneapolis-St. Paul, Minn.–Wis.	312.6	...	319.6	...	322.0	...	324.1	311.8	...	318.6	...	321.1	...	328.9
New York, N.Y.–Northeastern N.J.	288.1	297.3	299.0	299.9	300.9	300.8	301.6	285.9	290.2	290.5	289.9	291.2	291.6	293.0
Northeast, Pa. (Scranton)	...	291.0	...	293.0	...	294.7	...	...	293.2	...	294.0	...	295.5	...
Philadelphia, Pa.–N.J.	286.1	294.4	296.4	296.7	298.2	298.7	300.0	288.7	296.7	298.5	298.8	299.0	300.5	302.7
Pittsburgh, Pa.	305.4	...	315.5	...	318.6	...	319.7	299.5	...	299.6	...	301.5	...	301.4
Portland, Oreg.–Wash.	...	295.1	...	298.0	...	301.9	...	...	289.5	...	292.2	...	297.5	...
St. Louis, Mo.–Ill.	...	300.9	...	302.7	...	305.4	...	...	296.8	...	297.3	...	297.3	...
San Diego, Calif.	...	346.6	...	349.8	...	353.5	...	...	329.6	...	326.6	...	328.2	...
San Francisco-Oakland, Calif.	303.0	...	311.7	...	315.9	...	318.7	298.6	...	308.7	...	310.8	...	315.1
Seattle-Everett, Wash.	...	311.1	...	310.2	...	313.0	...	...	299.4	...	299.9	...	302.7	...
Washington, D.C.–Md.–Va.	...	303.4	...	305.1	...	305.7	...	...	308.1	...	308.2	...	308.9	...

[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 1983	1983 July	Aug.	Sept.	Oct.	Nov.	Dec.	1984 Jan.	Feb.	Mar.[1]	Apr.	May	June	July
FINISHED GOODS														
Finished goods	285.2	285.7	286.1	285.1	287.6	286.8	287.2	289.5	290.6	ʳ291.4	291.4	291.5	291.2	292.6
Finished consumer goods	284.6	285.2	285.7	285.1	287.0	285.9	286.3	288.9	290.1	ʳ291.1	290.6	290.7	290.3	292.0
Finished consumer foods	261.8	260.7	260.7	263.0	263.7	261.9	264.3	272.2	274.7	ʳ276.6	275.0	272.3	270.8	275.6
Crude	258.7	247.1	259.9	267.4	287.3	270.4	266.0	306.9	313.6	ʳ323.7	307.9	279.7	282.6	275.1
Processed	260.0	259.8	258.7	260.5	259.5	259.0	262.0	266.9	269.0	ʳ270.2	269.9	269.4	269.3	273.4
Nondurable goods less foods	335.3	337.7	338.6	338.6	338.1	336.8	335.2	335.0	336.1	ʳ336.7	336.7	339.3	339.6	339.8
Durable goods	233.1	233.4	233.8	229.2	235.3	235.4	235.9	235.9	236.1	236.6	236.7	236.6	236.5	236.6
Consumer nondurable goods less food and energy	231.5	232.0	232.7	233.0	233.6	234.1	234.0	236.0	236.5	ʳ237.1	237.6	238.6	238.5	240.2
Capital equipment	287.2	287.2	287.7	285.1	289.9	ʳ290.0	290.4	291.6	292.3	ʳ292.3	294.1	294.3	294.2	294.8
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	312.3	312.8	314.0	315.5	315.6	315.5	315.7	316.3	317.6	ʳ319.7	320.2	320.8	321.6	321.7
Materials and components for manufacturing	293.4	294.1	294.7	296.7	296.4	296.5	297.6	298.9	299.8	ʳ301.8	302.6	303.0	303.1	303.0
Materials for food manufacturing	258.4	257.4	260.5	269.4	263.5	260.0	262.9	268.6	268.3	ʳ269.6	271.3	275.6	274.7	276.6
Materials for nondurable manufacturing	280.0	279.7	281.1	282.7	283.3	284.6	285.7	286.6	287.0	ʳ290.3	291.4	292.5	292.6	293.0
Materials for durable manufacturing	319.4	320.9	320.9	323.1	322.3	321.6	322.8	323.4	325.6	ʳ328.2	329.0	326.8	327.1	325.3
Components for manufacturing	280.4	281.6	281.5	281.8	282.6	283.0	283.5	284.5	285.2	ʳ285.6	285.9	286.6	286.9	287.2
Materials and components for construction	301.8	302.9	303.7	303.1	303.6	303.9	304.9	305.5	307.8	ʳ309.6	310.1	309.6	310.2	310.7
Processed fuels and lubricants	564.8	567.9	572.0	573.4	574.2	568.1	561.7	556.4	561.3	ʳ567.8	564.2	569.2	577.2	578.9
Manufacturing industries	479.0	480.9	485.1	487.2	490.5	484.9	478.8	474.2	477.9	ʳ483.4	482.7	488.1	493.5	494.5
Nonmanufacturing industries	640.0	644.1	648.0	648.8	647.2	640.6	634.0	628.0	634.1	ʳ641.4	635.1	639.5	650.1	652.3
Containers	286.6	286.1	286.3	287.1	288.1	289.3	289.9	292.3	294.8	ʳ297.3	298.4	301.3	302.2	303.0
Supplies	277.1	276.2	277.9	280.2	280.6	281.6	281.6	282.6	282.2	ʳ283.0	284.1	284.2	283.8	283.0
Manufacturing industries	269.9	270.1	270.5	270.8	271.8	272.2	273.3	274.5	276.0	ʳ276.4	277.7	278.3	278.9	279.1
Nonmanufacturing industries	281.1	279.6	282.0	285.3	285.3	286.7	286.1	287.0	285.7	ʳ286.7	287.7	287.6	286.7	285.4
Feeds	225.9	216.2	230.7	249.6	246.7	251.0	243.9	243.7	227.7	ʳ232.2	233.5	229.5	221.5	211.3
Other supplies	292.8	291.9	293.0	293.4	294.0	294.8	295.5	296.6	298.0	ʳ298.4	299.3	300.0	300.4	300.8
CRUDE MATERIALS														
Crude materials for further processing	323.6	320.6	327.1	328.5	324.8	324.0	327.5	333.5	332.6	ʳ338.8	340.1	338.5	333.2	334.5
Foodstuffs and feedstuffs	252.2	248.4	256.4	257.2	253.7	251.8	256.0	264.0	260.5	ʳ269.9	270.4	267.2	260.7	264.0
Nonfood materials	477.4	476.2	479.6	482.5	478.2	479.4	481.6	483.4	488.1	ʳ487.5	490.4	492.2	489.5	486.6
Nonfood materials except fuel	372.2	371.6	375.6	378.1	377.1	377.7	379.1	380.1	385.5	ʳ387.8	389.0	389.7	385.9	381.1
Manufacturing industries	381.9	381.6	385.7	388.3	387.4	387.9	389.4	390.4	395.5	ʳ398.8	399.8	400.2	395.7	390.3
Construction	270.6	270.9	271.0	272.5	270.5	272.1	272.7	273.7	280.3	ʳ276.5	278.2	281.1	281.7	281.9
Crude fuel	931.5	927.8	926.9	931.0	910.9	915.3	921.1	926.1	926.6	ʳ910.6	922.2	929.2	933.2	940.6
Manufacturing industries	1,094.5	1,090.4	1,088.9	1,093.9	1,067.1	1,071.8	1,079.0	1,086.5	1,086.3	ʳ1,064.8	1,081.1	1,089.3	1,095.5	1,104.4
Nonmanufacturing industries	816.3	813.0	812.5	816.1	801.1	805.3	810.1	813.2	814.2	ʳ802.6	810.3	816.6	818.6	825.0
SPECIAL GROUPINGS														
Finished goods excluding foods	290.8	291.8	292.5	290.3	293.4	293.0	292.6	292.9	293.6	ʳ294.0	294.6	295.7	295.7	296.0
Finished consumer goods excluding foods	291.4	292.6	293.5	291.4	293.9	293.2	292.5	292.5	293.1	ʳ293.6	293.7	295.1	295.3	295.4
Finished consumer goods less energy	249.9	249.9	250.2	249.7	252.1	251.7	252.6	256.1	257.2	ʳ258.2	257.9	257.3	256.7	259.0
Intermediate materials less foods and feeds	317.1	318.0	318.7	319.5	320.0	319.9	320.2	320.6	322.3	ʳ324.4	324.8	325.4	326.5	326.7
Intermediate materials less energy	295.2	295.6	296.5	298.1	298.2	298.5	299.4	300.5	301.5	ʳ303.3	304.1	304.4	304.6	304.5
Intermediate foods and feeds	247.9	244.0	250.9	263.2	258.2	257.4	256.9	260.7	255.1	ʳ257.5	259.1	260.6	257.4	255.3
Crude materials less agricultural products	538.6	536.8	540.0	542.9	538.8	540.3	543.2	546.3	552.0	ʳ550.0	553.3	554.0	552.3	550.0
Crude materials less energy	246.5	243.9	251.2	252.5	249.6	248.3	252.0	258.3	257.3	ʳ265.1	266.0	263.8	257.7	258.7

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

r = revised.

24. Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1983	1983 July	Aug.	Sept.	Oct.	Nov.	Dec.	1984 Jan.	Feb.	Mar.[1]	Apr.	May	June	July
	All commodities	303.1	303.2	304.7	305.3	306.0	305.5	306.1	308.0	308.9	ʳ311.0	311.4	311.7	311.4	312.0
	All commodities (1957–59 = 100)	321.5	321.7	323.3	323.9	324.7	324.1	324.8	326.8	327.7	ʳ330.0	330.4	330.7	330.4	331.0
	Farm products and processed foods and feeds	253.9	251.5	255.5	259.1	257.5	256.0	257.9	264.4	263.4	ʳ267.9	267.9	266.3	262.7	265.2
	Industrial commodities	315.7	316.5	317.3	317.1	318.5	318.3	318.4	319.1	320.6	321.9	322.5	323.3	323.9	324.0
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	248.2	244.3	253.5	256.4	255.2	251.0	254.0	263.4	261.6	267.4	265.4	260.8	257.1	258.6
01–1	Fresh and dried fruits and vegetables	262.1	258.2	270.4	276.0	308.1	275.2	276.1	291.2	312.2	ʳ308.0	262.8	251.1	272.9	281.2
01–2	Grains	240.4	236.7	251.8	258.0	253.7	257.5	243.6	245.5	235.3	250.9	262.1	256.2	257.8	248.9
01–3	Livestock	243.1	240.7	242.2	231.5	229.4	220.5	238.2	250.7	251.9	260.8	260.8	254.8	250.0	260.1
01–4	Live poultry	206.5	214.5	221.4	242.2	208.5	238.5	241.2	252.6	251.3	258.4	240.8	240.6	227.7	259.2
01–5	Plant and animal fibers	227.0	230.4	240.7	238.7	234.5	243.6	244.1	229.3	232.7	250.3	252.3	259.1	252.7	235.8
01–6	Fluid milk	282.0	278.7	281.7	284.4	284.1	283.2	281.4	279.1	275.7	274.2	272.7	271.7	271.8	273.9
01–7	Eggs	(2)	177.2	189.5	200.1	(2)	(2)	(2)	282.4	280.7	(2)	264.4	201.0	177.9	184.9
01–8	Hay, hayseeds, and oilseeds	246.8	227.3	262.8	297.8	288.8	287.6	282.2	287.3	265.4	281.4	282.1	297.0	272.4	245.8
01–9	Other farm products	282.1	282.5	285.7	287.3	283.7	283.5	276.9	280.2	278.9	ʳ277.7	281.0	288.0	279.0	277.4
02	Processed foods and feeds	255.9	254.4	255.5	259.6	257.8	257.6	259.0	263.8	263.4	ʳ267.1	268.2	268.3	264.8	267.7
02–1	Cereal and bakery products	261.0	261.4	262.8	263.6	264.6	265.2	265.1	266.6	267.1	ʳ267.4	268.2	268.6	271.5	272.2
02–2	Meats, poultry, and fish	249.0	247.3	243.2	242.9	237.0	234.7	242.3	255.8	254.6	264.4	265.3	260.6	248.5	260.6
02–3	Dairy products	250.6	250.4	250.4	250.6	251.3	251.4	248.9	248.4	248.4	ʳ248.8	249.2	248.9	249.4	251.4
02–4	Processed fruits and vegetables	277.4	277.1	278.3	278.6	281.1	280.9	282.9	287.7	292.8	ʳ295.4	295.6	297.4	298.2	296.5
02–5	Sugar and confectionery	292.8	296.4	298.9	300.2	298.0	297.7	297.5	299.9	300.5	ʳ301.1	301.8	303.6	304.0	305.3
02–6	Beverages and beverage materials	263.6	263.7	263.9	264.3	265.2	266.3	266.5	268.7	270.2	ʳ269.9	271.6	273.6	271.7	273.8
02–7	Fats and oils	238.8	222.2	245.6	303.5	281.7	274.5	271.7	278.3	273.3	ʳ286.2	290.9	325.8	326.5	312.7
02–8	Miscellaneous processed foods	254.8	255.0	252.7	258.4	262.1	264.8	266.2	266.8	275.4	ʳ275.2	276.0	275.5	278.4	280.4
02–9	Prepared animal feeds	228.8	220.0	233.0	249.3	248.6	252.1	245.6	245.2	231.1	235.3	236.3	232.6	225.5	216.3
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	205.1	205.3	206.0	206.2	207.0	207.7	207.8	208.2	209.6	209.9	209.6	210.5	210.3	210.8
03–1	Synthetic fibers (12/75 = 100)	156.7	158.3	157.5	158.0	160.5	159.3	158.1	159.2	161.4	ʳ160.7	166.6	160.8	160.5	160.1
03–2	Processed yarns and threads (12/75 = 100)	138.5	138.5	140.2	140.3	141.3	141.7	142.9	142.3	144.0	ʳ144.0	143.7	144.3	143.8	143.7
03–3	Gray fabrics (12/75 = 100)	147.0	146.1	146.7	147.3	149.4	151.4	152.0	151.1	152.8	ʳ153.2	153.0	153.6	154.3	154.1
03–4	Finished fabrics (12/75 = 100)	123.1	122.4	123.6	123.4	123.8	124.4	124.8	124.8	126.3	ʳ127.0	126.6	127.4	127.2	127.7
03–81	Apparel	197.4	198.4	198.7	198.7	198.8	199.4	199.0	200.1	200.5	200.7	200.3	201.2	200.7	201.9
03–82	Textile housefurnishings	235.1	234.8	234.5	235.3	234.5	234.4	235.3	236.0	236.6	ʳ237.6	238.0	239.4	239.3	239.2
04	Hides, skins, leather, and related products	271.1	272.3	274.7	274.4	273.7	277.0	277.3	279.1	283.3	ʳ286.7	287.4	289.2	290.3	290.2
04–2	Leather	330.7	337.9	343.4	339.4	336.6	340.5	344.1	346.2	362.0	ʳ378.0	381.7	387.2	383.5	384.7
04–3	Footwear	250.1	249.9	250.9	251.6	251.3	257.3	250.3	250.9	252.5	ʳ253.5	251.8	251.8	250.3	250.1
04–4	Other leather and related products	252.7	253.5	253.7	253.5	253.5	255.8	255.6	257.2	257.3	ʳ257.3	261.6	263.1	271.2	271.2
05	Fuels and related products and power	664.7	668.7	671.7	672.3	669.5	663.7	658.0	652.1	656.0	ʳ658.7	656.5	662.7	667.9	667.2
05–1	Coal	537.4	534.8	536.6	537.9	538.2	542.3	543.9	541.4	544.7	ʳ546.2	543.0	546.9	543.3	546.8
05–2	Coke	444.6	431.6	453.9	453.9	453.1	453.8	415.4	418.3	437.9	ʳ438.9	434.4	428.7	441.9	441.9
05–3	Gas fuels[3]	1,146.9	1,148.9	1,145.9	1,147.0	1,128.4	1,122.0	1,120.4	1,123.0	1,107.8	ʳ1,091.0	1,115.2	1,116.8	1,122.1	1,123.5
05–4	Electric power	417.9	426.4	427.2	427.9	423.6	418.7	417.3	420.5	424.4	ʳ426.7	431.9	433.5	446.5	453.9
05–61	Crude petroleum[4]	681.4	675.7	675.1	675.7	675.7	675.8	674.4	675.6	675.6	ʳ675.6	674.3	674.3	673.7	673.1
05–7	Petroleum products, refined[5]	684.3	688.7	694.9	695.3	695.3	688.2	678.3	663.2	669.8	ʳ680.2	667.3	678.9	681.1	674.6
06	Chemicals and allied products	293.0	293.7	294.4	295.9	295.5	296.4	297.7	298.1	296.5	ʳ300.1	301.8	302.5	302.5	302.6
06–1	Industrial chemicals[6]	342.9	347.0	347.6	345.6	344.9	346.2	349.2	347.4	337.6	ʳ344.7	345.1	344.8	345.5	345.7
06–21	Prepared paint	264.7	265.2	265.4	264.5	264.2	264.5	264.9	265.6	267.3	ʳ267.3	267.3	268.0	270.8	274.1
06–22	Paint materials	305.8	300.5	305.7	316.2	316.9	316.5	315.5	316.6	314.2	ʳ317.9	327.6	337.2	337.1	335.4
06–3	Drugs and pharmaceuticals	226.1	227.6	227.3	227.4	229.3	231.0	230.9	232.9	234.4	ʳ237.6	239.9	240.2	238.7	240.0
06–4	Fats and oils, inedible	285.6	260.9	278.1	329.0	318.6	321.6	318.8	334.2	349.0	ʳ366.7	382.1	398.8	414.2	378.4
06–5	Agricultural chemicals and chemical products	280.5	278.1	277.1	276.0	276.4	280.4	281.9	278.5	285.9	ʳ288.1	288.3	286.6	286.4	285.5
06–6	Plastic resins and materials	291.5	291.3	293.7	302.6	299.1	297.9	301.5	305.2	305.0	ʳ306.2	308.6	311.1	310.8	309.9
06–7	Other chemicals and allied products	273.6	274.2	274.2	274.3	274.4	273.8	273.6	274.9	273.3	ʳ275.2	277.1	277.2	276.3	277.5
07	Rubber plastic products	243.2	243.4	243.7	243.2	244.4	243.6	243.8	244.8	246.2	ʳ246.4	246.5	247.4	247.3	247.5
07–1	Rubber and rubber products	266.0	265.2	265.1	263.9	264.8	264.3	264.6	266.6	266.8	ʳ265.5	266.7	267.2	266.3	266.9
07–11	Crude rubber	280.8	283.2	284.6	284.4	284.3	282.7	282.2	282.9	284.8	ʳ283.0	282.5	277.5	277.1	275.9
07–12	Tires and tubes	245.3	242.4	242.8	242.5	242.6	242.4	242.3	244.1	243.7	ʳ241.7	243.2	244.5	243.5	244.1
07–13	Miscellaneous rubber products	284.8	285.7	284.5	281.6	283.8	283.5	284.6	287.1	288.4	ʳ287.4	288.8	290.0	289.1	290.3
07–2	Plastic products (6/78 = 100)	135.3	136.0	136.4	136.6	137.4	136.7	136.8	136.9	138.4	ʳ139.4	138.8	139.6	140.1	139.9
08	Lumber and wood products	307.1	314.6	313.9	305.6	305.6	304.9	308.7	309.1	315.7	ʳ316.8	315.4	308.8	307.1	304.3
08–1	Lumber	352.6	373.1	366.6	346.6	344.7	342.8	351.3	352.6	364.9	ʳ370.5	369.6	355.8	351.5	343.3
08–2	Millwork	302.3	296.3	306.6	305.9	307.4	307.9	308.5	308.6	308.8	ʳ309.9	307.7	305.4	305.2	305.7
08–3	Plywood	244.1	252.5	246.2	242.2	246.6	244.6	247.2	248.2	249.5	ʳ248.6	244.0	235.4	236.3	237.1
08–4	Other wood products	230.6	229.7	229.3	229.4	229.6	229.8	230.6	230.0	230.8	ʳ231.8	233.3	234.3	234.9	235.2

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 1983	1983						1984						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	Apr.	May	June	July
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	298.1	297.8	298.8	299.9	302.2	303.6	304.0	309.1	312.0	ʳ314.0	315.3	317.0	317.6	319.2
09–1	Pulp, paper, and products, excluding building paper and board	271.4	270.2	271.1	273.1	275.2	277.4	277.4	280.8	285.0	ʳ288.3	290.1	292.7	293.3	295.6
09–11	Woodpulp	346.9	345.8	346.4	34.4	347.4	356.7	355.5	366.2	374.2	ʳ378.6	392.5	405.1	407.6	410.6
09–12	Wastepaper	(2)	183.3	(2)	194.4	216.2	215.0	211.5	211.5	229.3	242.9	258.8	259.3	257.3	254.7
09–13	Paper	282.0	279.2	280.9	286.0	287.2	288.5	289.3	294.2	296.6	ʳ299.8	300.6	301.3	301.4	307.9
09–14	Paperboard	250.9	249.7	250.1	254.0	257.3	259.4	260.9	262.2	271.8	ʳ275.6	275.4	276.9	279.1	279.1
09–15	Converted paper and paperboard products	265.3	264.1	264.7	265.0	266.5	267.9	268.0	270.6	273.7	ʳ276.5	277.7	280.6	280.8	281.9
09–2	Building paper and board	250.0	256.2	252.1	252.8	254.7	254.7	250.4	251.9	255.1	ʳ258.6	264.1	265.2	265.1	262.9
10	Metals and metal products	307.2	307.3	308.2	310.7	310.9	310.9	311.9	312.9	314.8	ʳ316.8	317.8	317.1	317.2	315.9
10–1	Iron and steel	343.4	342.1	343.2	348.1	348.5	349.5	350.9	353.8	356.2	ʳ356.5	356.5	357.1	356.8	357.2
10–17	Steel mill products	352.8	350.8	351.7	358.1	358.7	359.5	360.0	362.5	363.6	363.6	364.3	364.9	365.4	367.8
10–2	Nonferrous metals	276.1	278.4	279.8	282.0	279.3	276.6	278.2	276.8	280.2	286.1	289.0	283.6	282.9	276.8
10–3	Metal containers	335.4	336.5	336.6	338.5	338.3	338.2	340.3	344.1	344.8	ʳ345.4	345.5	348.1	348.2	348.4
10–4	Hardware	290.7	292.1	292.2	292.5	292.7	293.1	293.5	293.3	294.0	ʳ294.4	293.6	294.1	295.0	295.8
10–5	Plumbing fixtures and brass fittings	289.3	290.4	290.2	292.4	292.7	294.1	294.0	293.9	296.4	299.9	301.4	301.8	302.0	302.5
10–6	Heating equipment	243.6	244.9	245.1	246.6	245.3	245.5	245.7	247.3	248.1	ʳ248.5	250.3	252.5	251.3	254.7
10–7	Fabricated structural metal products	303.5	302.2	303.0	304.3	304.2	305.3	306.0	306.5	307.0	ʳ308.3	309.3	310.6	311.1	311.6
10–8	Miscellaneous metal products	283.6	283.7	284.0	284.3	289.0	289.5	289.6	290.3	291.1	ʳ292.1	292.7	293.1	294.5	294.1
11	Machinery and equipment	286.4	287.4	287.4	287.9	287.6	288.0	288.8	289.7	290.2	ʳ291.0	292.4	292.8	293.1	293.7
11–1	Agricultural machinery and equipment	326.3	327.1	327.3	328.5	328.0	328.6	330.1	331.0	331.4	ʳ332.9	335.5	337.1	336.8	337.2
11–2	Construction machinery and equipment	351.9	352.8	352.9	353.5	353.6	353.9	353.6	354.2	355.9	ʳ355.3	357.6	357.8	358.1	358.2
11–3	Metalworking machinery and equipment	326.5	326.6	326.5	326.6	327.0	327.3	328.7	329.2	330.2	ʳ330.6	332.4	332.9	333.3	334.1
11 4	General purpose machinery and equipment	308.2	308.5	307.9	308.1	307.8	308.6	309.8	310.7	310.9	311.7	313.1	313.3	313.6	314.9
11–6	Special industry machinery and equipment	337.1	338.0	339.0	339.8	340.6	341.0	342.0	342.0	343.2	ʳ344.6	347.1	348.2	348.8	351.0
11–7	Electrical machinery and equipment	240.1	241.7	241.7	242.9	242.6	242.8	243.8	244.7	245.7	ʳ246.7	247.3	247.5	248.4	248.5
11–9	Miscellaneous machinery	274.1	275.2	275.3	274.5	273.3	273.7	273.9	275.5	274.3	ʳ274.5	276.2	277.2	275.7	275.6
12	Furniture and household durables	214.0	214.8	214.9	215.4	215.3	215.7	215.7	216.8	217.2	217.4	217.9	218.9	219.2	218.7
12–1	Household furniture	234.7	235.4	236.3	236.6	236.9	237.4	237.2	237.9	239.1	240.0	240.7	241.5	242.3	241.8
12–2	Commercial furniture	286.3	287.5	286.5	287.3	287.4	289.9	289.5	293.4	294.7	ʳ294.7	297.5	297.6	297.0	297.9
12–3	Floor coverings	185.4	186.6	188.9	189.5	189.5	189.3	189.4	188.2	188.4	ʳ188.3	187.4	191.1	191.6	191.4
12–4	Household appliances	206.9	207.8	207.7	208.0	207.6	208.0	208.5	209.8	210.7	ʳ210.9	210.7	210.9	211.1	211.4
12–5	Home electronic equipment	86.1	85.9	85.5	85.8	85.8	85.1	84.5	84.4	84.1	ʳ84.0	84.1	84.1	83.7	82.4
12–6	Other household durable goods	313.1	314.8	313.9	314.5	314.0	315.1	315.2	318.0	316.8	ʳ316.7	317.9	321.0	322.1	320.4
13	Nonmetallic mineral products	325.2	325.1	326.3	327.2	328.0	328.9	328.9	330.1	332.2	ʳ333.4	335.6	337.3	338.4	339.3
13–11	Flat glass	229.7	229.8	229.7	229.5	229.6	230.1	229.9	229.5	229.9	ʳ229.1	229.5	226.4	227.3	227.4
13–2	Concrete ingredients	313.3	314.0	316.4	317.2	316.7	314.8	314.6	315.6	319.9	ʳ324.2	323.8	326.9	326.3	327.2
13–3	Concrete products	302.0	302.3	302.7	303.5	303.3	304.1	304.2	304.9	305.9	ʳ306.3	308.8	309.6	310.0	310.6
13–4	Structural clay products, excluding refractories	277.8	282.4	282.4	282.4	283.5	284.1	284.2	284.3	283.7	ʳ284.3	284.3	285.0	285.6	285.7
13–5	Refractories	341.3	338.2	339.4	340.2	344.7	353.3	353.3	353.9	356.0	ʳ361.1	362.9	362.9	362.9	362.9
13–6	Asphalt roofing	384.0	385.3	383.4	387.2	387.9	387.8	384.2	385.0	392.3	ʳ385.6	394.2	396.8	392.3	392.6
13–7	Gypsum products	286.0	276.0	289.3	297.8	312.8	315.1	322.6	328.6	339.4	ʳ339.6	353.1	360.9	360.3	360.6
13–8	Glass containers	352.4	351.6	351.3	351.1	350.2	350.4	350.4	350.6	350.6	ʳ351.6	358.4	361.2	366.0	367.1
13–9	Other nonmetallic minerals	480.2	479.7	481.9	482.5	483.2	487.4	486.8	486.4	488.1	ʳ490.8	490.8	495.0	499.7	507.1
14	Transportation equipment (12/68 = 100)	256.7	256.2	256.8	250.4	260.6	260.5	260.7	261.5	262.2	262.4	262.9	262.7	262.6	262.8
14–1	Motor vehicles and equipment	256.8	256.6	256.8	249.1	260.6	260.5	260.6	261.1	261.2	ʳ261.5	261.8	261.5	261.4	261.5
14–4	Railroad equipment	350.2	351.3	351.0	350.7	348.6	348.6	350.5	351.5	351.5	ʳ352.0	361.2	361.2	361.2	363.4
15	Miscellaneous products	289.6	291.5	292.0	291.4	291.7	291.7	292.8	294.5	294.9	ʳ294.9	294.5	294.3	295.6	297.1
15–1	Toys, sporting goods, small arms, ammunition	225.2	224.3	224.5	224.8	225.9	225.2	225.3	227.4	227.8	ʳ227.6	226.6	226.7	226.4	226.4
15–2	Tobacco products	365.4	373.4	376.7	376.9	376.8	377.0	377.1	389.4	390.3	ʳ390.4	390.4	390.6	400.2	407.9
15–3	Notions	280.1	280.3	279.7	279.7	279.7	279.6	280.1	281.4	282.2	282.2	283.0	283.9	283.9	283.9
15–4	Photographic equipment and supplies	215.7	216.5	216.6	216.6	216.8	216.8	216.8	(2)	217.9	ʳ212.7	213.9	213.5	213.5	213.7
15–5	Mobile homes (12/74 = 100)	163.4	163.5	163.7	164.3	164.8	165.0	165.1	162.2	162.4	ʳ162.5	164.0	163.9	163.9	164.1
15–9	Other miscellaneous products	351.8	353.7	352.9	349.6	349.2	349.3	353.2	350.8	350.5	ʳ354.2	351.5	350.0	349.6	349.8

[1] Data for March 1984 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.
[2] Not available.
[3] Prices for natural gas are lagged 1 month.
[4] Includes only domestic production.
[5] Most prices for refined petroleum products are lagged 1 month.
[6] Some prices for industrial chemicals are lagged 1 month.
r = revised.

79

25. Producer Price Indexes, for special commodity groupings

[1967 = 100 unless otherwise specified]

Commodity grouping	Annual average 1983	1983						1984						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	Apr.	May	June	July
All commodities—less farm products	306.6	307.1	308.0	308.3	309.2	309.1	309.4	310.7	311.9	r313.6	314.2	314.9	314.9	315.4
All foods	257.5	256.2	257.1	260.7	260.5	258.0	260.2	268.3	270.2	r272.9	271.6	269.8	267.6	272.1
Processed foods	258.7	257.7	257.6	260.9	258.6	258.0	260.4	266.2	267.0	r271.2	272.1	272.4	269.2	273.4
Industrial commodities less fuels	279.3	279.8	280.4	280.0	281.8	282.2	282.9	284.3	285.5	r286.7	287.5	287.8	287.9	288.1
Selected textile mill products (Dec. 1975 = 100)	138.2	143.0	139.0	139.1	139.4	139.8	140.1	140.0	141.3	r141.7	141.3	142.7	142.6	142.9
Hosiery	144.7	144.5	145.6	145.6	145.6	145.6	145.6	145.8	147.3	147.4	147.4	147.4	147.4	147.8
Underwear and nightwear	223.8	223.3	223.5	224.5	224.7	224.6	225.4	228.6	229.8	r229.8	229.8	229.9	229.0	229.5
Chemicals and allied products, including synthetic rubber and fibers and yarns	283.5	284.6	285.0	285.6	285.6	286.3	287.4	287.6	286.2	r289.1	290.6	290.9	290.7	291.2
Pharmaceutical preparations	224.8	226.3	226.0	227.1	229.4	231.3	231.8	233.9	235.9	r238.8	241.6	242.1	242.3	244.0
Lumber and wood products, excluding millwork	321.2	338.1	331.5	316.5	316.7	314.7	321.4	322.6	331.4	r334.9	332.8	320.6	317.9	312.6
Steel mill products, including fabricated wire products	351.2	349.3	350.1	355.9	356.4	357.4	357.8	360.1	361.1	361.2	361.8	362.5	363.1	365.3
Finished steel mill products, excluding fabricated wire products	351.5	349.4	350.3	357.1	357.8	358.6	359.2	361.7	363.2	r363.1	363.5	364.2	364.8	367.0
Finished steel mill products, including fabricated wire products	349.9	347.9	348.7	354.8	355.4	356.4	356.9	359.2	360.5	r360.5	360.9	361.6	362.3	364.4
Special metals and metal products	292.6	292.6	293.5	291.5	296.4	296.3	297.0	297.8	299.0	r300.3	301.0	300.6	300.6	300.0
Fabricated metal products	294.3	294.2	294.7	295.5	297.2	297.9	298.4	299.3	300.0	r301.1	301.7	302.7	303.5	303.8
Copper and copper products	196.6	201.6	201.2	198.2	190.7	182.6	185.0	182.1	185.1	r192.9	199.8	190.4	189.3	183.5
Machinery and motive products	279.8	280.1	280.4	277.7	282.2	282.4	283.0	283.9	284.5	r285.0	286.0	286.2	286.3	286.7
Machinery and equipment, except electrical	313.6	314.2	314.2	314.3	314.1	314.6	315.3	316.3	316.5	r317.1	318.9	319.6	319.4	320.3
Agricultural machinery, including tractors	341.5	342.7	342.8	344.0	343.6	344.0	346.4	347.1	347.5	r349.3	352.9	355.0	354.6	355.4
Metalworking machinery	357.1	357.8	357.8	357.5	357.1	357.6	358.2	359.3	362.1	r361.6	363.0	363.2	363.2	364.7
Total tractors	r369.7	370.7	370.0	372.5	372.6	373.1	373.8	374.0	374.5	376.1	384.3	384.5	384.8	384.9
Agricultural machinery and equipment less parts	330.0	331.0	331.2	332.6	331.8	332.2	334.2	335.2	335.7	r337.4	340.4	342.2	341.7	342.3
Farm and garden tractors less parts	347.2	348.8	347.5	350.6	350.7	350.9	352.0	352.2	352.9	r355.1	362.1	362.4	362.8	362.9
Agricultural machinery, excluding tractors less parts	337.1	338.0	339.2	338.9	338.2	338.7	342.2	343.3	343.4	r344.9	345.7	349.3	348.2	349.6
Construction materials	297.7	310.6	299.8	299.9	300.4	300.4	301.3	302.3	305.0	r306.6	306.8	306.0	306.3	306.6

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

26. Producer Price Indexes, by durability of product

[1967 = 100]

Commodity grouping	Annual average 1983	1983						1984						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	Apr.	May	June	July
Total durable goods	286.7	287.4	287.8	286.8	289.2	289.3	290.1	291.0	292.2	293.2	294.0	293.7	293.8	293.7
Total nondurable goods	315.7	315.4	317.8	319.7	319.1	318.1	318.4	321.2	321.9	r324.8	324.9	325.6	325.1	326.3
Total manufactures	295.7	296.1	296.9	297.2	298.5	298.4	298.8	300.0	301.2	r302.8	303.0	303.7	303.8	304.2
Durable	287.3	288.0	288.3	287.2	289.6	289.8	290.5	291.3	292.4	293.3	294.1	293.9	294.1	294.1
Nondurable	304.4	304.5	305.9	307.8	307.7	307.4	307.5	309.1	310.4	r312.7	312.3	314.0	314.1	314.9
Total raw or slightly processed goods	339.8	338.3	343.8	345.9	343.6	340.6	341.8	348.4	347.6	r352.4	354.1	351.7	349.0	350.8
Durable	249.3	249.9	256.8	260.7	259.8	258.5	263.3	267.4	275.2	r278.7	280.2	277.2	273.0	264.8
Nondurable	345.4	343.7	349.1	351.0	348.6	345.6	346.5	353.3	351.8	r356.7	358.4	356.1	353.5	356.0

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

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

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1983	1983						1984						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	Apr.	May	June	July
	MINING														
1011	Iron ores (12/75 = 100)	177.1	177.1	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)	269.7	237.5	231.2	243.3	283.3	287.5	277.0	275.8	245.4	r250.0	267.9	273.7	271.6	264.6
1311	Crude petroleum and natural gas	921.4	916.6	915.8	920.0	907.2	909.4	909.4	914.3	913.0	r902.7	910.1	914.9	919.2	922.2
	MANUFACTURING														
2067	Chewing gum	326.8	327.2	327.3	327.3	327.3	327.5	327.5	328.0	328.1	r328.7	328.8	329.0	329.0	329.1
2074	Cottonseed oil mills	204.1	192.4	220.6	262.9	253.5	233.1	223.3	229.2	201.7	r212.7	222.4	244.1	242.9	223.2
2083	Malt	234.1	232.6	232.6	232.6	232.6	241.6	241.6	241.6	241.6	241.6	241.6	241.6	241.6	241.6
2091	Canned and cured seafoods (12/73 = 100)	174.1	173.7	169.4	169.8	170.2	169.2	169.7	169.0	168.8	r168.6	166.7	169.4	168.9	167.8
2098	Macaroni and spaghetti	256.8	255.5	255.5	255.5	258.6	261.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9
2298	Cordage and twine (12/77 = 100)	139.3	137.6	137.6	139.0	139.0	138.9	139.0	139.0	139.2	r139.2	139.3	139.4	139.4	137.4
2361	Children's dresses and blouses (12/77 = 100)	116.6	117.0	117.0	117.0	117.0	117.0	117.0	118.2	117.8	117.8	118.5	118.5	118.5	118.6
2381	Fabric dress and work gloves	293.3	296.3	296.3	296.3	296.3	296.3	297.6	295.2	299.1	r302.3	304.8	315.6	315.6	315.6
2394	Canvas and related products (12/77 = 100)	147.0	146.2	146.2	146.2	147.8	147.8	147.8	150.6	150.6	r150.6	151.3	151.3	151.3	151.3
2448	Wood pallets and skids (12/75 = 100)	149.2	150.9	151.3	151.0	151.5	151.9	153.6	154.0	156.0	r157.9	161.6	165.0	165.4	166.3
2521	Wood office furniture	281.3	283.5	283.6	283.6	283.6	283.6	283.6	285.1	289.1	r289.1	290.3	290.3	290.3	290.3
2654	Sanitary food containers	266.1	267.1	267.1	267.8	269.0	269.0	269.0	269.1	273.4	r278.4	282.2	282.3	282.3	282.3
2655	Fiber cans, drums, and similar products (12/75 = 100)	186.5	187.7	187.7	187.7	187.8	189.5	189.6	189.6	189.7	r191.4	193.1	193.1	193.1	194.7
2911	Petroleum refining (6/76 = 100)	253.8	255.4	257.2	256.8	257.1	253.5	249.7	244.4	246.7	r249.8	245.5	248.7	249.6	247.2
3251	Brick and structural clay tile	332.3	336.4	336.4	336.4	338.4	339.7	339.9	340.2	339.9	r341.1	343.7	344.9	346.1	346.5
3253	Ceramic wall and floor tile (12/75 = 100)	146.0	149.6	149.6	149.6	149.6	149.6	149.6	149.6	149.6	r149.6	146.8	146.8	146.8	146.8
3255	Clay refractories	355.6	352.1	354.4	355.9	364.3	366.6	366.5	367.2	367.7	r369.3	373.5	373.5	373.7	373.7
3259	Structural clay products, n.e.c.	230.2	234.8	234.9	234.9	235.1	235.0	235.0	235.0	232.1	r232.4	232.8	232.8	232.9	233.0
3261	Vitreous plumbing fixtures	278.1	277.0	277.0	281.3	283.7	284.5	285.4	285.6	287.0	r290.1	290.4	290.8	292.5	293.1
3263	Fine earthenware food utensils	366.5	366.5	366.5	366.5	366.5	368.5	368.5	383.6	384.0	r375.9	375.4	378.8	375.5	372.1
3269	Pottery products, n.e.c. (12/75 = 100)	187.1	186.6	186.6	186.6	186.6	189.9	189.9	191.9	192.2	r191.9	189.1	192.3	192.2	192.1
3274	Lime (12/75 = 100)	185.7	187.1	187.6	186.3	185.9	182.4	182.5	182.8	184.4	r183.9	184.2	184.2	183.4	180.4
3297	Nonclay refractories (12/74 = 100)	205.2	203.7	203.8	203.8	203.9	212.8	212.8	213.1	215.4	r220.6	220.2	220.2	220.1	220.0
3482	Small arms ammunition (12/75 = 100)	180.5	181.6	181.6	181.6	181.6	181.6	181.6	190.3	190.3	r190.3	196.6	196.6	196.6	196.6
3623	Welding apparatus, electric (12/72 = 100)	243.6	243.5	243.5	243.6	243.9	243.9	244.7	246.0	246.7	r247.2	243.7	243.7	245.2	245.3
3648	Lighting equipment, n.e.c. (12/75 = 100)	172.8	173.4	173.4	173.5	173.7	173.9	172.6	173.5	173.5	r184.9	184.9	185.6	185.7	186.4
3671	Electron tubes, receiving type	435.4	432.5	432.5	432.8	432.9	432.9	469.8	490.6	490.8	r490.8	490.8	490.8	490.9	491.1
3942	Dolls (12/75 = 100)	137.5	137.7	137.7	137.7	137.7	137.7	137.7	137.6	137.8	r137.7	131.3	133.1	133.3	133.3
3944	Games, toys, and children's vehicles	238.7	236.1	236.2	236.3	236.4	236.2	236.2	239.3	240.6	r240.1	235.5	234.6	234.7	234.7
3955	Carbon paper and inked ribbons (12/75 = 100) . . .	139.2	139.2	139.2	139.2	139.3	139.3	139.3	144.3	149.0	149.0	149.1	149.1	149.1	146.7
3995	Burial caskets (6/76 = 100)	153.5	155.4	155.4	155.4	156.0	156.0	156.0	156.0	157.2	r157.3	158.8	158.8	158.8	158.8
3996	Hard surface floor coverings (12/75 = 100)	161.5	162.2	163.4	163.5	165.5	163.5	163.5	165.2	165.2	165.2	166.3	166.4	166.4	168.7

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

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

r = revised.

PRODUCTIVITY DATA

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

Definitions

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

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

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

Unit labor costs measure the labor compensation costs required to produce a unit of output and is derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current dollar gross product and dividing by output. **Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and the value of inventory adjustments per unit of output.

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

Hours of all persons measures the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all employee hour** describes labor productivity in nonfinancial corporations where there are no self-employed. The **capital services** input index used in the multifactor productivity computation is developed by BLS from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset. **Combined units of labor and capital input** are computed by combining changes in labor and capital inputs with weights which represent each component's share of total output. The indexes for capital services and combined units of labor and capital are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

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

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

The productivity and associated cost measures in the tables describe the relationship between output in real terms and the labor time and capital services involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input. Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and efforts of the work force. For a more complete description of the methodology underlying the multifactor productivity measures, see Bulletin 2178, "Trends in Multifactor Productivity, 1948–81" (September 1983).

Beginning with the September issue of the *Review*, all of the productivity and cost measures in tables 29–32 incorporate revised output and compensation measures reported by the Bureau of Economic Analysis of the U.S. Department of Commerce. In addition, revised values for seasonally adjusting measures of employment and average weekly hours were introduced, data for employees of nonagricultural establishments were rebenchmarked to the most recent levels from unemployment insurance data, and improved estimates of employment levels in agricultural services were incorporated.

28. Annual indexes of multifactor productivity and related measures, selected years, 1948–82

[1977 = 100]

Item	1948	1950	1960	1970	1973	1974	1975	1976	1978	1979	1980	1981	1982
PRIVATE BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	45.3	49.7	64.8	86.1	94.7	92.4	94.5	97.6	100.6	99.3	98.8	101.2	101.1
Output per unit of capital services	99.0	98.6	98.5	98.5	103.0	96.5	92.0	96.1	101.8	100.3	95.5	95.8	90.9
Multifactor productivity	60.0	63.6	75.4	90.2	97.5	93.8	93.6	97.1	101.0	99.7	97.7	99.3	97.5
Output	36.8	39.5	53.3	78.3	91.8	89.9	88.0	93.7	105.5	107.9	106.4	109.8	106.6
Inputs:													
Hours of all persons	81.3	79.5	82.2	90.9	96.9	97.2	93.1	95.9	104.9	108.6	107.7	108.4	105.4
Capital services	37.2	40.1	54.1	79.4	89.1	93.1	95.7	97.5	103.6	107.5	111.4	114.6	117.3
Combined units of labor and capital input	61.3	62.1	70.7	86.8	94.1	95.8	94.0	96.5	104.4	108.2	108.9	110.5	109.4
Capital per hour of all persons	45.7	50.4	65.8	87.4	92.0	95.8	102.8	101.6	98.8	99.0	103.4	105.7	111.3
PRIVATE NONFARM BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	51.2	55.6	67.9	86.8	95.3	92.9	94.7	97.8	100.6	99.0	98.3	100.2	100.2
Output per unit of capital services	97.9	98.2	98.4	98.6	103.2	96.5	91.7	96.1	101.9	100.1	95.2	95.0	90.1
Multifactor productivity	64.6	68.1	77.6	90.6	97.9	94.1	93.6	97.2	101.1	99.4	97.3	98.4	96.6
Output	35.6	38.3	52.3	77.8	91.7	89.7	87.6	93.6	105.7	108.0	106.4	109.3	106.2
Inputs:													
Hours of all persons	69.6	69.0	77.0	89.7	96.2	96.6	92.5	95.7	105.1	109.0	108.2	109.0	106.0
Capital services	36.4	39.0	53.2	78.9	88.8	93.0	95.6	97.4	103.7	107.9	111.7	115.1	118.0
Combined units of labor and capital input	55.2	56.3	67.4	85.9	93.6	95.4	93.6	96.3	104.6	108.6	109.4	111.0	110.0
Capital per hour of all persons	52.3	56.6	69.0	88.0	92.3	96.3	103.4	101.8	98.7	99.0	103.2	105.5	111.2
MANUFACTURING													
Productivity:													
Output per hour of all persons	45.1	49.4	60.0	79.1	93.0	90.8	93.4	97.5	100.8	101.5	101.7	105.3	106.5
Output per unit of capital services	93.9	94.5	88.0	91.8	108.2	99.6	89.4	96.1	101.5	99.5	90.7	90.2	82.7
Multifactor productivity	56.1	59.9	67.0	82.3	96.8	93.0	92.2	97.1	101.0	101.0	98.7	101.2	99.9
Output	35.8	38.6	50.7	77.0	95.9	91.9	85.4	93.6	105.3	108.2	103.5	106.5	99.1
Inputs:													
Hours of all persons	79.4	78.2	84.4	97.3	103.2	101.2	91.4	95.9	104.5	106.6	101.8	101.2	93.0
Capital services	38.1	40.9	57.5	83.9	88.6	92.2	95.5	97.4	103.8	108.8	114.1	118.0	119.9
Combined units of labor and capital input	63.8	64.6	75.6	93.6	99.1	98.8	92.6	96.4	104.3	107.2	104.8	105.2	99.2
Capital per hour of all persons	48.0	52.3	68.2	86.2	85.9	91.1	104.4	101.5	99.3	102.1	112.1	116.7	128.8

29. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–83

[1977 = 100]

Item	1950	1955	1960	1965	1970	1975	1976	1978	1979	1980	1981r	1982r	1983r
Business sector:													
Output per hour of all persons	50.4	58.3	65.2	78.3	86.2	r94.6	97.6	r100.5	99.3	r 98.8	100.7	100.9	103.7
Compensation per hour	20.0	26.4	33.9	41.7	58.2	r85.6	92.9	r108.5	118.7	r131.1	143.4	155.0	161.7
Real compensation per hour	50.5	r59.7	69.5	80.1	90.8	r96.4	98.9	r100.8	99.1	r 96.4	95.5	97.3	98.4
Unit labor costs	39.8	45.2	52.1	53.3	67.5	90.5	95.1	108.0	119.5	r132.6	142.4	153.6	156.0
Unit nonlabor payments	43.4	47.6	50.6	57.6	63.2	90.4	94.0	106.7	112.8	r119.3	136.7	136.8	145.5
Implicit price deflator	41.0	46.0	51.6	54.7	66.0	90.4	94.7	107.5	117.2	128.1	140.4	147.9	152.4
Nonfarm business sector:													
Output per hour of all persons	56.3	r62.8	68.3	80.5	86.8	r94.8	97.8	100.6	99.0	r 98.3	99.8	100.0	103.4
Compensation per hour	r21.9	28.3	35.7	42.8	58.7	r86.1	93.0	108.6	118.4	r130.6	143.1	154.5	162.0
Real compensation per hour	r55.1	64.0	r73.1	r82.3	91.5	r96.9	99.0	r100.8	98.8	r 96.0	95.3	97.0	98.6
Unit labor costs	38.8	45.1	52.3	53.2	67.6	90.8	95.1	108.0	119.5	132.8	143.5	154.5	156.6
Unit nonlabor payments	42.7	47.8	50.4	58.0	63.8	88.5	93.5	105.3	110.4	r118.6	135.0	136.9	147.0
Implicit price deflator	40.1	46.0	51.6	54.8	66.3	90.0	94.6	107.1	116.5	128.1	140.6	148.6	153.4
Nonfinancial corporations:													
Output per hour of all persons	(1)	(1)	68.0	r82.0	87.4	95.5	98.2	r100.8	100.6	r 99.7	101.6	102.6	106.1
Compensation per hour	(1)	(1)	37.0	43.9	59.4	86.1	92.9	r108.4	118.6	r130.8	143.1	154.6	161.0
Real compensation per hour	(1)	(1)	75.8	84.3	92.7	r97.0	98.9	100.7	99.0	r 96.2	95.3	97.0	97.9
Unit labor costs	(1)	(1)	54.4	53.5	68.0	90.2	94.6	107.5	117.8	131.2	140.9	150.6	151.8
Unit nonlabor payments	(1)	(1)	54.6	60.8	63.1	90.8	95.0	104.2	106.9	117.4	135.1	138.1	149.1
Implicit price deflator	(1)	(1)	54.5	56.1	66.3	90.4	94.7	106.4	114.1	126.4	138.9	146.3	150.9
Manufacturing:													
Output per hour of all persons	49.4	56.4	60.0	r74.6	79.2	93.4	97.6	r100.9	101.6	101.7	104.9	107.1	111.6
Compensation per hour	21.5	28.8	36.7	42.8	57.6	r85.5	92.3	108.3	118.8	132.7	145.2	158.0	163.4
Real compensation per hour	54.0	65.1	75.1	82.3	89.8	96.2	98.3	100.6	99.2	97.6	96.8	99.2	99.4
Unit labor costs	r43.4	51.0	61.1	57.5	72.7	91.5	94.6	r107.3	117.0	130.5	138.4	147.6	146.4
Unit nonlabor payments	r54.3	r58.6	61.1	r69.4	65.1	87.3	93.9	r102.7	99.9	r 97.9	111.6	110.5	128.8
Implicit price deflator	r46.6	53.2	61.1	61.0	70.5	90.3	94.4	106.0	112.0	120.9	130.6	136.7	141.2

[1] Not available. r = revised.

30. Annual changes in productivity, hourly compensation, unit costs, and prices, 1973–83

Item	1973	1974	1975	1976	1977	1978	1979	1980	1981r	1982r	1983r	Annual rate of change 1950-83	Annual rate of change 1972-83
Business sector:													
Output per hour of all persons	2.6	-2.4	2.2	3.3	2.4	r0.5	-1.2	-0.5	1.9	-0.2	2.7	2.2	1.1
Compensation per hour	8.0	9.4	9.6	r8.5	7.7	r8.5	9.4	r10.4	9.4	8.1	4.3	6.5	r8.5
Real compensation per hour	1.6	-1.4	0.5	2.6	1.2	r0.8	-1.7	r-2.7	-0.9	1.9	1.1	2.0	r0.2
Unit labor costs	5.3	12.1	7.3	5.1	5.1	8.0	10.7	r11.0	7.3	7.9	1.6	4.2	r7.3
Unit nonlabor payments	5.9	4.4	15.1	4.0	6.4	6.7	5.8	r5.7	14.6	0.1	6.3	3.7	r6.7
Implicit price deflator	5.5	9.5	9.8	4.7	5.6	7.5	9.0	r9.3	9.6	5.3	3.0	4.1	r7.1
Nonfarm business sector:													
Output per hour of all persons	2.4	-2.5	2.0	3.2	2.2	0.6	-1.5	-0.7	1.9	0.2	3.5	1.9	1.0
Compensation per hour	7.6	9.4	9.6	8.1	7.5	8.6	9.0	r10.3	9.6	8.0	4.9	6.3	r8.4
Real compensation per hour	1.3	-1.4	0.4	2.2	1.0	r0.8	-2.0	-2.8	-0.7	1.7	1.6	1.8	r0.2
Unit labor costs	5.0	12.2	7.5	r4.7	5.2	8.0	10.7	11.1	8.0	7.7	1.4	4.3	7.4
Unit nonlabor payments	1.3	5.9	16.7	5.7	6.9	5.3	4.8	7.4	13.8	1.4	7.4	3.8	6.9
Implicit price deflator	3.8	10.2	10.3	5.1	5.7	7.1	8.8	10.0	9.8	5.7	3.2	r4.1	r7.2
Nonfinancial corporations:													
Output per hour of all employees	2.4	-3.7	2.9	2.9	1.8	r0.8	-0.2	-0.9	1.9	1.0	3.3	(1)	1.1
Compensation per hour	7.5	9.4	9.6	7.9	7.6	r8.4	9.4	10.3	9.4	8.0	4.2	(1)	8.4
Real compensation per hour	1.2	-1.5	0.4	2.0	1.1	0.7	-1.7	-2.8	-0.9	1.8	0.9	(1)	0.2
Unit labor costs	4.9	13.6	6.5	4.9	5.7	7.5	9.6	11.3	7.4	6.9	0.8	(1)	7.2
Unit nonlabor payments	1.5	7.1	20.1	4.6	5.3	4.2	2.6	9.8	15.1	2.3	7.9	(1)	7.1
Implicit price deflator	3.8	11.4	10.9	4.8	5.6	6.4	7.2	10.8	9.8	5.3	3.1	(1)	7.2
Manufacturing:													
Output per hour of all persons	5.4	-2.4	2.9	r4.5	2.5	r0.9	0.7	0.2	3.1	2.1	4.3	2.5	r2.2
Compensation per hour	7.2	10.6	11.9	8.0	8.3	8.3	9.7	11.7	9.4	8.8	3.4	r6.3	r8.8
Real compensation per hour	0.9	-0.3	2.5	2.1	1.8	0.6	-1.4	-1.6	-0.9	2.5	0.2	1.9	r0.6
Unit labor costs	1.7	13.3	8.8	3.4	5.7	r7.3	9.0	11.5	6.1	6.6	-0.8	3.8	r6.5
Unit nonlabor payments	-3.3	-1.8	25.9	r7.5	r6.5	r2.7	-2.6	r-2.1	14.1	-1.0	16.5	2.6	r5.3
Implicit price deflator	0.3	9.0	13.1	4.6	6.0	6.0	5.7	7.9	8.0	4.7	3.3	3.4	6.2

[1] Not available. r = revised.

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

[1977 = 100]

Item	Annual average 1982r	Annual average 1983r	1981r IV	1982r I	1982r II	1982r III	1982r IV	1983r I	1983r II	1983r III	1983r IV	1984 Ir	1984 IIp
Business sector:													
Output per hour of all persons	100.9	103.7	100.3	100.9	100.3	100.9	101.6	102.2	103.6	104.3	104.7	105.7	106.5
Compensation per hour	155.0	161.7	147.6	151.4	153.9	156.7	158.4	160.2	161.0	161.8	164.2	166.7	167.5
Real compensation per hour	97.3	98.4	95.4	96.9	97.2	97.3	98.0	99.0	98.5	98.0	98.4	98.6	98.2
Unit labor costs	153.6	156.0	147.1	150.0	153.4	155.3	155.9	156.8	155.4	155.1	156.8	157.7	157.3
Unit nonlabor payments	136.8	145.5	139.6	138.0	137.0	135.8	136.5	139.8	144.6	147.9	149.1	151.6	155.4
Implicit price deflator	147.9	152.4	144.6	145.9	147.9	148.7	149.3	151.0	151.7	152.7	154.2	155.6	156.7
Nonfarm business sector:													
Output per hour of all persons	100.0	103.4	99.2	99.8	99.4	100.3	100.5	101.6	103.6	104.1	104.4	105.2	106.0
Compensation per hour	154.5	162.0	147.3	151.0	153.2	156.0	157.9	160.1	161.5	162.4	164.0	166.5	167.9
Real compensation per hour	97.0	98.6	95.2	96.7	96.8	96.9	97.7	99.0	98.8	98.3	98.2	98.5	98.5
Unit labor costs	154.5	156.6	148.5	151.4	154.2	155.6	157.1	157.6	155.9	155.9	157.1	158.3	158.4
Unit nonlabor payments	136.9	147.0	138.5	136.9	137.5	136.8	136.4	140.6	146.4	149.4	151.4	152.2	154.5
Implicit price deflator	148.6	153.4	145.1	146.5	148.6	149.3	150.2	151.9	152.7	153.8	155.2	156.3	157.1
Nonfinancial corporations:													
Output per hour of all employees	102.6	106.1	101.3	102.2	102.1	103.3	103.2	104.0	105.8	107.2	107.2	108.1	(1)
Compensation per hour	154.6	161.0	147.1	151.1	153.5	156.2	157.7	159.2	160.6	161.8	162.6	164.8	(1)
Real compensation per hour	97.0	97.9	95.1	96.7	97.0	97.0	97.5	98.4	98.2	98.0	97.4	97.5	(1)
Total unit costs	154.3	155.2	148.7	151.5	154.0	154.7	157.0	156.7	155.2	154.4	154.7	155.0	(1)
Unit labor costs	150.6	151.8	145.2	147.9	150.3	151.3	152.9	153.1	151.7	150.9	151.7	152.5	(1)
Unit nonlabor costs	164.8	164.9	158.5	161.6	164.3	164.4	168.8	167.0	165.1	164.4	163.3	162.0	(1)
Unit profits	84.6	117.2	100.2	89.4	86.8	86.6	75.6	92.5	111.8	126.6	135.9	143.2	(1)
Implicit price deflator	146.3	150.9	143.1	144.3	146.3	146.9	147.7	149.4	150.2	151.2	152.6	153.6	(1)
Manufacturing:													
Output per hour of all persons	107.1	111.6	104.0	105.5	106.3	108.8	107.8	109.1	110.8	113.4	113.1	114.2	115.1
Compensation per hour	158.0	163.4	149.8	154.3	157.2	159.8	161.0	162.7	163.0	163.5	164.6	169.0	170.3
Real compensation per hour	99.2	99.4	96.8	98.8	99.4	99.2	99.6	100.6	99.7	99.0	98.6	100.0	99.9
Unit labor costs	147.6	146.4	144.0	146.2	148.0	146.9	149.3	149.1	147.0	144.1	145.5	148.0	148.0

[1] Not available. p = preliminary.

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

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	IV 1982 to I 1983[r]	I 1983 to II 1983[r]	II 1983 to III 1983[r]	III 1982 to IV 1983[r]	IV 1983 to I 1984[r]	I 1984 to II 1984	I 1982 to I 1983[r]	II 1982 to II 1983[r]	III 1982 to III 1983[r]	IV 1982 to IV 1983[r]	I 1983 to I 1984[r]	II 1983 to II 1984
Business sector:												
Output per hour of all persons	2.1	5.9	2.8	1.4	4.0	p2.8	1.2	3.3	3.4	3.1	3.5	p2.7
Compensation per hour	4.4	2.2	2.0	6.1	6.2	p1.8	5.8	4.6	3.3	3.7	4.1	p4.0
Real compensation per hour	4.1	−2.1	−2.1	1.6	1.2	p−1.8	2.1	1.3	0.7	0.3	−0.4	p−0.3
Unit labor costs	2.2	−3.5	−0.8	4.6	2.1	p−1.0	4.5	1.3	−0.1	0.6	0.6	p1.2
Unit nonlabor payments	10.2	14.5	9.5	3.1	7.0	p10.4	1.3	5.5	8.9	9.2	8.4	p7.5
Implicit price deflator	4.6	1.9	2.5	4.1	3.7	p2.7	3.5	2.6	2.7	3.3	3.0	p3.2
Nonfarm business sector:												
Output per hour of all persons	4.4	8.1	2.1	1.0	2.9	p3.3	1.8	4.3	3.9	3.9	3.5	p2.3
Compensation per hour	5.7	3.5	2.2	4.1	6.1	p3.6	6.0	5.4	4.1	3.9	4.0	p4.0
Real compensation per hour	5.4	−0.8	−1.9	−0.3	1.0	p−0.1	2.4	2.0	1.5	0.6	−0.5	p−0.3
Unit labor costs	1.3	−4.2	0.1	3.0	3.1	p0.3	4.1	1.1	0.2	0.0	0.4	p1.6
Unit nonlabor payments	12.7	17.8	8.4	5.3	2.3	p6.1	2.7	6.5	9.2	10.9	8.3	p5.5
Implicit price deflator	4.6	2.2	2.7	3.7	2.8	p2.2	3.7	2.8	3.0	3.3	2.9	p2.9
Nonfinancial corporations:												
Output per hour of all employees . . .	3.2	7.5	5.3	−0.2	3.6	(1)	1.8	3.7	3.8	3.9	4.0	(1)
Compensation per hour	3.9	3.5	3.1	2.0	5.7	(1)	5.4	4.6	3.6	3.1	3.6	(1)
Real compensation per hour	3.5	−0.8	−1.0	−2.4	0.7	(1)	1.7	1.3	1.0	−0.2	−0.9	(1)
Total units costs	−0.7	−3.9	−2.0	0.8	0.6	(1)	3.5	0.8	−0.2	−1.5	−1.1	(1)
Unit labor costs	0.7	−3.7	−2.1	2.1	2.0	(1)	3.5	0.9	−0.2	−0.8	−0.4	(1)
Unit nonlabor costs	−4.1	−4.5	−1.7	−2.6	−3.2	(1)	3.3	0.5	0.0	−3.2	−3.0	(1)
Unit profits	124.6	112.8	64.8	32.6	23.4	(1)	3.5	28.7	46.3	79.8	54.8	(1)
Implicit price deflator	4.7	2.3	2.8	3.6	2.7	(1)	3.5	2.7	3.0	3.3	2.8	(1)
Manufacturing:												
Output per hour of all persons	4.8	6.4	9.7	−1.0	3.7	p3.2	3.4	4.3	4.3	4.9	4.7	p3.9
Compensation per hour	4.2	0.6	1.3	2.9	11.0	p3.1	5.5	3.6	2.3	2.2	3.9	p4.5
Real compensation per hour	3.9	−3.5	−2.8	−1.5	5.8	p−0.6	1.8	0.3	−0.3	−1.0	−0.6	p0.2
Unit labor costs	−0.5	−5.5	−7.7	3.9	7.0	p−0.1	2.0	−0.6	−1.9	−2.6	−0.7	p0.6

[1]Not available.

r = revised.
p = preliminary.

WAGE AND COMPENSATION DATA

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

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

Definitions

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

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

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

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

Notes on the data

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

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

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

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

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

33. Employment Cost Index, by occupation and industry group

[June 1981 = 100]

Series	1982			1983				1984		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	June 1984	
Civilian workers[1]	107.5	110.1	111.4	113.2	114.5	116.5	117.8	119.8	120.8	0.8	5.5
Workers, by occupational group											
White-collar workers	107.7	110.7	111.9	113.7	114.9	117.6	118.9	120.9	122.1	1.0	6.3
Blue-collar workers	107.1	109.2	110.5	112.3	113.6	114.8	115.8	117.7	118.6	.8	4.4
Service workers	108.3	110.8	112.4	114.3	115.1	116.7	119.1	122.0	122.1	.1	6.1
Workers, by industry division											
Manufacturing	107.2	109.3	110.4	112.5	113.5	115.0	116.0	117.9	119.1	1.0	4.9
Nonmanufacturing	107.7	110.5	111.8	113.5	114.9	117.2	118.6	120.7	121.6	.7	5.8
Services	109.2	113.5	115.0	116.6	117.1	121.1	122.6	125.0	125.5	.4	7.2
Public administration[2]	109.1	112.8	113.6	116.2	117.0	119.8	121.4	122.9	123.7	.7	5.7
Private industry workers	107.2	109.3	110.7	112.6	113.9	115.6	117.0	119.0	120.1	.9	5.4
Workers, by occupational group											
White-collar workers	107.2	109.5	110.8	112.8	114.2	116.5	117.9	119.9	121.4	1.3	6.3
Blue-collar workers	107.0	109.0	110.3	112.1	113.5	114.6	115.7	117.5	118.4	.8	4.3
Service workers	107.9	109.6	111.8	113.8	114.6	115.1	117.9	121.5	121.2	−.2	5.8
Workers, by industry division											
Manufacturing	107.2	109.3	110.4	112.5	113.5	115.0	116.0	117.9	119.1	1.0	4.9
Nonmanufacturing	107.1	109.3	110.8	112.6	114.2	116.0	117.5	119.6	120.7	.9	5.7
State and local government workers	109.3	114.3	115.1	116.5	117.1	120.8	122.0	123.9	124.4	.4	6.2
Workers, by occupational group											
White-collar workers	109.5	114.9	115.8	117.0	117.5	121.5	122.6	124.5	125.0	.4	6.4
Blue-collar workers	108.9	112.7	113.0	114.9	115.8	118.0	119.2	121.9	122.3	.3	5.6
Workers, by industry division											
Services	109.4	114.9	115.9	116.8	117.4	121.7	122.6	124.5	125.0	.4	6.5
Schools	109.1	114.8	115.8	116.6	116.9	121.9	122.6	124.5	124.7	.2	6.7
Elementary and secondary	109.5	115.6	116.6	117.2	117.4	123.3	123.9	125.4	125.7	.2	7.1
Hospitals and other services[3]	110.3	115.3	116.0	117.5	118.8	121.1	122.6	124.4	125.7	1.0	5.8
Public administration[2]	109.1	112.8	113.6	116.2	117.0	119.8	121.4	122.9	123.7	.7	5.7

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

87

34. Employment Cost Index, wages and salaries, by occupation and industry group
[June 1981 = 100]

Series	1982			1983				1984		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	June 1984	
Civilian workers[1]	107.3	109.7	110.9	112.2	113.4	115.3	116.5	117.9	118.8	0.8	4.8
Workers, by occupational group											
White-collar workers	107.6	110.4	111.4	113.0	114.2	116.7	117.9	119.3	120.4	.9	5.4
Blue-collar workers	106.7	108.6	109.8	110.8	112.0	113.1	114.0	115.3	116.1	.7	3.7
Service workers	107.9	110.1	111.8	113.2	113.9	115.1	117.4	120.0	119.8	− .2	5.2
Workers, by industry division											
Manufacturing	107.0	108.8	109.8	111.0	112.0	113.3	114.5	115.7	116.8	1.0	4.3
Nonmanufacturing	107.5	110.1	111.3	112.7	114.0	116.1	117.4	118.9	119.7	.7	5.0
Services	109.5	113.2	114.4	115.8	116.3	120.1	121.3	123.3	123.8	.4	6.4
Public administration[2]	108.4	111.9	112.6	114.6	115.4	118.2	119.4	120.4	121.3	.7	5.1
Private industry workers	107.1	109.0	110.3	111.6	112.9	114.5	115.8	117.2	118.2	.9	4.7
Workers, by occupational group											
White-collar workers	107.3	109.4	110.6	112.2	113.6	115.9	117.2	118.5	119.9	1.2	5.5
Professional and technical workers	109.4	111.8	112.9	114.8	115.9	119.9	120.4	122.2	123.8	1.3	6.8
Managers and administrators	107.2	108.5	109.3	112.0	114.0	114.8	115.7	118.0	119.2	1.0	4.6
Salesworkers	101.8	104.5	106.2	105.7	107.1	108.4	111.2	110.2	111.9	1.5	4.5
Clerical workers	108.3	110.3	111.6	113.4	114.6	116.7	118.3	119.8	120.7	.8	5.3
Blue-collar workers	106.6	108.5	109.7	110.7	111.9	112.9	113.9	115.1	115.9	.7	3.6
Craft and kindred workers	107.6	109.6	111.2	112.2	113.4	114.3	115.4	116.5	117.3	.7	3.4
Operatives, except transport	106.6	108.3	109.3	110.0	111.1	112.3	113.6	114.9	115.8	.8	4.2
Transport equipment operatives	104.1	106.0	106.9	108.0	110.3	110.7	110.2	111.7	112.7	.9	2.2
Nonfarm laborers	105.1	106.5	107.8	109.0	109.8	110.8	112.1	112.9	114.1	1.1	3.9
Service workers	107.9	109.3	111.4	112.9	113.5	113.7	116.5	119.8	119.3	− .4	5.1
Workers, by industry division											
Manufacturing	107.0	108.8	109.8	111.0	112.0	113.3	114.5	115.7	116.8	1.0	4.3
Durables	107.4	109.0	110.3	111.1	111.8	112.9	114.4	115.7	116.6	.8	4.3
Nondurables	106.3	108.5	109.1	110.9	112.3	113.9	114.6	115.8	117.1	1.1	4.3
Nonmanufacturing	107.1	109.1	110.5	112.0	113.4	115.2	116.5	118.0	119.0	.8	4.9
Construction	107.3	109.1	109.7	110.4	112.1	112.2	112.9	113.3	114.0	.6	1.7
Transportation and public utilities	106.9	109.5	111.1	112.9	114.7	115.7	116.8	118.5	119.3	.7	4.0
Wholesale and retail trade	105.8	106.5	107.2	108.5	110.8	111.5	112.3	114.3	116.0	1.5	4.7
Wholesale trade	108.9	109.0	109.8	111.8	114.1	115.7	116.5	118.2	120.0	1.5	5.2
Retail trade	104.5	105.5	106.1	107.2	109.4	109.9	110.6	112.8	114.4	1.4	4.6
Finance, insurance, and real estate	102.4	106.1	109.0	110.6	111.1	113.5	116.9	116.1	116.9	.7	5.2
Services	110.0	112.5	114.3	116.0	116.6	120.4	121.9	124.2	124.7	.4	6.9
State and local government workers	108.7	113.5	114.0	115.1	115.7	119.2	120.0	121.6	122.0	.3	5.4
Workers, by occupational group											
White-collar workers	108.9	114.2	114.6	115.6	116.1	119.8	120.6	122.2	122.5	.2	5.5
Blue-collar workers	107.9	111.5	112.0	113.3	114.3	116.4	116.9	119.1	119.6	.4	4.6
Workers, by industry division											
Services	108.8	114.2	114.6	115.5	115.9	119.8	120.6	122.2	122.5	.2	5.7
Schools	108.5	114.2	114.5	115.2	115.4	119.9	120.6	122.2	122.3	.1	6.0
Elementary and secondary	108.8	114.9	115.1	115.6	115.8	121.1	121.7	122.9	123.0	.1	6.2
Hospitals and other services[3]	109.5	114.3	114.9	116.5	117.7	119.7	120.6	121.9	123.1	1.0	4.6
Public administration[2]	108.4	111.9	112.6	114.6	115.4	118.2	119.4	120.4	121.3	.7	5.1

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

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

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

35. Employment Cost Index, private industry workers, by bargaining status, region, and area size
[June 1981 = 100]

| Series | 1982 | | | 1983 | | | | 1984 | | Percent change | |
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	3 months ended	12 months ended
										June 1984	
COMPENSATION											
Workers, by bargaining status[1]											
Union	108.4	110.6	112.3	114.5	116.0	117.8	118.8	120.6	121.7	0.9	4.9
Manufacturing	108.0	110.3	111.8	114.0	114.8	116.3	117.2	119.3	120.5	1.0	5.0
Nonmanufacturing	108.7	111.0	112.8	114.9	117.1	119.2	120.4	121.9	122.8	.7	4.9
Nonunion	106.5	108.5	109.7	111.5	112.8	114.4	115.9	118.0	119.2	1.0	5.7
Manufacturing	106.6	108.4	109.2	111.2	112.3	113.8	114.9	116.6	117.9	1.1	5.0
Nonmanufacturing	106.4	108.6	109.9	111.6	113.0	114.7	116.4	118.6	119.8	1.0	6.0
Workers, by region[1]											
Northeast	. . . .	. . . . .	111.7	112.6	114.3	116.0	117.5	118.9	120.7	1.5	5.6
South	. . . .	. . . . .	110.6	112.5	113.5	115.6	117.1	119.7	120.7	.8	6.3
North Central	. . . .	. . . . .	108.6	110.9	112.5	113.9	114.7	117.2	117.9	.6	4.8
West	. . . .	. . . . .	112.9	115.4	116.6	118.0	120.0	121.0	122.2	1.0	4.8
Workers, by area size[1]											
Metropolitan areas	107.2	109.4	110.9	112.9	114.2	116.0	117.4	119.4	120.6	1.0	5.6
Other areas	107.0	108.6	109.1	110.8	112.3	113.4	114.5	116.7	117.4	.6	4.5
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	108.1	110.3	111.8	112.9	114.2	116.0	116.9	118.1	119.0	.8	4.2
Manufacturing	107.3	109.5	110.8	111.4	112.3	113.7	114.8	116.1	117.1	.9	4.3
Nonmanufacturing	108.8	111.1	112.7	114.3	116.0	118.3	118.9	120.1	120.7	.5	4.1
Nonunion	106.5	108.3	109.5	110.9	112.2	113.7	115.2	116.7	117.8	.9	5.0
Manufacturing	106.7	108.2	109.1	110.7	111.8	113.0	114.2	115.4	116.5	1.0	4.2
Nonmanufacturing	106.4	108.3	109.6	111.0	112.4	114.0	115.6	117.2	118.3	.9	5.2
Workers, by region[1]											
Northeast	106.7	109.7	111.5	112.0	113.6	115.3	116.6	117.4	118.9	1.3	4.7
South	107.4	108.8	109.8	111.4	112.5	114.3	115.7	117.9	119.0	.9	5.8
North Central	106.1	107.6	108.6	110.1	111.5	112.8	113.6	115.5	116.0	.4	4.0
West	108.6	110.7	112.0	114.1	114.9	116.5	118.5	118.8	119.6	.7	4.1
Workers by area size[1]											
Metropolitan areas	107.1	109.1	110.5	111.9	113.2	114.9	116.2	117.6	118.6	.9	4.8
Other areas	106.8	108.3	108.8	110.1	111.4	112.3	113.4	115.1	116.0	.8	4.1

[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.

89

36. Wage and compensation change, major collective bargaining settlements, 1979 to date
[In percent]

Measure	Annual average					Quarterly average								
						1982			1983				1984p	
	1979	1980	1981	1982	1983	II	III	IV	I	II	III	IV	I	II
Total compensation changes, covering 5,000 workers or more, all industries:														
First year of contract	9.0	10.4	10.2	3.2	3.4	2.6	6.2	3.3	-1.6	4.4	5.0	4.9	5.2	3.6
Annual rate over life of contract	6.6	7.1	8.3	2.8	3.0	2.1	4.7	4.8	1.4	3.6	4.3	3.1	4.8	3.1
Wage rate changes covering at least 1,000 workers, all industries:														
First year of contract	7.4	9.5	9.8	3.8	2.6	3.4	5.4	3.8	-1.2	2.7	3.7	4.2	3.1	2.3
Annual rate over life of contract	6.0	7.1	7.9	3.6	2.8	3.2	4.5	4.8	2.2	2.8	3.6	2.8	3.4	2.3
Manufacturing:														
First year of contract	6.9	7.4	7.2	2.8	0.4	1.8	5.1	4.1	-3.4	1.3	3.4	2.9	2.9	1.9
Annual rate over life of contract	5.4	5.4	6.1	2.6	2.1	1.7	3.9	4.5	.9	1.7	3.5	3.1	2.7	1.4
Nonmanufacturing (excluding construction):														
First year of contract	7.6	9.5	9.8	4.3	5.0	6.6	5.5	3.6	3.3	5.9	5.8	4.8	4.4	4.1
Annual rate over life of contract	6.2	6.6	7.3	4.1	3.7	6.1	4.8	5.2	5.3	5.2	4.3	2.7	4.8	4.0
Construction:														
First year of contract	8.8	13.6	13.5	6.5	1.5	6.2	6.3	3.4	.7	1.7	1.5	1.1	-3.7	.7
Annual rate over life of contract	8.3	11.5	11.3	6.3	2.4	6.3	5.9	2.9	2.4	2.1	2.9	2.6	-3.0	1.1

p = preliminary.

37. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1979 to date

Measure	Year					Year and quarter								
						1982			1983				1984p	
	1979	1980	1981	1982	1983	II	III	IV	I	II	III	IV	I	II
Average percent adjustment (including no change):														
All industries	9.1	9.9	9.5	6.8	4.0	2.0	2.4	1.3	0.3	1.3	1.2	1.1	0.9	0.9
Manufacturing	9.6	10.2	9.4	5.2	2.7	1.0	1.7	1.5	-.5	1.1	1.2	.9	1.2	1.0
Nonmanufacturing	8.8	9.7	9.5	7.9	4.8	2.7	2.9	1.2	.9	1.5	1.2	1.2	.7	.9
From settlements reached in period	3.0	3.6	2.5	1.7	.8	.4	.5	.6	-.2	.3	.2	.6	.1	.1
Deferred from settlements reached in earlier period	3.0	3.5	3.8	3.6	2.5	1.4	1.3	.4	.4	1.0	.8	.3	.4	.7
From cost-of-living clauses	3.1	2.8	3.2	1.4	.6	.2	.6	.3	.1	.1	.2	.2	.4	.2
Total number of workers receiving wage change (in thousands)[1]	—	—	8,648	7,852	6,530	3,423	3,760	3,441	2,875	3,061	3,025	2,887	2,906	2,651
From settlements reached in period	—	—	2,270	1,907	2,027	511	620	825	448	561	599	996	291	316
Deferred from settlements reached in earlier period	—	—	6,267	4,846	3,260	1,594	2,400	860	812	1,405	1,317	669	1,043	1,231
From cost-of-living clauses	—	—	4,593	3,830	2,327	1,568	2,251	1,970	1,938	1,299	1,218	1,290	1,613	1,267
Number of workers receiving no adjustments (in thousands)	—	—	145	483	1,187	4,912	4,575	4,895	4,842	4,656	4,693	4,830	4,735	4,990

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

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

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

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (in thousands)	In effect during month (in thousands)	Number (in thousands)	Percent of estimated working time
1947	270	. . . .	1,629	. . . .	25,720	—
1948	245	. . . .	1,435	. . . .	26,127	.22
1949	262	. . . .	2,537	. . . .	43,420	.38
1950	424	. . . .	1,698	. . . .	30,390	.26
1951	415	. . . .	1,462	. . . .	15,070	.12
1952	470	. . . .	2,746	. . . .	48,820	.38
1953	437	. . . .	1,623	. . . .	18,130	.14
1954	265	. . . .	1,075	. . . .	16,630	.13
1955	363	. . . .	2,055	. . . .	21,180	.16
1956	287	. . . .	1,370	. . . .	26,840	.20
1957	279	. . . .	887	. . . .	10,340	.07
1958	332	. . . .	1,587	. . . .	17,900	.13
1959	245	. . . .	1,381	. . . .	60,850	.43
1960	222	. . . .	896	. . . .	13,260	.09
1961	195	. . . .	1,031	. . . .	10,140	.07
1962	211	. . . .	793	. . . .	11,760	.08
1963	181	. . . .	512	. . . .	10,020	.07
1964	246	. . . .	1,183	. . . .	16,220	.11
1965	268	. . . .	999	. . . .	15,140	.10
1966	321	. . . .	1,300	. . . .	16,000	.10
1967	381	. . . .	2,192	. . . .	31,320	.18
1968	392	. . . .	1,855	. . . .	35,567	.20
1969	412	. . . .	1,576	. . . .	29,397	.16
1970	381	. . . .	2,468	. . . .	52,761	.29
1971	298	. . . .	2,516	. . . .	35,538	.19
1972	250	. . . .	975	. . . .	16,764	.09
1973	317	. . . .	1,400	. . . .	16,260	.08
1974	424	. . . .	1,796	. . . .	31,809	.16
1975	235	. . . .	965	. . . .	17,563	.09
1976	231	. . . .	1,519	. . . .	23,962	.12
1977	298	. . . .	1,212	. . . .	21,258	.10
1978	219	. . . .	1,006	. . . .	23,774	.11
1979	235	. . . .	1,021	. . . .	20,409	.09
1980	187	. . . .	795	. . . .	20,844	.09
1981	145	. . . .	729	. . . .	16,908	.07
1982	96	. . . .	656	. . . .	9,061	.04
1983	81	. . . .	909	. . . .	17,461	.08
1983 January	1	3	1.6	38.0	794.8	.04
February	5	7	14.0	50.4	844.4	.05
March	5	10	10.5	54.9	1,131.5	.05
April	2	9	2.8	52.4	789.5	.04
May	12	17	24.9	34.2	488.5	.03
June	16	25	63.3	81.2	689.1	.03
July	10	23	64.5	99.8	1,270.1	.07
1984p January	6	12	28.9	43.0	507.3	.03
February	2	12	8.7	37.2	365.5	.02
March	2	9	3.0	14.6	284.2	.01
April	7	13	28.5	38.1	651.0	.03
May	r5	r15	r8.1	r39.2	r581.2	.03
June	5	r14	23.7	r45.7	r754.8	.04
July	7	19	65.0	100.7	1,211.3	.06

p = preliminary.   r = revised.

Published by BLS in July

SALES PUBLICATIONS

BLS Bulletins

Employee Benefits in Medium and Large Firms, 1983. Bulletin 2213, 69 pp., $3 GPO Stock No. (029-001-02816-4). Presents *results of a 1983* BLS survey of the incidence and provisions of employee benefits in medium and large firms. This survey—fifth in an annual series—provides representative data for 20 million full-time employees in a cross-section of the Nation's private industries.

Injuries in the Logging Industry. Bulletin 2203, 23 pp., $1.75 (GPO Stock No. 029-001-02815-6). Results of a survey of workers who were injured while performing logging activities. Conducted during April through July 1982, the survey will assist the Occupational Safety and Health Administration in developing safety standards, compliance strategy, and training programs for reducing work-related injuries.

Injuries Resulting From Falls From Elevations. Bulletin 2195, 20 pp., $1.75 (GPO Stock No. 029-001-02813-0). Results of a survey of workers who were injured as a result of falling from elevations during the period from December 1981 through June 1982. The findings of this survey will assist the Occupational Safety and Health Administration in its program to reduce work-related injuries.

Occupational Outlook Handbook, 1984-85 Edition. Bulletin 2205, 387 pp., $8.50, soft-cover edition, (GPO Stock No. 029-001-02765-6); $10, hard-cover edition (GPO Stock No. 029-001-02766-4). An encyclopedia of careers covering more than 200 occupations. For each of these occupations, information is included on what the work is like, job prospects through the mid-1990's, level and places of employment, educational and training requirements, advancement possibilities, related occupations, and where to find additional information.

Relative Importance of Components in the Consumer Price Indexes, 1983. Bulletin 2210. 36 pp., $2.25 (GPO Stock No. 029-001-02814-8). Presents data on the relative importance (value weights) of components in the Consumer Price Indexes. The data can be used in conjunction with the CPI Detailed Report, issued monthly by the Bureau of Labor Statistics.

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 $88 per year. Individual area bulletins are also available separately. The following were published in July:

Atlanta, Georgia, Metropolitan Area, May 1984. Bulletin 3025-18, 52 pp., $4 (GPO Stock No. 029-001-90285-9).

Houston, Texas, Metropolitan Area, May 1984. Bulletin 3025-17, 42 pp., $3.75 (GPO Stock No. 029-001-90284-1).

Greenville—Spartanburg, South Carolina, Metropolitan Area, June 1984. Bulletin 3025-19, 28 pp., $3.25 (GPO Stock No. 029-001-90286-7).

Norfolk—Virginia Beach—Portsmouth, Virginia—North Carolina, Metropolitan Area, May 1984. Bulletin 3025-14, 28 pp., $3.25 (GPO Stock No. 029-001-90281-6).

San Antonio, Texas, Metropolitan Area, May 1984. Bulletin 3025-20, 29 pp., $3.50 (GPO Stock No. 029-001-90287-5).

San Francisco—Oakland, California, Metropolitan Area, March 1984. Bulletin 3025-16, 52 pp., $4 (GPO Stock No. 029-001-90283-2).

San Jose, California, Metropolitan Area, March 1984. Bulletin 3025-15, 49 pp., $4 (GPO Stock No. 029-001-90282-4).

Periodicals

NOTE: Periodical prices reduced.

CPI Detailed Report. May issue provides a comprehensive report on price movements for the month, information on changes in the frequency of publication for local area CPI's which is to begin in 1987, plus statistical tables, charts, and technical notes. 77 pp., $4 ($25 per year).

Current Wage Developments. June issue includes selected wage and benefit changes; work stoppages in May; major agreements expiring in July; the Employment Cost Index for March 1984, and compensation changes. 43 pp., $2 ($21 per year).

Employment and Earnings. July issue covers employment and unemployment developments in June, new seasonal adjustment factors for the household data series, plus regular statistical tables on national, State, and area employment, unemployment, hours, and earnings. 174 pp., $4.50 ($31 per year).

Occupational Outlook Quarterly. Summer issue features articles on the job outlook for college graduates through the mid-1990's, the class of 1980 one year after graduation, and education for the noncollegiate labor force. 40 pp., $3 ($11 per year).

Producer Prices and Price Indexes. May issue includes a comprehensive report on price movements for the month, an explanation of removal of redundant indexes from publication, plus regular tables and technical notes. 150 pp., $4.25 ($29 per year).

FREE PUBLICATIONS

Area Wage Survey Summaries

Baton Rouge, La., June 1984. 3 pp.
Battle Creek, Mich., May 1984. 6 pp.
Brunswick, Ga., June 1984. 3 pp.
Columbus, Miss., June 1984. 3 pp.
Des Moines, Iowa, May 1984. 6 pp.
Duluth—Superior, Minn.-Wis., June 1984. 3 pp.
Fort Wayne, Ind., June 1984. 3 pp.
Portsmouth—Chillicothe—Gallipolis, Ohio, June 1984. 6 pp.
Tulsa, Okla., June 1984. 3 pp.

To order:

Sale publications—Order from BLS regional offices (see inside front cover), or the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Order by title and GPO stock number. Subscriptions available *only* from the Superintendent of Documents. Orders can be charged to a deposit account number or checks can be made payable to the Superintendent of Documents. Visa and MasterCard are also accepted. Include card number and expiration date.

Free publications—Available from the Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212 or from any BLS regional office. **Request regional office publications from the issuing office.** Free publications are available while supplies last.
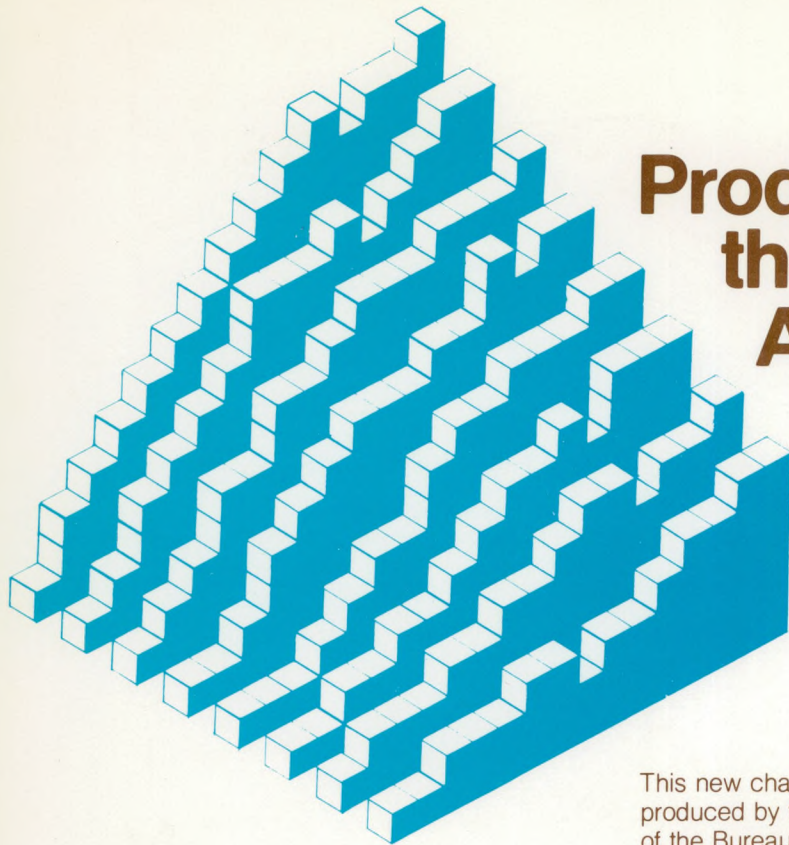
Productivity and the Economy: A Chartbook

Productivity. **Everybody talks about it.**
What does it mean?
How does it affect wages and costs?
What does it have to do with employment?

This new chartbook, produced by the staff of the Bureau of Labor Statistics, answers questions in understandable—yet technically accurate—charts and captions.

The chartbook explains what productivity is, how it has changed over the years, and what factors have contributed to that change.

The 80 page chartbook, priced at $5.00, is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or you may send your order to the BLS regional office nearest you.

BLS regional offices

1603 JFK Federal Bldg.
Boston, Mass. 02203

Suite 3400
1515 Broadway
New York, N.Y. 10036

P.O. Box 13309
Philadelphia, Pa. 19101

1371 Peachtree St., N.E.
Atlanta, Ga. 30367

9th Floor
Federal Office Bldg.
230 South Dearborn St.
Chicago, Ill. 60604

2nd Floor
555 Griffin Square Bldg.
Dallas, Tex. 75202

911 Walnut St.
Kansas City , Mo. 64106

450 Golden Gate Ave.
Box 36017
San Francisco, Calif. 94102

Order form

☐ Please send_____copies of *Productivity and the Economy: A Chartbook,* Bulletin 2172, GPO Stock No. 029-001-02752-4, at $5.00 per copy.

☐ Enclosed is check or money order payable to the Superintendent of Documents.

☐ Charge to my GPO Account no. _____

☐ Charge to my Mastercard* Account no. _____ Expiration date _____

☐ Charge to my VISA* Account no. _____ Expiration date _____

* Available only on orders sent directly to the Superintendent of Documents.

Name _____

Organization
(if applicable) _____

Street address _____

City, State,
ZIP _____

Postage and Fees Paid
U.S. Department of Labor
Lab-441

SECOND CLASS MAIL

U.S.MAIL

BLS
1884-1984
BUREAU OF LABOR STATISTICS · CENTENNIAL