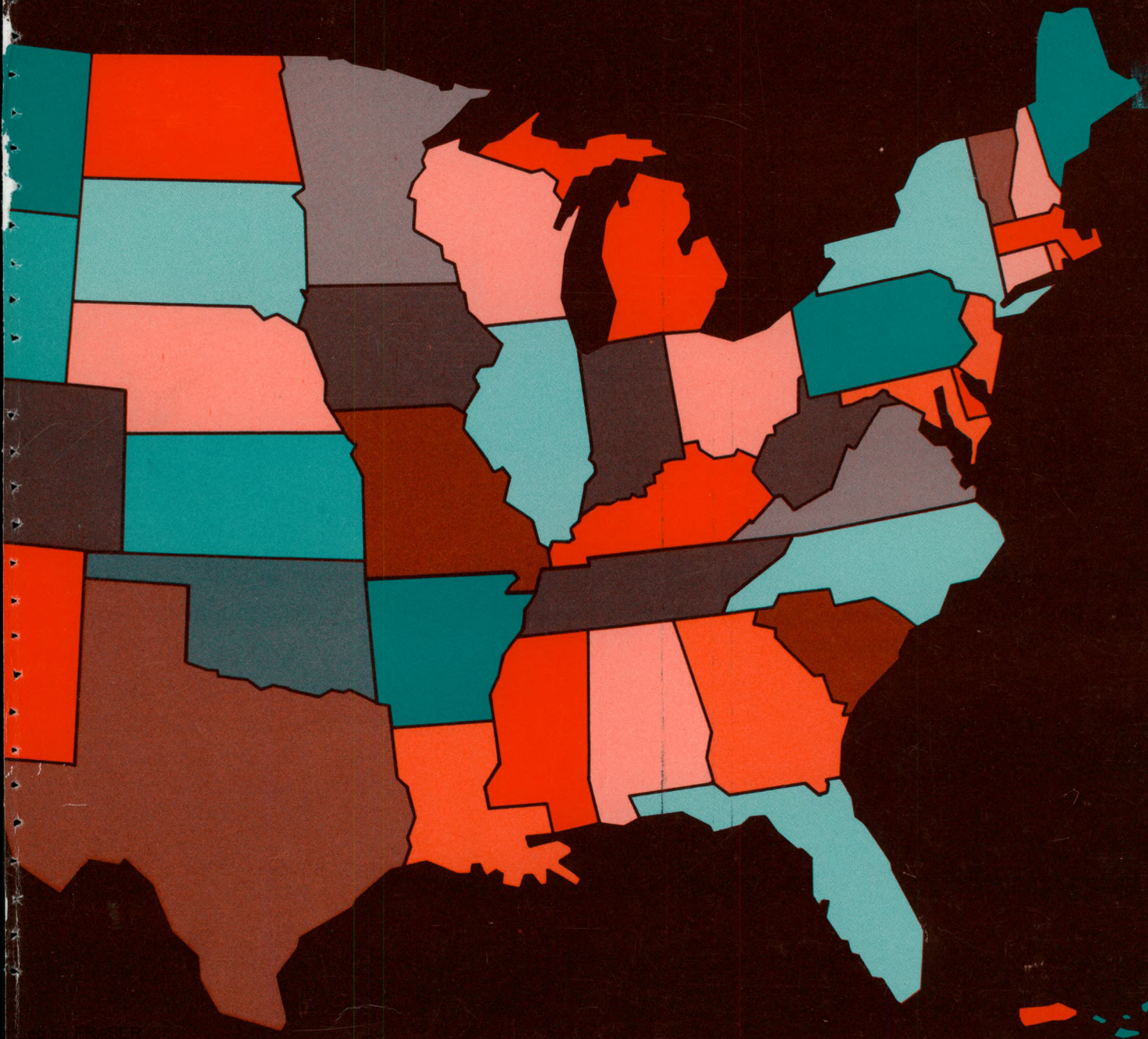




MONTHLY LABOR REVIEW

U.S. Department of Labor
Bureau of Labor Statistics
January 1981

In this issue:
State Labor Law
Changes in 1980





U.S. DEPARTMENT OF LABOR
Ray Marshall, Secretary

BUREAU OF LABOR STATISTICS
Janet L. Norwood, Commissioner

The Monthly Labor Review is published by the Bureau of Labor Statistics of the U.S. Department of Labor. Communications on editorial matters should be addressed to the Editor-in-Chief, Monthly Labor Review, Bureau of Labor Statistics, Washington, D.C. 20212. Phone: (202) 523-1327.

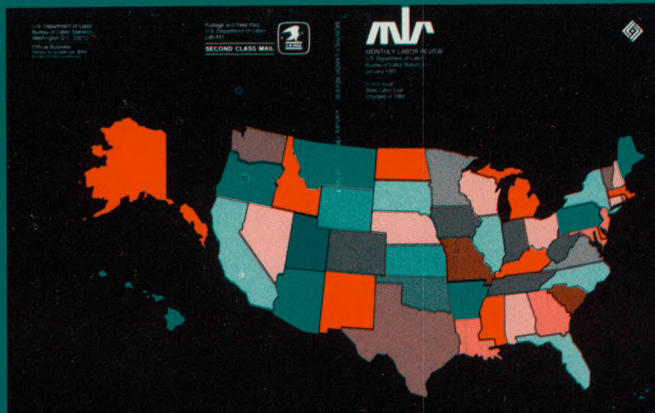
Subscription price per year —
 \$18 domestic; \$22.50 foreign
 Single copy \$2.50.

Subscription prices and distribution policies for the Monthly Labor Review (ISSN 0098-0818) and other Government publications are set by the Government Printing Office, an agency of the U.S. Congress. Send correspondence on circulation and subscription matters (including address changes) to: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Make checks payable to
 Superintendent of Documents

The Secretary of Labor has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through October 31, 1982. Second-class postage paid at Riverdale, MD, and at additional mailing offices.

Library of Congress Catalog
 Card Number 15-26485



January cover:

Design by Richard L. Mathews,
 Division of Audio-Visual Communications,
 U.S. Department of Labor

**Regional Commissioners
 for Bureau of Labor Statistics**

Region I — Boston: *Wendell D. Macdonald*
 1609 JFK Federal Building, Government Center,
 Boston, Mass. 02203
 Phone: (617) 223-6761
 Connecticut
 Maine
 Massachusetts
 New Hampshire
 Rhode Island
 Vermont

Region II — New York: *Samuel M. Ehrenhalt*
 1515 Broadway, Suite 3400, New York, N.Y. 10036
 Phone: (212) 944-3121
 New Jersey
 New York
 Puerto Rico
 Virgin Islands

Region III — Philadelphia: *Alvin I. Margulis*
 3535 Market Street
 P.O. Box 13309, Philadelphia, Pa. 19101
 Phone: (215) 596-1154
 Delaware
 District of Columbia
 Maryland
 Pennsylvania
 Virginia
 West Virginia

Region IV — Atlanta: *Donald M. Cruse*
 1371 Peachtree Street, N.E., Atlanta, Ga. 30367
 Phone: (404) 881-4418
 Alabama
 Florida
 Georgia
 Kentucky
 Mississippi
 North Carolina
 South Carolina
 Tennessee

Region V — Chicago: *William E. Rice*
 9th Floor, Federal Office Building, 230 S. Dearborn Street,
 Chicago, Ill. 60604
 Phone: (312) 353-1880
 Illinois
 Indiana
 Michigan
 Minnesota
 Ohio
 Wisconsin

Region VI — Dallas: *Bryan Richey*
 Second Floor, 555 Griffin Square Building, Dallas, Tex. 75202
 Phone: (214) 767-6971
 Arkansas
 Louisiana
 New Mexico
 Oklahoma
 Texas

Regions VII and VIII — Kansas City: *Elliott A. Browar*
 911 Walnut Street, Kansas City, Mo. 64106
 Phone: (816) 374-2481.

VII
 Iowa
 Kansas
 Missouri
 Nebraska

VIII
 Colorado
 Montana
 North Dakota
 South Dakota
 Utah
 Wyoming

Regions IX and X — San Francisco: *D. Bruce Hanchett*
 450 Golden Gate Avenue, Box 36017,
 San Francisco, Calif. 94102
 Phone: (415) 556-4678

IX
 American Samoa
 Arizona
 California
 Guam
 Hawaii
 Nevada
 Trust Territory of the Pacific Islands

X
 Alaska
 Idaho
 Oregon
 Washington



LIBRARY

JAN 30 1981



MONTHLY LABOR REVIEW

JANUARY 1981
VOLUME 104, NUMBER 1

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

-
- | | | |
|-----------------------------|----|---|
| Harold Wool | 3 | Coal industry resurgence attracts variety of new workers
Companies report no shortage of inexperienced applicants, even in 'boom' areas of West; favorable wages appear to be a major attraction to new, younger miners |
| Douglas R. LeRoy | 9 | Scheduled wage increases and cost-of-living provisions in 1981
Bargaining will be relatively light this year; however, as usual, most workers in major units will receive raises under contracts signed in previous years |
| George Ruben | 15 | Industrial relations in 1980 influenced by inflation, recession
Hard hit by plant closings and layoffs, the automobile and steel industries turned to unions and the Government for help; labor won some long-fought organizing battles |
| Richard R. Nelson | 21 | State labor legislation enacted in 1980
New areas of interest included bans on awarding of State contracts to employers that violate the National Labor Relations Act and on lie detector tests for jobs |
| Diana Runner | 35 | Legislative revisions of unemployment insurance in 1980
Many States adopted a pension offset provision; as a whole, few changes occurred, but major ones were made in Alaska and Pennsylvania to tighten qualifying requirements |
| J. D. York, E. S. Persigehl | 40 | Productivity trends in the ball and roller bearing industry
During 1958-79, annual productivity rose an average of 2.7 percent, slightly exceeding the rate for manufacturing; the increase was linked to improved production equipment |

REPORTS

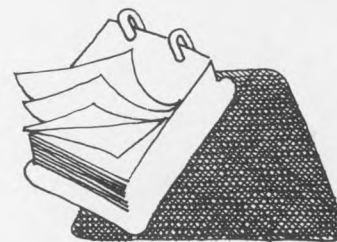
- | | | |
|----------------------------|----|--|
| C. R. Greer, J. C. Shearer | 44 | Do foreign-owned U.S. firms practice unconventional labor relations? |
| Nancy F. Rytina | 49 | Occupational segregation and earnings differences by sex |
| Ann C. Foster | 53 | Wives' earnings as a factor in family net worth accumulation |

DEPARTMENTS

- | | |
|----|--------------------------------------|
| 2 | Labor month in review |
| 44 | Communications |
| 49 | Research summaries |
| 61 | Major agreements expiring next month |
| 62 | Book reviews |
| 69 | Current labor statistics |

RESEARCH LIBRARY
Federal Reserve Bank
of St. Louis

Labor Month In Review



PUBLIC SECTOR DATA. Labor-management practitioners in public employment long have emphasized the need for more information in their field. Speaking at a December 8 symposium arranged by the Public Employment Relations Service, Commissioner of Labor Statistics Janet L. Norwood pointed to three areas in which BLS has expanded its public sector data.

Wage surveys. In the early 1970's, the Bureau began a series of tests to collect occupational wage data in large municipal governments. The tests were carried out in the Bureau's eight regional office cities (a way to reduce travel costs), with very limited funds. The tests were continued in different size cities for the next 3 years with favorable comments and constructive criticism from public-sector labor and management officials using the published test reports.

As a result, an enhanced survey design was developed—more occupations were added, a digest approach to employee benefits was introduced, and a description of municipal government pay plans was published. In 1975, this improved design was initiated in about two dozen large cities and continued annually.

These municipal government wage surveys provide data for a wide variety of uses, including collective bargaining, wage and salary administration, and a base for wage comparisons with the private sector for similar occupations.

The comparisons show that city government workers fared less well than their private industry counterparts during the late 1970's, as tight fiscal constraints slowed wage movements in municipal governments.

Bargaining settlements. Public sector collective bargaining is another area in which the Bureau has made modest progress. For a number of years, we have reported on the terms of large public sector bargaining agreements in the

Bureau's monthly publication, *Current Wage Developments*. This past year, we increased our coverage on bargaining agreement terms and began a new series on State and local government bargaining settlements, similar to the private-sector series. The new series, covering bargaining units with 5,000 employees or more, provides measures of the size of first-year wage adjustments averaged over-the-life of the agreement. This new series accounts for one-fourth of all workers under State and local government negotiated wage agreements.

A comparison of private and public sector settlements for 1979 reveals that there was little difference in the size of the average wage-rate adjustments for the first contract year (6.8 percent for the public sector, compared with 7.0 percent for units of 5,000 or more in the private nonfarm sector). The average annual wage gain over-the-life of the contract, however, was higher in the public sector (6.5 percent) than the private sector (5.5 percent).

Productivity measures. For several years, the BLS has been involved in an effort to measure the productivity of the Federal Government.

The productivity measures developed are indexes of output per unit of labor input (generally, employee year) which compare the current output-input relationship with that of a previous reference period.

Where possible, the relevant concept of output of a government agency is its final products—that is, what the organization produced for use outside the organization. However, because the output of one government organization may be consumed wholly or partially by another Federal organization, all output indicators will not be final from the perspective of the entire Federal Government. Therefore, our overall statistics do not represent "Federal Government Productivity" but rather the average of the productivity changes of the measured agencies in the sample.

In determining final output indicators, the BLS and the agencies have to identify services that are countable, fairly homogeneous over time, can be adjusted for quality changes, and reflect a significant portion of an agency's workload. The nature of the indicators varies substantially. They include such diverse items as trademarks disposed, tank repairs, weather observations, square feet of building cleaned, electric power generated, and deportable aliens located.

The data show that productivity for the total measured sample rose at an average rate of 1.4 percent per year from Fiscal Year 1967, the first year for which data are available, through FY 1979. This reflected an average increase of 1.3 percent per year in output, coupled with virtually no average change in the number of employee years. □

1977 = 100

In accord with government-wide policy, announced in the March 4, 1980 *Federal Register*, to change the base year in Federal statistics using index numbers from 1967 = 100 to 1977 = 100, the Bureau of Labor Statistics will convert its indexes during 1981. Due to a very large data base however, the Bureau's price indexes (consumer, producer, and import and export) will be changed to a 1977 base with the publication of the January 1982 price data. Most BLS indexes will be changed to the new base year by July 1981.

A technical note describing the BLS rebasing process in more detail will be published in the February 1981 *Review*.

V. 104
Jan. - June
1981

Coal industry resurgence attracts variety of new workers

Coal companies report no shortage of inexperienced applicants even in Western "coal boom" areas; favorable wages appear to be a major attraction for the new miners, who are younger, more educated than other miners and include a growing number of women

HAROLD WOOL

During the past three decades, the coal industry has experienced major cycles which have profoundly affected the structure of its labor force. Following severe cut-backs in jobs between 1950 and 1965, employment stabilized between 1965 and 1969, and then expanded steadily for the next 10 years. With the expansion, the industry's work force has become younger and has more years of education.

Coal mining remains one of the most hazardous occupations in the United States, although State and Federal legislation provide some protection. Yet, mining companies report no shortage of job applicants, and miners report a high incidence of job satisfaction, most often identifying "good pay" as a significant factor.

This article reports on recent and prospective employment trends in the coal industry, focusing on the unique characteristics of the work and workers in the industry.

Working conditions

With few exceptions, coal mining is conducted in areas which are beyond normal commuting distance from major urban centers. Of the Nation's 100 largest

Standard Metropolitan Statistical Areas, only two (Pittsburgh and Birmingham) have significant amounts of bituminous coal mining activity. In 1970, about one-half of all coal miners resided in rural areas (population under 2,500).¹

Coal mining is a highly mechanized operation, using complex, heavy equipment to provide safe access to the coal seams, to remove the coal from the seams, and then to load and transport the coal to a preparation plant for processing prior to shipment. The occupations or job tasks of coal mine production workers are correspondingly diverse, ranging from laborer and other entry level occupations, to skilled mechanics and electricians, and to responsible operative jobs such as continuous mining machine operators, roof bolters, and operators of coal-loading shovel equipment and drag-lines.

Until recently, underground coal mines had accounted for the major share of all U.S. coal production and, because of higher average unit labor requirements, for an even larger share of total coal mining employment. Despite the sharp surge in surface mining since the 1960's, underground miners still accounted for about three-fifths of the industry's employment in 1978. The underground mining environment is inherently unhealthy, hazardous, and difficult. Safeguards mandated under the Coal Mine Health and Safety Act of 1969 have done much to protect miners against some of the major hazards, such as roof falls, explosions, and high

Harold Wool is Program Director for Energy Manpower Research at The Conference Board. This article was adapted from Chapter V, "Labor Supply for Coal Mining," of his recent book, *The Labor Outlook for the Bituminous Coal Mining Industry* (Electric Power Research Institute, Palo Alto, Calif., 1980).

dust concentrations. However, these safeguards have failed to reduce the incidence of nonfatal disabling injuries since 1969, and—at about 50 per million hours of exposure for underground miners in 1978—the incidence of such injuries continues to be among the highest of any major industry.

Surface coal mining, like other heavy outdoor, construction-type activities, is subject to its own set of workplace hazards, including exposure to dust, temperature extremes, diesel and welding fumes, whole-body vibration, noise, and stress. Nevertheless, surface mining lacks the confining conditions and certain hazards of the underground mines, such as risks of roof cave-ins and explosions or the high gas concentrations. In 1978, the injury rate in surface mines, 16.5 per million hours, was about one-third of that occurring in deep mines.²

Job satisfaction high

In view of the inherently dangerous and “dirty” nature of most coal mining jobs, it would be reasonable to expect a relatively high degree of dissatisfaction among coal miners and a high incidence of associated job-related tensions. Survey evidence and results of interviews with coal mine company officials provide very little confirmation for this assumption.

- An analysis of a survey conducted by the Westinghouse Behavioral Services Center (for the National Institute for Occupational Safety and Health) to measure job stress in coal mining, concluded, “Focusing on average job stress, miners fared much better than other blue-collar workers in a large national sample of occupations and, in fact, miners were significantly less dissatisfied with their jobs.”³
- A study based on interviews with 124 coal miners employed in four West Virginia mines similarly reported a high incidence of job satisfaction among miners: “Ninety percent of the miners said they found their work satisfying, 84 percent said it gave them a sense of accomplishment and 72 percent said it was challenging. When asked about the negative aspects of their jobs, 42 percent of the miners described their work as tiring, 22 percent said it was frustrating, and 8 percent said it was boring.”⁴
- Additional insight on this question is provided by the results of a 10-percent sample survey of United Mine Workers of America members who had entered coal mine employment in 1975. When asked to identify major considerations in their decision to work in coal mining, miners cited “good pay” most frequently among six designated factors; it was ranked first by 35 percent of the respondents. However, an additional 24 percent—the next largest group—indicated that they “enjoyed” coal mining, and that this was the major consideration for them.⁵

Coal mining tends to be more self-paced and offers somewhat more variety of job tasks than assembly-line, machine-paced manufacturing jobs. Actual work time in deep mines is relatively short, in view of the time required for the trip from the mine portal to the actual work location and because of the interruptions inherent in the work operations. Recently, there have been good opportunities for advancement to more skilled jobs, including supervisory jobs. Finally, miners take pride in the fact that their work is physically challenging and risky. This, in turn, has contributed to a sense of team spirit and cohesiveness within work teams and among miners as a group.

Although it is evident that most coal miners do in fact take pride in their work, evidence also indicates that a dominant factor in their decisions to enter and remain in coal mining employment is the extrinsic or economic reward. In addition to the United Mine Workers survey data, this is illustrated by the results of the 1976 Westinghouse Behavioral Survey Center’s survey of coal miner attitudes, which included an item on the positive aspects of their jobs. The most frequently cited positive aspects, identified by 80 percent or more of the respondents, were those associated with economic rewards, that is, wages, “steady work,” and benefits such as vacations and medical care. A smaller proportion (70 percent) cited “type of work” as a positive aspect, while only a minority cited more intrinsic job aspects, such as “independence” or “holding a responsible job,” as a reason for liking their jobs.⁶

Attractive wages an employment incentive

Between 1969 and 1978 (following settlement of the national coal strike), employment in the bituminous coal industry increased by nearly 100,000 jobs, to 241,000, its highest level since the early 1950’s. Substantial gains were recorded in all major coal mining regions. This rebound was accompanied by a reversal in the coal industry labor market. The hiring rate of coal miners increased from a monthly average of 1.2 per 100 employees in 1965–69 to 1.5 per 100 in 1970–77, while the layoff rate fell to an average of 0.2 per 100—probably close to the irreducible minimum. A large volume of retirements among coal miners, resulting from the high average age of miners and from liberalized pension benefits, also contributed to increased hiring needs during this period.⁷

Companies experienced little difficulty in recruiting sufficient numbers of inexperienced personnel for entry-level jobs during 1970–78, although they did have problems attracting experienced personnel, particularly supervisory and skilled maintenance workers. Personnel officials of 15 major coal companies who were interviewed in the summer and fall of 1978, indicated that they had substantial lists of applicants for entry-

level jobs, even in areas of relatively rapid employment growth.

A major factor which facilitated recruitment of new entrants to coal mining has been the high wage structure of the industry. Average hourly earnings of production workers in coal mining have been among the highest of all industrial workers, exceeding the average for all manufacturing industries by 55 percent in 1978. Moreover, in view of the extensive opportunity for overtime work or for work on weekends or holidays at premium rates, the difference in full-time annual earnings has been even greater than suggested by these comparisons.

A direct measure of the earnings incentive associated with transfer to a coal mining job is provided by comparing the prior earnings of workers who entered coal mining between 1973 and 1975 with those of workers who were employed in coal mining in both of these years.⁸ The following tabulation presents the 1973 earnings of persons employed in coal mining in 1975, by industry and age in 1973:

	<i>Coal mining</i>	<i>Other industries</i>	<i>Ratio</i>
All miners	\$11,981	\$6,807	1.76
16-24 years	9,377	4,472	2.10
25-34 years	11,456	7,579	1.51
35-44 years	12,521	8,652	1.45
45-54 years	12,895	9,243	1.45

The 1973 earnings of those who entered the industry during 1974-75 (new entrants) were \$6,807, compared with \$11,981 for those who were employed in coal mining in both years. Comparisons by age groups indicate that younger workers, age 16 to 24, who entered coal mining from other jobs, experienced a much greater improvement in their earnings than did those in older age groups. This is particularly significant because about one-half of the entrants into coal mining during these years were men under age 25. These comparisons are probably influenced, to some extent, by differences in the number of hours and days worked on prior jobs for these younger entrants, compared with those employed as coal miners, as well as by the sharp contrast in pay levels between most unskilled entry-level jobs and jobs provided in the coal industry.

Favorable wage differentials have encouraged the movement of many workers into coal mining from other industries and occupations. Based on our analysis of a sample of social security records, more than 57,000 workers, or nearly three-fifths of those who entered bituminous coal mining during 1971-75 had been previously employed in other industries. An additional 35,000 had been either out of the labor force, unemployed, or in certain categories of employment not covered by social security. Finally, about 4,600 entered or

reentered coal mining after military service. Entrants came from a relatively broad age spectrum: about one-half were under age 25; however, nearly one-fourth were 35 years or older, and consisted largely of those transferring from other industries.

The expansion of the coal mine work force during the 1970's was also greatly facilitated by the adverse trend in general labor market conditions during this period. The Arab oil embargo and accompanying inflation in oil prices in 1974-75, which stimulated a rapid increase in coal production and employment, had also been a major contributing factor in the economic recession. Hence, at the very time that coal mine hiring was being accelerated, large numbers of additional workers became available for these jobs as a result of large-scale layoffs and curtailed hiring in other industries.

Profile of recent entrants

The expansion of coal mining employment has been accompanied by dramatic changes in the composition of its labor force—in its age distribution, experience level, education, and related characteristics—and has also seen a potentially significant breakthrough in terms of the role played by women in this traditionally male-dominated industry.

Influx of younger men. Since 1970, there has been a major shift in the age of mine workers. The following tabulation, based on social security records, shows the age distribution of men employed in coal mining in 1969-70 (average) and in 1975:⁹

<i>Age group</i>	<i>1969-70</i>	<i>1975</i>
16 to 24	11.1	20.0
25 to 34	19.0	30.2
35 to 44	19.1	19.1
45 to 54	29.5	17.9
55 to 64	18.8	10.9
65 and over	2.5	1.0

The proportion of male miners under age 25 nearly doubled, reaching 21 percent in 1975, as a result of the large volume of new hiring during this period. There was also a large increase in the percentage of men age 25 to 34, from 19 percent to 30 percent. At the same time, the percentage of miners age 45 years and over dropped sharply, from about 50 percent to 30 percent, in part because of retirements of older miners. As a result of these shifts, the median age of coal mine workers dropped by about 10 years in this 5-year span, from 45 years in 1970 to 35 years in 1975.

These changes were paralleled by a corresponding reduction in the experience level of the coal mining work force. Between 1969 and 1974, the proportion of workers with less than 4 years of experience rose from 30 percent to 48 percent of the total, with a corresponding

reduction in the proportion with 4 or more years of experience. As a result, the number of coal mining employees with less than 4 years of experience more than doubled, while the number with 4 years or more of experience remained unchanged. The immediate effects of this drastic reduction in the age and experience level of workers in the industry was a new requirement for systematic training of new workers. Traditionally, the industry had relied on informal on-the-job training methods under which new miners were assigned to work with more experienced workers, often a relative. This approach no longer was satisfactory, both as a result of the large-scale influx of inexperienced miners and of legislation requiring formal health and safety training.

Educational attainment higher. Most coal mining occupations traditionally required little if any, formal education. Rather, characteristics such as physical condition and reliability combined with basic mechanical aptitudes had been more relevant. This was reflected in the past low educational attainment of coal mine employees. In 1970, fewer than 30 percent of all coal mine employees had completed at least 4 years of high school, compared with 59 percent for all employed men age 16 and over.¹⁰ The following tabulation shows the educational attainment of bituminous coal industry employees in 1970:

Education	Percent
Less than high school	52.6
Some high school	18.0
High school graduate	23.5
Some college or college graduate	5.9

Although directly comparable statistics are not available for post-1970 periods, it is clear that the flow of younger men into the industry has been accompanied by a significant increase in the educational level of the work force. Among entrants into coal mining jobs included in the 1975 United Mine Workers survey, nearly 73 percent reported an educational attainment of at least 4 years of high school; about 17 percent had completed some college work, and an additional 15 percent had taken some post-secondary technical training.¹¹ Similarly, the 1976 Westinghouse survey indicated that nearly one-half of all miners were high school graduates, in contrast with the fewer than 30 percent reported in the 1970 Census.¹²

The much higher educational attainment of recent entrants into coal mining can be attributed, in part, to the overall increase in educational level of the labor force during this period, as younger workers with more formal schooling have replaced older workers whose formal education was very limited. Thus, in 5 years, the median length of schooling of all male blue-collar work-

ers increased by nearly one-half year, from 11.8 years in 1970 to 12.2 years in 1975, according to Current Population Survey data.¹³ However, the influx of better-educated workers into coal mining during this period also reflects the favorable competitive position of this industry in the labor market, a result of its high wage structure and expanding employment opportunities.

This development is considered a challenge and opportunity by some industry personnel officials because it has brought into coal mining individuals with greater potential for advancement into the industry's growing number of skilled and technical jobs, and into its supervisory ranks. However, the higher level of education has also been regarded as a contributing factor to the increase in rank-and-file militance and to related problems of worker discipline, which have emerged in recent years.¹⁴

Women. Coal mining, like other types of heavy and dangerous work, has traditionally been considered a "man's industry." Women accounted for only about 1.5 percent of total employees in both 1960 and 1970, and 2.1 percent in 1975. Occupationally, women had been predominantly employed in the lower ranking office jobs and in routine service functions, such as cleaning. Based on reports submitted in 1975 to the Equal Employment Opportunity Commission by companies with 100 employees or more, about 87 percent of all women were in office clerical and service-type jobs; about 7 percent were in higher level salaried jobs, including officials, managers, professionals, and technicians; and 5 percent were in blue-collar jobs—usually in the lowest level laborer category. (See table 1.) Since 1975, a number of developments combined to accelerate the pace of hiring of women in the coal industry. The increased readiness of women to demand entry into a wide range of higher wage occupations previously reserved exclusively for men has been aided by a number of successful legal actions filed under Federal or State equal em-

Table 1. Occupations of women in the bituminous coal mining industry, 1975

Characteristic	All employees	Women employees	
		Number	Percent
Total in reporting companies	131,441	2,814	2.1
White-collar workers	25,251	2,504	9.9
Managers and officials	15,640	70	0.4
Professionals	2,105	74	3.5
Technicians	2,704	80	3.0
Clerical and sales workers	4,802	2,280	47.5
Blue-collar workers	105,412	142	0.1
Crafts	40,080	30	0.1
Operators	42,060	19	0.1
Laborers	23,272	93	0.4
Service workers	778	168	21.6

Source: U.S. Equal Employment Opportunity Commission.

ployment opportunity laws.

Employment of women in coal mining doubled between 1975 and 1979, and their proportion of total employees increased at an average increment of 0.4 percent per year. This contrasts with an average gain of only 0.1 percent per year in the preceding 5-year period, 1970-75. The following tabulation, based on Bureau of Labor Statistics data, shows the employment gains of women since 1970 (annual averages, except 1978):

Year	Number	Percent
1970	2,400	1.7
1975	4,500	2.1
1976	5,600	2.5
1977	6,400	2.9
1978 (June)	8,400	3.3
1979	9,200	3.6

These gains have been accomplished—at least in part—by the entry of women into production workers coal mining positions, both in underground and surface mines. Corroboration of this trend is provided by data on the number of medical examinations, which are mandatory for new underground miners. According to the National Institute for Occupational Safety and Health, the first such examination for a female coal miner was recorded in 1973, but since then, the cumulative number of such examinations for women rose to 992 in July 1977, to about 2,000 in September 1978, and to 2,574 by June 1979.¹⁵ Not all of these women were hired by coal companies, and of those who were, a substantial proportion probably subsequently left their jobs. Nevertheless, even after allowance for these factors, it appears that of the 8,500 women employed in the bituminous coal industry in early 1979, more than 1,000 were actually working as “miners,” that is as production workers or in related blue-collar jobs.

Only about 4 percent of all coal industry employees in 1975 were black or members of other minority groups. As in most other industries, minority group members in coal industry jobs are disproportionately employed in the less skilled occupations. This pattern is most pronounced among white-collar jobs, and less so in blue-collar jobs, where advancement to more skilled craft jobs is often governed by union seniority and job-bidding rules. (See table 2.)

Continued employment growth expected

In the coming decade, labor requirements for the bituminous coal industry are expected to grow from an actual employment level of about 214,000 in 1977 to about 325,000 in 1990.¹⁶ Attainment of this employment level would, in turn, require the recruitment of an average of about 45,000 new workers per year, including those needed to replace workers leaving the industry because of retirement or other reasons.

Table 2. Occupations of minorities in the bituminous coal mining industry, 1975

Characteristics	All employees	Minority employees	
		Number	Percent
Total in reporting companies	131,441	5,405	4.1
White-collar workers	25,251	539	2.1
Officials and managers	15,640	219	1.4
Professionals	2,105	46	2.2
Technicians	2,704	43	1.6
Clerical and sales workers	4,802	231	4.8
Blue-collar workers	105,412	4,797	4.6
Craft workers	40,080	1,700	4.2
Operatives	42,060	1,963	4.7
Laborers	23,272	1,134	4.9
Service workers	778	69	8.9

SOURCE: U.S. Equal Employment Opportunity Commission.

When these projected requirements are compared to the aggregate size and growth trend of the total labor force, it seems unlikely that the coal industry will experience any significant problems recruiting workers. The U.S. civilian labor force, which totaled more than 100 million in 1978, is expected to grow to about 119 million by 1990, according to “intermediate-level” projections of the Bureau of Labor Statistics.¹⁷ Thus, labor requirements for the coal industry will continue to constitute only a minute fraction—less than 0.3 percent—of the potential total national supply of workers. General labor recruitment problems seem even less probable if allowance is made for the coal industry’s high wage structure and for the very modest qualification standards for entry into most coal mining jobs.

Nevertheless, shortages may emerge in some areas and in some occupations. This could stem from the highly uneven geographic pattern of growth for the coal industry in the period to 1990. In contrast to an overall projected employment growth of about 55 percent between 1975 and 1990, labor requirements in bituminous coal mining are expected to grow nearly sixfold in the Western, Great Plains, and Rocky Mountain regions, and about threefold in the Midwestern region. Very little net employment growth is expected in most of the Appalachian coal-mining areas.

The Western areas of projected rapid growth in coal mine employment are generally sparsely settled, with limited local labor reserves and low current unemployment, in contrast to the sizable labor reserves in many of the Eastern coal mining regions. Although employers have not reported significant difficulty in recruiting workers for entry-level coal mining jobs, they have reported problems in developing an adequate supply of experienced supervisors and skilled mechanics. Thus, coal employment needs now projected for these regions could be constrained by some labor supply problems, resulting in upward pressures on labor costs.

Recent developments, including legislation providing for development of a massive coal-based synthetic fuel industry, may increase coal demand in the coming decade above the levels anticipated in this report. These

developments may have sizable impacts on labor demand-supply conditions in some coal mining communities, but data are not yet available to attempt to quantify such impacts. □

—FOOTNOTES—

¹ 1970 Census of Population, Subject Report: Industrial Characteristics, PC (2)-7B (Washington, Bureau of the Census, 1973).

² *Mine Injuries and Worktime, Quarterly* (U.S. Department of Labor, Mine Safety and Health Administration, 1978), table 1 and *Statistical Abstract of the United States, 1977* (Washington, Government Printing Office, 1977), p. 422.

³ Cited by Ronald Althouse and Joseph J. Hurrell, Jr. in *An Analysis of Job Stress in Coal Mining* (U.S. Department of Health, Education and Welfare, National Institute of Occupational Safety and Health, 1977), #77-217.

⁴ Jeanne M. Brett and Stephen B. Goldberg, *Wildcat Strikes in the Bituminous Coal Industry: A Preliminary Report* (Evanston, Ill., Northwestern University, Graduate School of Management, 1978).

⁵ "UMWA Survey of 1976 Coal Mine Workers," in *Forecast of Employment and Training in the Coal Mining Industry, 1980-2000* (Salt Lake City, Utah, John Short and Associates, Inc., 1979), p. 56.

⁶ C. Michael Pfeifer, Joseph L. Stefanski, and Craig B. Grether, *Psychological, Behavioral and Organizational Factors Affecting Coal Miner Safety and Health* (Columbia, Md., Westinghouse Behavioral Services Center, 1976), tables 23 and 49.

⁷ *Determination of Labor Management Requirements to Meet the Goals of Project Independence* (Washington, Kramer Associates, Inc., 1975), ch. IV.

⁸ Data are from a 10-percent sample of social security records of male workers in the bituminous coal industry in 1971, 1973, and 1975.

⁹ Data for 1969-70 are based on analysis of a 1-percent sample of social security's continuous work history records of male employees

whose primary earnings were from the bituminous coal industry. (From unpublished tabulations by John Short and Associates.) Data for 1975 are based on analysis of a 10-percent sample of social security records of men whose primary earnings in the first quarter of 1975 were from the bituminous coal industry. (From tabulations prepared for The Conference Board by the U.S. Department of Commerce, Bureau of Economic Analysis.)

¹⁰ "UMWA Survey . . .," p. 51.

¹¹ *Ibid.*, p. 54.

¹² Althouse and Hurrell, *Analysis of Stress in Coal Mining*, p. 15.

¹³ *Employment and Training Report of the President, 1978* (Washington, U.S. Department of Labor, Employment and Training Administration, 1978), table B-12.

¹⁴ See, for example, Everett M. Kassalow "Labor management relations and the coal industry," *Monthly Labor Review*, May 1979, pp. 23-27.

¹⁵ *Coal Mining Women's Support Team News* (Oak Ridge, Tenn., Coal Employment Project, September-October 1978). Data for June 1979 provided by Betty Jean Hall, Director, Coal Employment Project.

¹⁶ Projections to 1990 presented in chapter 4 of Harold Wool and John B. Ostbo, *The Labor Outlook for the Bituminous Coal Mining Industry* (Palo Alto, Calif., The Electric Power Research Institute, 1980).

¹⁷ Paul O. Flaim and Howard N Fullerton, Jr., "Labor force projections to 1990: three possible paths," *Monthly Labor Review*, December 1979, pp. 25-35.

Scheduled wage increases and cost-of-living provisions in 1981

Although bargaining will be relatively light this year, most workers in major bargaining units will receive raises under contracts signed in previous years

DOUGLAS R. LEROY

Nearly all workers under major collective bargaining agreements (those covering 1,000 workers or more) in the private nonfarm sector receive some wage increase each year. During 1981, there will be 2.6 million workers covered by expiring agreements or contracts with wage reopening provisions; 6.1 million are scheduled to receive "deferred" wage increases from contracts negotiated in earlier years; and 4.5 million workers under expiring and continuing agreements, with or without deferred increases, may anticipate wage adjustments from cost-of-living clauses. About 162,000 workers are covered by contracts that extend through 1981 and do not provide for any wage increase.

An earlier article presented information on the general characteristics of groups that will be bargaining this year;¹ thus, the following discussion will focus primarily on deferred wage increases and cost-of-living adjustments (COLA) provided by the major agreements. The analysis excludes 818,000 workers whose contracts expired late in 1980 but had not been renegotiated by November 1, or for whom data were not otherwise available at this writing.²

Deferred wage increases

Multi-year collective bargaining agreements commonly provide for scheduled wage increases in each year of the contract. Deferred wage increases refer to changes that are implemented in the current year but were negotiated in prior years.

The average size of deferred wage increases has been about the same for the last few years—5.1 percent in 1978 and 1979, and 5.2 percent in 1980 and 1981. Reflecting the 3-year bargaining cycle characteristic of major agreements, larger numbers of workers were to receive deferred increases in 1978 and 1981 (6.7 million and 6.1 million workers, respectively) than in the 2 intervening years (5.2 million in 1979, and 5.0 million in 1980). Half of the workers (3.1 million) receiving such increases in 1981 are under agreements negotiated in 1980, 47 percent (2.8 million) are under contracts negotiated in 1979, and the remainder are covered by agreements reached before 1979.

Contract expirations similarly reflect the 3-year cycle. Bargaining in 1978 covered 2.5 million workers; negotiations in 1979 involved 3.5 million workers; and those in 1980 are expected to affect close to 4 million by the end of the year. Of the 2.6 million workers under contracts scheduled to expire or reopen in 1981, 260,000 are to receive deferred increases, averaging 5.6 percent. Of these, about 49,000 workers may also receive COLA payments, which will be discussed in detail in a later section, along with their deferred wage increases.

Among workers under contracts that run past 1981, 3.7 million will receive deferred increases averaging 3.4 percent and may also have COLA adjustments during the year; 2.2 million are to receive only deferred wage payments, averaging 8.3 percent; 46,350 workers may receive only COLA adjustments; and 162,000 workers are not scheduled for either COLA payments or deferred increases.

The 5.2-percent deferred wage increase amounts to an

Douglas R. LeRoy is an economist in the Office of Wages and Industrial Relations, Bureau of Labor Statistics

average 52.4 cents per hour. The highest increases, in both cents-per-hour and percentage terms, are in the construction industry, affecting about 870,000 workers: scheduled deferred wage increases average 9.7 percent or \$1.24 per hour in 1981.³ The metalworking industry, on the other hand, has negotiated increases averaging 3.1 percent, or 30.7 cents, for 2.0 million workers this year. (See table 1.) Much of the difference between these two industries is attributable to the greater prevalence of COLA adjustments as supplements to deferred increases in the metalworking industry.

Table 2 illustrates this difference in cost-of-living cov-

erage for the two groups. Eleven percent of workers under major construction contracts have COLA protection compared with 93 percent in the metalworking industry. Deferred increases in construction contracts with cost-of-living clauses (covering 98,000 workers) average 7.8 percent, compared with 10 percent for the 778,000 workers under contracts without COLA clauses. For the 108,000 workers covered by metalworking agreements without COLA provisions, the average deferred increase is 6.4 percent, compared with 2.9 percent for the 1.9 million workers with such clauses.

As in past years, the nonmanufacturing sector as a

Table 1. Workers receiving deferred wage increases in 1981, by major industry group and size of increase

[Workers in thousands]

Average hourly increases	Number of contracts	All private nonagricultural industries	Manufacturing					Nonmanufacturing				
			Total ¹	Selected industries				Total ²	Selected industries			
				Food and kindred products	Apparel	Chemicals	Metalworking		Contract construction	Transportation, communications, gas, and electric utilities	Warehousing, wholesale and retail trade	Services
Total	1,002	6,073	3,103	200	455	82	1,989	2,970	873	1,437	432	162
CENTS PER HOUR												
Under 15 cents	62	306	261	11	12	5	229	44	6	12	22	6
15 and under 20	33	102	55	12	.....	.....	22	48	3	23	5	6
20 and under 25	47	206	116	.....	.....	.....	92	91	.....	78	6	4
25 and under 30	114	1,154	490	49	108	10	298	664	2	601	52	5
30 and under 35	115	1,865	1,328	7	29	65	1,188	537	31	452	41	3
35 and under 40	39	251	188	7	138	.....	29	62	5	3	34	.....
40 and under 45	39	191	158	62	62	.....	25	33	.....	6	23	2
45 and under 50	22	138	123	12	103	2	12	15	3	6	2	4
50 and under 60	122	497	147	18	2	.....	46	350	49	21	180	85
60 and under 70	73	182	85	17	.....	.....	31	97	53	11	21	12
70 and under 80	54	221	85	14	.....	.....	4	136	71	35	24	6
80 and under 90	38	110	16	.....	.....	.....	1	93	48	41	3	.....
90 and under 100	15	51	11	.....	.....	.....	10	39	21	13	4	2
100 and under 110	58	245	31	.....	.....	.....	.....	214	117	63	9	25
110 and under 120	37	91	7	.....	.....	.....	.....	84	39	40	3	2
120 and over	134	464	2	.....	.....	.....	2	463	427	34	2	.....
Mean increase	.....	52.4	35.5	40.0	37.3	33.3	30.7	70.0	124.3	46.2	48.7	59.7
With cost-of-living clauses	.....	35.6	30.5	29.3	33.6	33.9	29.6	43.2	109.7	36.9	52.9	51.4
Without cost-of-living clauses	.....	81.6	50.0	47.1	38.9	26.8	50.3	99.3	126.1	107.1	46.4	59.8
Median increase	.....	33.9	30.4	41.6	40.0	35.0	30.4	47.5	120.0	35.0	50.0	58.2
PERCENT³												
Under 2 percent	47	250	216	13	.....	.....	201	33	7	10	11	.....
2 and under 3	156	2,342	1,555	49	12	10	1,447	787	36	727	8	.....
3 and under 4	96	743	278	6	.....	49	185	466	8	440	11	6
4 and under 5	45	168	70	6	.....	21	21	97	14	7	68	8
5 and under 6	81	401	215	73	106	.....	18	186	59	29	63	8
6 and under 7	116	483	257	4	192	2	33	225	59	16	147	4
7 and under 8	122	538	268	20	142	.....	59	270	119	28	72	39
8 and under 9	116	406	149	12	2	.....	4	257	110	88	15	41
9 and under 10	81	276	49	18	.....	.....	19	227	110	51	17	46
10 and under 11	72	187	44	.....	.....	.....	.....	143	85	43	13	2
11 and under 12	22	75	2	.....	.....	.....	2	73	66	.....	4	4
12 and over	48	206	.....	.....	.....	.....	.....	206	199	.....	2	5
Mean increase	.....	5.2	4.2	5.2	6.4	3.9	3.1	6.2	9.7	3.9	6.3	8.4
With cost-of-living clauses	.....	3.5	3.3	3.2	6.1	3.8	2.9	4.0	7.8	3.4	5.8	7.6
Without cost-of-living clauses	.....	8.1	7.0	6.5	6.6	4.4	6.4	8.7	10.0	7.2	6.6	8.4
Median increase	.....	3.1	3.0	5.7	7.0	3.9	2.8	5.5	9.1	3.0	6.4	8.6

¹ Includes workers in the following industry groups for which separate data are not shown: tobacco (28,000); textiles (19,000); lumber (64,000); furniture (17,000); paper (41,000); printing (31,000); petroleum refining (32,000); rubber (29,000); leather (16,000); stone, clay, and glass (50,000); instruments (36,000); and miscellaneous manufacturing (16,000).

² Includes 24,000 workers in mining and 42,000 in finance, insurance and real estate for which separate data are not shown.

³ Percent of straight-time average hourly earnings.

NOTE: Workers are distributed according to the average adjustment for all workers in each bargaining unit considered. Deferred wage increases include guaranteed minimum adjustments under cost-of-living clauses. Only bargaining units in the private, nonagricultural economy covering 1,000 workers or more are considered in this table. Because of rounding, sums of individual items may not equal totals. Dashes indicate there are no workers having wage increases that fall within that stated range.

whole has higher deferred increases, in both cents-per-hour and percentage terms, than the manufacturing sector—6.2 percent (70.0 cents), compared with 4.2 percent (35.5 cents). Again, some of this difference may reflect expectations of increases resulting from COLA clauses. Of the 3.1 million workers in the manufacturing sector with deferred increases scheduled in 1981, 2.3 million have COLA provisions in their contracts, with deferred increases averaging 3.3 percent, compared with 7 percent for those without COLA protection. In the nonmanufacturing sector, 3 million workers are scheduled for deferred increases. The 1.5 million with COLA clauses in their contracts will average gains of 4.0 percent, while those without will average 8.7 percent.

Deferred wage increases in 1981 for the combined transportation and communication industries average 3.7 percent (44.8 cents), and cover nearly 1.4 million workers. Mean increases of 6.4 percent (37.3 cents) are scheduled for 455,000 workers in the apparel industry, while 432,000 workers in trade will receive average wage gains of 6.3 percent (48.7 cents) during the year.

Table 3 shows concentrations of workers receiving deferred payments by month during 1981. A large portion of the 712,000 workers with increases due in April are under the Teamsters' Master Freight agreement. Some 585,000 construction industry workers receive increases during May, June, and July, and 262,000 workers in the apparel industry are scheduled for payments in June.

Table 2. Prevalence of cost-of-living adjustment (COLA) clauses in major collective bargaining agreements, November 1980

[Workers in thousands]

2-digit standard industry classification (SIC)	Industry	All contracts		Contracts with COLA clauses		Percent of workers covered by COLA clauses
		Workers covered	Number of contracts	Workers covered	Number of contracts	
	Total	9,333	1,989	5,318	771	57.0
10	Metal mining	56	14	44	11	79.5
11	Anthracite mining	2	1	2	1	100.0
12	Bituminous coal and lignite mining	160	1	...	...	0.0
15	Building construction general contractors	685	170	49	9	7.2
16	Construction other than building construction	471	118	68	11	14.5
17	Construction-special trade contractors	432	201	51	21	11.7
20	Food and kindred products	313	99	99	34	31.6
21	Tobacco manufacturing	28	8	24	6	88.0
22	Textile mill products	46	19	3	2	6.5
23	Apparel and other finished products	486	55	156	10	32.2
24	Lumber and wood products, except furniture	66	15	3	2	4.2
25	Furniture and fixtures	28	17	10	7	35.9
26	Paper and allied products	98	66	4	2	3.8
27	Printing, publishing, and allied industries	63	33	22	8	34.7
28	Chemicals and allied products	83	44	23	12	27.4
29	Petroleum refining and related industries	37	19	...	...	0.0
30	Rubber and miscellaneous plastics	83	15	68	10	81.5
31	Leather and leather products	38	16	...	...	0.0
32	Stone, clay, glass, and concrete products	91	36	67	23	73.2
33	Primary metals industries	476	118	450	103	94.6
34	Fabricated metal products	116	59	91	42	78.5
35	Machinery, except electrical	289	93	270	82	93.4
36	Electrical machinery equipment and supplies	448	103	408	80	90.9
37	Transportation equipment	1,209	107	1,140	87	94.3
38	Instruments and related products	49	16	28	7	57.3
39	Miscellaneous manufacturing industries	23	13	4	2	15.9
40	Railroad transportation	432	18	432	18	100.0
41	Local and urban transit	16	4	15	3	93.3
42	Motor freight transportation	476	20	468	17	98.3
44	Water transportation	95	19	36	7	37.5
45	Transportation by air	176	43	138	27	78.6
48	Communications	734	42	662	26	90.2
49	Electric, gas, and sanitary services	224	77	32	12	14.2
50	Wholesale trade—durables	44	26	12	8	27.5
51	Wholesale trade—nondurables	17	4	2	1	13.2
53	Retail trade—general merchandise	85	23	29	6	34.2
54	Food stores	532	105	334	51	62.7
55	Automotive dealers and service stations	18	11	2	1	8.2
56	Apparel and accessory stores	8	5	...	...	0.0
58	Eating and drinking places	80	25	...	...	0.0
59	Miscellaneous retail stores	18	7	8	3	43.4
60-65	Finance, insurance, and real estate	126	21	46	9	36.5
70-89	Services	376	83	20	10	5.4

NOTE: Due to rounding, sums of individual items may not equal totals, and percentages may not reflect shown ratios.

Dashes indicate absence of cost-of-living coverage.

Table 3. Workers receiving deferred increases in 1981 in bargaining units covering 1,000 workers or more, by month

[Workers in thousands]

Effective month	Principal industries affected	Workers covered
Total		6,073 ¹
January	Construction, oil refineries	334
February	Transportation equipment	155
March	Automobiles, apparel, and food stores	443
April	Trucking	712
May	Construction, trucking	405
June	Construction, apparel	942
July	Construction	631
August	Communications	1,184
September	Automobiles	1,113
October	Transportation equipment, apparel, and farm implement	418
November	Food stores, apparel	156
December	Electrical equipment	102

¹ This total is smaller than the sum of individual items because 489,600 workers will receive more than one increase. This total is based on data available as of Nov. 1, 1980, and thus may understate the number of workers receiving deferred increases for the entire year.

The two heaviest months are August and September when 1.2 and 1.1 million workers, respectively, receive increases. Workers in the steel and telephone industries account for 80 percent of those scheduled for increases in August, while auto industry agreements provide wage increases for 772,000 workers in September.

For contracts with 5,000 workers or more, the 1981 average increase in the cost of both deferred wages and benefits is 5.5 percent, compared with the 1980 average of 5.3 percent and the 1979 average of 4.7 percent. (See table 4.)

Cost-of-living adjustments

Fifty-seven percent of workers covered by major agreements have cost-of-living protection. COLA clauses are designed to help workers recover purchasing power lost through price increases. The number of workers receiving COLA increases and the proportion of purchasing power actually recovered under individual bargaining agreements depends on the specific formula used to relate wage and price increases, the timing of COLA reviews, and possible "caps" limiting the amount of COLA payments.

While deferred wage changes affect the largest portion of workers, cost-of-living increases may be larger than deferred increases in 1981. If inflation continues as it did during 1979 and in 1980, COLA payments are likely to have a significant impact on the total wage changes occurring during the year. More than four-fifths of workers with COLA clauses will have at least one review during 1981.⁴ (See table 5.)

The number of workers affected by COLA clauses has been decreasing since 1977 because the number of workers covered by major agreements has declined, but the proportion under contracts having this protection

has remained fairly constant. The following tabulation shows the number of workers (in millions) under cost-of-living provisions from January 1, 1971-81:

Year	Workers	Year	Workers
1971	3.0	1977	6.0
1972	4.3	1978	5.8
1973	4.1	1979	5.6
1974	4.0	1980	5.4
1975	5.3	1981 ⁵	5.3
1976	6.0		

Many of the workers covered by cost-of-living provisions are members of large unions. The Auto Workers represent the largest number of workers (1,092,000) under major agreements with cost-of-living provisions. Other important unions providing COLA protection are: the Communications Workers (600,000), the Teamsters (533,000), the Steelworkers (498,000), and the Machinists (314,000). These five organizations account for 57 percent of workers under major agreements with COLA clauses. Remaining unions each represent fewer than 200,000 workers with COLA provisions.

Adjustment formula. The rate of inflation is only one of several factors that control the size of cost-of-living adjustments. Rates of adjustments, caps, and indexes used also affect how well the formula protects workers' purchasing power. In 1979, COLA clauses returned about half the lost purchasing power caused by the 13.4-percent price rise that year. Through the first three quarters of 1980, COLA adjustments returned about two-thirds of the loss.

Probably the most obvious determinant of COLA payouts is the rate of adjustment used in various contracts. The most common rate is 1 cent per hour for each 0.3-point rise in the CPI. This provision covers 2

Table 4. Workers receiving deferred wage and benefit increases in 1981 in bargaining units covering 5,000 workers or more, by size of increase

[Workers in thousands]

Percentage increase	Workers covered
All settlements providing deferred changes ¹	4,588
Under 3 percent	907
3 and under 4	1,552
4 and under 5	547
5 and under 6	277
6 and under 7	447
7 and under 8	266
8 and under 9	168
9 and under 10	103
10 and under 11	72
11 percent and over	250
Mean increase (percent)	5.5
Median increase (percent)	3.9

¹ This total excludes workers who receive a deferred benefit change only.

NOTE: Only bargaining units in the private, nonagricultural economy are considered in this table. Because of rounding, sums of individual items may not equal totals.

Table 5. Timing of 1981 cost-of-living reviews in major contracts, by year of contract expiration and frequency of review

[Workers in thousands]

Type of contract, by expiration and frequency of cost-of-living review	First quarter		Second quarter		Third quarter		Fourth quarter		Full year ¹	
	Number of contracts	Workers covered	Number of contracts	Workers covered	Number of contracts	Workers covered	Number of contracts	Workers covered	Number of contracts	Workers covered
All contracts										
Total	293	2,621	258	2,554	266	2,693	207	2,465	476	4,536
Quarterly	209	1,801	183	1,734	169	1,696	153	1,663	213	1,812
Semiannual	61	648	36	615	39	205	33	610	99	1,279
Annual	23	171	39	205	58	793	21	193	143	1,372
Other ² .....	..	..	..	..	..	..	..	..	21	73
Contracts expiring in 1981 ³										
Total	84	674	38	91	20	44	2	12	102	748
Quarterly	59	143	33	75	16	33	..	..	59	143
Semiannual	21	441	3	6	1	4	..	..	24	447
Annual	4	90	2	10	3	7	2	12	11	120
Other ² .....	..	..	..	..	..	..	..	..	8	39
Contracts expiring in later years										
Total	209	1,947	220	2,463	246	2,650	205	2,453	374	3,788
Quarterly	150	1,659	150	1,659	153	1,663	153	1,663	154	1,669
Semiannual	40	207	33	610	38	201	33	610	75	832
Annual	19	81	37	195	55	786	19	180	132	1,252
Other ² .....	..	..	..	..	..	..	..	..	13	34

¹ Contracts that have at least one review in the year.

² Includes monthly, combinations of annual and quarterly, combinations of annual and semi-annual, other, and reviews dependent upon levels of the Consumer Price Index.

³ Includes only those reviews through the termination of the present agreements; does not

assume the continuation of existing reviews after contract expiration dates.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate that there is no coverage for a particular review in the quarter.

million workers. Members of the Steel Industry Coordinating Committee⁶ and companies which follow the steel contract pattern use this formula. In addition, 821,000 workers in the auto industry presently have their COLA payments adjusted at this rate, but this formula will be changed to 1 cent for each 0.26-point rise in the third contract year. COLA clauses in rubber industry contracts provide 1 cent for each 0.26-point increase in the CPI beginning in 1981, the second year of the agreements. The Bell System operating companies and manufacturing firms that follow their contract pattern specify changes of 55 cents a week plus 0.65 percent of each employee's weekly rate for each 1-percent movement in the CPI. This method applies to 721,000 workers.

Timing, "caps," and indexes. The timing of reviews also affects the average rate of return from COLA clauses for a given period. Quarterly reviews are the most common; they cover 2.1 million workers, including those in the steel and automobile industries. Annual reviews affect 1.7 million workers, most notably in communications—Bell System agreements provide for reviews in August of the second and third contract years. Semiannual reviews cover nearly 1.4 million workers, including more than 400,000 workers each in the railroad and trucking industries. In both of these industries, the frequency of review was changed from annual to semiannual when the current contracts were negotiated.

"Caps," or maximum limits, may also affect the

amounts that may be received from COLA clauses. Slightly more than 1.2 million workers have such caps in their contracts. The largest single group—431,000 workers in the railroad industry—may receive a maximum 8-percent adjustment during the year.

In addition, the amounts generated are affected by the price index used in the COLA formula. Contracts covering nearly 80 percent of the workers under COLA provisions use the BLS Consumer Price Index, U.S. "all cities" average. About 340,000 workers are under contracts with COLA clauses using individual city indexes. These include 125,000 workers covered by agreements using the Los Angeles-Long Beach Index, primarily those with the Food Employers Council in Southern California. Automobile industry contracts, covering 821,000 workers, use a combination of the U.S. and Canadian indexes because bargaining units in both countries are involved.

Minimums or "guaranteed COLA" payments also affect the amount of money generated by clauses because they provide a "floor" for payments. For purposes of this analysis, these minimum payments are not treated as COLA increases because they do not depend upon CPI movements; however, they are included in the tabulations of negotiated wage changes. More than 300,000 workers have guaranteed minimums in their contracts, and about 172,000 workers are under contracts with both minimums and caps on the COLA amounts that may be paid. □

—FOOTNOTES—

¹ For an analysis of the bargaining schedule for 1981, see David Schlein, "Contracts in six key industries scheduled to expire in 1981," *Monthly Labor Review*, December 1980, pp. 22–31.

² Bargaining units for which information was not available: 274 agreements which expired or were reopened prior to Nov. 1, 1980, covering 640,000 workers; and 55 contracts which expired or were reopened between Nov. 1 and Dec. 31, 1980, covering 178,000 workers.

³ About 477,000 construction workers will receive deferred increases under settlements in which the parties agreed to a total wage and benefit package, with the ultimate allocation between wages and benefits to be determined by the union. Because the final division was not known at the time this article was prepared, the entire package in

these cases has been treated as a wage increase, that may be overstated.

⁴ For more detailed information about cost-of-living provisions offsetting inflation, see Victor J. Sheifer, "Cost-of-living adjustment: keeping up with inflation?" *Monthly Labor Review*, June 1979, pp. 14–17.

⁵ The data for 1981 are based on information available as of Nov. 1, 1980.

⁶ The firms are Allegheny Ludlum Industries, Inc.; Armco Steel Corp.; Bethlehem Steel Corp.; Inland Steel Co.; Jones and Laughlin Steel Corp.; National Steel Corp.; Republic Steel Corp.; United States Steel Corp.; and Wheeling-Pittsburgh Steel Corp.

Industrial relations—a declining art?

. . . Unlike in many countries, industrial relations in America are not a subject of great public concern. Among many academics is the (rather complacent) feeling that all the interesting questions in industrial relations have been examined. It is no longer a field in which to "make a name".

The problem for many industrial relations institutes has been exacerbated by their specialization in a non-growth area: private sector unionism. The proportion of the private sector which is unionized is falling as, in all probability, is the absolute number of unionists there. But this decline could itself provide work for industrial relations institutes as unions build up their defenses in a fight for survival. And the institutes are not entirely lacking in the ability to adapt. Their extension services are busy training practitioners, especially those in the public sector where unionism and collective bargaining have of late grown rapidly. In many ways traditional industrial relations is now the preserve of the practitioner rather than of the researcher.

While the scope of industrial relations has narrowed considerably, interesting work is still being done on its mainstay of collective bargaining. Much of it is more theoretical and quantitative than that of the past and much concerns the public sector. Industrial relations as an area of study is alive in America but only just. Its survival is ensured by the emergence of (a few) able young scholars who combine a sensitivity for institutional detail with technical competence. But advances in many areas once the preserve of industrial relations are likely to come from the basic disciplines.

—DON J. TURKINGTON
*Industrial Relations Teaching and Research
in Australia and New Zealand* (Wellington,
New Zealand, Victoria University of
Wellington, Industrial Relations Center,
1978, pp. 64–65.

Industrial relations in 1980 influenced by inflation and recession

*Hard hit by plant closings and layoffs,
some automobile and steel companies
turned to unions and the Government for help;
settlements provided for larger wage increases;
and some long-fought organizing battles
in the South culminated in initial contracts*

GEORGE RUBEN

Inflation and recession combined to make 1980 a difficult year for both labor and management. At the same time that rising prices prompted increased rates of pay, severe economic difficulties surfaced in several key industries. Five of the largest U.S. industrial corporations reported combined losses of \$2.3 billion in the fourth quarter. Four automobile manufacturers—General Motors, Ford, Chrysler, and American Motors—reported combined losses of \$1.65 billion and U.S. Steel Corp., the Nation's largest steel producer, reported a loss of \$668.9 million—the largest quarterly loss for a single firm in U.S. history. The company also announced plans to close a dozen of its plants. Unions and the Government tried to help these and other ailing industries: the unions by agreeing to wage concessions at some companies and the Government by establishing special assistance programs.

The automobile companies' losses resulted from a sales slowdown variously attributed to increased imports, high fuel costs, inflation, recession, and a lack of adequate lines of smaller cars. The companies were forced to reduce costs by laying off both hourly and salaried employees, closing plants, and halting merit raises for salaried workers.

In July, President Carter announced a plan to aid the industry which called for the easing of certain aspects of

occupational safety and health and environmental protection regulations; increasing the working capital available to automobile dealers; and allocating \$50 million of Federal funds to aid communities hit by automobile industry dislocations. The plan also established a 14-member Automobile Industry Committee with labor, management, and government representatives to decide on further steps to aid the industry.

In June, Ford and the Auto Workers petitioned the International Trade Commission for a finding that the level of imports was the chief cause of the auto industry's slump, thereby enabling the President to impose quotas or tariffs on foreign vehicles. However, in November, the commission ruled that domestic conditions, such as the recession, high interest rates, and insufficient production of small cars, were the main reasons for the industry's problems.

Although Chrysler Corp. and the United Auto Workers negotiated a contract in October 1979, the parties revised the terms in January 1980. The revision provided for \$243 million in additional concessions by the union to conform with the requirements of the Chrysler Corporation Loan Guarantee Act of 1979, under which the Federal Government guaranteed repayment of up to \$1.5 billion in possible loans obtained by the beleaguered company. The concessions included further delays in some wage increases and elimination of 17 paid personal holidays during the contract term and one Sunday bonus holiday.

George Ruben is co-editor of *Current Wage Developments*, a monthly publication of the Bureau of Labor Statistics.

Adverse developments affecting the steel industry included plant closings, layoffs, and a drop in output attributed to increased imports and a worldwide slump in demand for steel. In March, U.S. Steel Corp. formally accused seven European companies of "dumping" steel, that is, selling steel in the United States at a price below their domestic price. The Government then suspended the "trigger price" mechanism under which such charges are usually initiated, contending that it could not legally administer trigger prices and decide the dumping case at the same time. (The "trigger cost" is the cost of producing steel in Japan.)

In October, President Carter announced a national steel policy based on the recommendations of the Steel Tripartite Advisory Committee, established in 1978. Under the new policy, the trigger price mechanism was reinstated and raised 12 percent. Other parts of the policy required congressional action that was not concluded by yearend, including extension of deadlines for complying with pollution standards and tax breaks to encourage the industry to modernize.

Pay concessions, plant closings

Efforts to improve Chrysler's financial condition drew the most attention, but there also was a surge in union wage concessions and plant closings in other industries.

- Uniroyal, Inc. closed two tire plants, ending 3,300 jobs, and announced the possible closing of a third plant employing 1,600 workers. About 6,000 Uniroyal employees, represented by the United Rubber Workers, agreed to wage and benefit cost concessions that were expected to save the company \$9.9 million. The concession accord provided for restoration of some of the lost pay if Uniroyal's pretax profit from domestic operations exceeds 4 percent of sales. The company lost \$120 million in 1979.

- Firestone Tire & Rubber Co. announced the closing of seven plants, affecting 8,500 active workers and 1,600 already on layoff. One of the affected plants was Firestone's last production facility in Akron, Ohio. The company also ended quarterly cost-of-living adjustments for its salaried employees.

- About 750 workers represented by the United Rubber Workers agreed to forgo \$1.05 an hour in cost-of-living pay at the Dunlop Tire and Rubber Co. plant in Buffalo, N.Y.

- U.S. Steel Corp. announced the closing of a dozen of its plants in eight States, permanently laying off 13,000 workers. The company said the action was necessary because the facilities had become "non-competitive." Employees at two American Bridge Division plants scheduled for closing agreed to waive certain future wage increases to keep the plants in operation. U.S. Steel said the concessions would help alleviate a labor cost disparity with certain other steel fabricators.

- About 12,000 employees of Wheeling-Pittsburgh Steel Corp. agreed to defer two cost-of-living increases and a scheduled \$150 bonus payment to improve the company's financial condition. Earlier, 1,800 incentive workers at the company's Allenport, Pa., mill agreed to a 10-step pay reduction that will eventually bring their earnings to a level "slightly above" the average for other steel mills.

- Continuing the cutbacks that have marked the meatpacking industry in recent years, Swift & Co. announced the closing of slaughtering operations in Guymon, Okla., and Clovis, N.M. Swift officials attributed the closing to excessive labor costs. Armour and Co.'s planned closing of a slaughtering plant in Hereford, Tex., was averted when the United Food and Commercial Workers agreed to "increases in chain speeds" on the "disassembly" lines.

- About 2,600 employees of Dayton (Ohio) Press, Inc., agreed to a 14-percent wage reduction to help finance their purchase of the magazine printing firm. The purchase move came after the 13 unions involved refused a proposed wage freeze the company said was necessary to bring its labor costs into line with its competitors.

- The Clothing and Textile Workers and the Clothing Manufacturers of America, citing depressed conditions in the industry resulting from increased imports, limited their new contract for 80,000 workers to 18 months. (The previous contract was for 40 months.) The shorter duration was a compromise between management's original proposal of a 3-year contract with a capped cost-of-living clause and the union's proposal of either a 1-year contract or a 3-year contract with an uncapped cost-of-living clause.

- The Teamsters Union agreed to study the impact of deregulation on the trucking industry, after rejecting an industry request for labor cost concessions the carriers said were needed to enable them to compete with non-union firms. The companies contended that much of their difficulties stemmed from the deregulation of the industry in 1980, which made it more difficult to increase shipping rates to offset labor cost increases. In addition to shutdowns of trucking companies, other companies have been suffering losses because deregulation has opened the industry to numerous new companies. In rejecting the reopening overture, the union contended that the carriers had not proven that the difficulties resulted from the obligations of the contract.

Anti-inflation plan

With prices continuing to rise sharply, the Carter Administration's anti-inflation plan, established in 1978, was changed several times during the year. In March, the president announced a new plan that called for cuts in Federal spending, restrictions on consumer credit,

a 10-cent "conservation fee" on each gallon of gasoline refined from imported petroleum, a study of ways to increase industry productivity, and the acceptance of the Pay Advisory Committee's recommendations of a 7.5- to 9.5-percent limit on annual pay increases.

The proposed cuts in the Federal budget drew a bitter reaction from AFL-CIO President Lane Kirkland, who contended the cuts would violate the 1979 national accord between the Administration and organized labor by limiting "counter-cyclical" moves to aid people affected by the downturn in the economy.

In its May session, the AFL-CIO's Executive Council again expressed labor's concern over the president's action but, nevertheless, reaffirmed its commitment to the national accord. Kirkland explained that the council had no other choice because the Federation must maintain contact with government to protect the interests of workers. However, he advised union leaders to press for the needs of their members in wage negotiations—even to the extent of violating the wage guideline, if necessary. He later clarified that statement by explaining that the new guideline was flexible enough to permit negotiators to attain wage and benefit improvements approaching those that could be attained if there was no guideline.

In July, the Council on Wage and Price Stability changed the pay guidelines to permit union-represented workers to receive wage and benefit improvements of up to 10.5 percent in any contract year, if the average annual rate of increase over the entire contract term fell within the 7.5- to 9.5-percent permitted range. Previously, the 7.5- to 9.5-percent range applied to each contract year.

In mid-September, the Council contended that the program had held the inflation rate one percentage point lower than it would otherwise have been, but said the program should be re-evaluated. The Council then extended the existing pay and price standards 1 year from their September 30 expiration date, but specified that union and management would be expected to adhere to the standards only until the end of 1980.

Union wage increases

Based on preliminary data for the first 3 quarters of 1980, settlements covering 1,000 workers or more in the private nonfarm economy provided for first-year wage adjustments averaging 9.7 percent, compared with 7.4 percent for all 1979 settlements.¹ Total wage adjustments over the contract term (excluding cost-of-living increases) averaged 7.3 percent when converted to an annual rate, compared with 6.0 percent for 1979.

As in past years, the 1980 settlements with cost-of-living escalator (COLA) clauses generally provided for smaller specified wage increases than those without. First-year negotiated wage adjustments in contracts

with COLA provisions averaged 8.2 percent, compared with 11.9 percent for contracts without such clauses. For 1979, the figures were 6.2 and 9.1 percent. When specified wage adjustments are averaged over the life of the contract, the annual rates were 5.0 percent for contracts with COLA and 10.4 percent for those without, compared with 4.6 and 8.0 percent in 1979.

When benefits are combined with wages (in settlements for 5,000 workers or more) the average adjustment was 10.7 percent in the first contract year (9.0 percent in 1979) and 7.2 percent annually over the life of the agreement (6.6 percent in 1979). Settlements that included COLA clauses provided for wage and benefit increases averaging 10.2 percent for the first year and 5.8 percent a year over the contract term, compared with 12.1 percent the first year and 10.8 percent over the life for those without COLA clauses. For the full year 1979, settlements with COLA provisions averaged 8.5 percent for the first year and 5.9 percent over the term and those without COLA clauses averaged 10.0 percent for the first year and 7.2 a year over the term.

Construction settlements, which covered 677,000 workers in bargaining units of 1,000 workers or more (including 372,000 in units of 5,000 or more), drew attention because they showed a large increase over 1979 settlements and were generally higher than other industries that settled in the first three quarters of 1980. Wage adjustments for all construction workers covered by settlements were 13.9 percent for the first contract year and 11.6 annually over the contract term. For all other industries, the figures were 8.5 percent for the first year and 6.0 percent over the term. Considering only units of 5,000 workers or more, construction settlements provided wage and benefit increases averaging 13.4 percent for the first contract year and 11.5 percent annually over the term. The comparable figures for other industries were 10.1 and 6.3 percent.

Major settlements during the first three quarters of 1980 covered about 3 million workers in 556 private nonfarm economy bargaining units. The settlements did not result in any increase in the number of workers covered by COLA clauses, partly because 1.7 million of the workers covered by the bargaining already were covered by such clauses. The 19 settlements (for 66,000 workers) that established COLA clauses and the 9 settlements (for 28,000 workers) that terminated clauses brought total coverage to 5.3 million (57 percent) of the 9.3 million workers in bargaining units of 1,000 workers or more.

Labor-management disputes led to about 4,250 work stoppages that either began in the first 10 months of 1980 or began earlier and were carried over into the period. This was lower than for the comparable period of all recent years, except 1978. Similarly, there were fewer workers involved in strikes in the first 10 months than in the comparable period of any recent year. However,

duration of the strikes, at almost 30 million days, was higher than in 1979. The stoppages involve six workers or more and last a full day or shift or longer.

Contract terms

Collective bargaining activity was heavy in 1980. Adherence to the Administration's anti-inflation plan was aided by the liberalized pay standard. The Council on Wage and Price Stability did not challenge the size of any of the more important settlements. Most of the major industries that settled already had cost-of-living wage adjustment clauses that reduced union pressure for large catch-up "set" wage increases. Unions did press for increased pensions for future and current retirees, continuing a movement that was evident in 1979.

Automobile industry. American Motors Corp. settled with the Auto Workers in 1980 on a less costly package than that at GM and Ford in 1979, continuing the practice of recent years. American Motors did not ask for government loan guarantees, but it did receive money from the Renault automobile company of France in exchange for part ownership.

The chief union concession in the American Motors agreement was that 14 cents an hour was diverted from the cost-of-living allowance to help pay for benefit improvements, effective immediately. (At the other three auto companies, the 14 cents diversion was to be accomplished by withholding 1 or 2 cents from future quarterly escalator adjustments.) Also, the American Motors agreement stipulated that the quarterly escalator adjustments are to be calculated at 1 cent for each 0.26-point movement in the BLS Consumer Price Index for Urban Wage Earners and Clerical Workers (1967=100) beginning in June 1983, but retroactive to the December 1981 adjustment. At the other companies, the change was effective in December 1981, rather than being delayed and then paid retroactively. The American Motors agreement expires in September 1983, a year later than the contracts at the other three companies.

Steel. The industry settled with the Steelworkers, continuing the strike-free relationship that has prevailed since the 1959 walkout. Doubts about continuation of the strike-free atmosphere were raised when the parties did not immediately renew the Experimental Negotiating Agreement that has prevented national strikes since its adoption in 1973. The delay on a decision to either extend, modify, or terminate the agreement apparently resulted from a difference of opinion within management; some executives contended that the "floor" the agreement set under wage negotiations was too high a price to pay for the assurance of uninterrupted production. (The floor guaranteed workers at least a 3-percent wage increase in each contract year—part of which

could be used for benefit improvements, continuation of the wage escalator clause, and a \$150-payment at the beginning of each new contract.)

The settlement between the nine Coordinating Committee Steel Companies and 290,000 members of the Steelworkers set a pattern for settlements covering 170,000 workers at 200 other companies. The Council on Wage and Price Stability, calculating the wage escalator portion of the package on an assumed 7.5-percent annual rise in the CPI, said the accord would raise worker compensation by 24.7 percent over the term, an amount well within the pay guidelines.

Continuing what has become a major concern of unions in recent years, the union pressed for pension improvements to aid current as well as future retirees in countering inflation. The two-step pension increases for current retirees ranged from 70 percent for workers who retired prior to July 31, 1966, to 10 percent for those who retired during July 31, 1977 to July 30, 1980. The cost-of-living clause was continued, as required by the Experimental Negotiating Agreement, but the union waived the 33-cent-an-hour final adjustment under the prior contract to help meet the cost of the pension improvements for present retirees.

One provision of the steel settlement was expected to improve the industry's competitive position. A pilot program calls for establishing "participation teams" of workers and first-line supervisors to improve output, employee morale and dignity, and working conditions. The union said that such a plan had been one of its goals since former Steelworkers' president Philip Murray coined the term "industrial democracy" in 1940. Extensive use of the new approach was not expected to begin immediately, but participation teams had already been set up at smaller plants of several major companies, with encouraging improvements in productivity.

Telephones. After wages, job security provisions were the chief issue in the negotiations between American Telephone & Telegraph Co. and the Communications Workers, the International Brotherhood of Electrical Workers, and the Telecommunications International Union. Communications Workers' officials said that improvements in job security were required to counter the effects of the increasing automation of the Bell System and the surge of competition from rival operating and supply companies resulting from some deregulation of the industry. The degree of automation in the system is illustrated by the fact that the number of employees for each 10,000 telephones declined from 148 in 1950 to 60 in 1979.

AT&T retained the right to introduce new technology, but the settlement included 14 provisions that the Communications Workers said dealt with "the interrelated issues of job security and job pressures," includ-

ing a committee to aid employees affected by technological changes; pay rate retention for the balance of the contract for workers downgraded because of technological changes; additional paid time off; increased benefits for laid-off workers; and restrictions on subcontracting of work.

Communications Workers' president Glenn Watts valued the 3-year wage and benefit package at 34.9 percent, including cost-of-living increases calculated on estimated 9.5 and 9.7 percent annual rises in the Consumer Price Index for Urban Wage Earners and Clerical Workers. He said this was within the 7.5- to 9.5-percent pay guideline because in calculating escalator increases, the Council on Wage and Price Stability uses the assumed 7.5-percent rate of increase in the CPI and also does not include certain benefit cost increases.

Aerospace. More than 100,000 workers were covered by settlements in the aerospace industry, as the Machinists led off by negotiating a 3-year pattern-setting contract at the Boeing Co. The Machinists valued the package at \$3.85 an hour or a 39-percent increase, including wage escalator adjustments based on an estimated 10-percent annual rise in the CPI and specified wage increases of 7, 3, and 3 percent in the respective contract years.

Initial contracts for Southern workers

An uneasy truce between J. P. Stevens & Co. and the Clothing and Textile Workers resulted in a first contract in the 17-year effort to organize the firm. Both sides claimed a victory.

Union organizers said that the accord, covering 3,500 workers at four locations, set the stage for organizing the company's 30,000 other production workers, as well as other Southern textile, apparel, and shoe companies. However, officials of J. P. Stevens said the company would continue to resist organizing efforts at its other facilities, and that the settlement would not aid further organizing efforts because "the people of the South basically don't care for unions."

The accord provided for an immediate 8.5-percent wage increase for the 3,000 workers at the seven plants in Roanoke Rapids, N.C., and a 8.5-percent increase retroactive to July 1979 to match the increases Stevens had granted workers at its nonunion plants. The workers at the other three plants—in Allendale, S.C., High Point, N.C., and West Boylston, Ala.—did not get the matching increases because they had already received them. Other terms, which were similar at all ten plants, included provisions for checkoff of union dues from the payroll, binding arbitration of disputes, seniority provisions, and "regulation" of workloads.

The union also agreed to terminate the 4-year consumer boycott of Stevens' products and to suspend its campaign of publicizing instances where Stevens' of-

ficers served as directors at other companies or where officers of other companies served as directors at Stevens.

The coming together of the parties was attributed to a number of factors, including a change in the leadership of the company; the increasing severity of the National Labor Relations Board and court decisions against the company for allegedly engaging in unfair labor practices; the time and cost to both parties; and weariness.

A 9-year dispute between the Clothing and Textile Workers and Wellman Industries, Inc., ended with an agreement on an initial contract for 1,000 workers in Johnsonville, S.C. The union had gained the right to represent the workers in a 1972 National Labor Relations Board election, but the following years produced only union charges—which were upheld by the board—that Wellman had engaged in unfair labor practices.

A 2½-year dispute culminated in a 43-month agreement between the Steelworkers union and Newport News Shipbuilding and Drydock Corp. The union's organizing campaign began when it defeated the incumbent Peninsula Shipbuilders Association in a National Labor Relations Board representation election. The company refused to bargain, charging election irregularities, but was unsuccessful in its appeals of court rulings against the charge. The settlement provided for more than \$2 an hour in wage increases and various improvements in benefits.

Internal union affairs

Early in the year, the AFL-CIO invited the major independent unions to join its ranks. As a result, reaffiliation discussions were started with the Teamsters union, which had been expelled from the Federation in 1957, and with the United Auto Workers, which had left the Federation in 1968. Discussions also were started with the United Mine Workers union, which had never been a part of the Federation.

Another unity move was initiated at the convention of the Ladies Garment Workers, when Clothing and Textile Workers president Murray Finley called for an eventual merger of the two unions. Garment Workers President Sol C. Chaikin agreed and suggested that discussions begin.

Several mergers occurred during 1980: the Barbers and Beauticians became part of the Food and Commercial Workers; the Jewelry Workers became part of the Service Employees; and the Railway and Airline Supervisors became part of the Railway, Airline, and Steamship Clerks.

Leadership changes. During the year, Seafarers' president Paul Hall died and was succeeded by vice president Frank Drozak; William H. McClennan retired

as president of the Fire Fighters and was succeeded by John A. Gannon; and Emmet Andrews lost the presidency of the Postal Workers Union to Morris Biller.

Other developments

Job safety and health. The Occupational Safety and Health Administration (OSHA) made several fundamental changes in its procedures for identifying hazards at the workplace and protecting workers.

- Under a new OSHA plan for reducing the incidence of cancer among workers, substances to be brought under control will be drawn from a list of about 500 suspected cancer-causing agents. After scientific testing, substances found to pose a grave danger to workers would be banned, if a substitute is available. If a substitute is not available, employers will be required to reduce worker exposure to the lowest possible level through engineering and work practice controls. If the case is less conclusive against a substance, it will be subject to further testing, but OSHA can issue a temporary standard in such a case, as well as when the substance poses a grave threat.

- A new OSHA rule requires employers to supply an employee's medical records within 15 days after the request is made. Medical records also must be supplied to an employee's collective bargaining agent, if the employee gives written authorization. OSHA also has access to the records, without the employee's authorization, but must obey regulations intended to assure the worker's privacy.

- The Supreme Court ruled that the 1977 benzene exposure standard was not warranted because OSHA had not obtained "empirical evidence" or "opinion testimony" that exposure to benzene at or below the required level had ever caused leukemia.

- The steel industry withdrew an appeal of OSHA's coke oven standard, saying that most of the protective measures called for in the standard had been introduced during the series of court tests that followed the announcement of the standard in 1977.

- The Supreme Court announced that it would hear a challenge of OSHA's 1978 cotton dust standard by the National Cotton Council of America and the American Textile Manufacturers Institute, Inc. The organizations maintained that OSHA's requirement that the standard be met through engineering controls and structural changes entailed excessive costs and that the standard could be met at far less cost through medical surveillance and use of individual respirators.

- General Motors Corp. announced that it is undertaking two studies to determine reasons for higher than usual levels of cancer among workers in certain of its operations. One of the cancer screenings, covering 4,000 model shop workers in 20 cities, is the largest in the history of American industry. The employees will sup-

ply medical, job, and dietary histories and undergo numerous medical tests to determine why their rates of colon and rectum cancer exceed those for people in other occupations. The employees involved build scale models of vehicles from wood, clay, plastic, and other materials. The examinations require 6 months to complete and will be repeated after a year. In the other study, the company will seek to find out why workers at its trim plant in Flint, Mich., suffer above-normal rates of various types of cancer. According to a recent Auto Workers study of employees and former employees of the automobile hardware plant who died between 1974 and 1978, a significant number of the deaths occurred among people who had worked in the plant's plating and die casting areas, where chrome, nickel, and cadmium—all known carcinogens—were used.

Equal employment opportunity. There were a number of developments involving efforts to erase job discrimination:

- Joyce Miller, a vice president of the Clothing and Textile Workers became the first female member of the AFL-CIO's Executive Council.

- The Government's plan for assuring equal job opportunities for all construction workers was revamped and broadened to cover projects in 285 metropolitan areas and 183 largely rural surrounding areas. Under the new approach, which applied to all private and Federal projects of contractors doing \$10,000 in Federal business, contractors were required to make good faith efforts to have each trade include members of minorities in the same proportion as they are found in the population of the area. Under the previous approach, goals varied by craft and were set by bargaining involving contractors, unions, and the Federal government.

- A long-standing union case against Westinghouse Electric Corp. was ended by a consent decree in which the company agreed to restore seniority and pay to women for time lost because of pregnancy; Prudential Insurance Co. and the Department of Labor agreed on procedures for the company to supply computer tapes the Department said it needed to evaluate the adequacy of the company's employment practices; and a legal dispute continued between Sears Roebuck & Co. and the Equal Employment Opportunity Commission over charges that the company discriminated against women and minorities in employment. □

— FOOTNOTE —

¹ The Bureau of Labor Statistics procedures for evaluating settlements differ from those of the Council on Wage and Price Stability. Unlike BLS, the council's evaluation includes estimates of potential cost-of-living escalator adjustments but excludes increases in the cost of maintaining existing health benefits in excess of the guideline range, increases in the cost of maintaining existing pension benefits levels, and the cost of legally-required social insurance programs.

State labor legislation enacted in 1980

There were new matters of interest including bans on awarding of State contracts to employers that violate the National Labor Relations Act, on lie detector tests for jobs, and on sexual harassment; less attention was paid to traditional concerns such as wages and labor relations than in previous years

RICHARD R. NELSON

In terms of State labor legislation, 1980 was a light year with some legislatures not meeting at all or only for brief sessions.¹ The small volume of new laws was particularly noticeable in traditional standards fields like minimum wage and labor relations. Wage garnishment or assignment for child support and the easing of youth employment restrictions also received limited attention.

New legislation did not reveal any clear trends. Instead, a few laws were enacted in each of a wide array of subject areas. Newer areas of interest included bans on sexual harassment on the job, preference for in-State contractors in awarding public contracts, restrictions in using lie detector examinations as a condition of employment, and prohibiting award of State contracts to companies that violate the National Labor Relations Act.

Minimum wage rates were increased either by legislation or wage order in five jurisdictions this year: California, District of Columbia, Oklahoma, Virginia, and West Virginia. The impact of rate changes was much greater, however, as prior law, wage order, or administrative action raised the minimums in an additional 21 States, Guam, and the Virgin Islands. Fifteen jurisdictions now have a minimum rate for some or all occupa-

tions, equal to the \$3.10 an-hour Federal standard, and 13 jurisdictions will match the Federal increase to \$3.35 scheduled for January 1, 1981, although some rates will be effective later in the year. In addition, Alaska, Connecticut, and certain industries in the District of Columbia continued with minimums higher than the Federal rate. New Mexico and Wisconsin, which have separate minimum wage rates for agricultural workers, provided for increases in those rates as well. In Pennsylvania the maximum tip credit was reduced from 45 to 40 percent of the minimum rate. In Connecticut, it was increased from 60 cents per hour to 23 percent of the minimum wage rate for persons employed in the hotel and restaurant industry.

Among other wage related actions of interest, in Oregon the prohibition on discharging, or of discriminating against an employee who has made a wage claim was expanded to protect those who have discussed such a wage claim with a lawyer or agency. In New York, the Labor Commissioner may now order the payment of a civil penalty up to 25 percent of the total amount found to be due under violations of the minimum wage and wage payment laws and regulations. Domestic workers, farmworkers, and employees of nonprofit organizations were made subject to the equal pay law.

Fourteen States enacted legislation concerning wage garnishment or assignment. Most of these, as in Georgia, Iowa, Louisiana, and Mississippi involved delin-

Richard R. Nelson is a labor standards adviser in the Division of State Employment Standards, Employment Standards Administration, U.S. Department of Labor.

quent child support payments, by setting limits on the amount of earnings subject to either type of action. In Iowa and Rhode Island employees were protected from disciplinary action resulting from such assignment. The wage garnishment provisions previously applicable to private sector employees in Nebraska will now apply to public sector employees as well, as will provisions in Wisconsin for court-ordered assignment for maintenance or support payments. In Virginia, employers of more than 10,000 workers may now charge an employee whose wages are garnished a \$10 fee to offset expenses in processing each garnishment summons.

As in 1979, efforts to repeal or amend prevailing wage legislation were made in several States. Although there were no successful new legislative attempts to repeal or limit coverage of existing prevailing wage laws, the Alabama Act was repealed in accordance with a 1979 law that provided for automatic future repeal unless preserved by the 1980 legislature. The law in Arizona was declared unconstitutional; the State Supreme Court let stand an appellate court decision that invalidated the rate determination methodology, which mandated the sole use of collectively bargained rates. Similar legislative and legal efforts are likely in 1981.

Employers in Connecticut and Wisconsin were prohibited from requiring public construction workers to kickback any portion of compensation received.

As in recent years, most child labor amendments modified work restrictions by relaxing employment certificate provisions, easing limits on nightwork and maximum hours, or lowering the age at which minors may work in certain occupations. Employment certificate requirements were eased in Alabama and Ohio, and nightwork hours were extended in New Jersey and Rhode Island for minors between ages 16 and 18. Maximum permissible hours of work for days before a nonschool day were increased in California for minors age 16 and older. Increased employment opportunities for youth were provided in Alabama, Arizona, and South Dakota by lowering the age limits at which minors are permitted to work in certain occupations.

Compulsory retirement based solely upon age, a subject that has received considerable legislative attention at both the Federal and State levels in recent years, received less attention during 1980. The mandatory retirement age was raised to 70 for public employees in Mississippi and for State employees and teachers in Virginia. Arizona and Tennessee passed laws banning age-based employment discrimination against persons ages 40 to 70, and Kentucky raised the upper age limit in its law from 65 to 70.

Employment discrimination in other forms was addressed by legislation in 23 States. Among the more significant laws were those in Illinois where various antidiscrimination laws were consolidated into a new

Human Rights Act in late 1979, and in Alaska where prohibitions on employment discrimination in the private sector were extended to the State and its political subdivisions. Coverage changes were made in Kentucky where prohibition of wage discrimination based on sex will apply to employers of two or more person rather than eight or more as before. In Michigan the fair employment practices law will now apply to all employers, rather than only those having four or more workers. New protections for deaf employees were enacted in Georgia, Maryland, and New Jersey. Sexual harassment was prohibited in Connecticut and Michigan, and in California it will be an unlawful employment practice to require any employee to be sterilized as a condition of employment. Among State constitutional amendments enacted in the November general election, Massachusetts prohibited discrimination against handicapped persons. Utah removed a prohibition against women working in underground mines and permitting work release and similar programs for prison inmates. A proposed Equal Rights Amendment to the State Constitution was defeated in Iowa.

Efforts to provide employment and other services to help homemakers displaced by dissolution of marriage or other loss of family income were not as prevalent in 1980 as in recent years. However, Colorado and Kansas did pass new legislation. The law enacted in Colorado was similar to one passed in 1977 with a provision that automatically repealed it in 1979. Nebraska and Rhode Island made previously enacted programs permanent.

In what may prove to be an emerging trend, Michigan, Ohio, and Wisconsin prohibited awarding of State contracts to persons or firms found to be in violation of the National Labor Relations Act. Connecticut had adopted a similar law in 1979. In other labor relations activity, a new public employee collective bargaining law was passed in the Virgin Islands, a new department of employee relations was created in Minnesota, and public employees in New Jersey were authorized to negotiate agency shop agreements. The use of strikebreakers was barred in Wisconsin, and in Oklahoma prison inmates on work release programs are not to report to work if a strike occurs and may not be used to replace strikers.

Renewed interest in the subject of preference for in-State contractors in awarding public contracts translated into new laws in California, Maine, Maryland, and Oklahoma. Several States already had similar laws, but until 1980 there had been little recent legislative activity. Maine and Oklahoma amended previous laws by increasing to 5 percent the amount of the preference. California-based companies may receive a preference of up to 9 percent on State contracts if the work is performed in "distressed" areas and if workers with a high risk of unemployment are used.

Occupational safety and health legislation was enacted in several jurisdictions and included a number of changes in boiler and mine safety laws. A comprehensive railroad safety and health law was enacted in Maryland, to be administered and enforced by the labor commissioner. In Connecticut, foundry workers are to be given lung function tests every 2 years, and employers must inform workers of the presence and dangers of carcinogens in the workplace. Arizona and Minnesota are to develop emergency response plans in the event of an accident at a nuclear facility. The Colorado occupational safety and health law was repealed, and all State regulation of safety and health in mines was abolished in Idaho.

Many other developments took place in 1980, affecting a wide range of labor standards subjects. In five States, workers on jury duty were protected against employer retaliation. Similar protections were enacted regarding National Guard duty in Florida and Kentucky. New restrictions were enacted on the use of lie detector tests and on disclosure of personal employment and medical records. School districts in Florida were authorized to adjust the school day and school year to help children of migrants complete their education. Also in Florida, all regulation of private employment agencies ceased as a result of previously adopted sunset legislation.

No additional States ratified the proposed Equal Rights Amendment to the U.S. Constitution during 1980. Approval by three additional States is necessary by June 30, 1982, for adoption.

The following is a summary, by jurisdiction, of labor legislation during 1980.

Alabama

Wages. The prevailing wage law was repealed at the close of the 1980 legislative session. A 1979 law had provided for automatic future repeal unless the 1980 legislature intervened. Bills to retain the law in amended form were introduced but failed to pass.

Child labor. Several changes were made in the child labor law including the relaxation of employment certificate provisions, by deleting requirements for both physical examinations and personal appearances by parents or guardians. Other changes included work in airport hangars and related jobs, which is now prohibited for employees under age 16, as is all work in building trades. Previously only heavy work was so prohibited in the building trades for this age group. Occupations involving wrecking, demolition, and shipbreaking are now prohibited for persons under 18. Theatrical work and jobs in bowling alleys are now permitted under age 16 and in pool and billiard rooms under age 18. Penalties for violations were increased.

Equal employment opportunity. As a result of "sunset" review, the Governor's Committee on Employment of the Handicapped was continued and is now required to make an annual report to the Governor and legislature, including recommendations for improving the State's effectiveness in employing or

helping to employ handicapped individuals.

Other laws. Discharging an employee for serving on jury duty is now prohibited.

A human resources board was created, composed of the Governor, and the Commissioners of the departments of Industrial Relations, and Pensions and Security, to assign to public work, employable persons who receive public assistance. Refusal to work will result in suspension of benefits.

Alaska

Wages. By prior law, which sets the minimum wage at 50 cents per hour above the Federal rate, the minimum wage rate rose to \$3.60 per hour on January 1, 1980, and will increase again to \$3.85 on January 1, 1981.

Overtime pay requirements will not apply to work performed under a flexible work hour plan that is part of a collective bargaining agreement, or to work performed by an employee under a voluntary flexible work hour plan that has been approved by the labor department.

Equal employment opportunity. The prohibition on employment discrimination on the basis of race, religion, color, national origin, age, physical handicap, or sex will now apply to the State and its political subdivisions, not only to private sector employers, labor organizations, and employment agencies as before.

Worker privacy. Records and names of persons involved in State Commission for Human Rights investigations will be given to the parties involved, but not to the public.

Other laws. A concurrent resolution requested the Governor to urge the U.S. Department of Labor to establish a Job Corps Center in the State.

Arizona

Wages. The prevailing wage law became inoperative when the State Supreme Court declined to review a 1979 court of appeals decision that declared unconstitutional the section of the law establishing the method for rate determination (use of collectively bargained rates). The lower court ruled that part of the law to be an unlawful delegation of legislative power to private persons over whom the legislature has no control.

Amendments to the wage payment law include: new restrictions on withholding of employee wages; employer permission to pay discharged employees within 3 working days or the end of the next regular pay period, whichever is sooner, rather than paying immediately; and the addition of a provision which permits an employee to file with the labor department a claim up to \$1,000 for unpaid wages, rather than having recourse only to civil action.

Agriculture. The termination date for the Agricultural Employment Relations Board, scheduled for July 1, 1980 under sunset legislation, was extended to July 1, 1982.

Child labor. High school graduates or students who have completed a vocational education program were excepted from prohibitions on employment of persons under age 18 in specified hazardous occupations, and children under 16 may now operate power-driven equipment used in the care and maintenance of lawns and shrubbery.

Equal employment opportunity. Age-based employment discrimination against persons ages 40 to 70 is now prohibited

under the Arizona Civil Rights Act.

The Advisory Council on Aging, scheduled to terminate on July 1, 1980, was extended to July 1, 1986. The council is to advise all State departments on matters and issues relating to aging.

Occupational safety and health. The Division of Emergency Services, within the Department of Emergency and Military Affairs, is to develop an emergency response plan to protect public health and safety in the event of an emergency resulting from an accident at a nuclear facility.

Other laws. Scheduled for termination on various dates between 1984 and 1996 under sunset legislation are the Boiler Advisory Board, Employment Advisory Council, Occupational Safety and Health Review Board, Civil Rights Advisory Board, Apprenticeship Advisory Council, and various other State boards, councils, and commissions.

Arkansas

Wages. A previous law provided for an increase in the minimum wage rate from \$2.30 an hour to \$2.55 on January 1, 1980 with a further increase to \$2.70 scheduled for January 1, 1981. Tip allowances rose to \$1.25 an hour on January 1, 1980, and will increase to \$1.35 on January 1, 1981.

California

Wages. New wage orders provided for an increase in the minimum hourly wage rate from \$2.90 to \$3.10 with a further increase to \$3.35 scheduled for January 1, 1981. Employer challenges to the orders were ruled by the courts to be without merit.

Minimum wage provisions applying to student employees of organized camps will now apply to camp and program counselors as well. These employees will receive 85 percent of the minimum rate for a 40-hour week, regardless of hours worked per week.

Wages due a laid-off employee or a group of employees engaged in oil drilling may now be paid within a reasonable time, not to exceed 24 hours after discharge, rather than immediately upon layoff as otherwise required.

Appeals of labor commissioner decisions in actions to recover wages, penalties, or other compensation may now be made to the justice court as well as the municipal or superior court. Also, if the parties seeking review are unsuccessful they must pay the costs and attorneys' fees of the opposing parties.

The governing board of each school and community college district may make deductions from salaries of classified employees for payment of union dues or other fees, and deductions from nonmembers for payment of service fees as required by a collective bargaining agreement. Nonmembers may choose to pay service fees directly to the exclusive representative.

The definition of public works under the prevailing wage law was amended to include construction work done under private contract when the work is performed according to plans, specifications, or criteria furnished by the State or political subdivision and when a lease for more than 50 percent of the property is entered into by a public body during or upon completion of the construction work.

Courts may now order assignment of wages for alimony in addition to the existing authorization for child support. Employers may not discharge an employee whose wages have been ordered assigned for such support.

Retirement, pension, disability, and other benefits payable by public employers, and benefits payable by private retire-

ment plans are now subject to garnishment or assignment for court-ordered child support or alimony.

Hours. The authority of the chief of the Division of Labor Standards Enforcement to temporarily exempt employers or employees from mandatory days-off requirements, if the chief determines that a hardship would result, was extended until January 1, 1984. This exemption was due to expire January 1, 1981.

Child labor. Minors age 16 and older are permitted to work up to 8 hours per day outside of school hours on days immediately prior to nonschool days. Formerly they were limited to 4 hours work on any schoolday.

Equal employment opportunity. The governor's reorganization, establishing the Department of Fair Employment and Housing, and abolishing the Division of Fair Employment Practices and the Fair Employment Practices Commission of the Department of Industrial Relations, was ratified by the legislature. The new department administers the laws prohibiting discrimination in employment and housing. Detailed investigation procedures were added to the law.

Requiring any employee to be sterilized as a condition of employment will now be an unlawful employment practice under the Fair Employment and Housing Act.

If the State Personnel Board, in establishing the order of layoffs, and re-employment of State employees, finds past discriminatory hiring practices, it must adopt a process to provide that the composition of the affected work force before and after the layoffs will be the same.

Licenses under the business and professions code, including private employment agencies, are prohibited from discriminating on the basis of marital status.

Worker privacy. A person's medical records may be obtained as part of an investigation of an on-the-job accident or illness, if kept confidential and if maintained only until the case under investigation is closed. The law otherwise prohibits unauthorized disclosure of medical information for employment or insurance purposes.

Labor relations. Where a union security arrangement has been negotiated, those public school employees whose religious beliefs include objections to supporting unions, may, in lieu of joining the union or paying a service fee, pay an equal amount to a nonreligious nonlabor charitable organization.

In cases of public school employer-employee impasses following mediation, the parties may now mutually agree on a factfinding panel chairperson, rather than being required to accept one selected by the Public Employment Relations Board.

Other laws. California-based companies may receive a preference of up to 9 percent in bidding on State contracts for goods or services in excess of \$100,000 if the contracts are performed in "distressed areas" and if workers with a high risk of unemployment are hired.

Payment bonds on public works contracts will now be required on contracts in excess of \$25,000 rather than the previous \$15,000.

Court-ordered inspection warrants may now be issued requiring State or local officials to conduct inspections required or authorized by any labor law or regulation.

An employment preparation program administered by the Employment Development Department was established to as-

sist Aid to Families with Dependent Children applicants and recipients to find jobs as quickly as possible.

Colorado

Wages. Earnings of public employees payable to a deferred compensation plan will now be subject to wage garnishment restrictions on the same basis as other earnings.

Occupational safety and health. The State's Occupational Safety and Health Act was repealed. There had been no enforcement activities for the past 2 years because of the legislature's failure to fund the program.

Emergency vehicles operated by mining concerns subject to the mandatory safety standards of the Federal Mine Safety and Health Administration were excluded from the definition of ambulance service in the Colorado Emergency Services Act.

Displaced homemakers. The executive director of the Department of Labor and Employment was authorized to establish multipurpose service centers to give job counseling, training, placement, and other services to displaced homemakers. The centers will be staffed by displaced homemakers to the maximum extent feasible. A fee will be assessed against each divorce petition filed by a nonindigent person, to be paid into a fund to help support the program. A similar law was enacted in 1977 with a provision to automatically repeal it on July 1, 1979.

Other laws. Rules and regulations of the Department of Labor and Employment, due to expire on July 1, 1980, through sunset legislation, were extended to July 1, 1984. Some rules concerning employment agencies, occupational safety and health, and other subjects were not extended.

Connecticut

Wages. By prior law, the hourly minimum wage increased from \$2.91 to \$3.12 on January 1, 1980. An increase to \$3.37 is scheduled for January 1, 1981.

Employees of hotels and motels, restaurants, bowling alleys, licensed amusement parks, and institutions other than hospitals that are primarily engaged in the care of sick, aged, or mentally ill persons are now to be paid overtime after 40 rather than 48 hours a week. Also, the minimum wage tip credit was increased from 60 cents an hour to 23 percent of the minimum wage rate for persons employed in the hotel and restaurant industry.

Employee earning statements must now include separate entries for straight time and overtime earnings.

Child labor. A criminal law was repealed which prohibited the employing or apprenticing out a child under age 16 in rope or wire walking, dancing, skating, bicycling, or peddling. The law also applied to work as a gymnast, contortionist, rider or acrobat, or that for obscene or immoral purposes, or in any vocation injurious to the health or dangerous to the life or safety of those children. The restrictions on hazardous occupations provided for in the child labor law will still apply.

Equal employment opportunity. Sexual harassment by employers, unions, and employment agencies will now be considered an unfair employment practice.

Municipalities will now be permitted to adopt a code of prohibited discriminatory practices and establish an equal opportunity commission for enforcement.

Worker privacy. A number of changes were made in the law

giving an employee the right to review his or her personnel file. One of these changes requires that files be made available at or near the place of employment, rather than at the place where the files are kept. Another change permits certain information in the file to be divulged to outside persons without the employee's written authorization. This includes verification of dates of employment, position, and wage or salary; information divulged as part of a personnel-related complaint against the employer, or in compliance with the terms of a collective bargaining agreement; or information released in response to a medical emergency.

Labor relations. Employers and employees are prohibited from mechanically eavesdropping or recording conversations pertaining to employment contract negotiations.

Occupational safety and health. Owners of buildings rented or leased to the State or any political subdivision were removed from coverage under the Occupational Safety and Health Act.

Employers now must periodically disclose to employees the existence and dangers of carcinogens in the workplace, and carcinogen suppliers must follow labeling and safe handling requirements.

The medical records for all newly diagnosed cancer patients in the State are to include the patient's occupational history. This information will be forwarded to the Connecticut Tumor Registry's information center.

Foundry workers are to be given lung function tests every 2 years.

Other laws. An employer may not threaten to fire or otherwise coerce an employee because of summons for jury duty. Violators will be guilty of criminal contempt and subject to fine, imprisonment, or both. If discharged, an employee may sue for up to 10 weeks of lost wages, attorneys' fees, and reinstatement.

Requiring any worker employed on public construction to kickback any compensation, under intimidation or threat of dismissal is now prohibited.

Delaware

Child labor. Employment certificates for minors under age 16 may now be issued by private as well as public school officials.

Other laws. The Department of Community Affairs and Economic Development was authorized to establish a State-assisted summer work program in 1980 for youths ages 15 to 20 who are from low income families. Participants are now entitled to the minimum wage.

The Department of Corrections may institute a program requiring certain physically able inmates to work without compensation, and to encourage inmates to work overtime by offering a reduction of sentence at the rate of two hours for every hour of overtime worked.

District of Columbia

Wages. A revised wage order for beauty culture occupations became effective March 17, 1980. Among other changes, the revision increased the basic minimum wage rate from \$2.50 to \$3.75 an hour, and increased the rate for apprentices and learners from \$2.25 to \$3.10 an hour.

The building service occupation wage order was revised to increase the minimum wage rate from \$2.70 to \$3.70 an hour effective January 1, 1981.

Child labor. The Youth Employment Act of 1979 became effective January 5, 1980. This law, which provides for summer and other employment opportunities for youth, and on-the-job training for adults with dependents, is similar to two 90-day emergency measures that were enacted in 1979.

Florida

Agriculture. The legislature endorsed the establishment of a college assistance migrant program, and urged a continued commitment to the education of migrant farmworkers.

School districts were given the option of providing for an extended schoolday and fewer weeks per year, to enable children of migrants in the farm labor and fish industries to complete their education, which would otherwise be interrupted by their parents' frequent moves. The Department of Education is to plan, fund, and administer educational programs for migrant children ages 3 and up.

Labor relations. Rules adopted by local jurisdictions under a local option for public employee collective bargaining, are not effective until approved by the State Public Employees Relations Commission. Also, criteria for appointment to local commissions were specified.

Following resolution by a legislative body, of impasses between public employers and employees, a written agreement must be prepared including the issues agreed upon.

Private employment agencies. As a result of previously adopted sunset legislation, all regulation of private employment agencies ceased on July 1, 1980.

Other laws. The Department of General Services may now delegate to the contracting agency the authority to exempt public construction contracts of \$25,000 or less from payment and performance bond requirements.

Members of the Florida National Guard cannot be discharged or otherwise penalized by their employers because of absence due to active service.

Georgia

Wages. Several changes were made in the wage garnishment law including establishing procedures for continuing garnishments, defining earnings for purposes of exemption, limiting garnishment for alimony or support to 50 percent of disposable earnings, and authorizing garnishment for Federal court judgments.

Equal employment opportunity. The State Fair Employment Practices Act, which prohibits discrimination in public employment on the basis of race, color, religion, national origin, sex, handicap, or age, set to expire on July 1, 1980, was extended to July 1, 1982.

The law providing equal opportunity in public sector employment for the blind and visually handicapped was expanded to include deaf persons as well.

Guam

Wages. The minimum wage rose to \$3.10 an hour and will increase to \$3.35 on January 1, 1981 under a prior law which adopted the Federal Fair Labor Standards Act rates by reference.

Hawaii

Wages. By prior law, the minimum wage rate was increased from \$2.90 to \$3.10 an hour effective July 1, 1980. An increase to \$3.35 is scheduled for July 1, 1981.

The requirement that all printing, binding, and stationery work for the State and its political subdivisions be paid for at prevailing wage rates was expanded to include all preparatory, press, bindery, and any other production-related work.

School attendance. A child is now exempt from the compulsory school attendance law if enrolled in an appropriate alternative educational program approved by the Department of Education.

Equal employment opportunity. State and county agencies are to institute selective employment programs exempt from civil service for severely handicapped individuals who possess the skills to safely perform in the positions.

Worker privacy. Restrictions were placed on unauthorized disclosure of personal records maintained by State and county agencies on individuals. With certain exceptions, individuals involved are to be granted access to their records in a reasonably prompt manner.

Labor relations. Public employees who hold positions essential to the public health or safety are prohibited from participating in strikes or secondary boycotts and can be assigned to work during strikes that may endanger public health or safety.

Private employment agencies. The maximum placement fees charged by private employment agencies will no longer be established by the director of labor and industrial relations, but will now be set through schedules submitted by the agencies and approved by the director.

Occupational safety and health. A comprehensive boiler, elevator, and amusement ride safety law was enacted, to be administered by the Department of Labor and Industrial Relations.

Idaho

Worker privacy. Financial information submitted by applicants to the Public Works Contractors State License Board is to be considered confidential.

Occupational safety and health. All State regulation of safety and health in mines was abolished. Mine conditions are now subject only to Federal jurisdiction.

Other laws. Payment bonds required of public works contractors will now protect those renting, leasing, or otherwise supplying equipment, not only persons supplying labor or materials.

Illinois

Wages. The subminimum wage for learners was changed from \$1.50 per hour to 70 percent of the basic minimum wage, effective January 1, 1980.

Equal employment opportunity. The State consolidated various antidiscrimination laws into a new comprehensive Human Rights Act in late 1979. The Fair Employment Practices Commission, Department of Equal Employment Opportunity, and the Commission on Human Relations were abolished and merged into a new Department of Human Rights. Among other changes, the age discrimination prohibition now applies to persons age 40 to 70, and marital status was added as a prohibited form of discrimination.

Among a number of 1980 changes in the Human Rights

Act, the definition of handicap was expanded to include the perception of such a characteristic by the person complained against, as well as the actual characteristic itself. Marital status was amended to include the status of legal separation, and it will now be a civil rights violation for an employer to discriminate with respect to promotions, renewal, or privileges of employment.

Indiana

Equal employment opportunity. The industrial aid law, which had provided 1 year of financial aid to visually handicapped persons learning to increase their earning capacities, was repealed.

Other laws. Eligibility for training of hard-core unemployed persons was modified, including the adoption of Federal definitions of poverty level and of lower living standard income level. Tax credit allowances for keeping trainees working on a long-term basis were increased.

Iowa

Wages. Courts may order wage assignments in cases of failure to pay permanent child support, with the assignment not to exceed the limitations established under the Federal wage garnishment law. Employers may not discharge an employee whose wages have been assigned.

Equal employment opportunity. A proposed Equal Rights Amendment to the State Constitution was defeated in the November general election.

Other laws. A provision was eliminated that required all employees of the Department of Social Services, except physicians and surgeons, to be State residents at the time of employment.

Kansas

Labor relations. Several changes were made in the law governing collective bargaining for professional school employees, including procedures for certification and decertification of professional organizations, impasse resolution, agreement ratification, and expansion of negotiable items. The fact-finding individual or board need no longer choose among the last-best-offers of the parties in negotiation disputes.

Displaced homemakers. A displaced homemakers law requires the secretary of human resources to establish one urban and one rural pilot multipurpose center to provide counseling, training, services, and education for displaced homemakers to assist them in becoming gainfully employed. Staff positions are to be filled wherever possible by displaced homemakers.

Kentucky

Wages. All regular school employees, except those employed on a 12-month basis, are to be paid regularly during the school year, provided, however, that any time not worked for which pay was received must be made up prior to the end of the current school year, or the amount of this payment will be withheld from the final salary payment.

Motor carrier employees covered by the Interstate Commerce Act were exempted from the State overtime pay requirements.

Hours. Employees subject to the Federal Railway Labor Act were excluded from the requirement that no employee work without a 10-minute rest period during each 4 hours worked.

Equal employment opportunity. The upper age limit in the ban on age discrimination in employment was raised from 65 to 70, and sex discrimination was defined to include pregnancy, childbirth, or related medical conditions.

Prohibitions on wage discrimination on the basis of sex will now apply to employers of two or more employees instead of only those employing eight or more.

Occupational safety and health. The boiler safety act was amended to provide for a comprehensive boiler and pressure vessel safety law administered by the commissioner of housing, buildings, and construction.

Other laws. Employers must now grant employees leaves of absence to perform active duty or receive training in the National Guard, with no loss of seniority, status, or other rights or benefits. Pay is not required for such leave.

Physical examinations required for the hiring of certified school employees, with the exception of bus drivers, will be at no cost if provided by the county health department. An employee who elects to use a private physician must pay the cost. The exam is to include a test for tuberculosis and is to be conducted prior to August 1 of the year in which the employee is hired.

The commissioner of labor is now authorized to apply to the county circuit court for an order requiring compliance with a subpoena issued by the commissioner.

Louisiana

Wages. The amount of wages exempt from garnishment for child support is 50 percent of disposable earnings, rather than the greater of 75 percent, or 30 times the Federal minimum wage, as is exempt for other purposes.

Child labor. Minors employed in any approved Federally-funded youth training program were exempted from the State child labor law.

Equal employment opportunity. A civil rights act for handicapped persons was enacted, including a prohibition against discrimination in employment. The law is applicable to employers of 15 or more employees or contractors performing work for public agencies, unions, and employment agencies, and is enforceable through civil court action.

Under a House concurrent resolution, the Department of Labor is one of a number of agencies that will independently study and submit a written report on the employment problems of ex-offenders, along with recommendations for improving employment opportunities. A separate resolution urged the Department of State Civil Service to study and submit an annual report, categorized by sex and race on State government employees.

Labor relations. A concurrent resolution requests the extension of a joint legislative committee study, begun in 1979 of public sector employer-employee relations. The committee is to study related issues including collective bargaining and strikes and is to report its findings and proposals to the legislature 30 days prior to the beginning of the 1981 regular session.

Occupational safety and health. The fees to be charged by the labor department for the inspection of boilers and issuance of inspection certificates were increased, as were fees for certified boiler inspector certificates and for annual renewal of identification cards.

Other laws. School board employees must be granted a leave of absence for jury duty without loss of salary, leave, or benefits.

The Department of Labor is to develop and administer a program for the training and employment of youths under age 25, including the creation of jobs through State-promoted and financed projects, and cooperation with community programs and private agencies. Jobs to be developed include those in construction and supply, and professional and paraprofessional work on socially useful projects. Participants must be paid the Federal minimum wage, and discrimination based on sex, age, race, color, religion, political belief, or national origin is prohibited.

Maine

Wages. The minimum wage rate was increased to \$3.10 an hour on January 1, 1980, under a prior law which mandated matching State increases to the Federal rate, up to a maximum \$4 rate.

Worker privacy. Directory information on school employees, which is open to the public, no longer may include address or date and place of birth, and the employee's social security number was added to the list of confidential personnel record information.

Other laws. Several departments and agencies including the Governor's Committee on Employment of the Handicapped, the Office of CETA Planning and Coordination, the Commission for Women, the Human Rights Commission, the Labor Relations Board, and the Office of State Employees Relations are scheduled for termination on June 30, 1987, through sunset legislation, unless continued by law.

In-State bidders on State contracts will now receive preference over those from out-of-State if their bid is no more than 5 percent higher than the bid of the lowest responsible bidder. The amount of this preference was previously 2 percent.

Maryland

Wages. The minimum wage rose to \$3.10 an hour and will increase next year to match the Federal rate under a prior State law which adopted the Fair Labor Standards Act rates by reference.

The labor commissioner was authorized, under prescribed circumstances, to exempt individual sheltered workshops or work activity centers, after an investigation and hearing, from the minimum wage provisions of the wage and hour law.

Medical insurance payments deducted from an employee's wages by the employer are now exempted from wages that are subject to wage garnishment.

Equal employment opportunity. It is now unlawful to aid, abet, or coerce anyone to violate the Fair Employment Practices Act or to prevent any person from complying with the act.

At grievance proceedings, deaf employees are entitled to an interpreter paid for by the employer and union.

Occupational safety and health. A comprehensive Railroad Safety and Health Law was enacted. It will be administered and enforced by the Commissioner of Labor and Industry who will promulgate appropriate standards, rules, regulations, and administrative procedures relating to all areas of railroad safety and health. Certain railroad safety functions, formerly performed elsewhere, were transferred to the commissioner.

Many of the provisions which resulted in dual Federal-State jurisdiction over mine safety were repealed with the State Bu-

reau of Mines retaining authority to inspect mines, adopt rules and regulations, and to test and certify mine personnel.

Other laws. The State Departments of General Services and Transportation are to give construction contract preference to contractors residing within Maryland in those instances where they are bidding against contractors from States that give preference to their own resident contractors. The Maryland firms' bid must be not more than 2 percent above that of the nonresident, and there must be no conflicting Federal grant or regulation.

Payment and performance bonds are required for any public work contract exceeding \$25,000, instead of \$5,000 as before, and cash or other security is now permitted in lieu of a bond.

A Teen Employment and Community Service Program was created in the Department of Natural Resources to employ persons age 14 to 20 on summer work projects on public property, at pay rates not less than the minimum wage.

State classified employees are now protected from personnel action reprisals for disclosing information on government illegality or impropriety.

Massachusetts

Wages. The minimum wage rose to \$3.10 an hour on January 1, 1980 and will increase to \$3.35 on January 1, 1981, under provisions of a 1977 amendment.

Any employer who submits a bill which includes a service charge is to clearly indicate the amount of such charge that is to be paid as a tip or gratuity, and the maximum fine assessable against an employer who requests, accepts, or retains employee tips was increased.

A late 1979 law requires railroad corporations to furnish each employee with a wage statement with every payment of wages, listing accrued total earnings and taxes to date and a separate listing of daily wages and how they were computed.

Hours. A number of provisions relating to wages and hours of work for women and children were repealed or amended to apply only to minors or to all persons.

Equal employment opportunity. Vacation credit may not be denied State employees, or any other penalty imposed, for the period they are absent from work on maternity leave.

Among changes in the handicap rehabilitation statute the commissioner of rehabilitation was given greater power to appoint personnel and to establish area offices.

The mandatory retirement age for State building inspectors, State elevator inspectors, and district engineering inspectors was lowered from age 70 to age 65. Members may continue to be employed past the mandatory retirement age if annual examinations indicate they are mentally and physically capable of continued job performance.

A measure was passed in the November general election to amend the State Constitution to prohibit discrimination against handicapped persons.

Labor relations. Elected officers of the Professional Firefighters of Massachusetts are to be given leave, if on duty, by the municipal employer, for regularly scheduled work hours spent on union business.

Occupational safety and health. Unlicensed elevator workers are now subject to a fine of from \$500 to \$1,000. They were previously subject to a lesser fine or imprisonment for up to 6 months.

Michigan

Wages. Under an amendment adopted in 1977, the minimum wage increased to \$3.10 an hour on January 1, 1980, with an increase to \$3.35 scheduled for January 1, 1981. These increases equal those under Federal law.

Individuals employed to provide the practice of massage were specifically included under the coverage of the minimum wage law.

Equal employment opportunity. Coverage of the fair employment practices law was extended from employers of four or more persons to all employers. Also, the definition of sex discrimination was amended to include sexual harassment where submission to unwelcome sexual advances, contact, or communication is made a term or condition of employment.

Labor relations. Employers who have been found in contempt of court at least three times for different violations in the preceding seven years, for failure to correct an unfair labor practice under the National Labor Relations Act, are now ineligible for State contracts or subcontracts.

Unresolved labor disputes of State Police troopers and sergeants were made subject to binding arbitration.

Occupational safety and health. Many changes were made in employee health and safety standards. Among them, employers are required to pay for personal protective equipment required by law. Employers are also required to make available to employees for inspection and copying, general health surveys of conditions in the place of employment which may adversely affect employees' health, and all medical records and health data in the employer's possession pertaining to those employees. Employees were given the right to attend or be represented at all meetings between the departments of labor or health and the employer, relative to the department's decision concerning an Occupational Safety and Health citation, abatement period, or proposed penalty. Provisions were made for tagging of equipment and processes that are a source of imminent danger, with employees not permitted to operate such tagged equipment or engage in tagged processes as long as danger exists.

Other laws. A neighborhood assistance program was established within the labor department to provide financial assistance for projects offering job training, community services, crime prevention, and physical revitalization of neighborhood facilities.

Contractors awarded contracts for the construction or repair of State buildings or property must hire at least 50 percent State residents if available. This requirement will not apply where there are collective bargaining agreements that allow for the interstate portability of employees, or where this requirement is in conflict with Federal law or regulation.

Minnesota

Wages. A 1979 law increased the minimum wage from \$2.30 to \$2.90 effective January 1, 1980, with further increases to \$3.10 on January 1, 1981 and \$3.35 on January 1, 1982.

Seafarers exempted from the overtime standards of the Federal Fair Labor Standards Act are now exempted from State minimum wage and overtime requirements.

Equal employment opportunity. The Human Rights Act was amended to authorize the Commissioner of Human Rights to

seek relief for a class of individuals, to prohibit employment discrimination because of membership or activity in a local commission, and to increase the maximum punitive damages that can be assessed by a hearing examiner from \$500 to \$1,000.

Labor relations. The name of the Department of Personnel was changed to the Department of Employee Relations. The new department is organized into the Division of Personnel and the Division of Labor Relations. The Division of Labor Relations will be responsible for negotiating and administering State employee collective bargaining agreements. Among other changes, the circumstances under which nonessential public employees may strike were broadened, and binding arbitration procedures were amended.

Private employment agencies. Services which place medical doctors exclusively were exempted from the employment agency law.

Occupational safety and health. The Director of Emergency Services, in cooperation with the Commissioner of Health and affected local units of government, is to develop State and local emergency response plans for nuclear power plants in the event of an accident.

Other laws. Employers must not only permit employees elected to public office, time off to attend public meetings as before, but must now also make an effort to allow the employees to make up the time.

An employee who is a member of a political party committee, or a delegate or alternate to a political convention may take leave to attend meetings and conventions provided at least a 10-day written notice is given the employer. The employee is not to be penalized or suffer any wage deduction other than for actual time absent from employment.

Mississippi

Wages. Limitations on the amount of wages subject to garnishment were conformed to limits set in the Federal wage garnishment law.

Child labor. A law making it illegal to persuade, entice, or decoy away from his parents an unmarried male under age 21 for purposes of employment, without parental consent, was amended to apply to males under age 18 only, the same as for females.

Equal employment opportunity. Among other changes to the public employees' retirement law, the mandatory retirement age was raised from 65 to 70, applicable to all employees except elected officials and those appointed by the Governor.

Worker privacy. A polygraph operator may have his or her license suspended or revoked for requiring a subject to acknowledge that the examination was not done for purposes of employment when the results of the examination are to be submitted to an employer.

Other laws. The State Department of Education is to develop and coordinate a State-wide vocational and technical education program which will include but not be limited to immediate training for established industries, and training for prospective employees for new and expanding industry in the State.

The Office of the Governor Job Development and Training was abolished, and the Division of Job Development and Training in the Office of the Governor was established and designated the administrator of the State's CETA programs. This law, which was implemented with Federal funds, will be automatically repealed if State funds are appropriated for the support of the division.

A new comprehensive law was enacted, effective April 1, 1981, to govern the furnishing of payment or performance bonds in public works contracts. The current public works bond provisions will be repealed at that time.

Nebraska

Wages. Orders for wage garnishment prior to final judgment were prohibited, and the wage garnishment provisions now specifically apply to officers of the State and political subdivisions, not only to private sector employees as before.

Child labor. The age for selling or dispensing alcoholic liquor in taverns was raised from 19 to 20, although minors may serve drinks at age 19 when working in restaurants, clubs, hotels, or similar places.

Equal employment opportunity. Commissions on the status of women may be established by any county and certain cities, to study the changing role of women and advise the city or county government on elimination of social, economic, and legal barriers affecting women.

Worker privacy. A new law was enacted requiring licensing of operators of polygraphs and other instruments such as deceptographs, psychological stress evaluators, or voice analyzers. Submission to such tests may not be required as a condition of employment except in public law enforcement. Such tests are permissible if voluntary, related to a specific investigation, and if no questions are asked about labor unions, political or religious affiliation, marital relationships, or sexual practices.

Displaced homemakers. The displaced homemakers law, scheduled to terminate September 2, 1980, was extended indefinitely, and the limit on the number of permitted displaced homemaker service centers was removed.

New Hampshire

Wages. The minimum wage rate rose to \$3.10 an hour on January 1, 1980 and will increase on January 1, 1981 to match the Federal \$3.35 rate.

New Jersey

Wages. By prior law, the minimum wage rate was increased from \$2.90 to \$3.10 an hour effective January 1, 1980.

The payment of prevailing wages, and the establishment of an affirmative action program for the hiring of minority workers is now required on construction projects receiving financial assistance from the State's Economic Development Authority.

Child labor. Changes in youth nightwork provisions eliminated more stringent provisions for girls and permitted minors between age 16 and 18 to work until 11 o'clock any night, rather than to 10 o'clock as before, and after 11 o'clock during school vacations. Minors employed in restaurants until midnight before nonschool days must now have written parental permission stating hours they are permitted to work.

As boys previously could, girls age 14 and over may now engage in street trades. This was formerly prohibited for girls

under age 18. In addition, girls under age 18 are no longer prohibited from employment as messengers.

Equal employment opportunity. Several changes were made in labor laws to remove sex discriminatory language. For example, seats are now required for all employees rather than only for women, employment agencies may not send any person, previously only females, to work at a place of amusement kept for immoral purposes, or to an illegal gambling house, and any employee required to have a physical examination under the workers' compensation or temporary disability insurance laws may request a physician of the same sex.

The commission to study sex discrimination in the statutes, scheduled for termination on January 8, 1980, was extended to January 12, 1982.

The law concerning civil rights and responsibilities of blind persons with guide dogs was amended to include deaf persons with guide dogs. It will be an unlawful employment practice to deny employment to an otherwise qualified deaf person solely because he or she is deaf or accompanied by a guide dog.

Labor relations. Public employees may now negotiate for an agency shop agreement whereby nonmembers of the union within the bargaining unit would be required to pay a representation fee in lieu of dues.

Other laws. County officers or employees elected to the State Legislature are to be given time off with compensation during periods of attendance at regular or special sessions or committee meetings. These rights are identical to those previously enacted for employees of municipalities and public schools.

A concurrent resolution requested the U.S. Congress, the Office of Management and Budget, and the President, to continue the funding of the Employment Opportunities Pilot Program.

New Mexico

Wages. By prior law, the minimum wage was increased from \$2.65 to \$2.90 an hour effective July 1, 1980, with a further increase to \$3.35 scheduled for July 1, 1981. The farm rate rose to \$2.90 on July 1, 1980 and will increase in two steps to \$3.35 by July 1, 1982.

New York

Wages. By prior law, the minimum wage rate for nonagricultural workers was increased to \$3.10 on January 1, 1980. It will rise to \$3.35 on January 1, 1981.

Effective January 1, 1981, minimum wage coverage will be extended to individuals employed or permitted to work in any nonteaching capacity by a school district or board of cooperative educational services.

The labor commissioner was empowered to order the payment of a civil penalty of up to 25 percent of the total amount found to be due under violations of the minimum wage and wage payment laws and regulations. The civil penalty will be in addition to and may be imposed concurrently with any other remedy or penalty.

Restitution of wages or supplements due an employee because of underpayment is to include interest at not less than 6 percent per year, and not more than the rate of interest in effect as prescribed by the superintendent of banks. Within this range, the interest rate paid will depend on the size of the business, the good faith of the employer, the gravity of the violation, the history of past violations, and the failure to comply with recordkeeping or other nonwage requirements.

Domestics, farmworkers, and employees of nonprofit organizations are now subject to the equal pay law through the repeal of a previously existing exemption.

Court-ordered wage deductions for support payments are now applicable to future employers, in addition to current and former employers as previously required.

Equal employment opportunity. Executive Order Number 45, which established equal employment opportunity and affirmative action requirements, including goals of minority employment on public works, was declared unconstitutional by the State Supreme Court as an unauthorized exercise of legislative power.

An increase was made from 200 to 400 in the number of positions the Civil Service Commission is authorized to find and reserve for persons certified as being either physically or mentally handicapped but capable of performing the job duties.

Occupational safety and health. A comprehensive occupational safety and health law was adopted for the public sector, applicable to the State, political subdivisions, public authorities, and instrumentalities. Administration and enforcement is by the Industrial Commissioner.

Other laws. To aid and promote the development of the domestic steel industry, the State procurement law now requires the purchase of American-made steel and steel products where possible.

North Carolina

Wages. By prior law, the minimum wage rate was increased from \$2.75 to \$2.90 an hour effective July 1, 1980.

Equal employment opportunity. The Study Commission on Equal Employment Practices was established to examine the need for a State Equal Employment Practices Act and related matters.

North Dakota

Wages. As the result of a 1979 wage order, the minimum wage rate was increased from \$2.60 to \$2.80 an hour for public housekeeping employees, effective July 1, 1980. The rate for mercantile employees and professional, technical, and clerical employees increased to \$3.10 an hour effective January 1, 1980.

Ohio

Wages. Wages may not be garnished for collection of debts that are subject to a debt scheduling agreement between the wage-earner and a consumer credit counseling service.

Child labor. Minors 16 and 17 years old were exempted from the usual employment certificate requirements for summer work in nonprohibited nonagricultural employment. Instead, such minors must present proof of age and parental consent. Also, minors employed in CETA programs were temporarily exempted from the requirement of obtaining age and schooling certificates for employment during the summer of 1980. Proof of age and parental consent is needed.

Labor relations. Employers found in contempt of court for failure to correct unfair labor practices under the National Labor Relations Act on more than one occasion during the preceding two years are ineligible for State contracts or subcontracts.

Occupational safety and health. Effective January 1, 1981, operators of underground mines employing 20 persons or more per shift and operators of strip mines are to have trained medical personnel and necessary safety equipment available for quick response to emergencies.

Other laws. An economic development program was established with the primary objective of preserving or creating employment opportunities.

Oklahoma

Wages. The minimum wage rate was increased from \$2.00 to \$3.10 an hour effective October 1, 1980.

Labor relations. Prison inmates employed through a work release program are not to report to work if a strike occurs at their place of employment, and they may not be hired to replace employees engaged in a labor dispute.

Other laws. Contractors must now furnish payment bonds on all public construction projects exceeding \$7,500, rather than the previous \$1,000.

In-State contractors will now be given preference on public contracts if their bid is no more than 5 percent higher than that of an out-of-State bidder. A 3-percent preference was previously authorized.

Oregon

Wages. As provided for in a prior law, the minimum wage rate was increased from \$2.65 to \$2.90 an hour effective January 1, 1980. An increase to \$3.10 an hour is scheduled for January 1, 1981.

The prohibition on discharging or discriminating against an employee who has made a wage claim was expanded to also protect those who have discussed, inquired about, or consulted an attorney or agency about a wage claim. Any person found in violation will be liable for actual damages or \$200, whichever is greater.

Pennsylvania

Wages. As provided for in a prior law, the minimum wage rate was increased from \$2.90 to \$3.10 an hour effective January 1, 1980 with a future increase to \$3.35 scheduled for January 1, 1981. The maximum tip credit was reduced from 45 to 40 percent of the minimum rate, effective January 1, 1980.

Equal employment opportunity. Age limitations for entry into approved apprenticeship programs of two years or more were exempted from the Human Relations Act prohibition against age discrimination.

Puerto Rico

Wages. Among other changes made by a 1979 revision of the minimum wage law, minimum wage rates under the Commonwealth wage board system may now be set at rates up to the Federal rates under the Fair Labor Standards Act, instead of the previous limit of \$2.50 per hour.

Rhode Island

Wages. By previous enactment, the minimum wage was increased from \$2.65 to \$2.90 an hour effective July 1, 1980. Additional increases to \$3.10 and \$3.35 an hour are scheduled for July 1, 1981 and July 1, 1982.

Employers are prohibited from taking any disciplinary action as the result of an employee's wages being assigned by court order for support payments. Such assignments have pri-

ority over any other attachments and are not subject to any statutory limitation on the amount levied against the employee's income.

Payments for voluntary participation in a vanpool system are now permissible deductions from wages.

Child labor. Minors 16 to 18 may now work until 11:30 on nights before schooldays, and until 1:30 in the morning on other days, rather than until 11:30 each night, as before. The limitation was also restricted only to minors who are regularly attending school. Minors 16 to 19 may now transport unopened alcoholic beverages in the course of their employment. Formerly, minors under 18 were prohibited from transporting such beverages except when accompanied by a parent or guardian.

Equal employment opportunity. The Labor Department's jurisdiction over age discrimination was eliminated, leaving the Human Rights Commission as the sole regulatory agency.

Under the Fair Employment Practices Law, compulsory retirement of university employees between age 65 and 70, who have unlimited tenure, will not be prohibited until July 1, 1982.

A vocational rehabilitation program including medical, diagnostic, training, vocational guidance, and other services for disabled persons was established under the Department of Social and Rehabilitative Services.

Labor relations. Casual and seasonal State employees were excepted from the law giving State employees the right to organize and bargain collectively.

Occupational safety and health. Two members representing labor are to be appointed to the new 21-member Special Commission on Hazardous Substances. The commission will recommend legislation to the General Assembly on alternative methods of handling and disposing of hazardous substances and waste with a minimum of potential harm to the public health and environment.

The State building code was repealed, and a new comprehensive code was enacted to govern the safety of all structures.

Displaced homemakers. The displaced homemaker program, scheduled to terminate on January 31, 1980, was made permanent.

South Carolina

Wages. A portion of a prisoner's wages may now be disbursed to the victim whose property was stolen or damaged, in an amount determined by the Board of Corrections.

Worker privacy. Nuclear-related businesses may obtain from the State Law Enforcement Division, the criminal history record of employees in certain sensitive positions, with the employees' written permission.

Labor relations. Special grievance and performance appraisal procedures were established for faculty members of State institutions of higher learning.

Occupational safety and health. A comprehensive statute was enacted to control the transportation, handling, and disposal of radioactive waste under the regulation of the Department of Health and Environmental Control.

Assessment of a civil penalty by the labor commissioner for each serious violation of an occupational safety or health rule or violation of any posting requirement in now discretionary, rather than mandatory.

South Dakota

Child labor. Children age 14 and over are now permitted to dispense gas and oil at gasoline service stations. This work was previously limited to those age 16 and over.

Equal employment opportunity. Qualified agencies employing the handicapped will be given preference in the award of public contracts for goods and services. Prior law had given this preference only to agencies employing blind persons.

Tennessee

Wages. State officers or employees whose total annual income, including overtime, is less than \$8,000 may now hold an additional part-time position for up to four hours a day in State government.

A summons for wage garnishment must now contain a notice that the employer is liable for any failure to withhold the required garnishment amount or failure to pay it to the court.

Equal employment opportunity. The antidiscrimination law was amended to include a prohibition on employment discrimination based on age, for persons age 40 to 70.

Private employment agencies. The application and license fees for employment agencies, managers, and counselors were increased.

Other laws. The commission on aging, scheduled for termination on June 30, 1980 under a sunset law, was extended to June 30, 1981.

Utah

Wages. An increase in the minimum wage to \$2.60 an hour, authorized by a 1978 administrative action, took effect on January 1, 1980, for the retail trade, public housekeeping, restaurant, laundry, cleaning, dyeing, and pressing industries in Salt Lake, Weber, Utah, and Davis counties and in all cities with a population of 5,000 or more. A further increase to \$2.75 is scheduled for January 1, 1981. The minimum for other areas was raised to \$2.35 an hour with an increase to \$2.50 scheduled for January 1, 1981.

Equal employment opportunity. An amendment to the State Constitution was approved in the November general election to remove the prohibition against women working underground in mines, and permitting work release and similar programs for prisoners.

Vermont

Wages. By prior law, the minimum wage rate was raised to \$3.10 an hour effective January 1, 1980 with a further increase to \$3.35 scheduled for January 1, 1981.

Employers will now be permitted to pay all employees bi-weekly or semi-monthly rather than only salaried employees as before. Also, all court costs and reasonable attorneys' fees will now be considered recoverable items in actions for failure to pay wages.

Labor relations. Revised rules covering grievances, promotions, transfers, internal affairs, and disciplinary procedures

are to be established by the Commissioner of Public Safety under legislature established guidelines. A State Police Advisory Commission was established to review the rules and to act as an adviser to the commission.

Virginia

Wages. The minimum wage rate was increased from \$2.35 to \$2.65 an hour effective July 1, 1980.

Employers of more than 10,000 workers may now charge an employee, whose wages are garnished, a fee of up to \$10 for expenses in processing each garnishment summons.

Equal employment opportunity. The mandatory retirement age of State employees or teachers was set at 70 under the State Supplemental Retirement Act. Formerly the employer could provide for compulsory retirement at any age from 65 to 70. Compulsory retirement at an earlier age is permitted if age is a bona fide occupational qualification, reasonably necessary to the normal operation of the particular business.

Contracting agencies are now prohibited from discriminating on the basis of race, religion, color, sex, or national origin in awarding public contracts. Previous law, applicable only to contractors, requires nondiscrimination clauses in government contracts or subcontracts over \$10,000.

Urban county boards of supervisors are permitted to establish commissions on human rights, to receive and assist in voluntary resolution of complaints of discrimination.

Private employment agencies. Agencies must now refund part of the placement fee if employment terminates without the employee's fault within 12 weeks, instead of having the option of making a refund or placing the applicant in other employment with a credit towards the additional fee.

Occupational safety and health. A five-member Coal Mine Health and Safety Advisory Committee was established to advise and make recommendations, to various legislative committees, on changes in law, rules, or regulations which it deems necessary for coal mine health and safety.

Other laws. Joint legislative committees were created to study a proposed State Comprehensive Youth Employment Program, and to study and make recommendations regarding duplication in the certification of apprentices by the State and local jurisdictions.

Virgin Islands

Wages. By prior wage order and legislative action, minimum hourly wage rates were increased to match the Federal \$3.10 rate with a further increase to \$3.35 scheduled for January 1, 1981. Certain previously prescribed occupational rates that exceed the Federal minimum were retained. For tipped employees, a 50-percent tip credit was enacted, replacing former lower minimums.

Labor relations. A Public Employee Labor Relations Law was enacted, granting public employees the right to form and join unions, and bargain collectively. The law also established unfair labor practices. Binding arbitration is provided for as is a limited right to strike. An Office of Collective Bargaining was created in the Office of the Governor with the responsibility to represent the executive branch and negotiate on its behalf.

Washington

Child labor. Professional disc jockeys and sound and lighting technicians age 18 and under may now be employed in places

where liquor is sold. Musicians age 18 and older previously had this right.

School attendance. Temporary absence from school for up to 10 days a year is permitted for a child between age 8 and 18 on parental request and with agreement of school authorities.

West Virginia

Wages. The minimum wage rate will rise from \$2.20 to \$2.75 an hour on January 1, 1981, and overtime of one and one-half times the regular rate will be payable after 40 rather than 42 hours a week, effective July 1, 1980.

Labor relations. The State's Labor-Management Advisory Council, scheduled for termination on June 30, 1980, was continued to June 30, 1983.

Occupational safety and health. The deadline date for the promulgation of various coal mine rules and regulations, including the right of miners to refuse to operate unsafe equipment, and regulation of long and short wall mining and the construction of shafts, slopes, and surface facilities, scheduled for January 1, 1978, was postponed until January 1, 1981.

The Board of Coal Mine Health and Safety is to report all coal mining fatalities within 60 days, to review major causes of coal mining injuries in detail, and to issue any necessary rules and regulations to prevent recurrence. An annual report is to be given to the Governor and legislature including recommendations for enactment, repeal, or amendment of any statute, for the purpose of enhancing health and safety in the mining industry.

Other laws. Under sunset legislation, the State Department of Labor is scheduled to terminate on July 1, 1981.

Employers are prohibited from discriminating against employees summoned for jury duty, such as threatening to decrease their pay or terminate their employment. Payment of wages while the employee is on jury service is not required.

Public employees are permitted to take time off from work to observe the birthday of Martin Luther King, Jr., with the time off charged to annual or vacation leave.

Wisconsin

Wages. By prior administrative action, the nonfarm minimum hourly wage rate was increased from \$2.80 to \$3 effective January 1, 1980, with a further increase to \$3.25 effective January 1, 1981. The farm rate was increased from \$2.60 to \$2.80 an hour effective January 1, 1980 with an increase to \$3.05 scheduled for 1981.

Employers were prohibited from taking, and employees from giving "kickbacks" of wages on any public construction project. Violators are subject to a fine or imprisonment or both. A similar provision was already in effect for highway construction projects.

Commission payments, earnings, and other income, as well as salary, are subject to court ordered assignment for maintenance or support payments, and employees of the State and political subdivisions may now have their wages assigned for such payments.

Child labor. Minors 12 and older are permitted to work under direct parental supervision, in connection with their parents' businesses, trades, or professions, subject to the restrictions on hours and hazardous work of the child labor law. A work permit is required, and will be issued unless the work is injuri-

ous or detrimental to the minor's education, health, safety, or welfare.

Worker privacy. Employers may not require or solicit a polygraph, voice stress analysis, psychological stress evaluator, or similar "honesty" test, of an employee or prospective employee, except for a test using a device that records both cardiovascular and respiratory patterns visually, permanently, and simultaneously. Any employer-employee agreement offering employment, pay, or job benefits in return for taking such a test is void. For permitted tests, the employee must be told that taking the test is voluntary and written consent is required. No questions may be asked on sexual practices, religious or political beliefs, marital relationship, or labor union activities.

Public and private sector employees have the right to inspect and make corrections to their personnel files and medical records at least twice a year, or as provided in a collective bargaining agreement, during normal working hours or other reasonable time, at a convenient location. The employee may also authorize a union representative to inspect the records when a grievance is pending. Certain records are excluded, such as letters of reference, records relating to a criminal in-

vestigation, management planning records, and portions of test documents.

Labor relations. The employment, recruitment, or transportation of strikebreakers to replace employees where a strike or lockout exists is prohibited, with criminal penalties provided for violation.

Persons or firms found in violation of the National Labor Relations Act on at least three occasions during the past five years are not to be awarded State contracts for a three-year period.

Other laws. Employers are prohibited from discharging or disciplining an employee for absence due to jury service. Violators may be fined and may be required to make full restitution to the employee, including reinstatement and back pay.

Preference in State purchasing is to be given to American-made materials to the extent possible.

Wyoming

Occupational safety and health. Civil and criminal penalty provisions were modified to conform closely to those in the Federal Occupational Safety and Health Act.

— FOOTNOTE —

¹ The legislatures did not meet this year in Arkansas, Montana, Nevada, North Dakota, and Texas. Abbreviated sessions were held in

Missouri, New Hampshire, New Mexico, and Utah, but no significant labor legislation was enacted.

Compulsory school, compulsory work

At a very early date in colonial history the need for workers led to child labor legislation, meant to insure that children as well as adults should contribute to the general welfare. The court of Massachusetts Bay in 1641 ordered that all heads of families should see that their children and servants should be industriously employed . . . But this was not to be at the expense of the children's education. In 1642, chosen men were empowered to take account of the calling and employment of the children . . . In 1647, it was ordered in Massachusetts that schoolmasters should be appointed in every town to teach the children. Similar legislation . . . was adopted in most of the New England colonies.

— *Summary of the Report
on Condition of Woman and Child Wage
Earners in the United States, Bulletin
175 (U.S. Bureau of Labor Statistics,
1916), p. 228.*

Legislative revisions of unemployment insurance in 1980

Many States adopted pension offset provisions but made few other changes; Alaska and Pennsylvania tightened qualifying requirements and disqualification provisions and increased the tax rates

DIANA RUNNER

In September 1980, Congress made amendments to Federal unemployment insurance law requirements which modified the pension deduction provision; specified circumstances in which extended benefits are not payable on interstate claims; and increased the service time necessary for former members of the Armed Forces to establish entitlement to unemployment compensation.

Under an amendment to the Federal Unemployment Tax Act, the pension deduction provision was liberalized. It had required States to reduce an individual's weekly benefits by the weekly prorated amount of any pension, annuity, or similar payment that he or she received for claims filed on or after April 6, 1980. The amendment (effective September 26, 1980) requires States to offset a pension only if such pension, retirement or retired pay, annuity, or similar periodic payment is under a plan maintained (or contributed to) by a base period or chargeable employer. This law also permitted States to take into consideration the amount of the individual's pension contributions when reducing benefits.

The Federal State Extended Unemployment Compensation Act was amended to prohibit payment of extended benefits pursuant to an interstate claim if it was filed in an agent-State where an extended benefit period was not in effect.

The U.S. civil code now requires a service member to have 365 days or more of active service in order to be

eligible for unemployment compensation instead of the former 90-day period. This amendment applies with respect to any new claims filed on or after October 1, 1980.

In general, State legislatures took very little action this year, except for Alaska and Pennsylvania where extensive changes were made. Twenty States adopted conforming pension reduction provisions.¹ Weekly benefit amounts changed in seven States and five States amended their qualifying wage requirements. Disqualification provisions changed in eight States with most States adopting requalifying work requirements.

Financing provisions were amended in several States and most raised the maximum tax rates or made provision for extra assessments to strengthen their trust funds, or did both.

The following is a summary of some significant changes in State unemployment insurance laws during 1980.

Alabama

Disqualification. The penalty for fraud was increased to a fine of not less than \$50 or more than \$500 (formerly \$250) or imprisonment for no longer than 12 months (formerly 3 months), or both. However, prosecution must begin within 3 years from date of offense.

Alaska

Benefits. The qualifying wages were increased from base period wages of \$750 with \$100 outside high quarter to base period wages of \$1,000 in at least two quarters. The maximum weekly benefit amount rose from \$90 to \$150 and the minimum from \$18 to \$34. A claimant may also receive \$24 a

Diana Runner is an unemployment program specialist in the Office of Research, Legislation and Program Policies, Employment and Training Administration, U.S. Department of Labor.

week for each dependent, not to exceed \$72. Benefit duration changed from 14 to 28 weeks to 16 to 26 weeks depending on the claimant's earnings ratio. For purposes of computing the weekly benefit amount, individuals who were paid 90 percent or more of their base period wages in only one calendar quarter shall have their base period computed as wages paid in the quarters of their base period, other than the one in which the greatest amount of wages were paid, multiplied by 10. However, those who were paid less than 90 percent of wages in one calendar quarter use all wages paid to them during the base period.

Partial benefits will be payable to an individual in an amount equal to the weekly benefit amount, less 75 percent of remuneration that is in excess of \$50. Formerly, the amount disregarded was that in excess of \$10 or one-half of the weekly benefit amount. An individual is considered unemployed in a week in which he performs no services for remuneration or in a week of less than full-time work, if the salary is not more than 1-1/3 times his weekly benefit amount (excluding dependent's allowances) plus \$50 (formerly \$10 or 1-1/2 times weekly benefit amount, whichever was greater).

Disqualification. In addition to the current 6 weeks disqualification for voluntary quit, discharge for misconduct, and refusal of suitable work, an individual will have his maximum potential benefits reduced. This will be by the lesser of an amount equal to three times his weekly benefit amount (excluding dependents' allowances) or the amount of unpaid benefits to which he is entitled. However, the disqualification may be removed if an individual earns at least eight times the weekly benefit amount. A person is disqualified for any week of unemployment during which he or she attends an established school providing academic instruction of 10 credit hours or more per week. This disqualification will be in effect until he or she is no longer attending classes if the period of nonattendance lasts 60 days or more. Alaska also adopted a pension reduction provision. The disqualification for misrepresentation was changed to continue for not less than 6 nor more than 52 weeks (formerly 26) in all cases. The penalties for fraud were changed to a class B misdemeanor for an individual, a class A misdemeanor for an employing unit.

Financing. The taxable wage base for 1981 and 1982 will be determined as 60 percent of the average annual wage computed to the nearest multiple of \$100, and for 1983 and thereafter, 75 percent. The standard tax rate of 2.7 percent was deleted and employers not eligible for a computed rate will pay one equal to that of the average industry. An employer's contribution rate may not be less than 1.0 or more than 6.5 percent. Formerly, the range was 0.6 to 5.5 percent. Each employer's rate of contribution will be 82 percent of the average benefit cost, multiplied by the employer's experience factor.

A further solvency contribution rate was added which may not be less than zero or more than 1.1 percent, although the solvency rate may not change more than 0.3 percent from year to year. The solvency rate is payable whenever the reserve rate (the ratio of the amount in the fund available for benefits to contributing employer payrolls) falls below 3.2 percent. Effective January 1, 1981, each employee will pay a contribution rate equal to 18 percent of the average benefit cost rate, rounded to the nearest 0.1 percent. Employee rates may not be less than 0.5 or more than 1.0 percent.

Administration. The period of time for appeal of an initial determination or an appeal tribunal decision was extended from 10 to 15 days.

Arizona

Benefits. The maximum weekly benefit was increased from \$90 to \$95.

Colorado

Coverage. Coverage was extended for unemployment insurance purposes to employees of church-related schools.

Connecticut

Benefits. The weekly dependency allowance was raised from \$5 to \$10 per dependent for up to five dependents.

Disqualification. The disqualification for refusal of suitable work was changed from the week of refusal and the next 4 weeks to the duration of unemployment, and until the claimant earns at least six times his weekly benefit amount. Also, a pension offset provision was adopted which conforms to the Federal law.

Administration. The time limit for filing an appeal from an initial determination was extended from 14 to 21 days and from 15 to 22 days for a referee's decision.

Delaware

Disqualification. It adopted a pension offset provision which conforms to the Federal law.

District of Columbia

Disqualification. It adopted a pension offset provision which conforms to the Federal law.

Florida

Benefits. The maximum weekly benefit amount was increased from \$95 to \$105.

Financing. The law provides that, if an employee is terminated during a probationary period (up to 60 days), any benefits received as a result of employment during this period will be noncharged (seasonal employers are excluded).

Coverage. The exclusion of aliens performing agricultural labor was extended to January 1, 1982.

Disqualification. The law was amended to provide that in addition to benefits under the Social Security Act or a disability program, any other similar periodic payment based on previous work of the individual will be considered as retirement income. This will be deductible from the weekly benefit amount.

Georgia

Financing. An employer's experience rating account shall not be charged for benefits paid to an individual working part time if the employer provided base period part-time employment and continues to provide part-time work to the same extent as in the base period. The employer must also be an interested party because of the employment loss and furnish timely information to the agency.

Disqualification. The State adopted a pension reduction provision which conforms to the Federal law.

Hawaii

Disqualification. It adopted a pension reduction provision which conforms to the Federal law.

Idaho

Benefits. High-quarter wages needed to qualify for benefits were increased from \$415.01 to \$910.01.

Disqualification. The State adopted a pension reduction provision which conforms to the Federal law.

Coverage. The exclusion of aliens performing agricultural labor was extended to January 1, 1982.

Administration. The second-level appeal body was changed from a board to a commission. The period of time in which a nonfraud overpayment is considered uncollectible was increased from 3 to 5 years.

Illinois

Benefits. The minimum weekly benefit amount was changed from \$15 to 15 percent of the statewide average weekly wage. Earnings disregarded in the computation of partial benefits changed from wages in excess of \$7 to those in excess of 50 percent of his weekly benefit amount.

Disqualification. The definition of "voluntary leaving" was amended to provide that such quit must be attributable to the employer except in the following cases: (1) quitting because of illness, or illness of a child, spouse or parent, (2) to accept another bona fide job or to take a job which lasts 2 weeks or longer and pays at least two times the weekly benefit amount, (3) in lieu of bumping another employee, (4) because of sexual harassment on the job of which employer had knowledge, and (5) quitting after accepting a job considered to be unsuitable under a specified section of Illinois law. The availability for work requirement was tightened to provide that an employer must only give a reason, or reasons, why an employee may not be available for work or actively seeking work. Also, the State adopted a pension offset provision which conforms to the Federal law.

Financing. Relief from charges to the employer's account is provided where the claimant voluntarily quit, took another job, and held it long enough to earn six times the weekly benefit amount and then was separated from the new work.

Administration. An "equity and good conscience" exemption in nonfault benefit overpayment recoupment is provided. When amounts are recouped by offset against current benefits, the amount of offset may not be allowed to exceed 25 percent (previously 50 percent) of weekly benefit amount. The time period for appeals from determinations of claims adjudicators and referees has been extended from 14 to 30 days.

Indiana

Benefits. The maximum weekly benefit amount was increased from \$74 to \$84 for an individual with no dependents; from \$87 to \$99 with one dependent; from \$99 to \$113 with two dependents; from \$112 to \$128 with three dependents; and from \$124 to \$141 with four dependents or more. Also, the minimum weekly benefit amount went from \$35 to \$40. Qualifying requirements were changed from wages of at least \$300 in the last two quarters of the base period and total wages of \$500 in the base period to at least \$900 in the last two quarters of the base period and total wages of at least \$1,500 throughout the four quarters of the base period.

Disqualification. An individual will be considered unavailable for work with respect to any week in which he or she is sus-

pending for misconduct in connection with the work. Formerly, the determination of unavailability could not exceed the week of suspension and the 5 calendar weeks immediately following. Previous conditions for disqualification for voluntary quit, discharge for misconduct, and refusal of suitable work were: the week of occurrence and until the claimant earns at least eight times the weekly benefit amount. The week of occurrence rule remains in effect, but now the claimant must earn remuneration in employment equal to or exceeding his weekly benefit amount in each of the 8 weeks. Indiana added to the disqualification for refusal of suitable work that it will apply whenever an individual fails to accept suitable work at any time after he or she is notified of a separation. Labor dispute disqualification was amended to apply when someone's unemployment is caused by a labor dispute (previously, a stoppage of work that exists because of a labor dispute) at a factory, establishment, or other premises at which the person was last employed. A claimant may not be disqualified for voluntary leaving if he leaves prior work for better employment and works at the new job for not less than 10 weeks (formerly 8); or if employed by two persons but leaves one employer and remains employed by the second for at least 10 weeks (previously 8). This would be subsequent to leaving the first employer. "Gross misconduct" was redefined as including only a felony or misdemeanor committed in connection with work. In the past, the law included explicit examples of the kind of behavior considered gross misconduct.

Kansas

Disqualification. The pension offset provision conforming to the Federal requirement was adopted. This State repealed the provision canceling all wage credits earned prior to the date on which felony charges are brought against an individual for job-related gross misconduct.

Kentucky

Disqualification. The "voluntary leaving" language was tightened to restrict good cause to that attributable to the employer. The disqualification for refusal of suitable work and discharge for misconduct changed from a variable disqualification to one of duration. The special disqualification for the duration of unemployment of a person who quits work to marry, attend school, or become self-employed was repealed. Kentucky adopted a pension reduction provision which conforms to Federal law. The time during which recovery of overpayments will be pursued was increased from 3 to 5 years. However, if the payments were obtained through fraud, no future benefits may be paid to that individual for 10 years.

Financing. The State added a new schedule of rates—ranging from 1.3 to 6.7 percent—to go into effect when the fund solvency factor is less than 0.4 or the trust fund is below \$100 million. No employer's rate shall be less than 2.7 percent provided the fund solvency factor equals 0.4, nor will it be less than 3.0 percent if the factor is less than 0.4 or the trust fund is below \$100 million.

Maryland

Benefits. The maximum weekly benefit amount increased from \$106 to \$120 and the minimum went up from \$10 to \$25. The qualifying requirement was raised from high-quarter wages of \$192.01 to \$576.01.

Disqualification. The voluntary leaving disqualification was amended to provide that it is not good cause to voluntarily

leave work to become self-employed, accompany or join a spouse, or to attend an educational institution. The refusal of suitable work disqualification was amended to apply for the week of refusal and will continue for from 4 to 9 weeks (formerly 1 to 10). The State adopted the pension reduction provision conforming to a Federal requirement.

Financing. The maximum tax rate moved up from 5.0 to 6.0 percent and the adjustment that could be made to an employer's tax was limited (beginning July 1, 1980) to an increase of 1.5 percent. The fund balance level at which the least favorable tax schedule would become effective (based on ratio between fund balance and total taxable wages) changed from 3.5 to 3.6 percent. Also, the percentage by which an employer's rate would be increased under this schedule was reduced from 3.0 to 2.7 percent.

Administration. The time period for filing with the Board of Appeals increased from 7 to 15 days.

Massachusetts

Disqualification. It adopted a pension reduction provision which conforms to the Federal law.

Michigan

Disqualification. It adopted a pension reduction provision which conforms to the Federal law.

Minnesota

Disqualification. The voluntary leaving disqualification excludes separation from employment because of its temporary nature or inability to pass a test or to meet performance standards necessary for continuation of employment.

Financing. A reimbursing employer will not be charged for benefits paid to a part-time employee, if the employer continues to provide part-time work equal to at least 90 percent of the part-time employment provided in the base period, and is an interested party because of a job loss of other employment. Also, the law provides for noncharging both contributing and reimbursing employers for unemployment directly caused by a major disaster (if the individual would have been eligible for Disaster Unemployment Assistance but for receipt of unemployment benefits).

Mississippi

Financing. Benefits may be noncharged to an employer's experience rating record if an individual was terminated during a probationary period.

Missouri

Financing. Benefits based on part-time work may be noncharged if the employer continues to employ individuals on a part-time basis. The maximum contribution rate payable by negative account employers was reduced from 6.0 to 4.4 percent.

Nebraska

Disqualification. A modified pension offset provision was adopted which applies to base period or chargeable employers. The provision which disqualified an individual who was discharged from military service or released from active duty after 20 years or more of service, and who has not been employed since discharge or release, was deleted.

New Jersey

Disqualification. The State adopted a pension offset provision which conforms to the Federal law.

Ohio

Disqualification. The voluntary leaving disqualification was amended to provide for removal of disqualification if an individual voluntarily quits to accept a recall from a prior employer, or to accept other work. He or she must begin this new job within 7 calendar days, plus earn wages equal to one and one-half times his or her average weekly wage or \$180 in 3 weeks of such work. In addition, a pension offset provision which conforms to the Federal law was adopted.

Oklahoma

Disqualification. A claimant who makes a false misrepresentation to obtain benefits shall be guilty of a misdemeanor and fined \$50, but not more than \$500.

Administration. a waiver of nonfraud overpayments for equity and good conscience was deleted.

Pennsylvania

Coverage. The exclusion from coverage of aliens performing agricultural labor was extended to January 1, 1982.

Benefits. The provision which allowed a claimant with insufficient wage credits to elect to have the base period consist of the four completed calendar quarters preceding the first day of the benefit year was deleted. The step-down provision was reduced from four to three lower levels on the benefit schedule. The duration of benefits was changed from a uniform 30 weeks to a variable period as follows: an individual earning \$50 or more per week for 18 to 23 weeks will collect a maximum of 26 weeks of benefits and someone earning \$50 or more for 24 weeks is eligible for 30 weeks of benefits. The weekly minimum was increased from \$13 to \$35 with wages of \$800 (formerly \$120) in one quarter, and total base period wages of \$1,230 (formerly \$440). The qualifying requirement—that a person with base year wages of less than \$600 must have earned such wages during 18 weeks within his base year—was deleted. A 1-week waiting period was reinstated and is reimbursable after the claimant has been paid benefits equal to four times his weekly benefit amount.

Disqualification. An individual will be disqualified for any week in which he fails to accept an offer of suitable full-time work in order to pursue seasonal or part-time work. However, one will not be disqualified for refusal of suitable work when the offer is made by his employer. Also, he is not required to accept the offer pursuant to terms of a union contract or agreement, or an established employer plan, program, or policy. An eligible claimant shall not be denied unemployment benefits for any week when he is exercising the option of accepting a layoff from an available position (pursuant to a union contract or an established employer plan, program, or policy). Nor will he be denied for voluntarily leaving in lieu of exercising this option. The disqualification applicable to a person who leaves work to accompany a spouse to a new locality or because of a marital, filial, or other domestic circumstance was repealed. The State adopted a pension offset provision which conforms to the Federal law; and any overpayment which occurs as a direct result of a retroactive implementation will be considered nonfault and nonrecoupable and thus, will not be collected.

Financing. The taxable wage base will increase from \$6,000 to \$6,300 for 1980 and 1981, and to \$6,600 for 1982 and thereafter. The maximum contribution rate was raised from 4.0 to 4.75 percent for 1980 and 1981, and to 4.9 percent for 1982 and thereafter. Also, the rate of contribution for newly liable construction employers (until they become experience rated) was upped from 4.0 to 6.5 percent for 1980 and 1981, and 6.6 percent for 1982 and thereafter. The rate of contribution for other newly liable employers was increased from 2.0 to 3.5 percent until they become experience rated. The State adjustment factor for 1980 and 1981 will be 1.75 percent and for 1982 and thereafter, recomputed annually but not to exceed 1.9 percent (formerly 1.7). If the adjustment factor for 1980 and for each year thereafter exceeds 1.7 percent (previously 1.0), such excess over 1.75 percent for 1980 and 1981 and 1.9 percent for 1982 shall be added to the computed factor. Employers whose total benefit costs exceeded their total contributions (negative reserve accounts), and who elected to write off the negative amount and have their reserve accounts adjusted, shall pay contributions for 3 years. These will be at a rate of 4.75 percent (was 4.0) for 1980 and 1981 and 4.9 percent for 1982 and thereafter. Employers who elected in 1978, 1979, or 1980 to have their reserve accounts adjusted will be required to pay contributions of 4.75 percent for 1980 and 1981 and 4.9 percent for 1982 or after. An additional contribution rate was added (excluding new employers) which entitles certain employers with a positive reserve account balance to a reduction in their contribution rate (0.1 to 0.4 percent); and an increase with a negative reserve account balance (0.1 to 0.7 percent), depending on the relationship of the employer's reserve account balance to his or her average annual payroll. Also, an additional contribution was added for employers (except newly liable employers) equal to 1.0 percent of their taxable wages. However, this surcharge can be reduced by up to 0.9 percent if the additional repayment procedure under the Federal Unemployment Tax Act is in effect.

Rhode Island

Coverage. Services performed by an individual under the age of 22 enrolled in a full-time work-study program at a nonprofit or public educational institution (that maintains a faculty and an organized body of students) is excluded from coverage. That is, unless the services are performed in a program established on behalf of the employer.

Disqualification. Voluntarily leaving work with good cause shall include sexual harassment against members of either sex.

South Carolina

Disqualification. It adopted a pension offset provision which conforms to the Federal law.

South Dakota

Disqualification. It adopted a pension offset provision which conforms to the Federal law.

Tennessee

Benefits. The maximum weekly benefit amount was increased from \$100 to \$110 and the minimum from \$14 to \$20. Also, the computation of the weekly benefit amount changed from a

weighted schedule of 1/26 to 1/30 to 1/26 to 1/31.

Disqualification. The requalifying earnings requirement for voluntary leaving increased from five to ten times the weekly benefit amount.

Financing. Two new rate schedules were added to the two schedules already provided. The highest rates, ranging from 0.75 to 4.4 percent, will be in effect when the balance in the trust fund is under \$200 million. The lowest rates, 0.25 to 3.9 percent, will be in effect when the balance is over \$350 million. Formerly, the maximum tax rate was 4.0 percent and the minimum rate 0.3 percent, and the schedule in effect for the year (1 of 2 schedules) depended on whether the balance in the trust fund was below a minimum of \$165 million or exceeded a maximum of \$250 million.

Vermont

Disqualification. It adopted a pension offset provision which conforms to the Federal law.

Virginia

Coverage. The exclusion of aliens performing agricultural labor was extended to January 1, 1982.

Disqualification. Benefits will be denied to nonprofessional school employees between 2 successive academic years if they performed services in the first of the terms or years. And they must have a contract to perform such services in the second academic year or term.

Financing. The maximum contribution rate was increased from 3.2 to 4.5 percent and that for delinquent employers, from 3.2 to 4.5 percent. The rate at which newly covered employers will be taxed advanced from 1.0 to 2.0 percent. A 100 percent emergency adjustment factor was added, which will trigger on at the end of any calendar month, if the trust fund balance falls below \$75 million and the Governor determines the adjustment is necessary. This factor applies to all existing tax rates, and it will remain in effect until the trust fund balance equals or exceeds \$125 million. The general assembly determines the need for continuing, modifying, or deleting the factor.

Administration. The time period for filing an appeal from an initial determination or an appeal tribunal's decision was extended from 14 to 21 days.

Washington

Benefits. The minimum weekly benefit amount will be determined as 15 percent of the average weekly wage for the preceding calendar year.

Disqualification. A pension offset provision which conforms to the Federal law was adopted. Benefits will be denied to school employees during an established vacation or holiday recess, if they performed such services before the vacation or holiday and have a reasonable assurance of performing services afterwards. The between-terms denial will also apply to employees of educational service agencies. □

FOOTNOTE

¹ Alaska, Connecticut, Delaware, Georgia, Hawaii, Idaho, Illinois, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Nebraska,

New Jersey, Ohio, Pennsylvania, South Carolina, South Dakota, Vermont, and Washington.

Productivity trends in the ball and roller bearing industry

During 1958–79, annual productivity increased an average of 2.7 percent, slightly above manufacturing as a whole; increase was linked to the adoption of improved production equipment

JAMES D. YORK AND ELMER S. PERSIGHEL

As measured by output per employee-hour, productivity in the ball and roller bearing industry grew at an average annual rate of 2.7 percent during 1958–79, slightly more than the 2.6 percent rate for all manufacturing.¹ This rise was associated with average annual increases of 3.5 percent in output and 0.8 percent in employee-hours. (See table 1.) The adoption of electronic control equipment to run production machinery, coupled with continuing improvements in this machinery, has also been an important factor in the productivity gains in this industry.

The period of 1958–79 was characterized by rapid productivity growth in the early years, followed by slower growth in later years, and most recently, a drop in 1979. From 1958–66, output per employee-hour increased at an average annual rate of 6.2 percent. Output increased at a rate of 10.6 percent, greatly outpacing that of employee-hours, 4.2 percent. During this period, output growth benefitted from a rapid increase in industrial production. Because a wide variety of industrial products utilize bearings, the growth in manufacturing output meant a rising demand for them.

From 1966 to 1979 productivity growth proceeded more slowly than in earlier years, growing at a rate of 1.6 percent annually. During this period, productivity changes experienced several cyclical swings. Productivity declined from 1966 to 1970 at an average annual rate of 0.9 percent, while output decreased at a rate of 3.4 percent, and employee-hours, 2.5 percent. The decline in output reflected the downturn in the economy during

1970, but as the economy recovered, the demand for ball and roller bearings increased rapidly. Productivity advanced continuously from 1970 to 1974, rising at a high average annual rate of 5.8 percent. Output rose at a rate of 8.6 percent, greatly outpacing that of employee-hours, 2.6 percent.

In 1975, however, industry output declined sharply as a downturn in the economy resulted in decreased consumption of bearings. During 1974–75, output dropped by more than 17 percent, which greatly exceeded the decline in employee-hours, and resulted in a 6.4-percent productivity drop.

Productivity growth was resumed gradually after 1975, increasing by only 1.7 percent in 1976 and 1.3 in 1977. However, in 1978, productivity rose by 4.9 percent, but in 1979, it declined 1.6 percent as output growth (4.0 percent) was exceeded by that of employee-hours (5.7 percent).

Numerous industry markets

Bearings are used to reduce the friction between moving parts of machines or various types of equipment. Because so many different products have moving parts, the overall market for bearings is very diverse. Although no individual segment has been predominant in determining output trends, certain types of machinery and equipment have accounted for major shares of the market.

The most significant market for bearings is the motor vehicle and equipment industry. Nearly two-thirds of the domestic consumption of tapered roller bearings, for example, is accounted for by the automotive and related industries.² From 1958 to 1978, the output of motor ve-

James D. York and Elmer S. Persigehl are economists in the Division of Industry Productivity Studies, Bureau of Labor Statistics.

Table 1. Productivity and related indexes for the ball and roller bearings industry, 1958-79

[1967 = 100]

Year	Output per employee-hour			Output	Employee-hours		
	All employees	Production workers	Nonproduction workers		All employees	Production workers	Nonproduction workers
1958	60.8	61.7	57.3	39.8	65.5	64.5	69.4
1959	76.2	73.8	87.0	62.4	81.9	84.5	71.7
1960	74.7	74.3	76.4	57.2	76.6	77.0	74.9
1961	76.8	77.2	75.3	55.4	72.1	71.8	73.6
1962	83.5	82.8	86.7	66.4	79.5	80.2	76.6
1963	84.9	86.1	80.1	68.4	80.6	79.4	85.4
1964	91.4	91.4	91.3	78.0	85.3	85.3	85.4
1965	103.8	102.7	108.4	95.0	91.5	92.5	87.6
1966	104.0	102.6	109.8	106.6	102.5	103.9	97.1
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	106.1	94.6	99.1	95.7	93.4	104.8
1969	101.3	102.9	95.3	101.8	100.5	98.9	106.8
1970	98.6	102.7	85.1	88.7	90.0	86.4	104.2
1971	102.1	107.7	85.0	80.8	79.1	75.0	95.1
1972	113.7	115.8	106.3	96.0	84.4	82.9	90.3
1973	119.4	119.9	117.0	111.5	93.4	93.0	95.3
1974	121.1	122.0	117.8	113.8	94.0	93.3	96.6
1975	113.4	117.5	99.8	94.2	83.1	80.2	94.4
1976	115.3	118.8	103.7	95.5	82.8	80.4	92.1
1977	116.8	120.7	104.1	101.3	86.7	83.9	97.3
1978	122.6	125.9	111.2	107.4	87.6	85.3	96.6
1979	120.6	121.9	115.6	111.7	92.6	91.6	96.6
Average annual rates of change (in percent)							
1958-79	2.7	2.9	2.0	3.5	0.8	0.6	1.5
1974-79	0.7	0.6	0.7	1.0	0.4	0.4	0.4

hicles and equipment increased at an average annual rate of 5.6 percent and this provided an important source of demand for the output of the bearings industry.

Motor vehicles is not the only transportation related industry which has provided an important end use for bearings. The manufacturers of aircraft, and aircraft engines and equipment consume large quantities of bearings, as does the railroad equipment industry. The current dollar value of bearings purchased in 1977 (the latest year for which data are available) for the production of railroad equipment was nearly nine times the amount purchased in 1958.

The use of bearings in construction machinery has also provided a strong source of demand. Between 1958 and 1977, the value of bearings consumed in the production of construction machinery increased almost seven-fold, reaching nearly \$120 million. Other important markets for bearings include farm machinery and equipment and industrial machinery, such as machine tools.

Rising imports have meant heightened competition for domestic markets. The benefits of large production volume possessed by the largest domestic manufacturers are also enjoyed by some foreign producers. For example, SKF of Sweden, produces approximately 20 percent of the world's bearings (including domestic U.S. operations).³ At least two Japanese companies, Nippon Seiko and NTN Toyo Bearing Company, also have production capacities which rival those of the largest U.S. producers. The market for commodity type bearings (those

used in commercial products such as household appliances) has already been deeply penetrated by foreign producers.⁴ Imports have captured a rising proportion of the domestic bearings market—about 13 percent in 1978.⁵ As imports have increased, some evidence suggests that they are acting as another incentive for domestic producers to continue improving the efficiency of their production facilities.⁶

Employment patterns change

The role of large establishments has diminished from 1958 to 1979, affecting their employment patterns. In 1958, there were 13 establishments with 1,000 employees or more, accounting for 60 percent of the industry's value added. In 1977, the number of this type of establishment dropped to 11, but their share of industry value added had fallen to about 48 percent.

For the period as a whole, employment in the ball and roller bearings industry increased slightly, on an average annual basis, at a rate of 0.6 percent. Employment in 1979 was nearly 59,000 compared with about 44,000 in 1958, with the most rapid growth in the early part of the period. From 1958-66, the average annual rate of increase was 3.3 percent. Employment increased in every year except 1960 and 1961. A large increase, 10.2 percent, took place in 1966, the year which marked the end of the growth trend in industry employment.

During 1966-69, employment remained fairly stable, followed by a decline in subsequent years. Employment decreased at an average annual rate of 0.5 percent from 1969 to 1979. Decreases were recorded in 4 years of this subperiod with the largest decline, 13.4 percent, in 1971.

Nonproduction workers have gradually increased their proportion of total industry employment. During 1958-79, nonproduction workers increased at an average annual rate of 1.4 percent, while production workers increased at a rate of only 0.4. The adoption of improved production equipment has enabled producers to increase output without proportionately increasing production worker employment. However, nonproduction workers have not been as strongly affected by technological advances.

Technology improves

Continual improvements in production equipment have contributed greatly to the industry's productivity gains. Bearings consist of several components—the balls or rollers, the separator which keeps them in place, and an inner and outer ring. The balls (or rollers) are enclosed between the two rings and move within a groove, or raceway, cut into each of the rings. There may also be a seal for the bearing lubricant and some form of handle, or housing, to serve as an attachment.

The balls are given their initial shape in a heading

operation where raw material is forced into header dies. The speed of the ball header equipment has been increasing over the years, aiding productivity. The development and adoption of better die materials has extended the life of the dies used in this operation, helping to reduce downtime.

The excess metal remaining on the balls after the heading operation must be removed by soft grinding. The adoption of meehanite plates has increased grinding speed in this operation, and has also eliminated the need for any secondary grinding.

The production of other components, such as the inner and outer rings, has benefitted from changes in the automatic screw machine, which turns out the basic blanks. Mechanical improvements have been incorporated into this machine; the use of increasingly better materials in the cutting tools has led to greater cutting speeds. Improvements in the cutting oils have also increased cutting speeds and have reduced downtime. Many producers have adopted electronic equipment to control the operation of the automatic screw machine. Without such controls, the operator must periodically test blanks for precise size and then stop the machine to make any necessary adjustments, resulting in lost production. Where electronic equipment is used to control the machine, the necessary adjustments are made in a continuous fashion, thus avoiding periodic shutdowns. The electronic controls themselves have been improved over time, reflected in additional productivity gains.

The cutting performed on the blanks by the automatic screw machine may need to be supplemented by a secondary cutting operation, in which screw holes may be drilled or burrs removed from faulty blanks. Better cutting tools and adoption of electronic controls have aided productivity. More sophisticated machines permit additional cutting operations to be carried on simultaneously.

The various bearing components must be subjected to a heat treatment process to develop the necessary hardness. Great improvements in furnaces have increased efficiency in the heat treating operation. Changes in gas burners and electric elements have permitted temperatures to be raised much faster. Improvements in timing and heat controls have also increased the speed with

which blanks can be heat-treated. The use of atmosphere-controlled, continuous rotary retort furnaces has enabled producers to harden balls on a continuous flow basis, a step up from earlier batch methods.

After heat treatment, the bearing blanks are tempered to remove the stresses and strains from the steel. Tempering furnaces have been improved in many of the same ways as the heat treatment type, further contributing to productivity gains.

The various bearing components must be ground to extremely precise tolerances. The balls, after being soft ground, must undergo a hard grinding operation, which follows heat treatment. Other components such as the inner and outer rings, must also be precision ground. Advancements in ball handling equipment and in much of the grinding equipment have contributed to productivity gains. Qualitative changes in the grinding equipment itself include improved bearings, gearing, and cutting tools.

Improvements in materials handling equipment such as cranes, forklifts, and conveyors have developed over the years. In addition, the adoption of automatic equipment has helped to increase efficiency in the packaging of the bearings for shipment.

Continued productivity gains likely

Increasing competition from foreign producers is likely to spur domestic manufacturers to strive for further production efficiencies.

More widespread adoption of electronic control equipment should be accompanied by continued mechanical improvements in production machinery. Experimentation by several firms with a new ring-roll forming process may lead to a reduction in machine downtime.⁷ This system uses coldforming rather than cutting to make bearing rings.

The current sales boom enjoyed by the industry should mean continued growth in output and possible increases in defense spending could lead to additional output demand. Faced with the prospect of strong markets, some producers have already announced plans for new production facilities. The opening of more modern plants should have a favorable effect on industry productivity. □

FOOTNOTES

¹ The ball and roller bearing industry is composed of establishments primarily engaged in manufacturing ball and roller bearings (including ball or roller bearing pillow blocks, flange, take-up cartridge, and hanger units) and parts. The industry is designated as SIC 3562 in the *Standard Industrial Classification Manual, 1972*. All average annual rates of change are based on the linear least squares trend of the logarithms of the index numbers. Extension of the indexes will appear in the annual BLS Bulletin, *Productivity Indexes for Selected Industries*.

² "Tapered Roller Bearings and Certain Components Thereof From Japan," (U. S. International Trade Commission, January 1975), p. 6.

³ "A Low-Profit Boom for Makers of Bearings," *Business Week*, October 1979, p. 160.

⁴ "A Low-Profit Boom," p. 160.

⁵ *U.S. Industrial Outlook* (U.S. Department of Commerce, 1980), p. 239.

⁶ *U.S.*, p. 166.

⁷ *U.S. Industrial Outlook* (U.S. Department of Commerce, 1979), p. 251.

APPENDIX: Measurement techniques and limitations

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

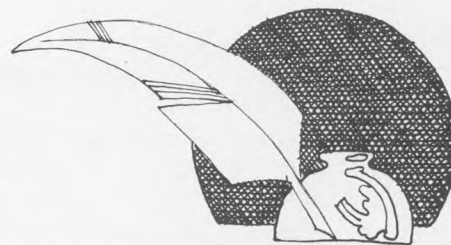
The preferred output index for manufacturing industries would be obtained from data on quantities of the various goods produced by the industry, each weighted (multiplied) by the employee-hours required to produce one unit of each good in some specified base period. Thus, those goods which require more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

In the absence of adequate physical quantity data, the output index for this industry was constructed by a deflated value technique. The value of shipments of the various product classes were adjusted for price changes by appropriate Producer Price Indexes to derive real

output measures. These, in turn, were combined with employee-hour weights to derive the overall output measure. These procedures result in a final output index that is conceptually close to the preferred output measure.

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

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



Do foreign-owned U.S. firms practice unconventional labor relations?

CHARLES R. GREER AND JOHN C. SHEARER

Foreign investment in the United States has grown at a rapid rate during recent years. In 1979, there were 437 new investments compared to 358 in 1978 and 274 in 1977.¹ This growth is due to a number of factors which include a stable political environment, a large market, technical expertise, an alternative to import duties or restrictions, favorable exchange rates, and continued governmental hospitality to foreign investors. The trend is likely to continue.

Increased foreign ownership of U.S. companies raises questions about whether such control produces labor relations practices different from those of domestically owned companies. The limited information available on how foreign-owned U.S. companies approach labor relations has been somewhat contradictory.

Allegedly, some of these companies have demonstrated "disregard for established U.S. labor practices . . ."² The possibility for greater resistance to unions exists, in part, because many foreign-owned U.S. companies are subsidiaries of multinational firms which possess important bargaining advantages, such as the ability to use foreign production to discourage strikes.³ In addition, a recent study of National Labor Relations Board representation elections by the authors reported a slight tendency for foreign-owned companies to obtain greater percentages of votes than domestically owned companies.⁴

Others have found no difference in the labor-relations approaches of foreign-owned and domestically owned companies. A U.S. Department of Commerce study by Michael J. Jedel and Duane Kujawa found that nationality of ownership was generally not a factor on the issue of union recognition, although Japanese-owned U.S. companies were found to exhibit "a decided preference to remain nonunion."⁵ However, they obtained data only from managements of foreign-owned U.S. compa-

nies and from their corporate headquarters, along with the opinions of a few U.S. employees. Nonetheless, it is very possible that unionization may pose no great problem for foreign-owned firms, especially those with European parent companies, because they have been dealing with unions successfully for many years.⁶ To resolve the questions created by this conflicting evidence, we conducted surveys of both foreign-owned U.S. companies and U.S. unions. By comparing company responses with those provided by unions, a more complete assessment of labor relations practices was obtained. Although some issues were analyzed by asking the companies or unions about specific practices, several issues were analyzed in a comparative manner by asking the unions how foreign-owned companies compare to domestically owned companies on such matters. The data were obtained through mail questionnaires.

Survey structure

The survey examined several characteristics of foreign-owned firms which could influence their labor relations practices. The extent to which the parent company becomes involved in the management of its U.S. subsidiaries may be the basis for differing approaches to labor relations issues. Thus, the number of home country nationals assigned to managerial positions in U.S. operations may be a rough gauge of potential differences, and companies were asked to reveal their staffing patterns. Whether the multinational structure of foreign-owned firms influences their approach to U.S. unions was examined by asking about (1) duplicate production facilities overseas, (2) use of foreign production to lessen the impact of U.S. strikes, and (3) use of overseas investment threats or production facility shifts to strengthen their power vis-a-vis the U.S. unions.

Evidence of possible differences in resistance to unionization between U.S. and foreign-owned firms was also sought in questions about union experiences. In addition, union views of foreign-owned U.S. companies' bargaining approaches on fringe benefit and personnel management issues were examined. Medical care may be provided by the governments of some countries, but in the United States, medical insurance is an important fringe benefit subject to negotiation. Other bargaining issues with some U.S. standards are grievance procedures (often culminating in voluntary, private arbitration), layoff procedures, and union security agreements.

Charles R. Greer is associate professor of management and John C. Shearer is professor of economics at Oklahoma State University, Stillwater, Oklahoma. Mary Leonard, a graduate assistant, helped in conducting the survey and analyzing the responses.

The company sample. Major foreign-owned firms were identified in the Department of Commerce publication, *Foreign Investment in the United States, a Report to the Congress*.⁷ Those firms that were at least 50 percent foreign-owned, for which addresses could be found, were sent questionnaires. In cases where the address of a holding company could not be identified, questionnaires were sent to one of its major subsidiaries. The list included 57 companies that were 90 to 100 percent foreign-owned and 18 that were 50 to 89 percent foreign-owned. Of these firms, 68 were sent questionnaires which were addressed to directors of industrial relations by name, other top executives (when the name of the industrial relations director could not be identified), and, finally, when no names could not be identified, simply to directors of industrial relations. To check on the accuracy of the source list, firms were asked to indicate whether they were at least one-half foreign owned; only these were asked to complete the questionnaire.

All of the firms sent questionnaires had 1974 sales of at least \$100 million. There were 12 nationalities of parent companies, predominantly European (47). The most heavily represented nations were the United Kingdom (17), Canada (16), and Germany (9). Other home countries frequently mentioned were the Netherlands/United Kingdom (7), Switzerland (4), and Japan (3). An overwhelming majority of the firms were involved in manufacturing; predominantly in chemicals, metals, pharmaceuticals, electronics, machinery, and petroleum products.

The union sample. National and international unions were identified in the Department of Labor publication, *Register of Reporting Organizations, 1977*.⁸ The elimination of unions not likely to represent employees of foreign-owned firms (such as public-employee unions) and of defunct or merged unions reduced the sample to a total of 141 unions.

The questionnaires were addressed to the highest union official whose name was identifiable. The predominant officials were directors of organizing activity or presidents. In a few cases, secretary/treasurers or vice presidents were the only officials identifiable. In cases where no official could be identified by name, the questionnaires were simply addressed to the director of organizing activity.

Most foreign-owned firms unionized

Of the 68 questionnaires sent to companies, 18 were initially returned, and 13 additional responses were returned in a follow-up survey.⁹ Thus, a total of 31 questionnaires was returned for a response rate of 45.6 percent. Only two responses were from firms with less than one-half foreign ownership, leaving 29 responses for analysis.

Most of the companies (82.1 percent) have experienced NLRB representation elections, and most have a substantial number of their U.S. employees represented by unions. All but one of the respondents had some employees represented by unions, and 79.3 percent reported that at least one-fifth of their employees were unionized. For a majority of companies (55.2 percent), at least 40 percent of their employees were unionized. Most of the respondents (65.5 percent) had conducted U.S. operations for more than 20 years. Thus, the degree of unionization among most of the firms is not surprising.

On the issue of labor dispute settlement, the majority of the companies (53.6 percent) felt that their approach was middle-of-the-road, and most of the remaining firms (28.6 percent) felt that their approach was innovative. Only five companies (17.9 percent) characterized their approach to labor relations as conservative.

As shown in table 1, very few companies staff management jobs exclusively with home-country nationals, although 52.0 percent frequently use such persons as directors of U.S. operations and 50.0 percent frequently assign them in executive positions in U.S. operations headquarters. A large proportion of foreign-owned companies do not use any home-country nationals for managerial positions in their U.S. subsidiaries, although the

Table 1. Use of foreign nationals in management of foreign-owned U.S. firms

Use of home-country nationals	Never		Only during plant start-up		Frequently		Exclusively	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
As directors of U.S. operations	8	32.0	2	8.0	13	52.0	2	8.0
In executive positions in U.S. operations headquarters	10	45.5	0	0	11	50.0	1	4.5
As presidents of U.S. subsidiaries	16	66.7	1	4.2	4	16.7	3	12.5
As vice presidents of U.S. subsidiaries	17	68.0	0	0	8	32.0	0	0
In executive level positions below vice president in U.S. subsidiaries	16	64.0	1	4.0	8	32.0	0	0
In middle management positions in U.S. subsidiaries	13	65.0	2	10.0	5	25.0	0	0
In front-line supervisory positions in U.S. subsidiaries	23	92.0	1	4.0	0	0	1	4.0

NOTE: Significant differences in the distribution of responses occurred at $p < .01$ level for each question, using a two-tailed χ^2 test.

frequency of utilization depends on the level of the position. There is a definite pattern not to use home-country nationals in lower managerial positions.

The number and location of a company's production facilities provide some indication of its potential bargaining power vis-a-vis unions.¹⁰ As shown in table 2, most of the companies (72.4 percent) have facilities overseas which duplicate their U.S. facilities. All but one of these firms denied ever using multinational production to discourage strikes in their U.S. operations. However, seven firms (26.9 percent) reported that they would consider using overseas production to discourage strikes. On the issue of multinational bargaining, the vast majority (81.5 percent) reported that the unions representing their U.S. employees have not cooperated with unions in other countries to strengthen their U.S. positions. Furthermore, the majority (77.8 percent) did not expect their unions to increase multinational cooperative efforts.

Finally, all of the companies indicated that their unions had not attempted to attract more jobs to the United States by moderating wage demands. This contrasts with the United Auto Workers' 1978 bargaining strategy with Volkswagen of America that included a wage package substantially lower than the industry standard.¹¹ Although such a strategy apparently has not been duplicated by other unions, Volkswagen's announcement of a second U.S. assembly plant¹² may encourage both the UAW and other unions concerned with recapturing "exported" U.S. jobs to pursue the advantages of a "wage-concession" strategy.

Some unions report differences

The initial survey of 141 unions produced only 24 responses; however, the follow-up produced an additional 26 responses.¹³ The success of the follow-up survey may

Table 3. Number of unions ranking foreign-owned firms relative to U.S.-owned firms in terms of union representation issues

Item	Greater than U.S.-owned firms	Less than U.S.-owned firms	About the same as U.S.-owned firms
Resistance to organizing drives	15	1	6
Frequency of filing unfair labor practice charges during organizational campaigns	2	1	8
Success rate of unions in winning NLRB representation elections	0	3	9

¹ The total membership of the identifiable unions reporting greater resistance is more than 2,800,000.

have resulted from an enclosed letter which made a plea for union assistance and noted that the response rate from companies had been much higher. Thus, a total of 50 unions responded to the survey for a response rate of 35.5 percent. Unfortunately, only 13 unions (25.5 percent) reported that they had any experience in dealing with foreign-owned companies.

Although the number of responses from unions with foreign-owned company experience was limited, the responding unions represent a substantial number of union members. The identifiable responding unions with such experience have a combined total membership of more than 5,600,000; 6 unions have individual memberships of more than 400,000.¹⁴ Thus, although a limited number of responses was obtained for analysis, these unions represent a substantial proportion of all unionized workers. Table 3 presents data on union perceptions of foreign-owned company approaches to union representation.

Although it is difficult to generalize from these results, most unions apparently view foreign-owned companies the same as domestically owned companies in labor relations matters. In organizing drives, unfair labor practices, and election win ratios, at least 50 percent of the unions found no difference between foreign-owned and U.S.-owned companies. A slight tendency for foreign-owned companies to be more difficult to organize could be reflected by the five unions that reported greater resistance by these companies.¹⁵ A recent study of NLRB elections by the authors provides support for such a tendency. Furthermore, indirect support for such an implication may be provided by the manner in which unions classified the bargaining approaches of foreign-owned companies. Most of the unions (66.7 percent) described the companies' approaches as conservative which could imply some resistance to unionization. The remaining unions classified the companies' approaches as middle-of-the-road, and none of the unions classified such approaches as innovative. As noted, 28.6 percent of the companies felt that their approach was

Table 2. Aspects of bargaining strategies reported by 29 foreign-owned U.S. firms

Bargaining-related issue	Firms reporting agreement		Firms reporting disagreement	
	Number	Percent	Number	Percent
Firm or parent firm has production facilities overseas which duplicate U.S. facilities	21	72.4	8	27.6
Firm has used multinational production to discourage strikes in U.S. facilities	1	3.6	27	96.4
Firm would consider using multinational production to discourage strikes in U.S. facilities	7	26.9	19	73.1
U.S. unions with which firm deals have cooperated with unions in other countries to strengthen their U.S. bargaining position	5	18.5	22	81.5
Unions are expected to increase their efforts to "internationalize" their bargaining strategy with the firm	6	22.2	21	77.8

Table 4. Number of unions reporting on use of multinational bargaining tactics by foreign-owned U.S. firms

Tactic	Firms frequently use tactic	Firms seldom use tactic	Firms never use tactic
Use of foreign production to undercut U.S. union's bargaining position			
Threatened use	0	1	7
Actually used	0	2	4
Use of foreign production to undercut U.S. union's position during a strike			
Threatened use	1	1	5
Actually used	1	1	4
Movement of U.S. production facilities abroad or new investments abroad to strengthen U.S. bargaining position			
Threatened to move, invest abroad	0	2	6
Actually moved, invested abroad	0	2	5

innovative. Unfortunately, it is not known whether the unions' and the companies' definitions of "conservative" and "innovative" are similar or whether most domestically owned firms would have been described as "conservative."

A final indication of differences between U.S. and foreign-owned companies in their approach to union organizing is provided by the open-ended comment portion of the questionnaires. Two large unions had very strong opinions that foreign-owned companies were more difficult to organize. However, two other unions commented that they noted no difference, and a fifth noted, on the basis of hearsay, that there might be a slight pro-union tendency on the part of foreign-owned companies from Western Europe.

The data in table 4 report the tactics which unions encounter when dealing with foreign-owned companies. According to most unions, foreign-owned companies do not use overseas production to bolster their bargaining positions or to soften the impact of U.S. strikes. Nonetheless, at least one union reported companies using each of the tactics on an infrequent basis.

The data in table 5 indicate that on the issues of grievance frequency, arbitration success, and severity of strike tactics at least 70 percent of the unions have not encountered different behavior on the part of foreign-owned companies. Thus, foreign-owned companies apparently do not differ much from domestically owned companies on such issues. However, grievance settlement prior to arbitration, authority to settle grievances locally, amount of local autonomy in negotiations, and difficulty in negotiating the first agreement appeared to be less consistent among foreign-owned firms relative to domestic company practices. Five unions reported that foreign-owned companies have less local authority to settle grievances, and four reported that such firms have less freedom in contract negotiations. But, in each case, a majority of the unions reported that foreign firms

Table 5. Number of unions ranking foreign-owned firms relative to U.S.-owned firms in terms of negotiation and administration

Item	Greater than U.S.-owned firms	Less than U.S.-owned firms	About the same as U.S.-owned firms
Frequency of reported grievances	2	1	8
Willingness to settle grievances prior to arbitration	1	3	7
Authority to settle important grievances locally	3	5	3
Frequency of firm winning in arbitration	0	1	6
Difficulty encountered in negotiating a first collective bargaining agreement	4	1	7
Amount of local autonomy in negotiating agreements	2	4	6
Severity of strike tactics (lockouts, antiunion publicity, and so on)	3	0	7

have as much or more authority than domestically owned firms. Some foreign-owned firms appear more difficult to deal with in the first contract negotiation.

On most bargaining issues (equal employment opportunity, layoffs, layoff allowances, medical benefits, other fringe benefits, support for incomes policies, and linking compensation to productivity), at least two-thirds of the unions indicated that foreign-owned companies do not differ in their approach from domestically owned companies. (See table 6.) On the remaining two bargaining issues, amount of concern over safety and resistance to union security clauses, unions reported some differences from domestically owned company practices.

Table 6. Number of unions ranking foreign-owned firms relative to U.S.-owned firms in terms of their approach to selected bargaining issues

Bargaining approach	Greater than U.S.-owned firms	Less than U.S.-owned firms	About the same as U.S.-owned firms
Concern over workplace safety	2	3	7
Concern over equal employment opportunity	1	2	8
Reluctance to layoff employees	3	1	8
Willingness to provide layoff allowances, supplemental unemployment benefits, or other monetary "cushions" for layoffs	1	1	8
Resistance to union security clauses	4	0	7
Comprehensiveness of medical benefits	0	3	8
Comprehensiveness of benefits (other than medical)	0	3	8
Degree of support for income policies or voluntary wage and price guidelines	4	0	8
Inclination to link compensation to individual productivity	4	0	8

AN IMPORTANT RESULT of our survey is that many—5 of 13—responding unions found foreign-owned companies somewhat more resistant to organization than domestically owned companies. Several unions reported that foreign-owned companies provide more difficulty than domestically owned companies in first contract negotiations, perhaps reflecting the firms' caution in an unfamiliar situation. Foreign-owned companies may have less local authority than domestically owned companies, according to some unions; others reported greater plant autonomy among foreign-owned firms. Thus, other factors such as the home-country experience with unions, firm size, type of industry, age of U.S. operations, and workforce composition may influence the approach of foreign-owned firms to local decisionmaking.

Finally, the unions' responses provide some evidence that there may be a tendency for foreign-owned compa-

nies to be more resistant to union security clauses, more supportive of income policies or voluntary wage and price guidelines, and more inclined to link compensation to individual productivity than domestically owned companies.

In summary, this exploratory survey has found that foreign-owned companies do not differ from domestically owned companies in their approach to most labor relations issues. Nonetheless, there appears to be a slight tendency for some foreign-owned companies to be more difficult to organize than domestically owned companies. Likewise, foreign-owned companies tended to differ on a few bargaining issues. Thus, although the approaches of foreign-owned and domestically owned companies to labor relations are basically similar, there is evidence of some differences which merit further study. □

— FOOTNOTES —

¹ "Foreign Investments Hit High in '79, Group Says," *The Wall Street Journal*, Feb. 5, 1980, p. 8.

² *Foreign Direct Investment in the United States*, Vol 5, Appendix I, Department of Commerce, (Washington, Government Printing Office, 1976), p. i-xiv.

³ Charles Craypo, "Collective Bargaining in the Conglomerate, Multinational Firm: Litton's Shutdown of Royal Typewriter," *Industrial and Labor Relations Review*, October 1975, pp. 3-25. Duane Kujawa, "Collective Bargaining and Labor Relations in Multinational Enterprise: A U.S. Public Policy Perspective," in Robert G. Hawkins, ed., *Research in International Business and Finance: An Annual Compilation of Research*, Vol. 1. (Greenwich, Conn., JAI Press, Inc., 1979), pp. 25-51.

⁴ Charles R. Greer and John C. Shearer, "Foreign Ownership Effects on NLRB Representation Elections," *Journal of International Business Studies*, forthcoming.

⁵ *Foreign Direct Investment* . . . p. I-14.

⁶ "The Continental Challenge," *The Economist*, Feb. 4, 1978, p. 79.

⁷ *Foreign Investment in the United States, a Report to the Congress*, Vol. A, Appendix A, Department of Commerce (Washington, Government Printing Office, 1976).

⁸ *Register of Reporting Organizations, 1977*, Department of Labor, Labor-Management Services Administration (Washington, Government Printing Office, 1977).

⁹ Of the initial company responses, seven were identifiable in some manner. These responding companies were obviously excluded from the follow-up survey. In the follow-up survey the companies were instructed to discard the questionnaire if they had responded to the initial survey.

¹⁰ See, for example, John C. Shearer, "Fact and Fiction Concerning Multinational Labor Relations," *Vanderbilt Journal of Transnational Law*, Winter 1977, pp. 51-82.

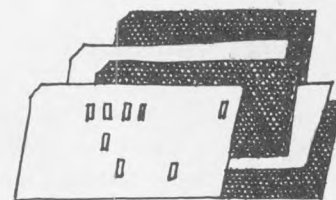
¹¹ John R. Emshwiller, "Strike at VW Disturbs Foreign Auto Makers Weighing U.S. Plants," *The Wall Street Journal*, Oct. 13, 1978, p. 1.

¹² Robert L. Simison, "VW Tentatively Selects Detroit-Area Site for its Second U.S. Auto-Assembly Plant," *The Wall Street Journal*, Feb. 11, 1980, p. 7.

¹³ Of the initial 24 responding unions, only 1 was not identifiable by a request for data or some other manner. Obviously these identifiable unions were excluded from the follow-up. In the follow-up survey, the unions were instructed to discard the questionnaire if they had responded to the initial survey.

¹⁴ *Directory of National Unions and Employee Associations, 1975*, Bulletin 1937, Department of Labor (Washington, Government Printing Office, 1977).

¹⁵ Of the five unions reporting "greater resistance" to unionization among foreign-owned than among domestically owned companies, four represent mainly manufacturing employees.



Occupational segregation and earnings differences by sex

NANCY F. RYTINA

The persistence of a wide male-female earnings differential is well-documented. Through 1978, women who worked full time continued to earn about 60 percent as much as men.¹ Among the various explanations offered to account for these differences, one suggested by a growing body of literature is that occupational sex segregation plays a critical role.² The majority of working women are employed in a small number of occupations which are predominantly female; in both 1969 and 1979, about one-half of all working women were employed in fewer than 30 of the detailed Census occupations (in which 80 percent or more of the employees were women).³ Among the occupations heavily dominated by women are nurses, secretaries, and elementary school teachers. While women have made some progress in entering fields dominated by men, there is little prospect for major changes in the degree of occupational sex segregation through the mid-1980's.⁴

Because earnings are lower, among both men and women, in female than in male-dominated occupations, there has been concern about how the process of occupational sex segregation operates and what bearing it might have on female earnings.⁵ The *operation* of the process is outside the scope of this report which deals with the *outcome* of the process: the relation of occupational sex segregation to the sex-earnings differential, exclusive of a limited number of worker and job characteristics that also affect earnings. Empirical research on occupational sex segregation has not typically taken into account the influence of both worker and job characteristics, thus making it difficult to disentangle the effects on earnings of occupational sex segregation from

factors such as workers' ages, education, and occupational skill or status.⁶

Data and method

The data for this research are cross-tabulations from the 1976 Survey of Income and Education, which is being used as part of a continuing study on occupational sex segregation. The median 1975 annual earnings of men and women in all detailed occupations were listed for workers grouped by age, race, and level of education as approximate indicators of worker characteristics. The percentage of women in each of the occupations was calculated as a measure of occupational sex segregation. In addition, the job characteristic of occupational status is included to take into account variations in earnings between male and female occupations which arise from the concentration of female occupations in the middle of the status hierarchy. Male occupations are more dispersed; they include the highest paying professional occupations, as well as some of the very low paid service and laborer occupations. The Duncan Socio-Economic Index, a widely used measure, indicates the status of each occupation.⁷ These status scores are computed from the median level of education and income of men in detailed occupations and range from a low of 2 to a high of 96. The scores are highly correlated with other measures of status which are based either on women or all workers.

Occupations served as the units of analysis; and correlational techniques were used to examine the association of occupational sex segregation with the sex-earnings differential. Each occupation was weighted by its share of total employment in an age, race, or education category to give less weight to those occupations with few employees.⁸ The results, for the most part, refer to full-time, year-round workers, owing to the availability of only annual earnings in the Survey of Income and Education and the problems that would have been posed because of the higher incidence of part-time employment among women. The survey is particularly useful for occupational research, because its large sample of about 150,000 households permits the analysis of some occupations for which no viable data could be obtained through smaller samples.

Nancy F. Rytina is a demographer in the Office of Current Employment Analysis, Bureau of Labor Statistics. Muriel K. Nelson, of the same office, assisted in the preparation of tables. An earlier version of this study was presented at the annual meeting of the American Statistical Association held in Houston in August 1980.

Findings discussed

Detailed occupations. The data in tables 1 and 2 provide descriptive information on the employment and the ratios of women's earnings to men's (sex-earnings ratios) in occupations ranked by the percentage of employed women. Table 1 highlights the extent to which women are employed in a small number of predominantly female occupations. Of the 419 identified occupations of full-time, year-round workers in 1975, there were 41 in which 90 percent or more of the workers were female. These occupations accounted for 40 percent of all female workers. In contrast, there were 179 occupations in which 90 percent or more of the workers were male. Nearly 50 percent of all men were employed in these occupations.

For each group of occupations in table 1, table 2 lists the 4 to 6 largest occupations within the group and the numbers of men and women employed, the status scores, and the sex-earnings ratios expressed by women's earnings as a percentage of men's earnings. The data indicate that the sex-earnings ratios are generally highest in the occupations which are predominantly female. For example, women's earnings as a percent of men's were 74 percent among waiters and waitresses, a group that was 93 percent female, 70 percent among accountants (32 percent female), 58 percent among bank officers and financial managers (27 percent female), and 41 percent among medical and osteopathic physicians (13 percent female). However, women fared comparatively well in largely public sector occupations regardless of their proportion in these occupations. For example, among postal clerks, men outnumbered women by about 2 to 1 and women earned 98 percent as much as men; the earnings of women were 86 percent as much as those of men in elementary education (84 percent female).

Sex-earnings ratios and correlations. These relationships between occupational sex segregation and earnings are summarized in table 3. The data on the left-hand side

show the average sex-earnings ratio for occupations classified as female-dominated (60 percent or more of the employees were women), male-dominated occupations (20 percent or less of the employees were women), and neutral or mixed occupations (21 to 59 percent of the employees were women).⁹ In comparing the sex-earnings ratios across female, neutral, and male occupations for any race, age, or educational grouping, a higher ratio in female, followed in turn by neutral and male occupations, may be interpreted as a positive association between the percent of women in the occupations and the sex-earnings ratio.¹⁰

In the data on the right-hand side of table 3, each correlation coefficient shows the degree of association between sex-earnings ratios and the percent of women in occupations for those in a particular age, race, or education group. The partial correlation coefficients control for variations in occupational status that might affect the relation of occupational sex segregation to the sex-earnings ratios.

Table 3 illustrates several aspects of the relationship of occupational sex segregation to the sex-earnings ratio. First, among whites and all age and education groups the sex-earnings ratios are generally highest in female occupations and lowest in male occupations. The strength of this pattern is attested to by the positive zero-order correlation coefficients between the percent of women in occupations and the sex-earnings ratios and the positive partial correlation coefficients, which control for occupational status. This can be interpreted to mean that irrespective of age, education, and occupational status, women fare more poorly relative to men in those occupations with the highest rewards—male occupations. To the extent that these factors reflect the influence of worker and job characteristics on earnings, the findings tentatively suggest that occupational sex segregation contributes independently to the gap between women's earnings and men's.

Second, the ratio of black women's earnings to black men's follows an opposite pattern from whites (among full-time, year-round workers), as the earnings for black women were closest to those of black men in male-dominated occupations. Several factors can be identified to help explain this pattern. The black sex-earnings ratio is lower in female-than in male-dominated occupations, possibly as a result of racial differences in employment concentration and earnings within female segregated occupations. Compared to white women, black women in female-dominated occupations are disproportionately employed in lower-paying occupations such as nursing aides, orderlies, and sewers and stitchers. However, in these occupations the earnings of black men were greater than those of black women, as well as those of white men and women. That black men earned substantially less than white men in nearly all other occupations,

Table 1. Employment among full-time, year-round workers in occupations ranked by the percent of women employed, 1975

Percent of women	All occupations		
	Number of occupations	Percent of employed	
		Women	Men
Total	419	100	100
91-100	41	40	1
81-90	15	11	1
71-80	19	10	3
61-70	13	5	2
51-60	18	8	4
41-50	31	6	5
31-40	36	7	8
21-30	29	3	5
11-20	38	7	22
0-10	179	2	49

highlights what may be viewed as a racial dimension of occupational sex segregation. In contrast, the higher sex-earnings ratio in male-dominated occupations may reflect the greater benefits to black women from Equal Employment Opportunity legislation in white-collar occupations. In some of those occupations such as lawyers, public administration officials, and wholesale sales representatives, the earnings of black women were about the same as or exceeded those of black men.

Third, the variability in the sex-earnings ratios within

age and education categories may be used to speculate on trends in the relation of occupational sex segregation to the sex-earnings gap. In terms of age, the high but similar sex-earnings ratios among the age cohort of 25 to 34 years suggests a narrowing of the sex-earnings differential irrespective of occupational sex segregation as successive cohorts of women pass through the life cycle. However, this is not necessarily reason to be optimistic. The lower sex-earnings ratios among the older cohorts, which result from factors such as work discontinuity

Table 2. Sex-earnings ratios of full-time, year-round workers in selected occupations ranked by the percent of women employed

Occupation	Percent of women ¹	Duncan Socio-economic Index	Number of employed workers (in thousands)		Median annual earnings (1975)		Sex-earnings ratio (women/men)
			Men	Women	Men	Women	
Kindergarten and prekindergarten teachers	99	72	(²)	49	(²)	\$ 9,348	(²)
Secretaries, n.e.c.	99	61	(²)	1,655	(²)	8,070	(²)
Waiters/waitresses	93	16	35	169	\$ 6,027	4,441	.74
Bookkeepers	92	51	95	685	12,300	7,455	.61
Cashiers	91	44	39	239	10,553	5,973	.57
Hairdressers and cosmetologists	91	17	32	139	9,704	5,114	.53
Nursing aides, orderlies, attendants	88	14	67	362	8,268	6,002	.73
Stenographers	88	61	(²)	56	(²)	9,408	(²)
Elementary school teachers	84	72	120	419	12,243	10,545	.86
Food service workers, n.e.c. except private household	84	11	33	82	7,897	5,398	.68
Miscellaneous clerical workers	82	44	93	333	10,220	7,710	.75
Sales clerks, retail trade	76	39	248	346	10,182	5,147	.51
Payroll and timekeeping clerks	73	44	48	98	13,028	8,309	.64
Counter clerks, except food	74	44	45	89	11,036	6,088	.55
Statistical clerks	73	44	56	134	13,127	8,075	.62
Housekeepers, except private household	71	31	(²)	86	(²)	7,243	(²)
Packers and wrappers, except meat and produce	68	18	119	171	8,775	6,885	.78
Therapists	67	60	39	61	12,508	10,898	.87
Knitters, loopers, toppers	66	02	(²)	(²)	(²)	(²)	(²)
Building interior cleaners, n.e.c.	65	09	148	172	8,021	5,628	.70
Office managers, n.e.c.	64	62	99	160	14,542	9,306	.64
Social workers	59	64	102	121	12,602	10,947	.87
Assemblers	54	17	256	235	10,497	7,019	.67
Checkers, examiners, inspectors, manufacturing	51	23	248	192	11,964	7,353	.61
Secondary school teachers	51	70	344	225	13,255	11,280	.85
Computer and peripheral equipment operators	50	45	99	80	11,450	8,358	.73
Painters and sculptors	47	67	45	27	14,348	7,772	.54
Real estate agents and brokers	46	62	181	64	15,261	8,179	.54
Personnel and labor relations workers	44	84	168	111	17,875	10,574	.59
Bartenders	42	19	80	33	7,278	4,923	.68
Insurance adjusters, examiners, investigators	40	62	65	39	13,661	8,069	.59
Sales managers and department heads, retail	38	71	178	84	14,617	7,164	.49
Accountants	32	77	512	165	15,218	10,617	.70
Machine operatives, miscellaneous specified	32	19	524	168	11,208	6,528	.58
Postal clerks	31	45	150	42	13,637	13,387	.98
School administrators, elementary and secondary	30	72	151	47	19,144	13,350	.70
Expeditors and production controllers	29	44	110	39	13,537	8,693	.64
Farm laborers, (wage workers)	28	22	253	24	6,083	4,067	.67
Bank officers and financial managers	27	80	363	115	16,567	9,686	.58
Computer programmers	21	65	128	25	15,150	12,785	.84
Janitors and sextons	18	13	556	662	8,349	6,902	.83
Insurance agents, brokers, underwriters	15	66	326	50	14,947	8,758	.59
Managers and administrators, n.e.c.	15	62	3,742	514	16,657	8,445	.51
Medical and osteopathic physicians	13	92	244	34	35,960	14,893	.41
Freight and material handlers	11	09	274	29	10,169	6,873	.68
Blue-collar work supervisors, n.e.c.	10	50	1,174	99	14,297	7,832	.55
Lawyers	10	92	266	(²)	24,964	(²)	(²)
Farmers (owners and tenants)	08	14	831	40	8,020	1,869	.23
Industrial engineers	03	86	179	(²)	17,948	(²)	(²)
Dentists	02	96	63	(²)	31,329	(²)	(²)
Automobile mechanics	01	19	554	(²)	10,488	(²)	(²)

¹ Refers to all workers.

² Figures not shown where less than approximately 60 sample cases.

Table 3. Sex-earnings ratio (female/male) by categories of occupational sex segregation (percent of women in occupations) for selected demographic groups

Demographic group	Sex-earnings ratio ¹				Correlation coefficients ²	
	Categories of occupational sex segregation (percent of women in occupations)				Sex-earnings ratio and percent of women in occupations	
	Total	Male occupations ≤ 20 percent female	Neutral occupations 21–59 percent female	Female occupations ≥ 60 percent female	Zero-order	Partial controlling for occupational status
All workers, total .....	.55	.50	.55	.62	.2187	.2206
Race:						
White .....	.53	.49	.54	.57	.1897	.1926
Black .....	.81	.77	.66	.92	(³)	(³)
Full-time, year-round workers, total .....	.65	.62	.66	.70	.2324	.2385
Race:						
White .....	.64	.60	.65	.68	.2024	.2089
Black .....	.82	.86	.79	.81	(³)	(³)
Education (years completed):						
Less than 12 .....	.65	.60	.65	.74	.2250	.2170 ⁴
12–15 .....	.65	.62	.65	.71	.2558	.2560
16 or more .....	.71	.63	.78	.77	.2852	.3261
Age (in years):						
25–34 .....	.74	.73	.73	.75	(³)	(³)
35–44 .....	.60	.55	.64	.65	.2349	.2578
45–54 .....	.64	.55	.65	.76	.2214	.2181
55–64 .....	.61	.54	.62	.68	.2937	.2756

¹ Ratio of median female to male 1975 annual earnings weighted by occupational size for given demographic characteristic.

² Significant at .01 level unless otherwise noted.

³ Refers to correlations which are not significant at the .05 level.

⁴ Significant at .05 level.

and discrimination will presumably have some effect on the earnings of the younger cohort as it ages.

With respect to education, the sex-earnings ratios are lower in male-than female-dominated occupations at all levels of education. This suggests that the advances in educational attainment of women have not yet had much impact in increasing their earnings opportunities in the more highly paid, male-dominated occupations. However, these issues require a more detailed investigation.

Study conclusions

In using occupations as the units of analysis, the findings indicated that the percentage of women in detailed occupations was positively related to the male-female earnings differential. That is, when women made up only a small proportion of the workers in an occupation, their earnings were much lower than those of their male counterparts. Only in the heavily dominated and comparatively low-paying, female-dominated occupations did the earnings of women even come close to those of men. While the data for blacks was an exception to these patterns and warrants additional examination, the relationships generally held, regardless of occupational status, even when full-time, year-round workers were disaggregated into various categories in terms of age and education. These controls for worker and job characteristics are crude and further research will take into account more of the factors that might affect the relationship of occupational sex segregation to earnings. However, the findings presented here support the notion that occupational sex segregation has a

negative impact on female earnings, thereby contributing to the persistence of male and female earnings differentials. □

FOOTNOTES

¹ Janice N. Hedges and Earl F. Mellor, "Weekly and hourly earnings of U.S. workers, 1967–78," *Monthly Labor Review*, August 1979, pp. 31–41. Their data show that the earnings of women fluctuated around 60 percent of those of men through the period 1967–78. Current Population Survey data for the first quarter of 1980 show that women employed full time earned 63 percent as much as men. This inconclusively suggests a trend toward improvement in the relative earnings of women.

² Valerie K. Oppenheimer, *The Female Labor Force in the United States*, Population Monograph No. 5 (Berkeley, University of California Press, 1970), Donald J. Treiman and Kermit Terrell, "Women, Work and Wages—Trends in the Female Occupational Structure Since 1940," in Kenneth C. Land and Seymour Spilerman, eds., *Social Indicator Models* (N.Y. Russell Sage, 1975) pp. 157–199.

³ For 1969 data, see Francine Blau, "Women's Place in the Labor Market," *American Economic Review*, May 1972, pp. 161–166. The 1979 figure was calculated from the annual average data in *Employment and Earnings*, January 1980, table 23.

⁴ Francine D. Blau and Wallace D. Hendricks, "Occupational Segregation by Sex: Trends and Prospects," *Journal of Human Resources*, spring 1979, pp. 197–210.

⁵ Briefly, it has been suggested that women select employment in female-dominated occupations which permit work discontinuity but at the expense of the specialized training and work experience which tend to be required in the more highly paid, male occupations. In addition, barriers in the form of stereotyping on the part of employers and outright discrimination prevent the entry of women into the more highly paid, male jobs and restrict them to employment in typical female jobs. Explanations of the lower earnings in female occupations range from the "crowding" of women into few jobs to the fact that female occupations are typically in the lower-paying secondary sector of employment, while male occupations are more commonly in the high-paying primary sector. For discussions of these issues see Oppenheimer, *The Female Labor Force*; Francine Blau and Carol Jusenius,

"Economists' Approaches to Sex Segregation in the Labor Market: An Appraisal," *Signs*, Spring 1976 Supplement, pp. 181-199, Francine Blau, "Women's Place," and Steven D. McLaughlin, "Occupational Sex Identification and the Assessment of Male and Female Earnings Inequality," *American Sociological Review*, December 1978, pp. 909-921.

⁶ For exceptions see, Andrea H. Beller, "Occupational Segregation by Sex: Determinants and Changes," paper presented at the Annual Meeting of the Population Association of America, (Denver, Colorado, April 1980) and Teresa Amott, "Mechanisms of Occupational Segregation: Some New Empirical Evidence," paper presented at the Eastern Economic Association Meetings (Montreal, Canada, May 1980).

⁷ Otis Dudley Duncan, "A Socioeconomic Index of all Occupations," in Albert Reiss, ed., *Occupations and Social Status* (N.Y., Free Press, 1961), pp. 139-161. This study uses the index recomputed for 1970 Census detailed occupations from David L. Featherman, Michael Sobel, and Peter Dickens, "A Manual for Coding Occupations and Industries into Detailed Socioeconomic and NORC Prestige Scores," Working Paper 75-1 (University of Wisconsin—Madison Center for Demography and Ecology, 1975).

⁸ In computing the weights, some of the race, age, and education groups had occupations without observations, for example, there were no medical and osteopathic physicians with less than 12 years of education.

In addition, occupations with fewer than 2,000 employees of either sex were excluded. These excluded occupations were based on at most two or three observations and tended to have extreme sex-earnings ratios, for example, less than .20 or greater than 1.50. This procedure excludes at most 10 percent of all workers with earnings in 1975.

Hence the weights are based on the number of persons employed in the following number of occupations for each demographic group:

	<i>Number of occupations</i>
All workers	277
Race:	
White	270
Black	129
Full-time, year-round workers	234
Race:	
White	227
Black	95
Education:	
Less than 12 years	124
12-15 years	187
16 years or more	106
Age:	
25-34	172
35-44	151
45-54	146
55-64	107

⁹ Categories of female, male, and neutral occupations have typically been defined by selecting an arbitrary percentage point spread of 5, 10, 15, or 20 points around the female proportion of total employment. See, for example, Carol L. Jusenius, "Occupational Change, 1967-71," Chapter 2 in *Dual Careers: Longitudinal Study of Labor Market Experience of Women*, Vol. 3 (Columbus, Center for Human Resource Research, 1975), and McLaughlin, "Occupational Sex Identification."

While these researchers both used a 10-percentage-point spread, this study uses the more stringent 20 percentage points to define the limits of male and female occupations. Given that 39.9 percent of the work force was female in 1975, this results in the following categories of occupational sex segregation: female occupations (40+20) or 60 percent or more female, male occupations (40-20) or 20 percent or less female, neutral occupations form the remainder or 21 to 59 percent female.

¹⁰ Age may be viewed as a very rough proxy for work experience, because direct measures of work history are not available from the Survey of Income and Education and indirect measures—such as age minus years of education minus 6—were not calculated for this research.

Wives' earnings as a factor in family net worth accumulation

ANN C. FOSTER

Over the last decade, the dramatic increase in the proportion of married women who are in the labor force has had a profound impact on both the family and the economy. By March 1979, the labor force participation rate of married women was 49.4 percent—up nearly 9 percentage points since 1970.¹ The earnings of wives often allow their families to enjoy a higher level of living than that provided by husbands' earnings alone. In 1978, for example, median income among families in which both husband and wife were employed was \$22,109, compared with the \$15,796 reported for families of wives who did not work outside the home.² In many cases, the additional earnings have lessened the inroads that inflation has made on family purchasing power.³

Previous research⁴ has shown that wives' labor force participation tends to be higher when husbands' income is relatively low, indicating that economic need is a major influence on wives' employment. Although labor force participation is still greater among wives of men at the lowest earnings levels, the largest increase in recent years has been among those whose husbands are in the upper earnings ranges.⁵ There is evidence that income distribution between working-wife and nonworking-wife families has become more unequal over the years,⁶ and increased labor force participation among wives of high earners could further widen the differential.

Of particular interest to many concerned with the effects of married women's employment is whether the pattern of consumption and saving in a family in which the wife works differs from that in a family in which the same amount of money is earned by the husband alone. This question is significant because the family's allocation of its human and material resources affects its economic well-being and ultimately its quality of life.

The purpose of this study is to explore the relationship between a wife's earnings and family net worth accumulation. Do working-wife and nonworking-wife families have comparable net worth, given similar composition and income, and to what extent do earnings affect net worth? Because the labor force participation rate of married women is predicted to increase, the relationship between a wife's earnings and net worth accumulation should be clarified.

Ann C. Foster is an assistant professor of consumer affairs at Auburn University, Auburn, Alabama.

Theoretical background

A wife's employment is not without cost. Part of her earnings may have to be used to purchase goods and services she formerly provided at home, such as cooking and child care. An additional portion may also be claimed by transportation and other job-related expenditures. These factors may account for previous findings that, other things being equal, working-wife families have higher consumption-to-income ratios than non-working-wife families.⁷

Family goals also greatly influence the use of financial resources. Among these goals is improvement in the level of living—the quantity and quality of goods and services consumed. Another goal is financial security, or the assurance that resources will be available to meet future needs. During a particular period, a family may use its total current income to meet consumption needs and enhance its level of living, or it may choose to save some of this income to increase net worth and financial security. Similarly, assets may be liquidated and the proceeds used to increase or maintain current consumption, or they may be held in reserve to provide for financial security.

Methodology

Data underlying this study of the impact of wives' earnings are from the 1967 and 1972 National Longitudinal Surveys of Labor Market Experience, conducted by the Ohio State University Center for Human Resources Research under contract to the U.S. Department of Labor, and relate to the cohort of mature women (age 30 to 44) in mid-1967.⁸ The initial multi-stage probability sample of 5,083 women was drawn by the Census Bureau in 235 areas of the United States to represent the Nation's noninstitutionalized mature female population at the time of data reference.⁹ For purposes of this study, that sample was further refined to include only those respondents who were married for the first time prior to 1967 and who resided with their husbands during the 1967–72 period. In addition, each respondent must have provided information on all characteristics of interest in this research. Despite these eligibility criteria, the net sample size of 807 is quite large compared with those used in other studies of the allocation of family financial resources.

It should be noted here that economic and social changes took place after this sample was drawn which might significantly alter the results of the following analysis. For example, the sharp increase in married women's labor force participation over the last decade probably reflects a different mix of reasons why women work. At the same time, inflationary pressures may have considerably changed the distribution of family income between current consumption and net worth accu-

mulation. And finally, the appreciation of housing since 1967 would make homeownership a much more important factor in explaining the stock of and change in family net worth.

Dependent variables

In the cross-sectional analyses of the relationship between wife's earnings and family net worth, the dependent variable of interest was family net worth in 1967 and 1972. Data for 2 years were analyzed because of the recent changes in the social and economic roles of American women. As previously indicated, intervening events during the period covered by the study could mean that variation in 1972 net worth was the result of factors different from those affecting 1967 net worth.

Net worth was determined by subtracting a family's total liabilities from its total assets. Assets used in the computation of net worth were:

- Savings and checking accounts
- U.S. savings bonds
- Stocks, bonds, and mutual funds
- Home
- Farm
- Business
- Other real estate

The value of savings and checking accounts was the dollar amount on deposit at the time of the interview, while face value was used in determining the worth of U.S. savings bonds. For remaining assets, current market value was used to assess worth. Liabilities used in the computation included obligations, such as mortgages and back taxes, connected with the ownership of home, farm, business, or other real estate, as well as debt for other goods and services.

In the longitudinal analysis of the effect of wife's earnings on net worth change, the dependent variable of interest—dollar change in family net worth during the 1967–72 period—was computed by subtracting 1967 net worth from 1972 net worth.

Independent variables

The following independent variables were included in the cross-sectional analyses:

- Respondent's earnings
- Family income
- Respondent's occupation, current or last job
- Respondent's age
- Respondent's race
- Respondent's education
- Number of family members
- Number of years married
- Homeownership status
- Number of durables purchased in previous year

In addition, the "employment-to-marriage" ratio was included in the 1967 analysis. This ratio consisted of

the number of years in which a respondent worked 6 months or more between marriage and 1967, divided by the number of years married.¹⁰

Respondent's earnings the major independent variable of interest, was the total of her pretax earnings in the calendar year prior to the survey from wages, salaries, commissions, tips, or operation of her own business. Family income was the total pretax income received from all sources over the same period. In addition to earnings of all family members, these sources included interest, dividends, rent, and social insurance and public assistance payments. Except for homeownership status and race, all independent variables were treated as continuous variables. Homeownership status was a dichotomous variable; nonhomeowners were coded 0, and homeowners, 1. Race was treated as a set of dummy variables based on the categories white, black, and "other"; the latter category was the reference category embodied in the regression constant.

Independent variables employed in the longitudinal analysis of change in net worth were:

- Respondent's earnings (1966)
- Change in respondent's earnings (1966-1971)
- Number of weeks respondent worked between 1967 and 1972 surveys
- Family income (1966)
- Change in family income (1966-1971)
- Net worth (1967)
- Respondent's age (1967)
- Respondent's education (1967)
- Respondent's race
- Number of family members (1967)
- Change in number of family members (1967-1972)
- Change in homeownership status (1967-1972)

Change in homeownership status was a set of dummy variables based on the following categories: (1) non-homeowner 1967 and 1972, (2) nonhomeowner 1967—homeowner 1972, (3) homeowner 1967 and 1972, and (4) homeowner 1967—nonhomeowner 1972. The latter category was the reference category. Except for race, which employed the same measurement used in the cross-sectional analyses, the remaining independent variables were treated as continuous variables.

Multiple regression model

In each analysis, independent variables were entered into an initial stepwise multiple regression model which was then refined to include only those variables which would collectively have the greatest impact on net worth or change in net worth. An independent variable was left in the final model if it explained at least 1 percent of total variance in the dependent variable or if it had a zero-order correlation coefficient of $\pm .25$, indicating a moderate degree of association with the dependent variable. A variable was also included in the final model if mandated by conceptual considerations, as in the case

of respondent's earnings. To facilitate comparisons between the two cross-sectional analyses, variables which met any criterion in one analysis were automatically included in the other.

Results of cross-sectional analyses

The final multiple regression model explained 29.7 percent of total variance in 1967 net worth and 25.5 percent in 1972. As tables 1 and 2 show, the relative importance of factors influencing net worth varied somewhat between the 2 years. In both analyses, family income made by far the greatest contribution to explained difference in net worth, although the variable's contribution was substantially less in 1972 than in 1967. B values indicate that for each additional dollar of family income, net worth was \$1.98 higher in 1967 and \$1.51 higher in 1972. It should be noted that a family's net worth at any time is, in large measure, a result of past saving behavior. Current income may be influential because it reflects a relatively high past income which allowed saving to occur and thus, net worth to increase.

Although much smaller than that of family income, the second greatest contribution to total variance in both analyses was made by homeownership status. The amount contributed to explained variance by this variable was greater in the 1972 study. Families who were homeowners in 1967 had net worth positions \$5,914 higher than nonhomeowners, but in 1972, homeownership was associated with an \$11,227 differential.

Respondent's earnings were not significant in explaining variance in 1967 net worth. The moderately high zero-order correlation coefficient of .23, however,

Table 1. Multiple regression of selected variables on 1967 net worth

[Sample size=807]

Independent variables	Coefficient of determination ¹ (R ²)	Variable contribution to final coefficient of determination (ΔR^2)	Coefficient of correlation (r)	² b
Family income . . . . .	.274	. . . . .	.52	³ 1.98 (0.15)
Respondent's earnings . . . . .	.276	.002	.23	-.026 (0.23)
Respondent's education . . . . .	.276	. . . . .	.22	-112.91 (219.75)
Homeownership status	.296	.020	.27	³ 5,913.76 (1,253.51)
Race—white . . . . .	.297	.001	.19	-3,563.36 (3,411.93)
Race—black			-.22	-3,292.08 (3,571.99)

¹ Each entry represents the contribution to the ratio of explained variation to total variation in net worth made by the associated variable and those variables which precede it.

² Partial regression coefficient, in dollars. Each b value indicates how much a one-unit change in the independent variable affects net worth when the effects of other independent variables in the multiple regression model are controlled. Standard error of the estimate is shown in parentheses.

³ Significant at the .01 level.

Table 2. Multiple regression of selected variables on 1972 net worth

[Sample size=807]

Independent variables	Coefficient of determination ¹ (R ²)	Variable contribution to coefficient of determination (ΔR ²)	Coefficient of correlation (r)	b ²
Family income . . . . .	.196	. . .	.44	³ 1.51 (0.15)
Respondent's earnings . . . . .	.209	.013	.11	³ -1.09 (0.29)
Respondent's education . . . . .	.218	.009	.26	⁴ 709.66 (337.06)
Homeownership status . . . . .	.247	.029	.28	³ 11,226.90 (2,101.83)
Race—white . . . . .	.255	.008	.25	-8,186.60 (5,101.72)
Race—black			-.28	⁴ -12,923.94 (5,323.97)

¹ Each entry represents the contribution to the ratio of explained variation to total variation in net worth made by the associated variable and those variables which precede it.

² Partial regression coefficient, in dollars. Each b value indicates how much a one-unit change in the independent variable affects net worth when the effects of other independent variables in the multiple regression model are controlled. Standard error of the estimate is shown in parentheses.

³ Significant at the .01 level.

⁴ Significant at the .05 level.

indicates that net worth, in the absence of other factors, was greater among working-wife families. A fairly high degree of association found between respondent's earnings and family income ($r = .51$) suggests that the effect of the former variable may have been indirect. It was determined that without a respondent's earnings, total income among working-wife families would have been substantially below that of nonworking-wife families in both 1966 and 1971. The fact that a working wife's contribution increased family income substantially appears to have had an important influence on net worth position in 1967. It seems that the amount, not the source, of family income was relevant in determining the level of net worth.

In 1972, however, respondent's earnings did make a statistically significant contribution to total variance in net worth. Although there was a slight positive zero-order correlation between respondent's income and net worth, when other factors were held constant, there was a weak negative association. For each additional dollar earned by a respondent in 1971, net worth in 1972 was lower by \$1.09. As in the previous analysis, it appears that the influence of a wife's earnings was indirect, increasing the financial resources available for strengthening net worth position.

The negative relationship is not inconsistent. Given two families of equal income and composition, a lower saving-to-income ratio, and thus lower net worth, would be expected in the family in which a wife earns a portion of this income. One explanation for the lower saving-to-income ratio is increased job-related expenditures and more frequent substitution of market goods and services for household production. These factors

would reduce discretionary income available for saving, relative to that of a nonworking-wife family. Another explanation is that the economic hazards of unemployment, death, and disability would be less in a family with more than one earner. Therefore, a working-wife family may feel less need to increase its financial security.

Factors influencing net worth change

The greatest influence on net worth change was exerted by the family income variables. As table 3 illustrates, both dollar change in family income and 1966 family income were positively associated with the dependent variable. It would appear that, among these families, the goal of financial security was sufficiently strong for at least a portion of any income increase to be allocated to net worth accumulation. Because 1966 family income had a fairly high zero-order correlation ($r = .52$) with 1967 net worth, its influence on net worth change may have been due to its being a proxy for initial net worth. Other factors being equal, families with high levels of income in 1966 probably experienced increased net worth accumulation relative to those at

Table 3. Multiple regression of selected variables on dollar change in net worth, 1967-72

[Sample size=807]

Independent variables	Coefficient of determination (R ²) ¹	Variable contribution to final coefficient of determination (ΔR ²)	Coefficient of correlation (r)	b ²
Change in family income, 1966-77 . . . . .	.039	. . .	.20	0.74 ³ (0.13)
Family income in 1966 . . . . .	.069	.030	.17	0.63 ³ (0.16)
Change in homeownership status:				
Nonhomeowner in 1967 and 1972			-.18	1,961.11 (3,824.66)
Nonhomeowner in 1967, homeowner in 1972 . . . . .	.089	.019	-.01	6,930.07 ⁴ (3,917.87)
Homeowner in 1967 and 1972 . . . . .			.17	8,219.29 ³ (3,592.01)
Change in respondent's earnings, 1967-72 . . . . .	.091	.002	.02	-0.71 ³ (0.31)
Total weeks worked . . . . .	.092	.001	.05	14.21 (8.49)
Respondent's earnings in 1966 . . . . .	.095	.003	.07	-0.62 (0.37)

¹ Each entry represents the contribution to the ratio of explained variation to total variation in net worth made by the associated variable and those variables which precede it.

² Partial regression coefficient, in dollars. Each b value indicates how much a one-unit change in the independent variable affects net worth when the effects of other independent variables in the multiple regression model are controlled. Standard error of the estimate is shown in parentheses.

³ Significant at the .01 level.

⁴ Significant at the .05 level.

lower levels because of subsequent appreciation of assets which comprised 1967 net worth.

Homeownership also had a positive influence on the dependent variable. Families who were homeowners in both 1967 and 1972 or who became homeowners by 1972 experienced increased net worth compared to families who were homeowners in 1967 only.

Of the remaining variables, only change in respondent's earnings was significant in explaining net worth change. Controlling for the effects of other factors uncovered a negative association; for each additional dollar increase in respondent's earnings change in net worth was \$.71 less. These findings indicate that in two families experiencing similar income increases, net worth accumulation was lower in the family in which the wife's earnings accounted for part of this change than in the family in which the wife made no monetary contribution. Again, factors such as increased job-related expenditures, substitution of market goods and services for household production, or preference for improvement in standard of living over financial security in working-wife families could account for these findings. It should be noted that change in respondent's earnings and change in family income had a moderately strong positive zero-order association ($r = .38$). This finding would indicate that by increasing the level of family income available for saving, change in respondent's earnings may have had an indirect positive influence on change in net worth.

Implications

Findings clearly indicate that the absolute amount of family income, rather than its sources, was the most important factor in determining the extent of net worth accumulation among sample families. Without a wife's earnings, however, income among working-wife families would have been appreciably lower than that of nonworking-wife families. Thus, a wife's earnings were important because they increased the family income available for transformation into both an improved level of living and increased financial security.

As noted earlier, the trend toward increased labor force participation among women whose husbands are at the highest earnings levels could increase the income inequality between working-wife and nonworking-wife families. Although they would have more time available for household production and leisure than working-wife families, this increased income inequality would most likely be reflected in a lower level of living among nonworking-wife families. Research findings of a positive association between level of family income and net worth accumulation suggest that, in the future, working-wife families should also have more favorable net worth positions and increased financial security compared to nonworking-wife families.

FOOTNOTES

¹ Beverly L. Johnson, "Marital and family characteristics of the labor force, March 1979," *Monthly Labor Review*, April 1980, p. 48.

² *Money Income of Families and Persons in the United States: 1978*, Current Population Reports, Consumer Income, Series P-60, No. 123 (Bureau of the Census 1980), p. 6.

³ See, for example, Howard Hayghe, "Families and the rise of working wives—an overview," *Monthly Labor Review*, May 1976, p. 18.

⁴ This relationship has been uncovered in a number of studies. For example, see William C. Bowen and T. Aldrich Finegan, *The Economics of Labor Force Participation* (Princeton University Press, 1969); Glen C. Cain, *Married Women in the Labor Force: An Economic Analysis* (University of Chicago Press, 1966); and Jacob Mincer, "Labor force participation of married women: A study of labor supply," in National Bureau of Economic Research, ed., *Aspects of Labor Economics* (Princeton University Press, 1962).

⁵ Paul Ryscavage, "More wives in the labor force have husbands with 'above-average' incomes," *Monthly Labor Review*, June 1979, pp. 40-42.

⁶ Dong W. Cho, "Working women and family income distribution," *The Collegiate Forum*, Winter 1979, p. 5.

⁷ Myra H. Strober, "Wives' labor force behavior and family consumption patterns," *American Economic Review*, February 1977, pp. 410-17.

⁸ Previous research in this area includes "Survey of financial characteristics of consumers," *Federal Reserve Bulletin*, March 1964, pp. 285-92; Ruth E. Deacon and Janet A. Krofta, *Economic Progress of Rural Nonfarm and Part-time Farm Families*, Research Bulletin 1976 (Wooster, Ohio, Agricultural Research and Development Center, December 1965); Flora L. Williams and Sarah L. Manning, "Net worth change of selected families," *Home Economics Research Journal*, December 1972, pp. 104-13; Rosemary Walker, *Wife's Hours of Market Work Related to Family Saving Behavior*, Ph.D. dissertation (Purdue University, 1978); and Colien Hefferan, "Saving behavior in multiple earner families," in *Proceedings 25th Annual Conference of the American Council on Consumer Interests* (Columbia, Mo., American Council on Consumer Interests, 1979), pp. 177-78.

⁹ For a more detailed description see, *The National Longitudinal Surveys Handbook* (Columbus, Ohio State University, Center for Human Resources, 1976).

¹⁰ This variable was not used in the 1972 analysis because data on the number of years in which a respondent worked 6 months or more between 1967 and 1972 were unavailable.

Occupational earnings in appliance repair facilities

Pay levels for full-time repairers of major electrical appliances typically ranged from \$6 to \$8 an hour, according to a November 1978 BLS survey of 19 metropolitan areas.¹ In every area where comparisons were possible (except Washington, D.C.), electrical appliance technicians—those servicing white goods such as refrigerators and washers—had higher pay averages than their TV-radio (brown goods) counterparts. The typical pay spread was 5 to 15 percent (see table 1.) In the limited instances where both worked in the same repair facility, brown-goods technicians were commonly paid as much as or more than white-goods repairers. The higher average earnings for the latter, therefore, are partly attributable to a larger proportion of the electri-

cal appliance repairers being in higher paying establishments than TV-radio technicians.

In contrast to job averages, individual earnings varied widely within the same job classification and geographic area. For example, the hourly earnings of the highest paid worker exceeded those of the lowest paid in each classification and area by at least \$4.50 in all 19 areas; in many instances, the spread reached \$8 or more. Varied earnings primarily result from the predominant methods of pay for repairers—ranges of rates that take into account length of service and informal plans where-in rates are based chiefly on the qualifications of the individual workers.

In the 19 areas combined, about one-tenth of all TV-radio and white-goods technicians received some form of commissions for the sale of maintenance contracts, parts or appliances, in addition to their straight-time earnings. In about seven-tenths of the areas, the proportion of these commissions to straight-time earnings plus commissions commonly averaged under 10 percent. The pay advantage of workers with commissions over those without was more evident for brown-goods than for white-goods repairers. For the latter, the pay edge went to workers without commissions in one-half of the areas compared.

In addition to the employment in the selected occupations at the time of the survey, the study also measured the number of job openings for which firms were actively trying to recruit workers.² For full-time, TV-radio technicians, the job vacancy rate was 3 percent in the

19 areas combined; for their apprentices, the rate was 5 percent. Job vacancy rates for full-time, white-goods repairers and their apprentices were 1 and 3 percent, respectively. Despite the low job vacancy rates reported, just over one-third of the establishments visited indicated that one or more service technicians or apprentices would be hired if they applied for a job on their own initiative.

Paid holidays and vacations were provided to the overwhelming majority of full-time workers in all areas. Typical leave provisions were 6 to 10 holidays and 2 to 4 weeks of paid vacation annually, depending upon completed service. Various forms of health, insurance, and pension plans were also available to most full-time repairers.

A comprehensive report, *Industry Wage Survey: Appliance Repair, November 1978* (BLS Bulletin 2067), is available from the Bureau or any of its regional offices. Separate releases for the 19 areas listed in table 1 were issued earlier. □

—FOOTNOTES—

¹ The survey covered 16,300 nonsupervisory service workers in 1,771 establishments classified in one of the following industries: electrical repair shops; department stores; retail television and radio stores; wholesalers of appliances, television sets, and radios; and retail appliance stores. Three-fourths of all workers in the survey were employed as technicians or apprentices repairing white or brown goods—the four occupational classifications for which wage and related benefit data were developed.

² Job vacancy rates were defined as the number of vacancies as a proportion of employment in the occupation, plus reported vacancies in the facilities visited.

Pay relationships examined for hospitals and nursing homes

Average hourly earnings of private hospital and nursing home workers differed markedly within the same occupation, according to September 1978 BLS surveys of selected metropolitan areas.¹ At that time, nonprofessional hospital employees typically held a 30 to 50 percent pay advantage over their nursing home counterparts, while professional hospital workers usually averaged from 10 to 20 percent more per hour. (See table 1.) Such pay spreads may be partly attributable to differences in proprietorship status—nine-tenths of all private hospital workers covered by the survey were employed by “non-profit” establishments compared to three-tenths of the nursing home work force—and to differences in establishment size—hospital employment was concentrated in facilities employing at least 1,000 workers, while nursing homes rarely employed as many as 250 workers. However, despite disparate pay levels, broad earnings ranges frequently resulted in some overlap of the

Table 1. Average straight-time hourly earnings¹ of workers in selected occupations in appliance repair facilities, November 1978

Area	Full-time technicians	
	TV-radio	Electrical appliance
Atlanta	\$6.38	\$7.97
Boston	6.64	7.01
Buffalo	6.05	6.84
Chicago	7.66	7.82
Cleveland	7.26	7.75
Dallas-Fort Worth	6.13	6.58
Denver-Boulder	6.34	6.95
Kansas City	6.79	7.18
Los Angeles-Long Beach	7.01	7.82
Memphis	6.60	(²)
Miami	7.22	7.73
Minneapolis-St. Paul	7.01	8.22
Nassau-Suffolk	6.88	7.36
Newark	6.55	7.54
New York	6.37	6.40
Philadelphia	6.94	7.41
St. Louis	7.04	7.84
San Francisco-Oakland	7.54	8.34
Washington	6.94	6.40

¹ Information on wages relates to straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts, as well as commissions paid for the sales of maintenance contracts, parts, or appliances. Premiums paid for licenses held by employees, if any, are included. Incentive payments, such as those based on flat-rate hours, flat-percentages, or other piecework or production bonus systems, and cost-of-living bonuses were included as part of the workers' regular pay. Nonproduction bonus payments, such as Christmas and year-end bonuses, were excluded.

² Data did not meet publication criteria.

Table 1. Average hourly earnings differentials for selected occupations, private hospitals and nursing homes, September 1978

[Nursing homes averages = 100]

Area	Occupation			
	Professional		Nonprofessional	
	General duty nurses	Licensed practical nurses	Nursing aids	Cleaners
Northeast:				
Boston	118	114	139	135
Buffalo	117	117	121	118
New York	94	88	102	97
Philadelphia	109	110	146	143
South:				
Atlanta	109	106	122	119
Baltimore	112	116	132	127
Dallas-Ft. Worth	107	97	119	116
Houston	110	100	126	107
Miami	126	116	126	121
Washington	113	106	139	136
North Central:				
Chicago	116	118	150	144
Cleveland	121	117	146	136
Detroit	127	120	151	147
Kansas City	111	107	124	116
Milwaukee	97	93	135	125
Minneapolis-St. Paul	106	99	112	117
St. Louis	111	108	130	128
West:				
Denver-Boulder	119	107	131	128
Los Angeles-Long Beach	107	97	137	134
San Francisco-Oakland	121	122	172	168
Seattle-Everett	118	105	128	129

NOTE: Pay relationships are limited to full-time workers; earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts, as well as the value of room, board, or other perquisites.

industries' individual earnings within the same occupation.

In the majority of the 23 areas studied, average hourly earnings of hospital workers fell into three distinct ranges. The top range—from about \$7.50 to \$10 an hour—embraced such professional jobs as clinical specialists, head nurses, and pharmacists. The middle range—\$5.50 to \$7.50 an hour—included general duty nurses and various types of medical technicians, technologists, and therapists. The lowest rates—\$3.50 to \$5.50 an hour—usually applied to occupations such as licensed practical nurses and clerical and other nonprofessional jobs.

In nursing homes, average hourly earnings were usually highest for physical therapists—about \$7 to \$9 an hour—and lowest for most nonprofessional jobs, such as cleaners and food service helpers—usually between \$2.90 to \$3.20 an hour. General duty nurses, the most populous professional position surveyed, typically reported average hourly earnings from \$5.50 to \$6.50.

Paid holidays and vacations were provided to virtually all hospital and nursing home workers, although hospital employees were normally covered by more liberal leave plans, that is, 9 paid holidays or more a year and a 4-week vacation after 5 years of service. In addition, health, insurance, and retirement plans were avail-

able to at least 90 percent of all hospital workers in almost every area studied, while similar coverage in nursing homes usually fell below 75 percent, and for retirement plans, rarely applied to more than one-fourth of the workers.

A comprehensive report, *Industry Wage Survey: Hospitals and Nursing Homes, September 1978* (BLS Bulletin 2083), is available from the Bureau or any of its regional offices. Separate releases for each area studied were issued earlier. □

FOOTNOTE

¹The hospital survey covered approximately 1,250 private and State/local government facilities employing about 1.2 million workers in 23 selected metropolitan areas. Excluded were all Federal hospitals and any facility with fewer than 100 workers. The nursing home survey covered about 2,800 private facilities employing 286,000 workers in 21 of the same metropolitan areas. Excluded were nursing homes with fewer than 20 employees.

Occupational pay in drug manufacturing

Weekly averages for biologists, chemists, and engineers ranged from nearly \$270 for entry-level chemists to about \$650 for highly experienced engineers, according to a first-time Bureau of Labor Statistics survey of drug manufacturing conducted in September 1978.¹ Among the three professional categories surveyed, biologists and chemists had similar average salaries—somewhat below that for engineers at each of six levels of skill and responsibility studied. (See table 1.) Workers in these three jobs accounted for slightly more than half of the 18,000 professionals covered by the survey.

Science technicians, numbering about 4,700 in the industry, generally averaged less than the professionals. Divided into three levels of skills and responsibility, the top level technician averaged \$294 weekly; the middle level, \$231; and the lowest level, \$199. Approximately

Table 1. Weekly pay levels for three professional jobs in drug manufacturing, September 1978

Work level ¹	Average straight-time weekly earnings		
	Biologists	Chemists	Engineers
I	\$280.50	\$268.50	\$340.50
II	328.50	317.00	361.00
III	373.50	377.50	434.00
IV	450.50	466.00	496.00
V	551.00	541.50	570.00
VI	642.50	641.00	653.00

¹Excluded were workers at higher levels who make decisions and recommendations that are recognized as authoritative and have an important impact on extensive company activities, such as fostering technological breakthroughs and advances. Also excluded were executive and administrative officers. Copies of the job descriptions used in the survey are available upon request.

NOTE: Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts; pay levels are rounded to the nearest half dollar.

two-thirds of all technical workers in the survey were science technicians.

The survey's 54,400 production and related workers averaged \$5.81 per hour. About half of these workers were in the Middle Atlantic Region, where the average was \$6.42. In the other regions permitting comparison,² hourly pay levels were \$4.78 in the Southeast, \$5.72 in the Middle West, and \$5.07 in the Pacific.

Production workers in union plants or in metropolitan areas enjoyed pay advantages over their counterparts in nonunion plants or in smaller communities. However, nationwide differences were influenced by the disproportionate employment of these workers in the high-paying Middle Atlantic region. For example, three-fourths of all union workers were in the Middle Atlantic region. Thus, while the nationwide union-to-nonunion pay advantage was 16 percent, the corresponding differential was 6 percent in the Middle Atlantic. Similarly, a 24-percent pay advantage for metropolitan-area workers nationwide was reduced to less than 1 percent in the Middle Atlantic, where three-fifths of these workers were employed.

Twenty-one occupations, selected to represent the wage structure and production activities, accounted for half the drug industries' production work force. Hourly pay levels in these job categories ranged from \$8.14 for maintenance pipefitters to \$4.44 for packagers performing hand and machine tasks. The latter category was

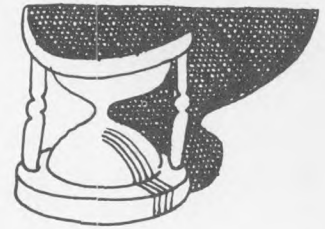
also the largest studied—almost one-tenth of the production work force. Other numerically important jobs and their averages included machine packagers, \$5.27; hand packagers, \$4.97; janitors, \$5.54; top-level chemical operators, \$7.19; and lower-level operators, \$5.92. Virtually all production workers were paid time rates; the proportion paid under rate-range plans (75 percent) was the highest among manufacturing industries studied in the BLS occupational wage survey program.

A comprehensive bulletin, *Industry Wage Survey, Drug Manufacturing* (BLS Bulletin 2077) is available from the Bureau or any of its regional offices. Separate locality releases were issued earlier for New York-Northeastern New Jersey, the State of New Jersey, and Los Angeles-Long Beach. □

— FOOTNOTES —

¹ The drug manufacturing industries consist of three segments: (1) biological products, such as diagnostic agents, plasma, serums, and vaccines; (2) medicinal chemicals and botanical products, primarily in bulk form; and (3) pharmaceutical preparations. "Pharmaceuticals" is by far the largest of the three, accounting for more than four-fifths of the industries' work force.

² Survey coverage was reduced to 84 percent of the nationwide employment in the drug industry because of the unavailability of data from large establishments in the industries that could not be adequately represented by other establishments. Because these nonrespondents were centered in the Great Lakes region, which has about one-fourth of the industries' work force, data for that region could not be shown separately.



Major Agreements Expiring Next Month

This list of collective bargaining agreements expiring in February 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.

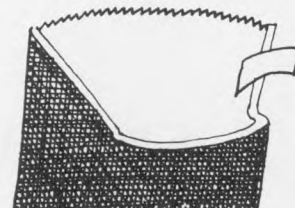
Employer and location	Industry	Union ¹	Number of workers
American Can Co. (Interstate)	Fabricated metal products	Steelworkers	7,000
AMBAC Industries, Inc., Electrical Products Division (Mississippi)	Transportation equipment	Electrical Workers (IUE)	1,000
Associated Fur Manufacturers, Inc., and United Fur Manufacturers Association, Inc. (New York, N.Y.)	Apparel	Food and Commercial Workers	3,000
Building Service League, Commercial Jobs (New York, N.Y.)	Services	Service Employees	5,000
Continental Group, Master Agreement (Interstate)	Fabricated metal products	Steelworkers	11,000
Crown Cork & Seal Co., Inc. (Interstate)	Fabricated metal products	Steelworkers	1,800
Dennison Manufacturing Co., National Blank Book Co., Inc. (Holyoke and Springfield, Mass.)	Printing and publishing	Graphic Arts	1,500
Desoto, Inc., Fort Smith Furniture Division (Ft. Smith, Ark.)	Furniture	Furniture Workers	1,350
Exxon Corp., Bayway Refinery and Chemical plant (Linden, N.J.)	Petroleum	Teamsters (Ind.)	1,000
Exxon Corp., Research and Engineering Division (Linden and Florham Park, N.J.)	Services	Independent Laboratory Employees' Union, Inc.	1,200
Fieldcrest Mills, Inc., Columbus Towel Division (Georgia & Alabama)	Textiles	Clothing and Textile Workers	1,600
Georgetown Steel Corp. (South Carolina & Texas)	Primary metals	Steelworkers	1,450
Hyster Co. (Danville, Ill.)	Machinery	Independent Lift Truck Builders Union	1,300
Litton Systems, Inc., Ingalls Shipbuilding Division (Pascagoula, Miss.)	Transportation equipment	Electrical Workers (IBEW)	2,850
Litton Systems, Inc., Ingalls Shipbuilding Division (Pascagoula, Miss.)	Transportation equipment	Pascagoula Metal Trades Council	10,900
Maintenance Contractors Agreement (Interstate) ²	Services	Service Employees	4,000
Midtown Realty Owners Association, Inc. (New York, N.Y.)	Retail trade	Service Employees	2,000
National Airlines, Inc., Flight Attendants (Interstate) ³	Air transportation	Air Line Pilots	1,200
National Can Corp., Master Agreement (Interstate)	Fabricated metal products	Steelworkers	4,500
National Electrical Contractors' Association, Inc., Alaska Chapter, Outside and Inside Agreement (Alaska)	Construction	Electrical Workers (IBEW)	2,000
National Transient Members (Interstate) ²	Construction	Boilermakers	7,500
Piper Aircraft Corp., Master Agreement (Lock Haven, Pa.)	Transportation equipment	Machinists	1,800
PPG Industries, Inc., (Interstate)	Transportation equipment	Glass and Ceramic Workers	2,300
Quaker Oats Co. (Cedar Rapids, Iowa)	Food products	Retail, Wholesale, and Department Store	1,200
Rochester Telephone Corp., (Rochester, N.Y.)	Communication	Communications Workers	1,050
White Consolidated Industry, Inc., Blaw-Knox Co., Division (Interstate)	Primary metals	Steelworkers	3,000
Window Cleaning Employers Association (New York, N.Y.)	Services	Service Employees	1,150
Youngstown Hospital Association (Youngstown, Ohio)	Hospitals	Service Employees	1,300
	Government activity	Employee organization ¹	
Wisconsin: Milwaukee Fire Department	Public safety	Fire Fighters	1,050

¹ Affiliated with AFL-CIO except where noted as independent (Ind.).

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

³ Information is from newspaper reports.

Book Reviews



A familiar prescription for inflation

Persistent Inflation: Historical and Policy Essays. By Phillip Cagan. New York, Columbia University Press, 1979. 283 pp., bibliography. \$17.50, cloth; \$7.50, paper.

This is a collection of essays by one of the most persistent students of one of our most persistent social problems. Phillip Cagan began his career with his doctoral dissertation on hyperinflation some 25 years ago. That work continues to be a standard reference. In the volume under review are nine pieces on contemporary U.S. inflation written between 1968 and 1978.

Although the perspective of the author shifts somewhat from one year to the next as the decade unfolds and the experience is recounted, his basic views of the problem and its solution do not seem to change.

Cagan's views are quickly summarized. Changes in the money stock are "the main contributors to price changes in the long run" (p. 52). Or, "... higher and rising price levels cannot be maintained for long without monetary expansion." Money is "... a proximate cause but not in any simple sense *the* fundamental cause of inflation" (p. 10). Large corporations and labor unions are not responsible for initiating inflation. In fact, they tend to slow down the speed with which inflationary impulses travel through the economy. However, they also tend to slow down the speed with which anti-inflationary shocks are transmitted. Escalators (indexing) shorten the adjustment lags and are thought to increase the speed of adjustment to both increased and decreased inflationary pressures. Inflationary anticipations, on the other hand, tend to intensify the economy's resistance to inflationary and deflationary influences.

Increases in the price level during expansions are not becoming more rapid or severe. This is a recurring observation. In earlier years, prices often increased more rapidly during cyclical upswings. There is, however, a growing tendency for prices not to decrease or even to slow their rate of increase during periods of economic slack. "This ... lies at the heart of the 'inflation problem' in the postwar period" (p. 69).

Cagan is convinced that if inflationary expectations could be eliminated, our economic system would allow for a stable price level without substantial unemployment. He sees "no alternative to monetary restraint"

(p. 49). The sooner the better. And, ideally, the Federal Government should simultaneously "... run a substantial budget surplus ..." (p. 49). The monetary and fiscal restraints need to be more severe and additional unemployment will be required, when expectations of further inflation have to be broken. But "... there are no economic barriers to reducing inflation" (p. 248).

The barriers to reducing inflation are political. They have become more difficult, in part, because even when a policy of restraint is working, it will give the impression that it is not. Momentum of earlier inflationary impulses and short-term cyclical factors hide the slow deceleration in the long-term inflation rate. The political difficulties interact with the process of inflation-expectation formation in the private sector. Why should one suppose that labor and management will lower their expectation of increases in prices and costs when the consequences of the policy of restraint is not noticed and when politicians are unable to persuade their constituents that the policy works? Why should one suppose that politicians will support a policy of restraint, leading constituents to lose their jobs, if the effects of the policy on prices cannot be perceived by them or the voters? There is some expression of hope by Cagan that the political barriers are not increasing progressively.

Cagan has no enthusiasm for wage-price controls or for guideposts. In practice, he sees difficulties in timing and enforcement. Convinced that controls are of no value in dealing with demand-pull, he suggests that phase I and II controls in 1971-72 may have had some effects, though very small, in moderating the inflation during this period of slack in aggregate demand. Controls are not really believed to affect the final outcome in such circumstances, though they admittedly may delay it. According to Cagan, controls can be counterproductive; they satisfy the community's desire to find a scapegoat for inflation. Nowhere in these essays does he consider the proposals for tax-based incomes policies or for more fundamental reforms of economic and political institutions that are being widely discussed.

The book is a review of where we have been, and why, from a highly orthodox point of view. But one cannot help but be disappointed, after a long and thorough examination by a renowned specialist, being told that there are no new treatments worth a try for our persistent and painful ailment. Cagan does not succeed

in persuading me that managing to live with the ailment would be more painful than his cure. His prescription that “. . . the best anti-inflation policy available lies somewhere between very mild restraint and the opposite extreme . . . ” (p. 224) will encourage one to turn elsewhere for advice and help.

—FRED M. WESTFIELD
Professor of Economics
Vanderbilt University

A search for unemployment patterns

Injury to Insult: Unemployment, Class, and Political Response. By Kay Lehman Schlozman and Sidney Verba. Cambridge, Mass., Harvard University Press, 1979. 393 pp. \$20.

Although this overly long book makes some interesting points, these could have been adequately and probably more clearly presented in a journal article of moderate length. It is all too easy for the reader to get periodically lost in the welter of somewhat fragmented and repetitive presentations.

The title “Injury to Insult” indicates that the unemployed are disproportionately drawn from among minority groups, the unskilled, and so forth; to the “insult” of being disadvantaged is added the “injury” of unemployment. The purpose of the book is to trace through the connections (or, as it turns out, the absence thereof) among unemployment, personal and economic strain, political beliefs, and political activity. The work is divided into three parts—“Unemployment and Economic Strain,” “Unemployment, Economic Strain, and Ideology,” and “Unemployment and Political Behavior”—which successively deal with each indicated link. As is generally known and as Kay Lehman Schlozman and Sidney Verba make clear in their introduction, the unemployed have not been a potent political force in the 1970’s, even at those times when unemployment has been a key political issue. The story this book has to tell largely comes down to which of the expected relationships did not materialize.

Most of the results and analysis reported here are based on a telephone survey, conducted in April 1976, of a sample of 1,370 urban labor force participants, 571 of whom were unemployed at the time of the survey. However, this information is supplemented at some points with data taken from the Current Population Survey (CPS) and from other surveys. The details of the telephone survey are clearly presented in three appendices; the complete 21-page, 101-question questionnaire that was used constitutes appendix C. This appears to be a very good questionnaire, admirably free from am-

biguities. It does, however, have the shortcoming of providing only scanty information, and no quantitative detail, on income, a crucial variable that deserves more attention. Only one question (number 99) asks about 1975 family income, and this merely divides respondents into four income classes: below \$6,000, \$6,000–\$11,000, \$11,000–\$16,000, and over \$16,000. No quantitative data on either the composition of or recent changes in income is provided. This omission, in turn, makes the interpretation of patterns of answers to qualitative questions—on income satisfaction, cuts in expenditures and sources of additional income—difficult and inconclusive.

Although the questionnaire is clear, essentially following definitions by the Bureau of Labor Statistics, with respect to labor force and employment status, the early descriptive chapter “The Unemployed: Some Preliminaries” is marred, in particular on pages 34–35, by a confusion in the text between the population and the labor force.

The focus in this chapter describing the unemployed, based on only the April 1976 Current Population Survey, presumably for consistency with the time of the authors’ own metropolitan work force survey, I find to be on balance ill-advised. A particular point in time may not give a “typical” picture of the unemployed, and we get no impression whatever of cyclical variation in the composition and duration of unemployment. At least two points in time—a business cycle trough and a peak—would be preferable here.

Chapter 3 purports to take “a more systematic look” at the hardship of unemployment. In a series of nine figures and two tables, the fractions of various groups (the employed and unemployed by occupational level and demographic or socioeconomic characteristics) dissatisfied with their income, accomplishments or family life are lengthy. Chapter 4 is similar to the preceding chapter—essentially a series of figures showing the percentages of the employed and unemployed, by occupational level, who reported cutting back on expenditures or generating new resources, and the relationship of such activities to family responsibilities and the receipt of unemployment benefits. The conclusion of part 1 would appear to be that “[unemployment] is strongly associated with dissatisfaction, and the best efforts by those out of work to manage on their own do not reduce that dissatisfaction” (p. 99).

It is in part 2 that, as the authors repeatedly note, expected relationships most obviously fail to materialize. Personal economic strain and dissatisfaction do not appear to affect general social ideology and beliefs concerning economic opportunity. Similarly, part 3 fails to uncover any systematic connection of political attitudes and behavior to either employment status or social ideology.

Leading to the conclusion that personal economic status and satisfaction, social ideology, and political beliefs and activities are essentially three separate and unconnected elements, rather than sequential links in a causal chain, the reader is subjected to an almost unending series of bits and pieces of evidence that, by and large, remains fragmentary. Redundancy and lack of synthesis are recurrent problems because of the tendency to examine the various relationships one by one rather than simultaneously. Where multivariate analysis is used, incomplete information on precise variable definitions and the appropriate estimation technique frequently reduces the ability to interpret the results in a useful way.

As a result of these defects, this book is too long and often extremely uninteresting. Although many social scientists will find some of its findings of interest, few, if any, will be inspired to read it from cover to cover.

—BETH T. NIEMI
Associate Professor of Economics
Rutgers University-Newark

Making social security secure

Social Security and Pensions in Transition: Understanding the American Retirement System. By Bruno Stein. New York, The Free Press, 1980. 309 pp., bibliography. \$14.95.

For many years, few Americans worried about the social security system which they regarded as solid as the Plymouth Rock. But in recent years, there has been widespread concern about the future of social security. Some are troubled about its fiscal soundness. Perhaps a smaller number of observers wonder if the system will provide adequate payments to the millions of retirees and other beneficiaries who will depend on them.

In a book which should be useful to both specialists and general readers, Bruno Stein has done much to illuminate both of these major issues. He also describes how social security interrelates with the other major sources of retirement income, private and public pensions, and Supplementary Security Income, which is the public assistance program for the impoverished elderly.

At one point, the author refers to literature which is written in economics rather than in English. Stein's book is written in English and is readily understandable.

Stein analyzes the welfare and income replacement functions of social security, both of which are characteristic of a social insurance program. Fulfilling the two functions is what makes it possible for social security to meet both adequacy and equity goals. It is not always clear whether Stein favors some kind of separation of

these aspects of the program. Indeed, the book is given to a somewhat dispassionate statement of the issues and a reluctance by the author to come down hard with definitive solutions. But in the end, he concludes that there is no objective way of determining a proper balance between equity and adequacy and, therefore, how this balance is decided is "a matter of political taste and compassion."

Some have advocated handling adequacy in a welfare program and making social security a pure earnings-related program. Others favor a so-called "double-decker" with a flat minimum benefit in the bottom tier and an earnings-related payment in the top tier. Both could result in large numbers of retirees being subjected to a means test and, in a footnote, Stein reminds readers that means-tested programs are demeaning to recipients.

Stein supports giving up virtually exclusive reliance on payroll taxes to finance social security in favor of a modest infusion of general revenues into the system. But, though it would seem to be a matter of accounting rather than a genuine difference, he would use the general revenue only for "one or more specific purposes on which a consensus can be obtained" rather than as an across-the-board contribution. He rejects the contention of some who claim that partial general revenue financing would convert social security into a welfare program. On this point, he wryly comments: "... one doubts whether American workers would have felt demeaned by a system that included some contributions from general revenues. European workers have never been troubled by this."

Stein feels that if social security is funded in part from general revenues, it should help to mitigate the intergenerational conflict which he sees looming in the next century. Because the ratio of retirees to workers will greatly increase but not the overall dependency ratio, which includes children as well as the elderly, a reallocation of resources from the fewer children to the more numerous elderly will be necessary. Stein thinks that this will present political difficulties which can more easily be met with some general revenue financing because it would "spread the pain somewhat more thinly" than if the reallocation were done entirely through the payroll tax.

The book deals with a great number of other questions related to retirement income systems in this country. Among them are the impact of social security on savings and investment (Stein thinks the jury is out on this one), whether social security is "crowding out" supplementary private and public pensions (Stein thinks not), the appropriateness of deciding now to raise the social security retirement age to 68 at the beginning of the next century (Stein favors this, rejecting the argument that it would penalize those who couldn't work because of ill health or inability to find jobs) and taxing

social security benefits (which he opposes because there is no reason to start tax reform with the elderly).

The book ends on a pessimistic note. Stein recognizes that "long-term economic growth is needed if our aspirations for retirement—and for living standards prior to retirement—are to be satisfied." To finance adequate retirement programs will require that such expansion be accompanied by low unemployment and relatively stable prices. But it is Stein's view that as of now policies to achieve these goals seem unattainable.

Whether or not his pessimism is justified, the book should be useful to those who want to know about the problems America faces in seeking to provide adequate income to retirees and some possible ways of facing up to those problems.

—BERT SEIDMAN

Director, Department of Social Security
AFL-CIO

Publications received

Economic and social statistics

Bouvier, Leon F., *The Impact of Immigration on the Size of the U.S. Population*, Washington, Population Reference Bureau, 1980, 43 pp.

Ferber, Robert and others, *What Is a Survey?* Washington, American Statistical Association, Subcommittee of the Section on Survey Research Methods, 1980, 25 pp. Single copy free.

Nelson, Jon P. and George R. Neumann, "Tax Policy and Steel Industry Investment Behavior: An Econometric Analysis," *Quarterly Review of Economics and Business*, Autumn 1980, pp. 19–34.

Triplett, Myra L., "The Role of Interagency Committees in Statistical Policy Coordination," *Statistical Reporter*, October 1980, pp. 1–35.

Economic growth and development

Gilder, George, *Wealth and Poverty*. New York, Basic Books, Inc., Publishers, 1981, 306 pp., bibliography. \$16.95.

Hutt, W. H., *The Keynesian Episode: A Reassessment*. Indianapolis, Ind., Liberty Press, 1979, 449 pp. \$10, cloth; \$4.50, paper.

"The Crisis in Economic Theory: Toward the Next Economics," by Peter F. Drucker, "The Dissolution of the Keynesian Consensus," by James W. Dean, "Monetarism and the Crisis in Economics," by Allan H. Meltzer, "Models and Reality in Economic Discourse," by Daniel Bell, "'Rational Expectations' as a Counterrevolution," by Mark H. Willes, "Microeconomics and X-Efficiency Theory," by Harvey Leibenstein, "The 'Austrian' Perspective," by Israel M. Kirzner, "General Equilibrium Theory," by Frank Hahn, "Real and Nominal Values in Economics," by Kenneth J. Arrow, "Post Keynesian Economics," by Paul Davidson, "Value and Capital in Marxian Economics," by Edward J. Nell, "Rationalism

in Economics," by Irving Kristol, *The Public Interest*, Special Edition, 1980, pp. 4–218.

Education

Breneman, David W., "The Humanities in a Technological Society," *The Brookings Bulletin*, Spring 1980, pp. 1–5.

Shapiro, Constance H., B. Jeanne Mueller-Lazar, Stanley L. Witkin, "Performance-based Evaluation: A Diagnostic Tool for Educators," *Social Service Review*, June 1980, pp. 262–72.

Industrial relations

Blackburn, John D., "Legal Aspects of Smoking in the Workplace," *Labor Law Journal*, September 1980, pp. 564–69.

Block, Richard N., "Union Organizing and the Allocation of Union Resources," *Industrial and Labor Relations Review*, October 1980, pp. 101–13.

Center to Protect Workers' Rights, *Union-Busting and the Law: From Benign Neglect to Malignant Growth*. Washington, Center to Protect Workers' Rights, 1980, 76 pp.

Chaison, Gary N., "A Note on Union Merger Trends, 1900–1978," *Industrial and Labor Relations Review*, October 1980, pp. 114–20.

Cleary, Timothy F., "Some Aspects of Agency Review of Initial Decision of Administrative Law Judges," *Labor Law Journal*, September 1980, pp. 531–38.

Duncan, Gregory M. and Duane E. Leigh, "Wage Determination in the Union and Nonunion Sectors: A Sample Selectivity Approach," *Industrial and Labor Relations Review*, October 1980, pp. 24–34.

Flanagan, Robert J., "The National Accord as a Social Contract," *Industrial and Labor Relations Review*, October 1980, pp. 35–50.

Freeman, Richard B., "Unionism and the Dispersion of Wages," *Industrial and Labor Relations Review*, October 1980, pp. 3–23.

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

Hogler, Raymond L., "Industrial Due Process and Judicial Review of Arbitration Awards," *Labor Law Journal*, September 1980, pp. 540–76.

Moye, William T., "Presidential Labor-Management Committees: Productive Failures," *Industrial and Labor Relations Review*, October 1980, pp. 51–66.

National Mediation Board, *Forty-Fifth Annual Report of the National Mediation Board, Including the Report of the National Railroad Adjustment Board for the Fiscal Year Ended Sept. 30, 1979*. Washington, National Mediation Board, 1980, 68 pp. Stock No. 037-000-000-29-9. \$4, Superintendent of Documents, Washington 20402.

Ogden, Warren C., "An Impasse in Decisionmaking," *Labor Law Journal*, September 1980, pp. 559–63.

Pulliam, Mark S., "Union Security Clauses in Public Sector Labor Contracts, and *Abood v. Detroit Board of Education*: A Dissent," *Labor Law Journal*, September 1980, pp. 539–46.

Rehmus, Charles M. and Benjamin A. Kerner, "The Agency Shop After *Abood*: No Free Ride, But What's the Fare?" *Industrial and Labor Relations Review*, October 1980, pp. 90-100.

Schachter, Victor and Andrew Peterson, "Lawful Employer Participation in the Revocation of Union Authorization Cards," *Labor Law Journal*, September 1980, pp. 547-58.

Unterberger, S. Herbert and Edward C. Koziara, "The Demise of Airline Strike Insurance," *Industrial and Labor Relations Review*, October 1980, pp. 82-89.

Industry and government organization

Candilis, Wray O. and Theodore A. Nelson, "Geographic Distribution of Manufacturing Activity," *Industrial Economics Review*, Summer 1980, pp. 45-54.

Dalton, Donald and James McElroy, "Inflationary Pressures in the Softwood Lumber and Softwood Plywood Industries in the 1980's," *Industrial Economics Review*, Summer 1980, pp. 32-44.

Figueroa, Oscar and Charles Winkler, *A Business Information Guidebook*. New York, AMACOM, A division of American Management Associations, 1980, 190 pp. \$19.95.

"Industry Profile of the Current Recession," *Industrial Economics Review*, Summer 1980, pp. 1-5.

Johnson, Arthur M., "The Future of 'Free' Enterprise," *Management Review*, October 1980, pp. 8-14.

Kristensen, Chris and Joseph Correia, "Energy Usage Trends for Selected Manufacturing Industries," *Industrial Economics Review*, Summer 1980, pp. 20-31.

Sekiguchi, Shiro, "How Japanese Business Treats Its Older Workers," *Management Review*, October 1980, pp. 15-18.

Vaccara, Beatrice N. and Patrick H. MacAuley, "Evaluating the Economic Performance of U.S. Manufacturing Industries," *Industrial Economics Review*, Summer 1980, pp. 6-19.

Wendling, Wayne and Jack Werner, "Nonprofit Firms and the Economic Theory of Regulation," *Quarterly Review of Economics and Business*, Autumn 1980, pp. 6-18.

International economics

Bryant, Ralph C., *Money and Monetary Policy in Interdependent Nations*. Washington, The Brookings Institution, 1980, 584 pp., bibliography, \$29.95, cloth; \$12.95, paper.

Langdon, Steven W., *Canadian Private Direct Investment and Technology Marketing in Developing Countries*. Hull, Quebec, Economic Council of Canada, 1980, 55 pp. \$8.95, Canada; \$10.75, other countries. Available from Canadian Government Publishing Center, Supply and Services Canada, Hull, Quebec.

Labor and economic history

Goldin, Claudia, *The Historical Evolution of Female Earnings Functions and Occupations*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1980, 38 pp. (NBER Working Paper, 529.) \$1.

Hoerder, Dirk, "American Labor and Immigration History: Reports on the State of the Historiography Since 1945, Part II," *Labor History*, Summer 1980, pp. 392-419.

Ichioka, Yuji, "Japanese Immigrant Labor Contractors and the Northern Pacific and the Great Northern Railroad Companies, 1898-1907," *Labor History*, Summer 1980, pp. 325-50.

Kahn, Lawrence M., "Unions and Internal Labor Markets: The Case of the San Francisco Longshoremen," *Labor History*, Summer 1980, pp. 369-91.

O'Donnell, L. A., "Labor Rediscovered Its Past," *Commonweal*, Sept. 12, 1980, pp. 490-91.

Wetzel, Kurt, "Railroad Management's Response to Operating Employees Accidents, 1890-1913," *Labor History*, Summer 1980, pp. 351-68.

Labor force

Bartel, Ann, *Wages, Nonwage Job Characteristics and Labor Mobility*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1980, 34 pp. (NBER Working Paper Series, 552.) \$1.

Denton, Frank T., Christine H. Feaver, Byron G. Spencer, *The Future Population and Labour Force in Canada: Projections to the Year 2051*. Hull, Quebec, Economic Council of Canada, 1980, 48 pp. \$3.50, Canada; \$4.20, other countries. Available from Canadian Government Publishing Center, Supply and Services Canada, Hull, Quebec.

Gilley, Otis W., "Search Intensity, Reservation Wages, and Duration of Unemployment," *Quarterly Review of Economics and Business*, Autumn 1980, pp. 99-107.

Giraldo, Z. I., *Public Policy and the Family: Wives and Mothers in the Labor Force*. Lexington, Mass., D.C. Heath and Co., Lexington Books, 1980, 217 pp.

Hall, Robert E., *The Importance of Lifetime Jobs in the U.S. Economy*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1980, 27 pp. (NBER Working Paper Series 560.) \$1.

Liebhafsky, E. E., John E. Gnuschke, William L. McKee, "Value Judgments Inherent in Criticisms of CPS Measurement of Unemployment," *Social Science Quarterly*, September 1980, pp. 237-52.

New Zealand, Department of Labor, "Employment and Regional Policies in France," *Labour and Employment Gazette*, June 1980, pp. 9-11.

Osterman, Paul, *Getting Started: The Youth Labor Market*. Cambridge, Mass., The MIT Press, 1980, 197 pp. \$20.

Thomas-Lycklama à Nijeholt, *On the Road for Work: Migratory Workers on the East Coast of the United States*. Boston, Martinus Nijhoff Publishing, 1980, 211 pp., bibliography. (Series on the Development of Societies, 7.) \$16. Distributed in the United States by Kluwer Boston, Inc., Hingham, Mass.

Yohalem, Alice M., ed., *Women Returning to Work: Policies and Progress in Five Countries*. New York, Conservation of Human Resources, 1980, 291 pp. \$25, Allanheld, Osmun & Co., Publishers, Inc., Montclair, N.J.

Management and organization theory

Ball, Robert, "Europe Outgrows Management American Style," *Fortune*, Oct. 20, 1980, pp. 147-48.

Batten, J. D., *Beyond Management by Objectives: A Management Classic*. New York, AMACOM, A division of American Management Associations, 1966; reissued and

- updated, 1980. 112 pp. \$10.95.
- Braverman, Jerome D., *Management Decision Making: A Formal/Intuitive Approach*. New York, AMACOM, A division of American Management Associations, 1980, 241 pp. \$16.95.
- Cole, Donald W., *Professional Suicide: A Survival Kit for You and Your Job*. New York, McGraw-Hill Book Co., Inc., 1981, 232 pp., bibliography. \$12.95.
- Curtis, Donald A., "Management in the Public Sector: It Really Is Harder," *Management Review*, October 1980, pp. 70-74.
- Davis, Tim R. V., "Managers in Action: A New Look at Their Behavior and Operating Modes," *Organizational Dynamics*, Summer 1980 pp. 64-80.
- Dewitt, Sherri, *Worker Participation and the Crisis of Liberal Democracy*. Boulder, Colo., Westview Press, 1980, 168 pp. \$18.
- Enger, Norman L. and Paul W. Howerton, *Computer Security: A Management Audit Approach*. New York, AMACOM, A division of American Management Associations, 1980, 264 pp. \$21.95.
- "Health, Safety, and Security," *Personnel Administrator*, November 1980, pp. 18-54.
- Hofstede, Geert, "Motivation, Leadership, and Organization: Do American Theories Apply Abroad?" *Organizational Dynamics*, Summer 1980, pp. 42-63.
- Howard, Cecil G., "How Relocation Abroad Affects Expatriates' Family Life," *Personnel Administrator*, November 1980, pp. 71-78.
- Humble, John, "Time Management: Separating the Myths and the Realities," *Management Review*, October 1980, beginning on p. 25.
- Kenney, William J., Jr. and Bernard Ryan, Jr., "How Business Can Help Bring Management Skills to Urban Government," *Personnel Administrator*, November 1980, pp. 63-68.
- Klimoski, Richard J. and Noreen J. Hayes, "Leader Behavior and Subordinate Motivation," *Personnel Psychology*, Autumn 1980, pp. 543-55.
- Koen, Clifford M., Jr., "The Pre-Employment Inquiry Guide," *Personnel Journal*, October 1980, pp. 825-29.
- Leavitt, Harold J. and Jean Lipman-Blumen, "A Case for the Relational Manager," *Organizational Dynamics*, Summer 1980, pp. 27-41.
- Murr, Donald W., Harry B. Bracey, Jr., William K. Hill, "How to Improve Your Organization's Management Controls," *Management Review*, October 1980, pp. 56-63.
- Newburg, Thomas A., "Exercises for Better Management Development," *Personnel Journal*, October 1980, pp. 850-52.
- "Office Automation, Personnel and the New Technology: A Conference Report," *Personnel Journal*, October 1980, pp. 815-23.
- Peters, Thomas J., "Management Systems: The Language of Organizational Character and Competence," *Organizational Dynamics*, Summer 1980, pp. 2-26.
- Raffel, Judith, "Combating Employee Resistance to Retirement-Planning Seminars," *Personnel Journal*, October 1980, pp. 845-46.
- Rappaport, Cyril M., "Hiring the Handicapped," *Personnel Administrator*, November 1980, beginning on p. 81.
- Rynes, Sara L., Herbert G. Heneman III, Donald P. Schwab, "Individual Reactions to Organizational Recruiting: A Review," *Personnel Psychology*, Autumn 1980, pp. 529-42.
- Sammert, George, Jr. and Clifton G. Kelley, *Do's and Don'ts in Subcontract Management*. New York, AMACOM, A division of American Management Associations, 1980, 40 pp. (An AMA Management Briefing.) \$5, AMA members; \$7.50, nonmembers.
- Stead, W. Edward and Jean G. Stead, "Cancer in the Workplace: A Neglected Problem," *Personnel Journal*, October 1980, pp. 847-49.
- Turney, John R. and Stanley L. Cohen, "Participative Management: What Is the Right Level?" *Management Review*, October 1980, pp. 66-69.
- Witte, John F., *Democracy, Authority, and Alienation in Work: Workers' Participation in an American Corporation*. Chicago, Ill., The University of Chicago Press, 1980, 216 pp. \$20.

Monetary and fiscal policy

- Moscato, Donald R., *Building Financial Decision-Making Models: An Introduction to Principles and Procedures*. New York, AMACOM, A division of American Management Associations, 1980, 150 pp. \$17.95.
- Rabinowitz, Alan, *The Real Estate Gamble: Lessons from 50 Years of Boom and Bust*. New York, AMACOM, A division of American Management Associations, 1980, 308 pp. \$17.95.

Productivity and technological change

- Griliches, Zvi, *R & D and the Productivity Slowdown*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1980, pp. 343-48. Reprinted from *The American Economic Review*, May 1980. (NBER Reprint, 91.) \$1.
- Pakes, Ariel and Zvi Griliches, *Patents and R&D at the Firm Level: A First Look*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1980, 33 pp. (NBER Working Paper Series, 561.) \$1.

Social institutions and social change

- Chapman, Jane Roberts, *Economic Realities and the Female Offender*. Lexington, Mass., D.C. Heath and Co., Lexington Books, 1980, 234 pp., bibliography.
- Kramer, Jane, *Unsettling Europe*. 5th ed. New York, Random House, Inc., 1980, 217 pp. \$9.95.
- Livernash, Robert E., ed., *Comparable Worth: Issues and Alternatives*. Washington, Equal Employment Advisory Council, 1980, 260 pp.

Wages and compensation

- Baird, Lloyd S. and Philip J. Beccia, "The Potential Misuse of Overtime," *Personnel Psychology*, Autumn 1980, pp. 557-65.
- Fishwick, Frank, *The Introduction and Extension of Shiftworking*. London, England, National Economic De-

- velopment Office, 1980, 90 pp. Available from NEDO Books, 1 Steel House, 11 Tothill St., London, SW1H 9LJ.
- Levenson, Mark, "Minimum Wage Controversy," *Dun's Review*, October 1980, pp. 114-16.
- National Commission on Unemployment Compensation, *Unemployment Compensation Policy Decisions: Preliminary*. Rosslyn, Va., National Commission on Unemployment Compensation, 1980, 150 pp.
- New Zealand, Department of Labor, "Part-time Careers—A Public Sector Experiment," *Labour and Employment Gazette*, June 1980, pp. 12-14.
- Saks, Daniel H., *Wage Determination During Periods of High Inflation*. Washington, National Commission for Employment Policy, 1980, 12 pp.
- Welfare programs and social insurance**
- Barth, Michael C., "Welfare Policy: Near and Longer Term," *The Journal/The Institute for Socioeconomic Studies*, Autumn 1980, pp. 38-49.
- Baucus, Max, "The Federal Response to Medicare Supplementary Insurance," *The Journal/The Institute for Socioeconomic Studies*, Autumn 1980, pp. 65-73.
- Bethell, Tom, "Real Welfare Reform," *The Journal/The Institute for Socioeconomic Studies*, Autumn 1980, pp. 29-37.
- Board of Directors, Manpower Demonstration Research Corp., *Summary and Findings of the National Supported Work Demonstration*. New York, Manpower Demonstration Research Corp., 1980, 164 pp. \$3.
- Driver, William J., "Forty-Fifth Anniversary of Social Security," *Social Security Bulletin*, August 1980, pp. 3-5.
- Levitan, Sar A., *Programs in Aid of the Poor for the 1980s*. 4th ed. Baltimore, The Johns Hopkins University Press, 1980, 159 pp. \$11, cloth; \$3.95, paper.

Alcohol and work: a poor mix

Alcohol abuse is clearly disruptive to job efficiency. Sometimes the drinking worker is simply unable to carry out his assigned tasks. Perhaps more costly is "covered-up" inefficiency which can lead to production errors and a high degree of waste among blue-collar workers. This waste parallels inefficient decisionmaking among drinking white-collar employees. Here also the cost may be indirect and not evident until "the damage is done." Poor decisionmaking or the failure to make needed decisions is perhaps the most marked cost of white-collar drinking, potentially disrupting large segments of an organization's activities.

The deviant drinker may lower the morale of his coworkers. Absenteeism and the consequent disruption in workflow create inconveniences and even hardships for those who must take up the slack. A sense of "distributive injustice" may come to pervade his fellow workers, that is, the deviant drinker is receiving the same rewards they are, but he is doing only a small part of his assigned tasks. Consequently, they may adjust their own performances. This attitude takes a particularly heavy toll in settings where production quotas are emphasized. Furthermore, alcohol use or a hangover can result in an employee's being oversensitive, obnoxious, boisterous, insulting, and, in some instances, even violent.

—HARRISON M. TRICE
AND PAUL M. ROMAN
*Spirits and Demons at Work: Alcohol
and Other Drugs on the Job*. 2d ed.
(Ithaca, N.Y., Cornell University, New
York State School of Industrial and
Labor Relations, 1978), p. 3.

Current Labor Statistics



Notes on Current Labor Statistics	70
Schedule of release dates for major BLS statistical series	70
Employment data from household survey. Definitions and notes	71
1. Employment status of noninstitutional population, selected years, 1950-79	71
2. Employment status by sex, age, and race, seasonally adjusted	72
3. Selected employment indicators, seasonally adjusted	73
4. Selected unemployment indicators, seasonally adjusted	74
5. Unemployment rates, by sex and age, seasonally adjusted	75
6. Unemployed persons, by reason for unemployment, seasonally adjusted	75
7. Duration of unemployment, seasonally adjusted	75
Employment, hours, and earnings data from establishment surveys. Definitions and notes	76
8. Employment by industry, 1950-79	77
9. Employment by State	77
10. Employment by industry division and major manufacturing group	78
11. Employment by industry division and major manufacturing group, seasonally adjusted	79
12. Labor turnover rates in manufacturing, 1977 to date	80
13. Labor turnover rates in manufacturing, by major industry group	80
14. Hours and earnings, by industry division, 1949-79	81
15. Weekly hours, by industry division and major manufacturing group	82
16. Weekly hours, by industry division and major manufacturing group, seasonally adjusted	83
17. Hourly earnings, by industry division and major manufacturing group	84
18. Hourly Earnings Index, by industry division, seasonally adjusted	84
19. Weekly earnings, by industry division and major manufacturing group	85
20. Gross and spendable weekly earnings, in current and 1967 dollars, 1960 to date	86
Unemployment insurance data. Definitions and notes	87
21. Unemployment insurance and employment service operations	87
Price data. Definitions and notes	88
22. Consumer Price Index, 1967-79	89
23. Consumer Price Index, U.S. city average, general summary and selected items	89
24. Consumer Price Index, cross classification of region and population size class	95
25. Consumer Price Index, selected areas	96
26. Producer Price Indexes, by stage of processing	97
27. Producer Price Indexes, by commodity groupings	98
28. Producer Price Indexes, for special commodity groupings	100
29. Producer Price Indexes, by durability of product	100
30. Producer Price Indexes for the output of selected SIC industries	100
Productivity data. Definitions and notes	103
31. Annual indexes of productivity, hourly compensation, unit costs, and prices, 1950-79	103
32. Annual changes in productivity, hourly compensation, unit costs, and prices, 1969-79	104
33. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted	104
34. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices	105
Labor-management data. Definitions and notes	106
35. Wage and benefit settlements in major collective bargaining units, 1975 to date	106
36. Effective wage rate adjustments going into effect in major collective bargaining units, 1975 to date	107
37. Work stoppages, 1947 to date	107

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. For a technical discussion of the method used to make seasonal adjustments, see *X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (Bureau of the Census, 1967).

Seasonally adjusted labor force data in tables 2-7 were last revised in the February 1980 issue of the *Review* to reflect the preceding year's experience. 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, September 1979). 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 in tables 11, 13, 16, and 18 begins with the August 1980 issue using the X-11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 33 and 34 are usually intro-

duced 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 \times 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. The *Handbook of Labor Statistics 1978*, Bulletin 2000, provides more detailed data and greater historical coverage for most of the statistical series presented in the *Monthly Labor Review*. More information from the household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau, and in two comprehensive data books issued annually—*Employment and Earnings, United States* and *Employment and Earnings, States and Areas*. 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 major BLS statistical series

Title and frequency (monthly except where indicated)	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	January 9	December	February 6	January	1-11
Producer Price Index	January 9	December	February 13	January	26-30
Consumer Price Index	January 23	December	February 25	January	22-25
Real earnings	January 23	December	February 25	January	14-20
Major collective bargaining settlements (quarterly)	January 26	1980	.....	.....	35-36
Work stoppages	January 29	December	February 27	January	37
Labor turnover in manufacturing	January 30	December	February 26	January	12-13
Productivity and costs (quarterly):					
Nonfinancial corporations .....	.....	.....	February 26	4th quarter	31-34

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 65,000 households beginning in January 1980, 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 are (1) those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population; the **total labor force** includes military personnel. Persons **not in the labor force** are

those not classified as employed or unemployed; this group includes persons retired, those engaged in their own housework, those not working while attending school, those unable to work because of longterm 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.

Full-time workers are those employed at least 35 hours a week; **part-time workers** are those who work fewer hours. Workers on part-time schedules for economic reasons (such as slack work, terminating or starting a job during the week, material shortages, or inability to find full-time work) are among those counted as being on full-time status, under the assumption that they would be working full time if conditions permitted. The survey classifies unemployed persons in full-time or part-time status by their reported preferences for full-time or part-time work.

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 2-7 are seasonally adjusted, based on the seasonal experience through December 1979.

Year	Total non-institutional population	Total labor force		Total	Civilian labor force					Not in labor force
		Number	Percent of population		Employed			Unemployed		
					Total	Agriculture	Nonagricultural industries	Number	Percent of labor force	
1950	106,645	63,858	59.9	62,208	58,918	7,160	51,758	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,170	6,450	55,722	2,852	4.4	44,660
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,240	61.1	80,734	77,902	3,606	74,296	2,832	3.5	53,602
1970	140,182	85,903	61.3	82,715	78,627	3,462	75,165	4,088	4.9	54,280
1971	142,596	86,929	61.0	84,113	79,120	3,387	75,732	4,993	5.9	55,666
1972	145,775	88,991	61.0	86,542	81,702	3,472	78,230	4,840	5.6	56,785
1973	148,263	91,040	61.4	88,714	84,409	3,452	80,957	4,304	4.9	57,222
1974	150,827	93,240	61.8	91,011	83,935	3,492	82,443	5,076	5.6	57,587
1975	153,449	94,793	61.8	92,613	84,783	3,380	81,403	7,830	8.5	58,655
1976	156,048	96,917	62.1	94,773	87,485	3,297	84,188	7,288	7.7	59,130
1977	158,559	99,534	62.8	97,401	90,546	3,244	87,302	6,855	7.0	59,025
1978	161,058	102,537	63.7	100,420	94,373	3,342	91,031	6,047	6.0	58,521
1979	163,620	104,996	64.2	102,908	96,945	3,297	93,648	5,963	5.8	58,623

3. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1979		1980										
	1978	1979	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
CHARACTERISTIC															
Total employed, 16 years and over	94,373	96,945	97,608	97,912	97,804	97,953	97,656	97,154	96,988	96,537	96,996	97,006	97,207	97,176	97,396
Men	55,491	56,499	56,580	56,734	56,486	56,732	56,601	55,998	55,823	55,457	55,629	55,551	55,738	55,885	55,956
Women	38,882	40,446	41,028	41,178	41,318	41,221	41,051	41,156	41,165	41,079	41,367	41,455	41,469	41,291	41,440
Married men, spouse present	38,688	39,090	38,845	38,924	38,749	38,955	38,745	38,342	38,147	38,193	37,999	37,910	37,969	38,139	38,216
Married women, spouse present	21,881	22,724	22,940	23,027	23,111	23,178	23,202	23,080	23,155	23,144	23,097	23,162	23,017	22,953	23,038
OCCUPATION															
White-collar workers	47,205	49,342	49,912	49,911	50,313	50,448	50,302	50,405	50,606	50,861	51,114	51,413	51,149	51,084	51,119
Professional and technical	14,245	15,050	15,131	15,272	15,337	15,444	15,397	15,542	15,551	15,712	15,741	15,761	15,501	15,796	15,890
Managers and administrators, except farm	10,105	10,516	10,617	10,535	10,608	10,971	10,755	10,745	10,882	10,911	11,046	11,153	11,018	10,958	10,994
Salesworkers	5,951	6,163	6,362	6,346	6,452	6,185	6,113	5,988	6,022	5,981	6,128	6,124	6,347	6,317	6,142
Clerical workers	16,904	17,613	17,802	17,758	17,915	17,848	18,037	18,129	18,152	18,256	18,199	18,375	18,284	18,013	18,092
Blue-collar workers	31,531	32,066	32,110	32,302	31,882	31,754	31,670	31,127	30,681	30,243	30,149	29,983	30,444	30,621	30,678
Craft and kindred workers	12,386	12,880	12,925	13,041	12,814	12,728	12,767	12,773	12,523	12,301	12,382	12,233	12,546	12,545	12,444
Operatives, except transport	10,875	10,909	10,963	11,042	10,878	10,661	10,579	10,408	10,336	10,131	10,134	10,066	10,196	10,244	10,313
Transport equipment operatives	3,541	3,612	3,628	3,635	3,616	3,571	3,558	3,483	3,421	3,395	3,335	3,474	3,434	3,457	3,453
Nonfarm laborers	4,729	4,665	4,594	4,584	4,774	4,795	4,767	4,463	4,402	4,416	4,299	4,209	4,268	4,376	4,467
Service workers	12,839	12,834	12,899	12,970	12,979	13,080	12,981	13,034	13,932	12,930	13,045	12,917	12,917	12,863	12,851
Farmworkers	2,798	2,703	2,718	2,694	2,660	2,764	2,733	2,658	2,745	2,606	2,689	2,601	2,779	2,735	2,726
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,419	1,413	1,475	1,451	1,428	1,417	1,449	1,370	1,405	1,365	1,352	1,263	1,418	1,344	1,435
Self-employed workers	1,607	1,580	1,622	1,596	1,554	1,648	1,600	1,591	1,662	1,590	1,631	1,648	1,706	1,643	1,597
Unpaid family workers	316	304	310	310	293	283	300	281	289	269	292	273	315	338	335
Nonagricultural industries:															
Wage and salary workers	84,253	86,540	87,020	87,384	87,578	87,419	87,221	86,741	86,631	86,257	86,407	86,508	86,331	86,507	86,701
Government	15,289	15,369	15,358	15,397	15,414	15,540	15,622	15,668	15,799	15,891	15,760	15,495	15,538	15,565	15,638
Private industries	68,966	71,171	71,662	71,987	72,163	71,879	71,599	71,072	70,832	70,365	70,647	71,014	70,793	70,942	71,063
Private households	1,363	1,240	1,211	1,228	1,132	1,178	1,115	1,123	1,206	1,219	1,245	1,209	1,113	1,146	1,154
Other industries	67,603	69,931	70,451	70,759	71,031	70,702	70,484	69,949	69,625	69,147	69,402	69,805	69,679	69,796	69,909
Self-employed workers	6,305	6,652	6,781	6,737	6,752	6,899	6,825	6,813	6,648	6,666	6,765	6,879	7,014	7,051	6,945
Unpaid family workers	472	455	417	409	379	397	376	363	411	445	441	399	423	420	404
PERSONS AT WORK¹															
Nonagricultural industries	85,693	88,133	88,617	89,180	89,454	88,985	88,585	87,660	87,680	87,910	87,454	88,270	88,243	88,466	88,751
Full-time schedules	70,543	72,647	72,997	73,137	73,223	73,110	72,749	71,807	71,224	71,206	70,649	71,478	71,969	72,142	72,365
Part time for economic reasons	3,216	3,281	3,392	3,519	3,513	3,406	3,418	3,816	4,349	3,999	4,113	4,148	4,204	4,261	4,168
Usually work full time	1,249	1,325	1,413	1,491	1,549	1,380	1,463	1,709	2,064	1,781	1,847	1,692	1,695	1,667	1,578
Usually work part time	1,967	1,956	1,979	2,028	1,964	2,026	1,955	2,107	2,285	2,217	2,266	2,456	2,509	2,593	2,590
Part time for noneconomic reasons	11,934	12,205	12,228	12,524	12,718	12,469	12,418	12,037	12,106	12,706	12,692	12,644	12,069	12,064	12,218

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

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1979.

4. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1979		1980										
	1978	1979	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
CHARACTERISTIC															
Total, 16 years and over	6.0	5.8	5.8	5.9	6.2	6.0	6.2	7.0	7.8	7.7	7.8	7.6	7.5	7.6	7.5
Men, 20 years and over	4.2	4.1	4.3	4.2	4.7	4.6	4.9	5.9	6.6	6.7	6.7	6.6	6.7	6.4	6.3
Women, 20 years and over	6.0	5.7	5.6	5.7	5.8	5.7	5.7	6.3	6.6	6.5	6.7	6.5	6.1	6.8	6.7
Both sexes, 16-19 years	16.3	16.1	15.9	16.0	16.3	16.5	15.9	16.2	19.2	18.5	19.0	19.1	17.5	18.4	18.7
White, total	5.2	5.1	5.1	5.1	5.4	5.3	5.4	6.2	6.9	6.8	6.9	6.8	6.5	6.7	6.6
Men, 20 years and over	3.7	3.6	3.7	3.7	4.1	4.0	4.4	5.3	5.9	6.0	6.0	5.9	5.9	5.7	5.6
Women, 20 years and over	5.2	5.0	4.9	5.0	5.1	5.2	4.9	5.5	5.8	5.8	5.9	5.8	5.5	5.9	5.8
Both sexes, 16-19 years	13.9	13.9	13.9	13.9	14.0	13.8	13.8	14.6	17.4	16.4	16.7	17.0	14.8	15.9	16.5
Black and other, total	11.9	11.3	10.9	11.3	11.8	11.5	11.8	12.6	13.9	13.6	14.2	13.6	14.2	14.3	14.0
Men, 20 years and over	8.6	8.4	8.4	8.6	9.6	9.2	9.3	10.9	12.0	12.6	12.7	12.7	13.5	12.1	11.9
Women, 20 years and over	10.6	10.1	9.5	10.0	10.0	9.0	10.5	11.4	11.9	10.9	11.5	10.6	10.4	12.6	12.2
Both sexes, 16-19 years	36.3	33.5	32.8	34.3	34.6	37.9	33.0	29.8	35.2	34.4	36.6	37.4	38.2	37.8	36.3
Married men, spouse present	2.8	2.7	2.9	2.8	3.4	3.1	3.4	4.1	4.7	4.9	5.1	4.9	4.8	4.6	4.3
Married women, spouse present	5.5	5.1	4.8	5.0	5.2	5.4	5.3	5.7	6.3	6.1	6.2	6.1	5.6	6.1	5.7
Women who head families	8.5	8.3	8.4	8.4	9.2	8.5	8.7	9.3	8.3	8.4	8.9	8.9	8.5	10.4	9.9
Full-time workers	5.5	5.3	5.4	5.4	5.7	5.6	5.8	6.6	7.5	7.4	7.6	7.4	7.3	7.3	7.3
Part-time workers	9.0	8.7	8.3	8.5	8.7	8.9	8.3	8.9	9.3	8.8	8.7	8.6	8.6	9.4	8.6
Unemployed 15 weeks and over	1.4	1.2	1.1	1.2	1.3	1.2	1.3	1.6	1.6	1.7	1.8	2.1	2.2	2.2	2.2
Labor force time lost ¹	6.5	6.3	6.4	6.4	6.7	6.6	6.8	7.5	8.8	8.3	8.5	8.3	8.2	8.4	8.3
OCCUPATION															
White-collar workers	3.5	3.3	3.2	3.3	3.4	3.4	3.3	3.7	3.9	3.7	3.7	3.7	3.7	4.0	3.9
Professional and technical	2.6	2.4	2.4	2.3	2.2	2.3	2.3	2.4	2.7	2.6	2.4	2.3	2.4	2.7	2.5
Managers and administrators, except farm	2.1	2.1	1.9	2.0	1.9	2.2	2.4	2.6	2.7	2.4	2.5	2.4	2.4	2.6	2.4
Salesworkers	4.1	3.9	3.7	3.8	4.4	4.5	4.0	4.7	4.5	4.4	4.2	4.1	4.2	4.6	5.0
Clerical workers	4.9	4.6	4.4	4.6	4.8	4.7	4.5	5.1	5.4	5.3	5.4	5.4	5.4	5.6	5.5
Blue-collar workers	6.9	6.9	7.5	7.2	8.0	7.7	8.0	9.7	11.3	11.5	11.5	11.4	10.9	10.8	10.5
Craft and kindred workers	4.6	4.5	4.9	4.4	4.9	4.8	5.4	6.7	8.1	8.0	7.4	8.1	7.7	7.0	6.9
Operatives, except transport	8.1	8.4	9.0	9.0	9.9	9.2	9.3	11.6	14.0	13.8	14.6	13.6	13.0	13.2	12.9
Transport equipment operatives	5.2	5.4	5.2	5.0	6.9	6.7	6.6	8.9	9.0	10.5	10.5	10.0	10.6	10.5	10.1
Nonfarm laborers	10.7	10.8	12.2	12.2	12.3	12.0	13.0	14.1	15.4	16.2	16.1	16.5	15.1	15.3	14.9
Service workers	7.4	7.1	6.6	6.6	6.9	6.9	7.1	8.0	8.5	8.1	8.4	8.6	8.1	8.3	8.3
Farmworkers	3.8	3.8	4.5	4.3	4.4	3.9	4.0	5.0	4.8	4.2	4.8	5.6	4.3	4.5	3.9
INDUSTRY															
Nonagricultural private wage and salary workers ²	5.9	5.7	5.8	5.8	6.2	6.0	6.2	7.1	8.2	8.3	8.2	8.0	7.8	7.9	7.8
Construction	10.6	10.2	10.2	10.3	10.8	10.5	13.0	15.1	17.5	16.5	16.1	18.3	16.5	14.3	14.7
Manufacturing	5.5	5.5	5.9	5.9	6.7	6.4	6.5	7.9	9.9	9.9	10.3	9.3	9.1	9.3	8.8
Durable goods	4.9	5.0	5.6	5.5	6.7	6.3	6.4	8.3	10.5	11.2	11.2	10.2	10.1	9.4	8.9
Nondurable goods	6.3	6.4	6.3	6.4	6.8	6.7	6.7	7.4	8.8	8.0	8.8	7.9	7.7	9.2	8.5
Transportation and public utilities	3.7	3.7	4.2	4.1	4.4	4.4	3.8	4.6	5.1	5.2	5.8	5.7	5.4	5.3	4.8
Wholesale and retail trade	6.9	6.5	6.5	6.4	6.6	6.4	6.3	7.0	7.6	8.0	7.5	7.6	7.6	7.7	8.3
Finance and service industries	5.1	4.9	4.6	4.7	4.6	4.6	4.9	5.1	5.7	5.7	5.7	5.6	5.3	5.7	5.4
Government workers	3.9	3.7	3.6	3.6	3.8	4.0	4.2	4.4	4.2	3.5	4.1	4.0	4.1	4.6	4.2
Agricultural wage and salary workers	8.8	9.1	10.1	9.4	10.3	9.2	10.2	11.9	11.7	9.7	10.8	13.8	10.9	11.8	9.7

¹ Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.
² Includes mining, not shown separately.

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1979

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 166,000 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.

LABOR TURNOVER DATA in this section are compiled from personnel records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies. A sample of 40,000 establishments represents all industries in the manufacturing and mining sectors of the economy.

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 14–20 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 eliminate the effects of price change. 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. **Spendable earnings** are earnings from which estimated social security and Federal income taxes have been deducted. The

Bureau of Labor Statistics computes spendable earnings from gross weekly earnings for only two illustrative cases: (1) a worker with no dependents and (2) a married worker with three dependents.

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.

Labor turnover is the movement of all wage and salary workers from one employment status to another. **Accession rates** indicate the average number of persons added to a payroll in a given period per 100 employees; **separation rates** indicate the average number dropped from a payroll per 100 employees. Although month-to-month changes in employment can be calculated from the labor turnover data, the results are not comparable with employment data from the employment and payroll survey. The labor turnover survey measures changes during the calendar month while the employment and payroll survey measures changes from midmonth to midmonth.

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 June 1980 data, published in the August 1980 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Complete comparable historical unadjusted and seasonally adjusted data are published in a Supplement to Employment and Earnings (unadjusted data from April 1977 through March 1980 and seasonally adjusted data from January 1974 through March 1980) and in *Employment and Earnings, United States, 1909–78*, BLS Bulletin 1312–11 (for prior periods).

Data on recalls were shown for the first time in tables 12 and 13 in the January 1978 issue of the *Review*. For a detailed discussion of the recalls series, along with historical data, see "New Series on Recalls from the Labor Turnover Survey," *Employment and Earnings*, December 1977, pp. 10–19.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9–20. See also *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976).

The formulas used to construct the spendable average weekly earnings series reflect the latest provisions of the Federal income tax and social security tax laws. For the spendable average weekly earnings formulas for the years 1978–80, see *Employment and Earnings*, March 1980, pp. 10–11. Real earnings data are adjusted using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

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

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

Industry division and group	1979		1980										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Nov. ^P
TOTAL PRIVATE	35.6	35.7	35.6	35.5	35.4	35.3	35.1	35.0	34.9	35.1	35.2	35.2	35.3
MINING	43.6	43.9	43.4	43.2	43.4	42.8	42.7	43.2	41.9	43.1	43.5	43.4	43.3
CONSTRUCTION	37.0	37.2	37.3	37.1	36.6	36.7	36.8	37.1	36.8	36.5	37.4	36.9	37.2
MANUFACTURING	40.1	40.2	40.3	40.1	39.8	39.8	39.3	39.1	39.0	39.4	39.6	39.6	39.7
Overtime hours	3.3	3.2	3.2	3.0	3.1	3.0	2.6	2.4	2.5	2.7	2.7	2.8	2.9
Durable goods	40.6	40.7	40.8	40.6	40.3	40.3	39.7	39.5	39.4	39.9	40.1	40.1	40.3
Overtime hours	3.3	3.2	3.3	3.1	3.2	3.0	2.5	2.4	2.4	2.6	2.7	2.8	2.9
Lumber and wood products	38.9	39.0	39.4	39.1	38.7	37.3	37.5	37.6	38.1	38.9	38.8	38.5	39.0
Furniture and fixtures	38.9	38.9	39.2	39.0	38.5	38.5	37.6	37.0	36.6	37.4	38.0	37.9	38.1
Stone, clay, and glass products	41.4	41.5	41.4	41.2	40.9	40.6	40.3	40.4	40.2	40.3	40.9	40.9	41.1
Primary metal industries	40.8	40.7	40.8	40.8	40.7	40.6	39.2	38.8	38.6	39.2	40.0	40.4	41.0
Fabricated metal products	40.7	40.9	40.9	40.8	40.7	40.8	39.9	39.7	39.6	40.1	40.4	40.3	40.4
Machinery, except electrical	41.5	41.5	41.6	41.5	41.3	41.5	41.0	40.7	40.6	40.8	40.9	40.7	40.7
Electric and electronic equipment	40.4	40.5	40.5	40.3	40.0	39.9	39.5	39.2	39.0	39.4	39.5	39.8	39.9
Transportation equipment	40.5	40.9	40.9	40.8	40.4	40.5	39.7	39.5	39.6	40.9	40.6	40.8	40.9
Instruments and related products	41.0	41.0	41.4	40.9	40.4	40.7	40.3	40.4	40.1	40.1	40.1	40.2	40.5
Miscellaneous manufacturing	38.9	39.0	39.2	39.1	38.6	38.5	38.3	38.2	38.3	38.6	38.9	38.6	38.5
Nondurable goods	39.4	39.4	39.5	39.4	39.0	39.1	38.9	38.6	38.5	38.7	38.8	39.0	38.9
Overtime hours	3.2	3.1	3.1	2.9	3.0	3.0	2.6	2.5	2.6	2.8	2.7	2.8	2.9
Food and kindred products	39.9	39.9	39.8	39.7	39.3	39.6	39.9	39.6	39.7	39.8	39.7	39.6	39.6
Tobacco manufactures	37.8	38.5	38.5	37.9	37.7	38.2	38.2	37.3	38.5	37.3	37.5	39.5	39.2
Textile mill products	41.0	41.0	41.5	41.1	40.8	40.3	39.7	39.1	38.8	39.2	39.7	39.8	39.8
Apparel and other textile products	35.3	35.6	36.0	35.9	35.3	35.8	35.3	35.2	35.1	35.1	35.1	35.3	35.0
Paper and allied products	42.7	42.8	43.0	42.9	42.6	42.5	41.7	41.4	41.4	41.8	42.2	42.3	42.3
Printing and publishing	37.5	37.4	37.8	37.4	37.2	37.2	37.1	36.8	36.9	37.1	36.9	37.0	36.7
Chemicals and allied products	42.0	41.8	42.0	41.9	41.8	41.5	41.3	41.1	40.8	41.0	41.3	41.4	41.5
Petroleum and coal products	44.4	43.4	36.9	40.7	39.7	41.1	42.5	42.3	42.2	42.2	42.7	43.5	43.8
Rubber and miscellaneous plastics products	40.0	40.0	40.7	40.0	39.9	40.1	39.3	39.2	39.0	40.2	40.1	40.3	40.8
Leather and leather products	36.6	37.0	37.2	37.2	36.9	37.3	36.7	36.7	36.1	36.5	36.2	36.1	35.9
TRANSPORTATION AND PUBLIC UTILITIES	40.2	40.0	39.5	39.4	39.5	39.5	39.3	39.6	39.9	39.7	39.7	39.7	39.7
WHOLESALE AND RETAIL TRADE	32.6	32.6	32.6	32.4	32.3	32.0	32.1	31.9	31.8	32.0	32.1	32.2	32.2
WHOLESALE TRADE	38.9	38.9	38.9	38.8	38.5	38.5	38.6	38.0	38.0	38.2	38.5	38.4	38.6
RETAIL TRADE	30.6	30.6	30.6	30.4	30.3	30.0	30.1	30.0	29.8	30.1	30.1	30.2	30.2
FINANCE, INSURANCE, AND REAL ESTATE	36.3	36.4	36.2	36.3	36.3	36.2	36.1	36.4	36.2	36.3	36.1	36.3	36.4
SERVICES	32.7	32.8	32.7	32.7	32.7	32.6	32.5	32.6	32.6	32.6	32.5	32.6	32.7

20. Gross and spendable weekly earnings, in current and 1967 dollars, 1960 to date

[Averages for production or nonsupervisory workers on private nonagricultural payrolls]

Year and month	Private nonagricultural workers						Manufacturing workers					
	Gross average weekly earnings		Spendable average weekly earnings				Gross average weekly earnings		Spendable average weekly earnings			
			Worker with no dependents		Married worker with 3 dependents				Worker with no dependents		Married worker with 3 dependents	
	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars
1960	\$80.67	\$90.95	\$65.59	\$73.95	\$72.96	\$82.25	\$89.72	\$101.15	\$72.57	\$81.82	\$80.11	\$90.32
1961	82.60	92.19	67.08	74.87	74.48	83.13	92.34	103.06	74.60	83.26	82.18	91.72
1962	85.91	94.82	69.56	76.78	76.99	84.98	96.56	106.58	77.86	85.94	85.53	94.40
1963	88.46	96.47	71.05	77.48	78.56	85.67	99.23	108.21	79.51	86.71	87.25	95.15
1964	91.33	98.31	75.04	80.78	82.57	88.88	102.97	110.84	84.40	90.85	92.18	99.22
1965	95.45	101.01	79.32	83.94	86.63	91.67	107.53	113.79	89.08	94.26	96.78	102.41
1966	98.82	101.67	81.29	83.63	88.66	91.21	112.19	115.42	91.45	94.08	99.33	102.19
1967	101.84	101.84	83.38	83.38	90.86	90.86	114.49	114.49	92.97	92.97	100.93	100.93
1968	107.73	103.39	86.71	83.21	95.28	91.44	122.51	117.57	97.70	93.76	106.75	102.45
1969	114.61	104.38	90.96	82.84	99.99	91.07	129.51	117.95	101.90	92.81	111.44	101.49
1970	119.83	103.04	96.21	82.73	104.90	90.20	133.33	114.64	106.32	91.42	115.58	99.38
1971	127.31	104.95	103.80	85.57	112.43	92.69	142.44	117.43	114.97	94.78	124.24	102.42
1972	136.90	109.26	112.19	89.54	121.68	97.11	154.71	123.47	125.34	100.03	135.57	108.20
1973	145.39	109.23	117.51	88.29	127.38	95.70	166.46	125.06	132.57	99.60	143.50	107.81
1974	154.76	104.78	124.37	84.20	134.61	91.14	176.80	119.70	140.19	94.92	151.56	102.61
1975	163.53	101.45	132.49	82.19	145.65	90.35	190.79	118.36	151.61	94.05	166.29	103.16
1976	175.45	102.90	143.30	84.05	155.87	91.42	209.32	122.77	167.83	98.43	181.32	106.35
1977	189.00	104.13	155.19	85.50	169.93	93.63	228.90	126.12	183.80	101.27	200.06	110.23
1978	203.70	104.30	165.39	84.69	180.71	92.53	249.27	127.63	197.40	101.08	214.87	110.02
1979	219.30	100.73	177.55	81.56	194.35	89.27	268.94	123.54	212.43	97.58	232.07	106.60
1979: November	225.70	99.17	182.22	80.06	199.27	87.55	276.86	121.64	217.80	95.69	238.08	104.60
December	229.04	99.58	184.59	80.26	201.80	87.74	285.07	123.94	223.38	97.12	244.31	106.22
1980: January	225.34	96.59	181.96	77.99	199.00	85.30	277.01	118.74	217.91	93.40	238.20	102.10
February	226.75	95.88	182.98	77.37	200.07	84.60	278.60	117.80	218.99	92.60	239.40	101.23
March	229.15	95.52	184.67	76.98	201.89	84.16	280.99	117.13	220.61	91.96	241.22	100.55
April	228.55	94.21	184.25	75.95	201.43	83.03	279.35	115.15	219.49	90.47	239.97	98.92
May	229.95	93.82	185.23	75.57	202.49	82.62	280.21	114.32	220.08	89.79	240.63	98.18
June	233.33	94.16	187.59	75.70	205.06	82.75	283.68	114.48	222.43	89.76	243.26	98.17
July	234.39	94.51	188.33	75.94	205.86	83.01	282.85	114.05	221.87	89.46	242.63	97.83
August	237.14	95.01	190.25	76.22	207.95	83.31	286.89	114.94	224.61	89.99	245.69	98.43
September	240.04	95.29	192.28	76.33	210.15	83.43	295.71	117.39	230.60	91.54	252.39	100.19
October ^p	242.16	95.30	193.76	76.25	211.76	83.34	298.10	117.32	232.22	91.39	254.20	100.04
November ^p	243.92	(¹)	194.99	(¹)	213.09	(¹)	302.80	(¹)	235.41	(¹)	257.76	(¹)

¹Not available.
 NOTE: The earnings expressed in 1967 dollars have been adjusted for changes in price level as measured by the Bureau's Consumer Price Index for Urban Wage Earners and Clerical Workers. These series are described in "The Spendable Earnings Series: A Technical Note on its Cal-

ulation," **Employment and Earnings and Monthly Report on the Labor Force**, February 1969, pp. 6-13. See also "Spendable Earnings Formulas, 1978-80," **Employment and Earnings**, March 1980, pp. 10-11.
 c = corrected.

UNEMPLOYMENT INSURANCE DATA

UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from records of State and Federal unemployment insurance claims filed and benefits paid. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

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

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unem-

ployed. Persons not covered by unemployment insurance (about one-third of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

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

21. Unemployment Insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1979				1980								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All programs:													
Insured unemployment	2,164	2,236	2,559	3,047	3,740	3,730	3,652	3,629	3,680	3,790	4,140	3,911	3,961
State unemployment insurance program: ¹													
Initial claims ²	1,219	1,641	1,827	2,263	2,837	1,818	1,705	2,190	P 2,248	2,319	2,737	.....	.....
Insured unemployment (average weekly volume)	2,024	2,057	2,384	2,864	3,537	3,518	3,356	3,278	3,343	3,455	3,692	3,408	3,087
Rate of insured unemployment	2.4	2.4	2.8	3.4	4.1	4.1	3.9	3.8	3.9	4.0	4.3	3.9	3.6
Weeks of unemployment compensated	6,993	7,638	8,107	9,171	13,792	12,801	13,170	12,689	P 12,302	12,441	14,398	.....	.....
Average weekly benefit amount for total unemployment	\$89.07	\$90.59	\$92.39	\$94.54	\$96.41	\$98.39	\$99.15	\$99.52	P \$99.55	\$99.88	\$98.75	.....	.....
Total benefits paid	\$606,095	\$673,965	\$728,370	\$843,869	\$1,283,946	\$1,229,877	\$1,218,231	\$1,232,173	\$1,196,836	\$1,213,595	\$1,397,508	.....	.....
Unemployment compensation for ex-servicemen: ³													
Initial claims ¹	23	26	24	24	25	21	21	21	P 20	23	27	.....	.....
Insured unemployment (average weekly volume)	52	52	54	56	60	58	63	52	50	45	58	55	56
Weeks of unemployment compensated	211	236	232	233	299	255	249	246	P 220	122	331	.....	.....
Total benefits paid	\$19,634	\$23,325	\$23,093	\$23,093	\$29,635	\$25,308	\$24,928	\$24,518	\$22,025	\$11,761	\$33,342	.....	.....
Unemployment compensation for Federal civilian employees: ⁴													
Initial claims	13	18	15	15	19	11	12	11	P 12	14	17	.....	.....
Insured unemployment (average weekly volume)	25	28	29	31	34	32	30	25	22	20	26	25	29
Weeks of unemployment compensated	91	109	118	118	150	129	123	108	P 88	50	124	.....	.....
Total benefits paid	\$8,453	\$10,093	\$11,063	\$11,047	\$14,118	\$12,226	\$11,901	\$10,323	\$8,280	\$4,665	\$11,296	.....	.....
Railroad unemployment insurance:													
Applications	13	11	10	11	22	7	5	4	6	24	44	13	.....
Insured unemployment (average weekly volume)	21	18	20	19	40	39	30	27	23	27	44	39	.....
Number of payments	32	51	36	41	80	71	68	62	54	55	66	86	.....
Average amount of benefit payment	\$189.08	\$189.61	\$183.38	\$197.22	\$199.01	\$208.73	\$210.79	\$201.87	\$193.44	\$199.06	\$207.08	\$211.87	.....
Total benefits paid	\$5,747	\$8,003	\$6,462	\$8,085	\$14,967	\$14,573	\$13,884	\$13,002	\$9,953	\$10,140	\$13,320	\$17,336	.....
Employment service: ⁵													
New applications and renewals	15,525	1,855	3,183	4,378	5,980	7,285	8,708	10,021	11,446	12,864	.....	.....	.....
Nonfarm placements	4,349	458	768	1,044	1,314	1,561	1,853	2,143	2,413	2,730	.....	.....	.....

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

² Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

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

⁴ Includes the Virgin Islands. Excludes data on claims and payments made jointly with State programs.

⁵ Cumulative total for fiscal year (October 1 - September 30).

NOTE: Date for Puerto Rico included. Dashes indicate data not available.

PRICE DATA

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

Definitions

The **Consumer Price Index** is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. One index, a new CPI for All Urban Consumers, covers 80 percent of the total noninstitutional population; and the other index, a revised CPI for Urban Wage Earners and Clerical Workers, covers about half the new index population. The All Urban Consumers index includes, 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, doctor's and dentist's 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. Prices are collected from over 18,000 tenants, 24,000 retail establishments, and 18,000 housing units for property taxes 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

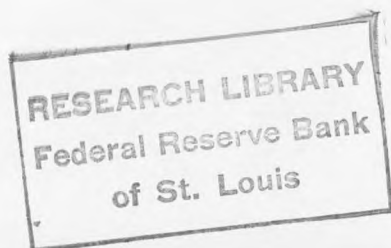
Beginning with the May 1978 issue of the *Review*, regional CPI's cross classified by population size, were introduced. These indexes will enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes will be published bimonthly. (See table 24.)

For further details about the new and the revised indexes and a comparison of various aspects of these indexes with the old unrevised CPI, see *Facts About the Revised Consumer Price Index*, a pamphlet in the Consumer Price Index Revision 1978 series. See also *The Consumer Price Index: Concepts and Content Over the Years*. Report 517, revised edition (Bureau of Labor Statistics, May 1978).

For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics, 1977*, Bulletin 1966 (Bureau of Labor Statistics, 1977), tables 122-133. Additional data and analysis on price changes are provided in the *CPI Detailed Report and Producer Prices and Price Indexes*, both monthly publications of the Bureau.

As of January 1976, the Wholesale Price Index (as it was then called) incorporated a revised weighting structure reflecting 1972 values of shipments. From January 1967 through December 1975, 1963 values of shipments were used as weights.

For a discussion of the general method of computing consumer, producer, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13-15. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review*, April 1978, pp. 7-15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review*, August 1965, pp. 974-82.



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

[1967=100 unless otherwise specified]

Area ¹	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)							
	1979	1980						1979	1980						
	Oct.	May	June	July	Aug.	Sept.	Oct.	Oct.	May	June	July	Aug.	Sept.	Oct.	
U.S. city average ²	225.4	244.9	247.6	247.8	249.4	251.7	253.9	225.6	245.1	247.8	248.0	249.6	251.9	254.1	
Anchorage, Alaska (10/67=100)	...	226.5	...	228.4	...	230.9	...	...	223.1	...	224.8	...	226.7	...
Atlanta, Ga.	220.8	...	242.2	...	246.5	...	250.2	223.5	...	244.7	...	249.7	...	252.4	
Baltimore, Md.	...	249.1	...	252.4	...	255.0	...	...	247.8	...	250.8	...	253.2	...
Boston, Mass.	...	236.9	...	240.9	...	244.4	...	...	236.8	...	240.9	...	244.5	...
Buffalo, N.Y.	218.7	...	235.4	...	236.8	...	239.6	218.6	...	234.6	...	235.5	...	238.2	
Chicago, Ill.-Northwestern Ind.	221.8	243.1	248.2	246.8	245.2	250.1	253.7	221.7	243.0	248.0	247.0	245.4	249.5	252.8	
Cincinnati, Ohio-Ky.-Ind.	...	251.6	...	256.7	...	259.9	...	...	252.9	...	259.1	...	261.7	...
Cleveland, Ohio	224.7	...	250.1	...	253.9	...	264.6	225.5	...	250.5	...	254.4	...	264.2	
Dallas-Ft. Worth, Tex.	228.2	...	256.4	...	258.5	...	264.9	228.0	...	254.5	...	257.4	...	262.9	
Denver-Boulder, Colo.	...	258.0	...	261.6	...	266.6	...	...	262.4	...	265.8	...	270.9	...
Detroit, Mich.	227.2	248.4	256.7	253.7	255.1	259.5	264.3	226.9	248.9	255.8	252.1	253.8	257.7	261.4	
Honolulu, Hawaii	210.5	...	227.5	...	230.1	...	234.6	211.1	...	228.0	...	229.5	...	233.5	
Houston, Tex.	244.2	...	266.5	...	268.6	...	272.3	241.8	...	262.8	...	265.6	...	269.4	
Kansas City, Mo.-Kansas	229.9	...	247.8	...	250.8	...	254.8	227.9	...	246.3	...	249.3	...	253.0	
Los Angeles-Long Beach, Anaheim, Calif.	221.8	249.1	250.1	248.7	247.3	249.6	252.6	224.0	252.6	253.4	251.5	250.1	252.0	254.9	
Miami, Fla. (11/77=100)	...	129.7	...	133.6	...	133.1	...	...	130.9	...	134.7	...	134.9	...
Milwaukee, Wis.	...	250.3	...	251.6	...	258.4	...	...	255.2	...	255.9	...	263.2	...
Minneapolis-St. Paul, Minn.-Wis.	231.2	...	246.4	...	250.1	...	255.5	233.0	...	248.4	...	250.6	...	256.6	
New York, N.Y.-Northeastern N.J.	219.9	234.5	237.2	238.9	240.8	241.8	243.1	219.3	234.1	236.7	238.4	240.7	241.5	242.6	
Northeast, Pa. (Scranton)	...	232.5	...	239.8	...	243.1	...	...	235.8	...	243.2	...	246.9	...
Philadelphia, Pa.-N.J.	220.1	239.4	242.5	244.1	246.0	247.2	247.9	221.3	239.9	243.8	245.3	247.3	248.3	249.5	
Pittsburgh, Pa.	226.0	...	246.1	...	250.7	...	256.3	226.1	...	246.8	...	251.2	...	257.6	
Portland, Oreg.-Wash.	...	257.3	...	252.7	...	256.9	...	...	255.9	...	252.2	...	255.4	...
St. Louis, Mo.-Ill.	...	241.8	...	245.0	...	252.4	...	...	242.6	...	245.9	...	252.7	...
San Diego, Calif.	...	269.7	...	269.9	...	271.8	...	...	264.8	...	265.7	...	267.7	...
San Francisco-Oakland, Calif.	221.5	...	248.0	...	251.0	...	251.9	220.8	...	247.7	...	251.4	...	252.6	
Seattle-Everett, Wash.	...	249.6	...	255.1	...	258.1	...	...	246.8	...	251.6	...	254.6	...
Washington, D.C.-Md.-Va.	...	241.2	...	247.2	...	249.2	...	...	242.0	...	248.7	...	251.8	...

¹The 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.

²Average of 85 cities.

PRODUCTIVITY DATA

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

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input**, or labor productivity, measure the value of goods and services produced per hour of labor. **Compensation per hour** includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

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

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

The use of the term "man-hours" to identify the labor component of productivity and costs, in tables 31 through 34, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

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

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

Beginning with the September 1976 issue of the *Review*, tables 31-34 were revised to reflect changeover to the new series—private business sector and nonfarm business sector—which differ from the previously published total private economy and nonfarm sector in that output imputed for owner-occupied dwellings and the household and institutions sectors, as well as the statistical discrepancy, are omitted. For a detailed explanation, see J. R. Norsworthy and L. J. Fulco, "New sector definitions for productivity series," *Monthly Labor Review*, October 1976, pages 40-42.

Item	1950	1955	1960	1965	1970	1972	1973	1974	1975	1976	1977	1978	1979
Private business sector:													
Output per hour of all persons	61.2	70.6	79.0	95.1	104.4	111.5	113.6	110.2	112.6	116.6	118.7	119.3	118.3
Compensation per hour	42.6	56.1	72.2	88.7	123.3	139.8	151.3	165.2	181.7	197.6	213.3	231.4	253.1
Real compensation per hour	59.2	69.9	81.4	93.9	106.0	111.6	113.6	111.8	112.7	115.9	117.5	118.4	116.4
Unit labor cost	69.6	79.4	91.4	93.3	118.2	125.4	133.2	149.8	161.3	169.5	179.7	194.0	214.0
Unit nonlabor payments	73.1	80.4	85.4	95.9	105.8	118.9	124.9	130.3	150.3	157.9	165.5	174.3	184.4
Implicit price deflator	70.8	79.8	89.3	94.2	113.9	123.2	130.3	143.1	157.5	165.5	174.8	187.2	203.8
Nonfarm business sector:													
Output per hour of all persons	67.2	74.6	81.2	96.0	103.2	110.1	112.0	108.6	110.7	114.6	116.4	116.9	115.7
Compensation per hour	45.6	59.0	74.5	89.4	121.9	138.4	149.2	163.0	179.3	194.2	209.6	227.5	247.9
Real compensation per hour	63.3	73.6	84.1	94.6	104.8	110.5	112.1	110.4	111.2	113.9	115.5	116.4	114.0
Unit labor cost	68.0	79.1	91.7	93.2	118.1	125.7	133.2	150.1	161.9	169.5	180.1	194.6	214.4
Unit nonlabor payments	71.4	80.1	84.4	95.8	106.0	117.4	117.8	124.7	145.9	156.0	163.8	169.9	178.6
Implicit price deflator	69.1	79.4	89.2	94.1	114.0	122.9	127.9	141.4	156.4	164.8	174.5	186.1	202.1
Nonfinancial corporations:													
Output per hour of all employees	(¹)	(¹)	80.6	96.9	103.7	110.6	112.9	108.7	112.2	115.8	117.0	118.0	117.5
Compensation per hour	(¹)	(¹)	76.0	90.1	121.8	136.7	147.6	161.7	177.9	192.7	208.0	225.0	244.9
Real compensation per hour	(¹)	(¹)	85.7	95.3	104.7	109.1	110.9	109.5	110.4	113.0	114.6	115.2	112.7
Unit labor cost	(¹)	(¹)	94.3	93.0	117.4	123.7	130.7	148.8	158.6	166.4	177.7	190.6	208.4
Unit nonlabor payments	(¹)	(¹)	90.8	100.1	103.5	114.8	116.8	124.8	148.1	156.8	164.4	170.6	179.5
Implicit price deflator	(¹)	(¹)	93.1	95.5	112.5	120.5	125.8	140.2	154.9	163.0	173.0	183.5	198.1
Manufacturing:													
Output per hour of all persons	65.8	75.0	79.8	98.4	105.0	115.7	118.9	113.0	118.8	124.0	127.7	128.2	129.2
Compensation per hour	45.6	61.2	78.0	91.1	122.3	136.6	146.5	161.7	181.1	196.1	212.7	229.9	250.8
Real compensation per hour	63.3	76.3	88.0	96.4	105.1	109.0	110.1	109.5	112.3	115.0	117.2	117.6	115.3
Unit labor cost	69.4	81.6	97.7	92.6	116.5	118.1	123.2	143.1	152.4	158.2	166.6	179.4	194.1
Unit nonlabor payments	82.3	88.6	92.3	103.3	96.2	107.4	106.4	105.6	128.4	139.6	147.4	152.4	154.4
Implicit price deflator	73.3	83.8	96.1	95.9	110.3	114.8	118.0	131.6	145.1	152.5	160.7	171.1	181.9

¹ Not available.

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

[1967 = 100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	I 1979 to II 1979	II 1979 to III 1979	III 1979 to IV 1979	IV 1979 to I 1980	I 1980 to II 1980	II 1980 to III 1980	II 1978 to II 1979	III 1978 to III 1979	IV 1978 to IV 1979	I 1979 to I 1980	II 1979 to II 1980	III 1979 to III 1980
	Private business sector:											
Output per hour of all persons	-2.0	-1.4	-0.3	-0.3	-2.7	1.0	-0.7	-1.6	-1.7	-1.0	-1.2	1.0
Compensation per hour	9.5	8.7	7.5	11.7	12.0	18.7	9.4	9.4	9.2	9.3	9.9	19.9
Real compensation per hour	-2.9	-4.1	-5.4	-4.5	-1.5	1.5	-1.1	-2.1	-3.2	-4.2	-3.9	1.0
Unit labor cost	11.8	10.3	7.8	12.1	15.1	18.4	10.2	11.2	11.1	10.5	11.3	110.8
Unit nonlabor payments	6.5	4.2	5.9	3.8	4.9	17.0	5.7	4.8	3.9	5.1	4.7	7.8
Implicit price deflator	10.1	8.3	7.2	9.4	11.9	11.0	8.7	9.1	8.7	8.8	9.2	9.9
Nonfarm business sector:												
Output per hour of all persons	-3.9	-1.5	0.8	-1.1	-3.7	1.5	-1.1	-2.0	-2.0	-1.4	-1.4	1.0
Compensation per hour	8.1	8.5	9.5	10.7	10.8	18.8	8.9	8.9	9.1	9.2	9.8	19.9
Real compensation per hour	-4.2	-4.4	-3.6	-5.3	-2.6	1.6	-1.6	-2.5	-3.3	-4.4	-4.0	1.0
Unit labor cost	12.5	10.1	8.6	12.0	15.0	17.2	10.1	11.1	11.3	10.8	11.4	110.7
Unit nonlabor payments	7.7	6.6	4.6	7.5	9.1	16.8	5.0	4.3	3.7	6.6	7.0	9.4
Implicit price deflator	11.0	9.0	7.4	10.6	13.2	11.0	8.5	9.0	8.9	9.5	10.0	110.3
Nonfinancial corporations:												
Output per hour of all employees	-2.7	-0.3	-0.4	-0.1	-1.9	4.7	-6	-1.1	-1.4	-0.9	-0.7	0.6
Compensation per hour	8.3	8.5	8.4	11.0	11.1	19.6	8.7	8.9	9.0	9.0	9.7	110.0
Real compensation per hour	-4.1	-4.3	-4.5	-5.1	-2.3	2.3	-1.8	-2.6	-3.3	-4.5	-4.1	1.0
Total unit costs	11.8	10.2	9.3	12.2	17.6	18.2	8.6	9.9	10.8	10.9	12.3	111.7
Unit labor costs	11.2	8.8	8.9	11.1	13.2	14.7	9.4	10.1	10.6	10.0	10.5	109.4
Unit nonlabor costs	13.5	14.6	10.6	15.4	31.1	18.6	6.2	9.4	11.3	13.5	17.7	118.7
Unit profits	-3.4	-5.3	-10.4	-10.9	-34.7	27.5	0	-3.9	-10.6	-7.6	-16.2	1.0
Implicit price deflator	10.2	8.6	7.3	9.9	12.1	9.6	7.7	8.4	8.4	9.0	9.5	9.7
Manufacturing:												
Output per hour of all persons	1.1	2.5	-1.3	-2.8	-4.7	-0.7	0.8	0.1	-0.3	0.2	-1.6	1.0
Compensation per hour	9.6	7.8	8.8	10.5	15.2	12.1	9.2	9.1	9.1	9.2	10.5	111.6
Real compensation per hour	-2.8	-4.9	-4.2	-5.5	1.4	4.6	-1.3	-2.4	-3.3	-4.4	-3.4	1.0
Unit labor cost	8.5	5.2	10.2	13.7	20.9	12.9	8.3	8.9	9.3	9.3	12.4	114.4

1 = revised.

LABOR-MANAGEMENT DATA

MAJOR COLLECTIVE BARGAINING DATA are obtained from contracts on file at the Bureau of Labor Statistics, direct contact with the parties, and from secondary sources. Additional detail is published in *Current Wage Developments*, a monthly periodical of the Bureau. Data on work stoppages are based on confidential responses to questionnaires mailed by the Bureau of Labor Statistics to parties involved in work stoppages. Stoppages initially come to the attention of the Bureau from reports of Federal and State mediation agencies, newspapers, and union and industry publications.

Definitions

Data on wage changes apply to private nonfarm industry agreements covering 1,000 workers or more. Data on wage and benefit changes *combined* apply only to those agreements covering 5,000 workers or more. **First-year wage settlements** refer to pay changes going into effect within the first 12 months after the effective date of

the agreement. **Changes over the life of the agreement** refer to total agreed upon settlements (exclusive of potential cost-of-living escalator adjustments) expressed at an average annual rate. **Wage-rate changes** are expressed as a percent of straight-time hourly earnings, while **wage and benefit changes** are expressed as a percent of total compensation.

Effective wage-rate adjustments going into effect in major bargaining units measure changes actually placed into effect during the reference period, whether the result of a newly negotiated increase, a deferred increase negotiated in an earlier year, or as a result of a cost-of-living escalator adjustment. Average adjustments are affected by workers receiving no adjustment, as well as by those receiving increases or decreases.

Work stoppages include all known strikes or lockouts involving six workers or more and lasting a full shift or longer. Data 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.

35. Wage and benefit settlements in major collective bargaining units, 1975 to date

[In percent]

Sector and measure	Annual average					Quarterly average							
	1975	1976	1977	1978	1979	1978	1979				1980 ^p		
						IV	I	II	III	IV	I	II	III
Wage and benefit settlements, all industries:													
First-year settlements	11.4	8.5	9.6	8.3	9.0	6.1	2.8	10.5	9.0	8.5	8.6	10.1	11.6
Annual rate over life of contract	8.1	6.6	6.2	6.3	6.6	5.2	5.3	7.8	6.1	6.0	6.4	6.8	7.3
Wage rate settlements, all industries:													
First-year settlements	10.2	8.4	7.8	7.6	7.4	7.4	5.7	8.9	6.8	6.3	7.8	8.7	10.7
Annual rate over life of contract	7.8	6.4	5.8	6.4	6.0	5.9	6.6	7.2	5.1	5.3	6.3	6.8	7.4
Manufacturing:													
First-year settlements	9.8	8.9	8.4	8.3	6.9	9.5	8.7	9.7	6.3	5.6	7.0	6.6	8.7
Annual rate over life of contract	8.0	6.0	5.5	6.6	5.4	7.4	7.7	8.1	4.7	4.2	5.6	4.9	5.5
Nonmanufacturing (excluding construction):													
First-year settlements	11.9	8.6	8.0	8.0	7.6	6.4	3.2	8.5	9.4	7.8	9.1	10.4	9.4
Annual rate over life of contract	8.0	7.2	5.9	6.5	6.2	5.1	5.6	5.8	6.5	7.4	7.1	8.6	5.8
Construction:													
First-year settlements	8.0	6.1	6.3	6.5	8.8	8.4	9.7	8.7	9.7	7.5	9.6	12.7	15.7
Annual rate over life of contract	7.5	6.2	6.3	6.2	8.3	7.1	8.2	8.3	8.5	7.6	9.3	10.3	13.3

36. Effective wage adjustments going into effect in major collective bargaining units, 1975 to date

[In percent]

Sector and measure	Average annual changes					Average quarterly changes								
	1975	1976	1977	1978	1979	1978		1979				1980 ^P		
						III	IV	I	II	III	IV	I	II	III
Total effective wage rate adjustment, all industries	8.7	8.1	8.0	8.2	9.1	2.7	1.4	1.4	2.6	3.3	1.6	1.5	2.9	3.1
Change resulting from—														
Current settlement	2.8	3.2	3.0	2.0	3.0	.5	.4	.2	1.1	1.0	.5	.4	1.0	1.5
Prior settlement	3.7	3.2	3.2	3.7	3.0	1.2	.5	.6	1.0	1.0	.4	.5	1.2	1.1
Escalator provision	2.2	1.6	1.7	2.4	3.1	1.0	.5	.6	.5	1.2	.7	.6	.6	.6
Manufacturing	8.5	8.5	8.4	8.6	9.6	2.9	1.9	1.5	2.3	3.2	2.4	1.8	3.2	2.6
Nonmanufacturing	8.9	7.7	7.6	7.9	8.8	2.5	1.1	1.4	2.8	3.4	1.0	1.3	2.7	3.6

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

37. Work stoppages, 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 (thousands)	In effect during month (thousands)	Number (thousands)	Percent of estimated working time
1947	3,693	.....	2,170	.....	34,600	.30
1948	3,419	.....	1,960	.....	34,100	.28
1949	3,606	.....	3,030	.....	50,500	.44
1950	4,843	.....	2,410	.....	38,800	.33
1951	4,737	.....	2,220	.....	22,900	.18
1952	5,117	.....	3,540	.....	59,100	.48
1953	5,091	.....	2,400	.....	28,300	.22
1954	3,468	.....	1,530	.....	22,600	.18
1955	4,320	.....	2,650	.....	28,200	.22
1956	3,825	.....	1,900	.....	33,100	.24
1957	3,673	.....	1,390	.....	16,500	.12
1958	3,694	.....	2,060	.....	23,900	.18
1959	3,708	.....	1,880	.....	69,000	.50
1960	3,333	.....	1,320	.....	19,100	.14
1961	3,367	.....	1,450	.....	16,300	.11
1962	3,614	.....	1,230	.....	18,600	.13
1963	3,362	.....	941	.....	16,100	.11
1964	3,655	.....	1,640	.....	22,900	.15
1965	3,963	.....	1,550	.....	23,300	.15
1966	4,405	.....	1,960	.....	25,400	.15
1967	4,595	.....	2,870	.....	42,100	.25
1968	5,045	.....	2,649	.....	49,018	.28
1969	5,700	.....	2,481	.....	42,869	.24
1970	5,716	.....	3,305	.....	66,414	.37
1971	5,138	.....	3,280	.....	47,589	.26
1972	5,010	.....	1,714	.....	27,066	.15
1973	5,353	.....	2,251	.....	27,948	.14
1974	6,074	.....	2,778	.....	47,991	.24
1975	5,031	.....	1,746	.....	31,237	.16
1976	5,648	.....	2,420	.....	37,859	.19
1977	5,506	.....	2,040	.....	35,822	.17
1978	4,230	.....	1,623	.....	36,922	.17
1979 ^r : October	439	.....	208	.....	3,372	.17
November	272	.....	91	.....	3,201	.17
December	149	.....	45	.....	2,424	.13
1980 ^P : January	352	441	207	292	3,142	.16
February	354	590	114	332	3,025	.17
March	396	631	123	310	2,705	.14
April	425	663	116	231	2,786	.14
May	505	752	139	214	2,464	.13
June	435	714	164	201	2,553	.13
July	491	768	270	394	4,030	.21
August	409	768	64	238	3,363	.17
September	438	711	163	269	3,189	.16
October	360	649	94	189	2,638	.13

^r = revised.

^P = preliminary.

How to order BLS publications

PERIODICALS

Order from (and make checks payable to) Superintendent of Documents, Washington, D.C. 20402. For foreign subscriptions, add 25 percent.

Monthly Labor Review. The oldest and most authoritative government research journal in economics and the social sciences. Current statistics, analysis, developments in industrial relations, court decisions, book reviews. \$18 a year, single copy, \$2.50.

Employment and Earnings. A comprehensive monthly report on employment, hours, earnings, and labor turnover by industry, area, occupation, et cetera, \$22 a year, single copy \$2.75.

Occupational Outlook Quarterly. A popular periodical designed to help high school students and guidance counselors assess career opportunities. \$6 for four issues, single copy \$1.75.

Current Wage Developments. A monthly report about collective bargaining settlements and unilateral management decisions about wages and benefits; statistical summaries. \$12 a year, single copy \$1.35.

Producer Prices and Price Indexes. A comprehensive monthly report on price movements of both farm and industrial commodities, by industry and stage of processing. \$17 a year, single copy \$2.25.

CPI Detailed Report. A monthly periodical featuring detailed data and charts on the Consumer Price Index. \$15 a year, single copy \$2.25.

PRESS RELEASES

The Bureau's statistical series are made available to news media through press releases issued in Washington. Many of the releases also are available to the public upon request. Write: Bureau of Labor Statistics, Washington, D.C. 20212.

Regional. Each of the Bureau's eight regional offices publishes reports and press releases dealing with regional data. Single copies available free from the issuing regional office.

BULLETINS AND HANDBOOKS

About 140 bulletins and handbooks published each year are for sale by regional offices of the Bureau of Labor Statistics (see inside front cover) and by the Superintendent of Documents, Washington, D.C. 20402. Make checks payable to the Superintendent of Documents. Among the bulletins and handbooks currently in print are these:

Occupational Outlook Handbook, 1980-81 Edition. Bulletin 2075. A useful resource supplying valuable assistance to all persons seeking satisfying and productive employment. \$8, paperback; \$11 cloth cover.

BLS Handbook of Labor Statistics 1978. Bulletin 2000. A 604-page volume of historical data on the major BLS statistical series. \$9.50.

Handbook of Methods. Bulletin 1910. Brief technical account of each major statistical program of the Bureau of Labor Statistics. \$3.50.

BLS Measures of Compensation. Bulletin 1941. An introduction to the various measures of employee compensation; describes each series, the manner in which it is developed, its uses and limitations. \$2.75.

Occupational Projections and Training Data. Bulletin 2052. Presents both general and detailed information on the relationship between occupational requirements and training needs. (Updates Bulletin 1918 published in 1976.) \$3.25.

Exploring Careers. Bulletin 2001. A new career guidance resource designed for junior high school students but useful for older students as well. Includes occupational narratives, evaluative questions, suggested activities, career games, and photographs. \$10.

International Comparisons of Unemployment. Bulletin 1979. Brings together all of the Bureau's work on international unemployment comparisons. Describes the methods of adjusting foreign unemployment rates in 8 countries to U.S. concepts. \$3.50.

Productivity Indexes for Selected Industries, 1979 Edition. Bulletin 2054. A 190-page report of indexes of output, employment, and employee hours in selected industries from 1954 to 1978. This edition contains measures for three industries previously not covered, as well as components of previously published measures in 10 industries. \$5.50.

Profiles of Occupational Pay: A Chartbook. Bulletin 2037. A graphic illustration of some of the factors that affect workers' earnings. This three-part presentation looks at wage variations among and within occupations and portrays characteristics of high- and low-paying urban areas and manufacturing industries. \$3.50.

REPORTS AND PAMPHLETS

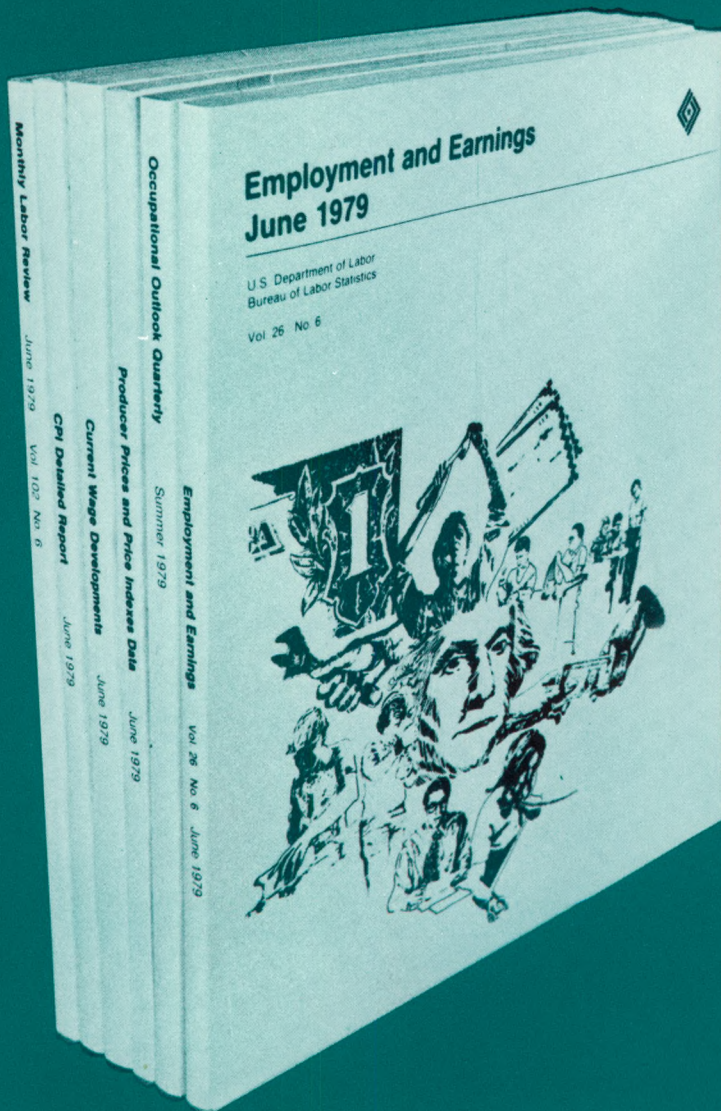
Single copies available free from the BLS regional offices or from the Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

Major Programs of the Bureau of Labor Statistics. Report 552. A summary of the Bureau's principal programs, including data available, sources, uses, and publications.

Employment in Perspective: Working Women. A quarterly report series presenting highlights of current data on women in the labor force.

Employment in Perspective: Minority Workers. A quarterly report series presenting highlights of current data on blacks and persons of Hispanic origin in the labor force.

Employment and Earnings



...one of six periodicals published by the Bureau of Labor Statistics, U.S. Department of Labor, gives monthly figures on *those two topics* for the Nation as a whole, for individual States, and for more than 200 areas. Included are household and establishment data, seasonally and not seasonally adjusted. The data are collected by the Bureau of the Census (Department of Commerce), State Employment Security Agencies, and State Departments of Labor in cooperation with BLS. A supplement is included in the subscription price.

Subscription Order Form:

Enter my Subscription to: *Employment and Earnings* \$22; (\$5.50 additional for foreign mailing).

Remittance is enclosed. Charge to GPO deposit account no. - Order No. _____

Credit Card Orders Only-Master Charge and Visa.

Total charges \$ _____

Credit Card No. Expiration Date Month/Year



Mail Order Form to:

Superintendent of Documents,
U.S. Government Printing
Office, Washington, D.C. 20402.
Make checks payable to
Superintendent of Documents.

Name _____
Address _____
City, State, and Zip Code _____

U.S. Department of Labor
Bureau of Labor Statistics
Washington D.C. 20212

Official Business
Penalty for private use, \$300
RETURN POSTAGE GUARANTEED

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



SECOND CLASS MAIL

MLR LIBRA442L ISSDUE003R 1
LIBRARY
FED RESERVE BANK OF ST LOUIS
PO BOX 442
SAINT LOUIS MO 63166

