



# MONTHLY LABOR REVIEW

U.S. Department of Labor  
Bureau of Labor Statistics  
September 1977

*In this issue:*

Productivity in 1976

Work Sharing Here  
and Abroad

The End of a Twelve  
Hour Day







**U.S. DEPARTMENT OF LABOR**  
**Ray Marshall, *Secretary***

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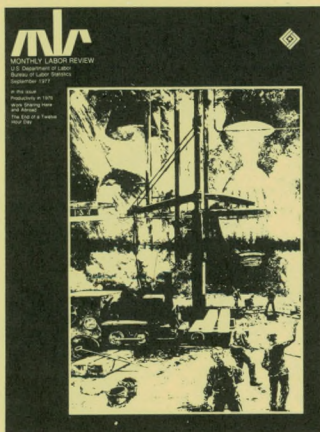
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## MONTHLY LABOR REVIEW

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Robert W. Fisher, Executive Editor

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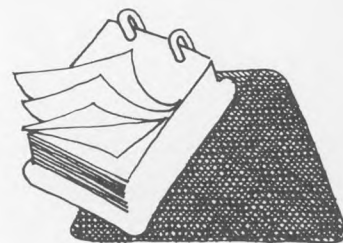
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# Labor Month In Review



**YOUTH UNEMPLOYMENT.** The problems of young jobseekers received new attention with the release of 1976 unemployment rates and employment-population ratios for large cities and the passage of a federally sponsored job creation program.

The newly released data focused on the employment-population ratio (which measures the percentage of the working-age population who are actually employed) and the unemployment rate (which measures the percentage of the labor force who do not have jobs but who are looking for work) because together they provide a good picture of labor market conditions.

A decrease in the employment-population ratio followed by an increase in the unemployment rate is usually a sign of economic distress. Conversely, an increase in the employment-population ratio accompanied by a drop in the unemployment rate is generally a sign of economic improvement because it indicates that employment gains are outdistancing growth in the working-age population.

In a survey of 16- to 19-year-old youths in 11 central cities, the Bureau of Labor Statistics found that Houston was the only city experiencing a rising employment-population ratio and a declining unemployment rate. The youth employment-population ratio rose from 41.2 percent in 1970 to 46.8 percent in 1976 and remained the highest of the 11 cities. The unemployment rate declined to 16.8 percent (from 19.9 percent) during the period.

The proportion of employed U.S. youth 16 to 19 years increased from 42.3 percent to 44.3 over the period, and the unemployment rate increased from 15.2 percent to 19.0.

New York City had the lowest employment-population ratio, 21.9 percent, down from 30.4 percent in 1970. The decline may, in part, reflect the major job losses of recent years. The city's unemployment rate among teenagers doubled during this period—increasing from 15.1 percent in 1970 to 30.3 percent in 1976.

The remaining cities, Dallas, Milwaukee, Philadelphia, St. Louis, Washington, D.C., Cleveland, Detroit, Chicago, and Baltimore all experienced declines in the employment-population ratio and increases in the unemployment rate between 1970 and 1976.

**Helping hand.** Noting that half of the Nation's unemployed persons are under age 24, President Carter signed the Youth Employment Projects Act of 1977. The \$1.5-billion program is expected to create more than 200,000 jobs and training positions during fiscal years 1977 and 1978.

The measure adds a Title VIII to the Comprehensive Employment and Training Act (CETA), creating a *Young Adult Conservation Corps*, tested favorably in recent years as a summer program. Under this program, unemployed youths, age 16 to 23, will be hired to maintain and improve public parks, forests, and recreational areas.

A new Part C to Title II of CETA authorizes three projects designed to relieve youth unemployment:

*The Youth Incentive Entitlement Pilot Project* will provide funds to employ or train youths age 16 to 19 who are in school or willing to return to school.

*The Youth Community Conservation and Improvement Project* is available

to all unemployed youths, age 16 to 19, whether in or out of school.

*The Youth Employment and Training Program* will serve youths, age 16 to 21, who are unemployed, underemployed, or in school, and who are members of a family whose income does not exceed 85 percent of the BLS lower standard of living budget.

Additional provisions of the Act will further amend CETA to (1) make Hawaiians eligible for programs formerly limited to Indians; (2) require the Secretary of Labor to initiate steps to increase the participation of veterans under age 35 in CETA's programs; and (3) limit vacant teaching positions in elementary and secondary schools to unemployed persons with teaching experience who are certified by the State.

The programs will be administered largely by the Department of Labor. In a statement, Secretary of Labor Ray Marshall said, "There is no one simple solution to the problem of youth unemployment. That is why this legislation authorizes . . . a variety of approaches. . . ."

In its second annual report to the President and the Congress, the National Commission for Manpower Policy had recommended expansion of "manpower programs," specifically changing existing summer and in-school youth efforts into year-round programs and creating additional employment and training programs for disadvantaged inner-city and rural out-of-school youths.

A forthcoming release will feature data on employment-population ratios and unemployment by age groups in the 11 cities. Data on New York City youths are available from the Bureau's New York office. □



# Productivity and costs in the private economy, 1976

*Output per hour rose 4.2 percent  
in the private business sector,  
more than double the 1975 rate  
and the sharpest rise since 1962*

J. R. NORSWORTHY AND L. J. FULCO

Productivity in the private business sector increased faster in 1976 than in any year since 1962. Rebounding from the depressed growth rates of the recent recession, output per hour of all persons (productivity) advanced 4.2 percent—2.3 times the 1975 increase (table 1). Over the last decade, the average annual increase in this important economic indicator has been 1.6 percent.

Productivity growth enables the economy to provide increases in hourly compensation without matching advances in unit labor cost. In 1976, unit labor cost (compensation of all persons per unit of output) rose 4.7 percent, the smallest increase since 1972; hourly compensation rose 9.1 percent. The recovery was also evident in the increases in both output and hours of all persons—up 7.0 percent and 2.7 percent. Both measures had declined a year earlier.

Productivity movements are strongly influenced by the business cycle. At the trough of a recession, both capital and labor are often substantially underutilized. Thus, increases in output which accompany the expansion phase can be met with less than proportional increases in hours, and productivity advances briskly. The appreciably faster-than-trend rise in productivity in 1976 is an example of this kind of productivity boost.

In a similar manner, productivity growth is retarded—or reversed—during the contraction phase of the business cycle. Employers adjust payrolls to lower levels of demand only after a lag. Downward adjustments in employment are not immediately proportional because of uncertainty concerning the severity and duration of the decline in demand, and because of the costs involved in hiring and training workers when conditions improve. It may be more economical to hold onto trained employees through a short period of slack than to fire and rehire.

Hourly compensation is a measure of the cost to an employer of securing the services of labor. It includes wages and salaries, as well as fringe benefits and employer-paid employment taxes for employees, plus an estimate of the labor compensation of proprietors. Real hourly compensation—which takes into account changes in the Consumer Price Index (CPI)—relates changes in compensation to changes in purchasing power. Although some employment costs are not available to the employee for current allocation (such as employer contributions to social security and health insurance premiums) and so are not part of the CPI, the real compensation measure provides some insight into changes in real income.

Since 1947, changes in real hourly compensation have been closely related to changes in output per hour (chart 1). In the private business sector, productivity increased an average 2.9 percent annually,

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and real hourly compensation also increased at an average annual rate of 2.9 percent. Since 1966, when the productivity growth rate fell to 1.6 percent, real hourly compensation has grown at the same slow rate. Table 2 shows the close agreement in the two series.

### Nonfarm business sector

In the nonfarm business sector—which represents 95 percent of the hours in the private business sector—productivity increased somewhat less than the overall rise, because the farm sector experienced faster growth. Productivity rose 4.1 percent in 1976, compared with 1.6 percent in 1975.

Unit labor cost increased by 4.4 percent in the nonfarm sector, because both hourly compensation and productivity rose more slowly than in the private business sector. The labor cost increase reflects a 8.7-percent rise in hourly compensation, and is ap-

preciably less than the 7.9-percent increase experienced in the previous year. Labor compensation typically accounts for about two-thirds of the value of output in current dollars. During 1976, both output and hours reversed the declines of 1975, posting gains of 7.3 and 3.1 percent.

*Nonfinancial corporate sector.* The nonfinancial corporate sector includes all corporations doing business in the United States, with the exception of banks, savings and loan holding companies, stock and commodity brokers, and finance and insurance agencies. Three subsectors—manufacturing, services, and trade—account for more than four-fifths of employment in the nonfinancial corporate sector. Nearly 70 percent of the hours paid for in the private business sector are associated with employees of nonfinancial corporations.

In 1976, productivity increased 3.7 percent in the nonfinancial corporate sector, compared with 3.5

**Table 1. Annual rates of change in productivity and related measures, 1966–76**

Sector	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
<b>Private business</b>											
Output per hour of all persons .....	3.2	2.3	3.3	0.3	0.7	3.2	2.9	1.9	-2.7	1.8	4.2
Unit labor cost .....	3.7	3.3	4.1	6.6	6.4	3.2	2.7	6.2	12.4	7.7	4.7
Hourly compensation .....	7.0	5.6	7.6	7.0	7.2	6.6	5.7	8.2	9.4	9.6	9.1
Output .....	5.5	2.0	5.1	3.0	-9	2.8	6.6	5.9	-2.3	-2.3	7.0
Hours .....	2.3	-3	1.7	2.7	-1.6	-4	3.6	3.9	.4	-4.1	2.7
Real hourly compensation .....	4.0	2.7	3.3	1.5	1.1	2.2	2.3	1.8	-1.4	.5	3.1
<b>Nonfarm business</b>											
Output per hour of all persons .....	2.5	1.9	3.2	-2	.2	2.9	3.0	1.7	-2.8	1.6	4.1
Unit labor cost .....	3.4	3.8	3.9	6.6	6.5	3.5	2.7	6.0	12.6	7.9	4.4
Hourly compensation .....	6.1	5.8	7.3	6.5	6.7	6.6	5.8	7.8	9.4	9.6	8.7
Output .....	6.0	1.9	5.4	3.0	-1.1	2.7	6.9	6.0	-2.4	-2.6	7.3
Hours .....	3.3	0	2.1	3.2	-1.2	-3	3.7	4.3	.4	-4.1	3.1
Real hourly compensation .....	3.1	2.9	3.0	1.0	.7	2.2	2.4	1.4	-1.4	.5	2.8
<b>Nonfinancial corporations</b>											
Output per all-employee hour .....	2.3	1.4	3.4	0.5	-1	3.4	3.0	2.4	-3.5	3.5	3.7
Unit labor cost .....	3.2	4.2	3.4	6.3	6.8	2.7	2.5	5.7	13.8	6.8	4.7
Hourly compensation .....	5.5	5.7	6.9	6.9	6.7	6.2	5.6	8.3	9.8	10.5	8.6
Output .....	7.7	2.4	6.6	4.4	-1.1	3.1	8.4	7.4	-3.5	-2.3	7.7
Hours .....	5.3	1.0	3.1	3.9	-1.0	-3	5.2	4.8	0	-5.6	3.8
Real hourly compensation .....	2.5	2.8	2.6	1.4	.7	1.9	2.2	2.0	-1.1	1.2	2.7
Unit profits .....	-1	-7.8	.6	-11.8	-21.4	10.3	13.1	-1.7	-18.8	34.8	20.9
<b>Manufacturing, total</b>											
Output per hour of all persons .....	1.6	.3	3.6	1.2	-4	5.6	5.2	2.9	-5.5	3.1	6.8
Unit labor cost .....	3.1	4.8	3.3	5.2	7.2	1.0	.4	4.3	16.1	7.8	1.7
Hourly compensation .....	4.7	5.1	7.0	6.5	6.8	6.6	5.6	7.3	9.8	11.2	8.6
Output .....	8.0	0	5.6	2.9	-5.7	1.3	9.4	8.4	-6.7	-6.4	11.6
Hours .....	6.4	-3	1.9	1.7	-5.3	-4.0	4.0	5.4	-1.3	-9.2	4.5
Real hourly compensation .....	1.7	2.2	2.7	1.1	.8	2.2	2.2	1.0	-1.1	1.9	2.6
<b>Manufacturing, durable goods</b>											
Output per hour of all persons .....	.4	.6	3.3	.1	-1.5	6.2	5.0	1.9	-6.0	3.1	7.2
Unit labor cost .....	4.0	4.3	3.7	6.1	8.7	.8	.5	5.0	16.6	8.6	1.5
Hourly Compensation .....	4.4	4.9	7.1	6.1	7.1	7.1	5.5	7.0	9.6	12.0	8.8
Output .....	8.9	.1	5.3	2.2	-8.7	.6	10.7	9.9	-6.8	-8.5	12.1
Hours .....	8.5	-4	1.9	2.1	-7.3	-5.3	5.4	7.9	-9	-11.2	4.5
Real hourly compensation .....	1.4	2.1	2.8	.7	1.1	2.7	2.1	.7	-1.2	2.6	2.9
<b>Manufacturing, nondurable goods</b>											
Output per hour of all persons .....	3.1	-1	4.1	3.0	1.5	4.7	5.4	4.2	-4.7	3.1	6.1
Unit labor cost .....	1.4	5.5	2.6	3.9	5.3	1.3	-1	2.9	15.3	7.1	1.8
Hourly compensation .....	4.6	5.4	6.8	7.0	6.8	6.1	5.3	7.2	9.9	10.4	8.1
Output .....	6.6	-1	6.2	4.1	-9	2.4	7.5	6.1	-6.6	-3.2	10.8
Hours .....	3.3	0	2.0	1.1	-2.4	-2.2	2.1	1.8	-2.0	-6.1	4.4
Real hourly compensation .....	1.6	2.6	2.5	1.5	.9	1.7	1.9	.9	-1.0	1.1	2.2



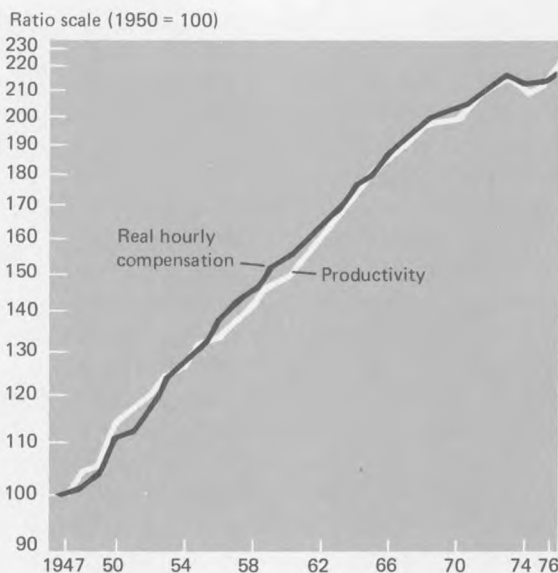
percent in 1975. Hourly compensation rose 8.6 percent, and unit labor cost increased 4.7 percent. This was the smallest rise in unit labor cost since 1972. Output and hours rose strongly, after both measures had declined a year earlier. The 1976 percentage increases in these series were as follows:

Sector	Productivity	Output	Hours
Private business .....	4.2	7.0	2.7
Nonfarm business .....	4.1	7.3	3.1
Nonfinancial corporations....	3.7	7.7	3.8
Manufacturing .....	6.8	11.6	4.5
Durable goods .....	7.2	12.1	4.5
Nondurable goods .....	6.1	10.8	4.4

**Manufacturing sector.** The manufacturing sector accounts for nearly one-third of the nonfarm sector hours. Productivity in manufacturing rose 6.8 percent, compared with a 3.1-percent increase a year earlier, and a decline of 5.5 percent in the recession year 1974. The 1976 increase in productivity was the largest since 1963.

Output in the manufacturing sector rose 11.6 percent, and hours rose 4.5 percent. Both measures had declined in the 2 preceding years. The recession-recovery pattern was particularly evident in this sector, where output had dropped 6.7 percent in 1974 and 6.4 percent in 1975. In the earlier year, the decline in hours paid for (1.3 percent) was less than the decline in output, so productivity fell by 5.5 percent. During 1975, the reduction in hours (9.2 percent) outweighed the decrease in output, so productivity

**Chart 1. Productivity and real hourly compensation in the private business sector, 1947-76**



**Table 2. Percent changes in productivity and real hourly compensation, 1947-76**

Sector and period	Productivity	Real hourly compensation
Private business:		
1947-76 .....	2.9	2.9
1947-66 .....	3.2	3.4
1966-76 .....	1.7	1.7
Nonfarm business:		
1947-76 .....	2.4	2.6
1947-66 .....	2.6	3.0
1966-76 .....	1.4	1.4
Manufacturing:		
1947-76 .....	2.7	2.5
1947-66 .....	2.8	3.1
1966-76 .....	2.1	1.5
Nonfinancial corporations <sup>1</sup> :		
1947-76 .....		
1947-66 .....		
1966-76 .....	1.6	1.5

<sup>1</sup> Consistent data are not available prior to 1958.

increased by 3.1 percent. During 1976, there was a solid expansion in both measures; productivity rose 6.8 percent, as output jumped 11.6 percent and hours rose 4.5 percent.

Unit labor cost in manufacturing rose only 1.7 percent, partly because the rise in output per hour largely offset the 8.6-percent increase in hourly compensation.

In the second quarter of 1976, the Bureau of Labor Statistics expanded its productivity measurement program to include quarterly productivity and cost measures for the durable and nondurable goods-producing subsectors of manufacturing.<sup>1</sup> The composition of the manufacturing sector has remained relatively constant in the post-war period, with between 55 and 60 percent of all hours paid for accounted for by durable goods-producing industries. Productivity growth rates within the sector have differed over time; the durable subsector has had both slower growth and more volatility than the nondurable subsector. The average annual percentage increase in productivity in the subsectors and in total manufacturing is shown in the following tabulation:

	Total	Durable	Nondurable
1947-76 .....	2.7	2.3	3.1
1947-66 .....	2.8	2.3	3.3
1966-76 .....	2.1	1.7	2.7

During the postwar years, productivity growth has not been steady. As has been observed in the private business sector, the rate of productivity growth has slowed since 1966. Moreover, the gap between the growth rates of the subsectors has widened in recent years. In the earlier period, productivity in the durable subsector grew at about 70 percent of the nondurable rate; in the latter period, it grew at about 63 percent of the rate.



The importance of manufacturing in the nonfarm business sector has diminished since 1966. From 1947 to 1966, hours of all persons grew about the same amount in manufacturing (23 percent) as in the remainder of nonfarm business enterprises (24 percent). Since 1966, hours in manufacturing have declined by 3.6 percent, while hours in the rest of the nonfarm business sector have increased 20.1 percent (table 3). Manufacturing industries accounted for about 37 percent of nonfarm business hours in 1947 and in 1966; a decade later the share was only 32 percent.

During the recent recession, manufacturing hours declined for a longer time and by a greater amount than hours in the private business sector as a whole. Hours of all persons in manufacturing declined 12.8 percent over six quarters, while the decline in the private business sector was only 5.8 percent, and occurred over four quarters.

### Capital and labor productivity

In 1976, the Bureau of Labor Statistics began reporting labor productivity for the private business and nonfarm business sectors of the U.S. economy, replacing the total private and private nonfarm sectors.<sup>2</sup> The new sector measures have the advantages that (1) the output measures are based on market transactions (none of the imputations from the broader gross national product measure, such as for the rental value of owner-occupied dwellings, are included); and (2) labor inputs can be matched exactly to the corresponding sector output measures. The Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce,<sup>3</sup> which is the source of capital data consistent with the National Income and Product Accounts, does not publish capital stock series for these sectors, but it is possible to construct such measures by excluding from the capital stock the equipment and structures that lie outside the private business sector.<sup>4</sup>

The net capital stock differs from the gross stock in that it excludes depreciation<sup>5</sup> (or capital consumption allowances, the term used in the National Income and Product Accounts). There are some significant differences between the growth rates of gross and net measures of the capital stock. Table 4 shows the growth rates for both measures for the various

**Table 4. Average annual rates of growth in output, hours, and capital stock, 1947-66 and 1966-76**  
[In percent]

Sector and period	Output	Hours	Gross capital stock	Net capital stock
Private business: 1947-66 .....	3.9	0.4	2.8	3.3
1966-76 .....	2.6	.8	3.4	3.5
Nonfarm business: 1947-66 .....	4.0	1.1	2.9	3.4
1966-76 .....	2.6	1.1	3.5	3.6
Farm business: 1947-66 .....	1.0	-4.4	2.1	2.6
1966-76 .....	2.5	-2.9	2.0	1.9
Manufacturing: 1947-66 .....	4.5	1.2	3.1	3.1
1966-76 .....	1.9	-3	2.8	2.7

sectors for 1947-66 and 1966-76, as well as the corresponding growth rates for output and hours of all persons engaged in production. These periods are chosen to correspond to the periods before and after the slowdown in productivity growth which began in the mid-1960's.<sup>6</sup>

Output grew more slowly between 1966-76 than 1947-66 in all sectors except farm, partially reflecting the effects of two recessions. Hours grew faster in the later period in the private business sector, and at the same rate in both periods in nonfarm business. In manufacturing, hours declined slightly in the later period, again a consequence of cyclical forces. In the farm sector, hours of labor input declined in both periods, although they fell more slowly from 1966-76.

Except in manufacturing, the patterns of growth in capital stock vary significantly with the choice of measures—gross or net. In the private business and nonfarm business sectors, the net capital stock grew more rapidly from 1966 to 1976 than the gross capital stock; for the farm sector, the reverse is true for the same period. In manufacturing, the capital stock grew somewhat more slowly in the later period; in the farm sector there is a significant slowdown in capital stock growth only for the net stock measure. For 1966-76, gross and net capital stocks exhibit very similar growth rates in all sectors. Because the gross and net growth rates differ, both measures are used in this analysis.

Historically, increases in the capital stock have contributed to the growth of the productivity of labor. A conventional way of expressing the relationship between capital and labor is the capital/labor ratio. Labor productivity growth has been shown to result from growth in the capital/labor ratio and growth in capital productivity (the output/capital ratio).<sup>7</sup> When labor productivity growth is "explained" in this way, most of the cyclical movement in productivity growth is associated with cyclical movement in capital productivity, while trends in the capital/labor ratio are more stable. This technique has been used to examine movements in labor pro-

**Table 3. Percent change in hours paid for, 1947-76**

Period	Nonfarm business sector	Nonfarm business less manufacturing	Manufacturing		
			Total	Durable	Nondurable
1947-76 .....	37.8	48.9	18.8	29.3	6.4
1947-66 .....	23.7	24.0	23.2	36.0	8.2
1966-76 .....	11.4	20.1	-3.6	-4.9	-1.6

**Table 5. Sources of productivity change, 1947-66 and 1966-76**

[In percent]

Sector and period	Change	Gross capital stock			Net capital stock		
		Attributed to—					
		Capital/ labor ratio	Output/ capital ratio	Inter- action	Capital/ labor ratio	Output/ capital ratio	Inter- action
Private business:							
1947-66 .....	3.4	2.5	1.0	-0.1	3.0	0.5	-0.1
1966-76 .....	1.8	2.6	-0.8	-0.1	2.7	-0.8	-0.1
Nonfarm business:							
1947-66 .....	2.8	1.8	1.1	-0.1	2.3	0.6	-0.1
1966-76 .....	1.5	2.5	-0.9	-0.1	2.5	-0.9	-0.1
Farm business:							
1947-66 .....	5.8	7.0	-1.1	-0.1	7.4	-1.4	-0.2
1966-76 .....	5.7	5.0	0.6	-0.1	5.0	0.7	0
Manufacturing:							
1947-66 .....	3.1	2.1	1.3	-0.3	2.1	1.4	-0.3
1966-76 .....	2.1	3.3	-0.9	-0.2	3.2	-0.8	-0.3

ductivity since 1947 for the private nonfarm business and farm business sectors, and for manufacturing. In order to shed further light on the slowdown in labor productivity growth which has occurred since the mid 1960's, the effects of the capital/labor ratio and of the output/capital ratio were computed for 1947-66 and 1966-76. Results for both gross and net capital stock measures are shown in table 5.

The pattern that emerges for nonfarm business and manufacturing is that the effect of the capital/labor ratio on the growth of labor productivity was reduced during 1966-76. This pattern appears whether gross or net capital stock is the basis of measurement. The slight slowdown experienced in the private business sector clearly results from the deceleration in the growth of the capital/labor ratio in the farm sector, and this effect is more pronounced when the net stock measure is used. That is, the reduced growth in the net capital/labor ratio for the private business sector is the result of a slowdown in capital stock growth in the farm sector alone. And the cause of this slowdown is primarily the smaller annual rate of decline in farm hours after 1966; prior to 1966, the farm-to-nonfarm shift in employment and hours was greater, as noted below.

A second clear pattern outside the farm sector is that the output/capital ratio grew at an annual rate of about 1 percent from 1947 to 1966, and fell at a similar rate from 1966 and 1976. This reversal in capital productivity growth accounts for the lower rate of labor productivity growth in the later period. The decline in the growth of the output/capital ratios derives from reduced output growth rates which are at least partially associated with the recessions of 1969-70 and 1974-75.

### Intersectoral shifts and labor productivity

Productivity changes in the private business economy result from changes in the pattern of employ-

ment and hours among sectors, as well as changes within the component sectors. Because output per hour is higher in some sectors than in others, productivity will rise if workers—and hence hours—are shifted from a low productivity sector to a high productivity sector, even if there is no productivity growth within sectors. (Clearly, productivity decline may be induced by the reverse process.) Past articles have reported the effect on labor productivity of intersectoral shifts within the private economy and within the private nonfarm sector.<sup>8</sup> Since the BLS introduced new sector definitions for productivity and cost measurement in 1976, it is worthwhile to update the analysis of intersectoral shifts.

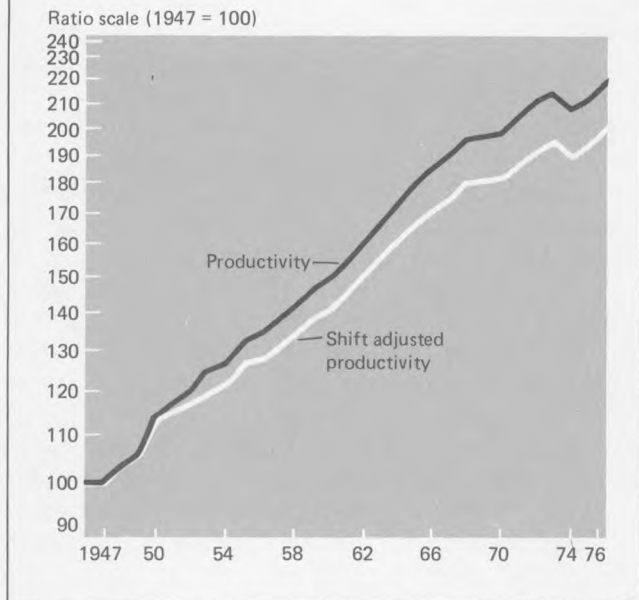
Table 6 shows the results of dividing productivity change for the private business sector into the effects of within-sector productivity growth and the effects of the farm-to-nonfarm shift. The period prior to 1967 is characterized by large shift effects—an average of 0.5 percent per year. In 1947, 19.2 percent of total hours in the private business sector were accounted for by the farm sector. By 1966, the proportion had fallen to 7.5 percent. Thus, a major part of the postwar productivity growth prior to 1966 arose from the movement of the labor force from farm to nonfarm business (chart 2). Labor input on farms fell

**Table 6. Percent productivity change in the private business sector, 1947-76**

Period	Change	Attributed to —		
		Productivity effect	Farm-to-nonfarm shift effect	Interaction
1947-76 .....	2.79	2.44	0.34	0.00
1947-66 .....	3.35	2.89	.46	0
1966-76 .....	1.47	1.35	.12	0
1948 .....	3.92	3.26	.66	0
1949 .....	1.68	2.10	-.41	-.02
1950 .....	8.02	6.60	1.38	.04
1951 .....	2.92	1.76	1.13	.03
1952 .....	2.49	1.83	.64	.02
1953 .....	3.66	2.69	1.04	-.07
1954 .....	1.80	1.87	-.07	0
1955 .....	4.15	3.94	.20	.01
1956 .....	1.38	.76	.62	0
1957 .....	2.96	2.35	.61	0
1958 .....	2.67	2.45	.23	-.01
1959 .....	3.57	3.29	.26	.02
1960 .....	1.61	1.33	.29	-.01
1961 .....	3.26	2.99	.27	0
1962 .....	4.64	4.32	.30	.02
1963 .....	3.97	3.66	.30	0
1964 .....	4.10	3.67	.41	.02
1965 .....	3.74	3.43	.31	0
1966 .....	3.20	2.60	.59	.01
1967 .....	2.30	2.16	.15	0
1968 .....	3.34	3.17	.16	.01
1969 .....	.35	.07	.30	-.02
1970 .....	.73	.56	.19	-.02
1971 .....	3.24	3.17	.07	0
1972 .....	2.89	2.82	.06	.01
1973 .....	1.90	1.73	.17	0
1974 .....	-3.38	-3.39	.01	0
1975 .....	1.89	1.91	-.03	0
1976 .....	3.97	3.82	.16	0



**Chart 2. Productivity in the private business sector adjusted for shifts in hours between the farm and nonfarm sectors, 1947-76**



by 58 percent during this period. Since 1966, the share of farm hours in private business hours has fallen to 5.1 percent, but the productivity of farm workers has risen faster than that of nonfarm work-

**Table 7. Average annual productivity change in the nonfarm business sector, 1947-75**

[In percent]

Period	Change	Attributed to —		
		Productivity effect	Shift effect	Interaction
1947-73 .....	2.50	2.43	0.09	-0.01
1966-73 .....	1.84	1.75	.10	-.02
1947-75 .....	2.26	2.18	.09	-.01
1947-66 .....	2.75	2.68	.08	-.01
1966-75 .....	1.24	1.14	.12	-.02

ers. Consequently, the shift effect has been considerably smaller since 1966—only about one-tenth of 1 percent annually. The declining contribution of the shift is the most important single factor in the recent slowdown in labor productivity growth.<sup>9</sup>

Within the nonfarm business sector, labor also shifts among subsectors.<sup>10</sup> There has been a small, steady shift effect amounting to about one-tenth of 1 percent per year, as shown in table 7. There appears to be little tendency for the shift effect to increase over time. Because data were only available through 1975, the shift analysis is also presented for periods ending in 1973, the last peak year of the business cycle. The effects on average productivity growth of extending the analysis to 1975 are quite noticeable, because in the severe 1974-75 recession, labor productivity fell sharply. □

FOOTNOTES

<sup>1</sup> These series are similar to the total manufacturing measure, because they are based on annual levels published by the Bureau of Economic Analysis and monthly indexes of industrial production derived by the Board of Governors of the Federal Reserve Bank. Information on labor input is derived mainly from the monthly BLS survey of establishments, supplemented with data on proprietors and unpaid family workers from the monthly household survey. See J. R. Norsworthy and L. J. Fulco, "Productivity and costs in the third quarter, 1976," *Monthly Labor Review*, February 1977, pp. 75-79.

<sup>2</sup> See J. R. Norsworthy and L. J. Fulco, "New sector definitions for productivity series," *Monthly Labor Review*, October 1976, pp. 40-42, for an explanation of the new measures.

<sup>3</sup> BEA uses the perpetual inventory method for estimating the capital stock, based on historical series for plant and equipment expenditures. See "Conceptual Framework and Major Estimating Techniques," *Fixed Nonresidential Business and Residential Capital in the United States, 1925-75* (Bureau of Economic Analysis, U.S. Department of Commerce, June 1976). Subsequent updates to these data by BEA have also been included in the present article.

<sup>4</sup> For purposes of this analysis, output and labor input of government enterprises have been excluded from the private business sector and

nonfarm business sector output measures, because corresponding capital stock measures are not available. The patterns noted in the text are not sensitive to this adjustment. The trend rates in this section are average annual rates of growth, not least squares trends.

<sup>5</sup> See "Conceptual Framework and Major Estimating Techniques," pp. T12-T14.

<sup>6</sup> Other dimensions of this issue are examined in R. E. Kutscher, J. A. Mark, and J. R. Norsworthy, "The productivity slowdown and the outlook to 1985," *Monthly Labor Review*, May 1977, pp. 3-8.

<sup>7</sup> See J. R. Norsworthy and L. J. Fulco, "Productivity and costs in the private economy, 1975," *Monthly Labor Review*, May 1976, pp. 3-11. The procedure used is described briefly here.

<sup>8</sup> See J. R. Norsworthy and L. J. Fulco, "Productivity and costs in the private economy, 1973," *Monthly Labor Review*, June 1974, pp. 3-9, and Norsworthy and Fulco, "Productivity, 1975."

<sup>9</sup> See Kutscher, Mark, and Norsworthy, "Productivity slowdown."

<sup>10</sup> For this analysis, output data by major industry sector are available only through 1975. The components of nonfarm business are: mining; manufacturing; construction; transportation; communications; utilities; trade (wholesale and retail combined); finance, insurance, and real estate; services; and government enterprises.

# Productivity and new technology in eating and drinking places

*Labor-saving techniques for preparing meals, the rapidly expanding fast food chains, and a decline in the number of drinking places have altered output and hours in the industry*

RICHARD B. CARNES AND HORST BRAND

Productivity in eating and drinking establishments<sup>1</sup> rose at an average annual rate of 1.0 percent between 1958 (when adequate data became available) and 1976, but varied widely over the 18-year span. (See chart 1.) Output increased 3.1 percent annually and hours, 2.1 percent.<sup>2</sup> (See table 1.) During the same period in the private economy, productivity advances averaged 2.8 percent a year.

Factors that have contributed to the advance of productivity in the food service industry are the spread of modern management techniques and work organization, particularly in the rapidly expanding fast food segment of the industry. Menus have been simplified and standardized, and menu items are increasingly prepared off premise, reducing on-premise employee-hour requirements. Layouts of establishments are designed to minimize walking time of personnel. Technological innovations, such as the microwave oven, reduce cooking time. Finally, the decline in the number of single-unit drinking establishments (usually proprietorships and partnerships) has resulted in the disappearance of marginal enterprises.

## Trends, 1958-76

Between 1958 and 1964, output per hour rose at an average annual rate of only 0.5 percent, reflecting gains below the long-term trend in both output and aggregate hours. Between 1964 and 1968, productivity increases accelerated, averaging 2.3 percent a

year, as output grew rapidly and hours advanced moderately. From 1968 forward, productivity improvement again slackened to 0.4 percent a year; however, output continued to expand vigorously, accompanied by relatively large increases in hours.

Year-to-year changes in the trend of labor productivity deviated significantly from the long-term average. The largest annual gain, 3.4 percent, occurred in 1970; the largest decline, 2.2 percent, occurred the following year, when output rose slightly and hours expanded sharply.

*Output and growth factors.* The industry's output gains reflect an upward trend in real per capita spending on meals eaten away from home. At \$159 per capita in 1976 (constant 1972 dollars), such spending has risen 24 percent since the mid-1960's with all of the rise having occurred since 1973.<sup>3</sup> The relation between changes in industry output and changes in real per capita income is illustrated below:

	Output	Real per capita income
1958-76 .....	3.1	2.8
1958-63 .....	1.6	1.5
1963-68 .....	4.0	4.0
1968-76 .....	3.0	2.3

Relatively slow advances in real per capita income were associated with modest output growth in the earlier years; while rapid income increases were linked with accelerated output rates in the later years.

The long-term trend in food service output was also influenced by the more rapid rise in the number

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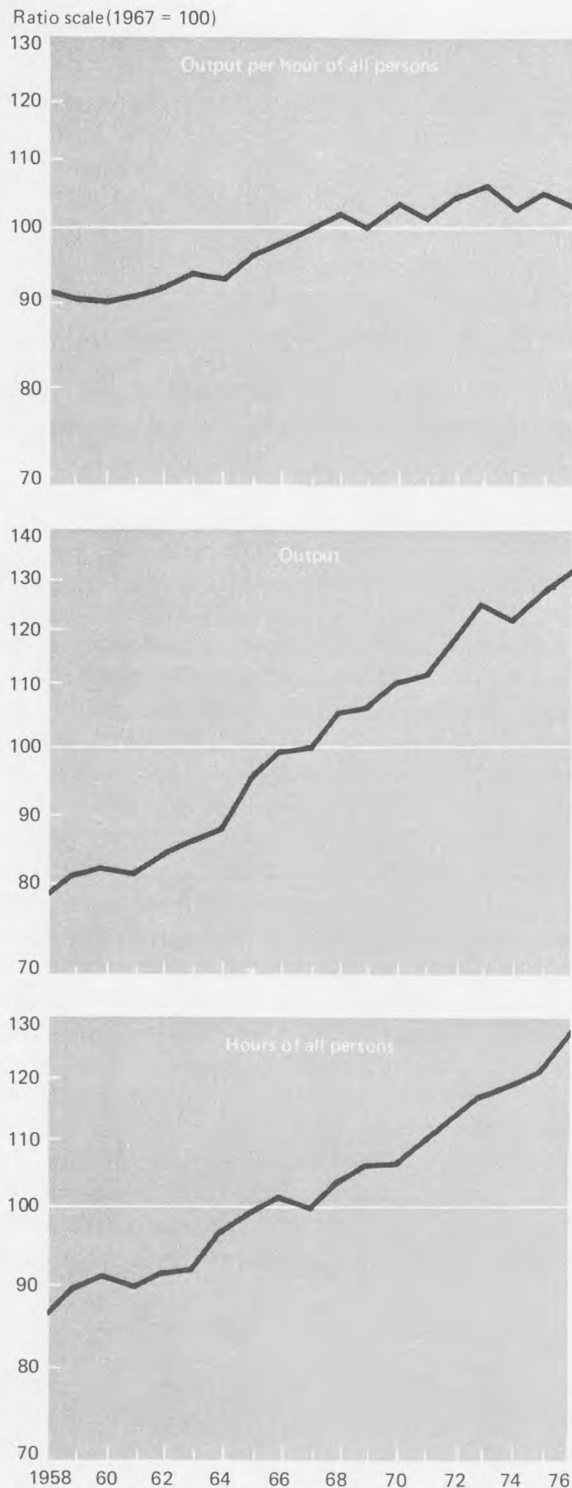


of households headed by unattached individuals (97 percent between 1960 and 1975) than in the number of families (24 percent). Such individuals are more likely to eat out than families: according to the latest Bureau of Labor Statistics consumer expenditure survey, 1-person households, on average, spend 40 percent of their food budgets on meals away from home, compared with 25 percent for families (the proportion diminishes as size of family increases).<sup>4</sup> Moreover, between 1960 and 1975, real incomes rose faster for unattached individuals than for families—56 and 34 percent, in constant dollars.<sup>5</sup>

Another important factor that bolstered output gains in food service was the increase in the number and proportion of wives in outside employment, contributing to family incomes. In 1975, 44 percent of all wives (husband present) held a paid job, compared with 31 percent in 1960. Real income of such families climbed 37 percent over that period; real incomes increased 27 percent for families with wives not in paid employment. The absolute difference in income between the two categories, 35 percent in 1975, made a significantly larger absolute difference in their spending on meals eaten out—51 percent.<sup>6</sup>

The overall increase in spending for meals and snacks eaten away from home was accompanied by a shift from full-service restaurants to fast-food establishments. This shift has given rise to greater frequency of eating out and to consumption of lower priced meals. The share in total industry receipts of restaurants and lunchrooms declined from 62 percent in 1958 to 50 percent in 1972; over the same period, the share of refreshment places (which includes most fast-food units) quadrupled, and stood at 26 percent in 1972. Commercial cafeterias raised their share from 6 to 8 percent. The remaining share

**Chart 1. Productivity, output, and hours in eating and drinking places, 1958-76**



**Table 1. Indexes of productivity, output, and hours in food service establishments, 1958-76**

[1967 = 100]

Year	Output per hour of all persons	Output	Hours of all persons
1958	91.3	78.8	86.3
1959	90.3	81.0	89.7
1960	90.0	81.6	90.7
1961	90.8	81.5	89.8
1962	91.8	84.0	91.5
1963	93.8	86.0	91.7
1964	93.1	89.8	96.5
1965	96.0	95.5	99.5
1966	98.0	99.4	101.4
1967	100.0	100.0	100.0
1968	101.9	105.6	103.6
1969	100.1	106.3	106.2
1970	103.5	110.4	106.7
1971	101.2	111.6	110.3
1972	104.4	118.5	113.5
1973	106.0	124.6	117.5
1974	102.8	122.9	119.6
1975	105.0	127.4	121.3
1976	103.2	131.9	127.8

of industry receipts is accounted for mostly by drinking establishments which, like restaurants, suffered a large loss in market penetration over the 1958-76 period.

The average transaction in fast-food establishments is about three-quarters of that in full-service restaurants.<sup>7</sup> This does not mean that consumer preferences have shifted to cheaper foods; surveys of representative menus conducted by *Institutions/Volume Feeding* do not indicate significant changes in the choice of the major classes of breakfast foods, dinner entrees, or desserts.<sup>8</sup> Rather, the evident increase in the number of transactions at fast-food establishments has been accompanied by fewer services rendered to consumers (when compared with full-service restaurants) and by a decline in the variety of foods offered, reflecting standardized menus.<sup>9</sup>

*Employment doubles and hours moderate.* Employment in eating and drinking places (currently 3.7 million) doubled between 1958 and 1976, rising at an average annual rate of 3.9 percent. Its growth, like that of output, was comparatively slow between 1958 and 1963 (1.7 percent annually), but accelerated from 1964 forward at an annual rate of 4.6 percent.

Total hours of persons engaged in the industry rose about half as much as employment, with average weekly hours for nonsupervisory workers declining from 35.6 in 1958 to 28.0 in 1976. This drop in weekly hours resulted in part from the expansion of part-time work. In 1975, 51 percent of all workers in the industry worked part time, compared with 32 percent in 1962.<sup>10</sup> Moreover, the number of proprietors and partners dropped, and the working hours of supervisory personnel declined from an estimated 61 hours in 1958 to 51 hours in 1975.

The occupational composition of food service workers has not changed significantly since detailed data first became available in 1972. (See table 2.) More than half of the employees occupy positions such as waiters, waiter assistants, counter and foun-

tain workers, or dishwashers. About one-third were cooks and bartenders and the remainder performed clerical, or managerial and administrative tasks.<sup>11</sup> Limited data for earlier years indicate a steady contraction in the number of waiters and waitresses, and an expansion in jobs associated with counter work. In general, trends in food and equipment technology, together with organization changes, have increasingly favored the employment of low-skilled persons in the industry—developments also promoted by rising labor costs,<sup>12</sup> and the difficulty of attracting a stable work force.

Data on the work experience, age, and sex of food service workers indicate a generally high turnover rate. The proportion in full-time, year-round jobs, 22 percent in 1976, was the lowest for any occupational category reported by the Bureau of Labor Statistics (except for private household workers). It compared with 53 percent for all service-producing workers outside of households, and 54 percent for all occupational groups. Women accounted for 64 percent of all workers in the industry, compared with 51 percent for all services outside households, and 44 percent for all occupational groups. Women are generally more likely than men to hold part-time jobs in the industry.

Furthermore, the average age of the work force has declined over the past 15 years, suggesting a decline in the proportion of seasoned, experienced workers. In 1975, teenagers accounted for 30 percent of all food service workers, compared with 17 percent for all service industries, and 8 percent for total nonagricultural payroll employment. Between 1960 and 1970, the median age of food service workers declined from 42 to 33 years. For the labor force as a whole, it remained constant at 40 years.

### Growth in multi-unit firms

The eating and drinking place industry changed considerably during the 1958-76 period. The number of establishments dropped 4 percent, to 359,500, between 1958 and 1972 (the most recent year for which data are available). All of the decline occurred in drinking establishments serving alcoholic beverages. While the number of drinking places dropped 7 percent, eating places rose 10 percent with nearly all of the rise in multi-unit operations, usually run by one firm. Multi-unit establishments almost doubled over the 14-year period; single-unit establishments grew by less than 2 percent; and owner-operator units without paid employees dropped by one-third. No comparable changes occurred for drinking places, virtually all of which were owner-operated in both 1958 and 1972.

The impact of these changes on the industry's labor productivity cannot be demonstrated. Eating

**Table 2. Employment in food service occupations, 1972 and 1976**

Occupation	1972		1976	
	Number	Percent	Number	Percent
Restaurant, cafeteria, and bar managers . . .	494	13.2	505	12.1
Food service workers . . . . .	3,263	87.0	3,919	88.6
Bartenders . . . . .	201	5.4	261	5.9
Waiters and assistants . . . . .	1,263	33.6	1,450	32.8
Cooks . . . . .	866	23.1	1,065	24.1
Dishwashers . . . . .	218	5.8	251	5.7
Counter and fountain workers . . . . .	307	8.2	421	9.5
Other (except managerial) . . . . .	408	10.9	471	10.6

SOURCE: BLS *Employment and Earnings*. Comparable data for years prior to 1972 are not available.



place sales per employee rose during the period, but variations from the average by employment size class of single- or multi-unit establishments are influenced by the menu offered, and therefore cannot be used to indicate changes in labor productivity of specific employment size classes. However, efficiencies in the use of capital, materials, and organizational inputs undoubtedly have been greater in multi-unit than in single-unit establishments, and this largely accounts for the more rapid expansion of multi-unit businesses.

The changes in the structure of the food service industry were marked by the expansion of fast-food establishments. According to a Department of Commerce survey, there were 43,000 franchised eating establishments in 1975, representing an estimated 20 percent of all eating and drinking places, and accounting for 25 percent of industry sales.<sup>13</sup> A study by the U.S. Senate Select Committee on Small Business shows that the number of fast food units nearly tripled between 1960 and 1971, while the number of restaurants, other than fast food, declined 9 percent to 210,000.<sup>14</sup> The expansion of fast-food establishments has introduced profound systemic changes in the food industry which lie at the root of recent and future productivity improvements.

Fast-food operators introduced principles of industrial engineering in retail food services—including work organization and layout—which had previously been applied mainly by large institutional and industrial caterers or food contractors.<sup>15</sup> These principles have been implemented throughout numerous franchised or company-owned outlets. According to a survey by The Conference Board,<sup>16</sup> all or the great majority of fast-food franchisers participating in the survey distributed operating manuals; operated management training programs; trained franchisee employees; selected sites; and designed facilities and layout. Moreover, many services to franchisees were rendered on a continuing basis, including counseling through field personnel; training of new employees; help with maintaining quality standards; and centralized purchasing. These organizational features are more prevalent among company-owned fast-food chains than among franchised establishments, and represent key elements in standardizing managerial practices.<sup>17</sup>

### Labor-saving innovations

Productivity gains in the food service industry have been associated with three kinds of technological advances: (1) the off-premise preparation of foods which permits reduction in on-premise preparation time and employee-hours, (2) the simplification of work processes through improvements in materials handling and cooking devices, and (3) innovations in food preservation methods and equipment. Food serv-

ice establishments have not adopted these technologies to the same extent; many of the higher priced restaurants, for example, capitalize on the culinary skills of their staff, and use off-premise prepared (or convenience) foods on only a limited scale.<sup>18</sup> The numerous single-unit small diners and refreshment places that characterize much of the industry are often slow to modernize their equipment, or unable to do so altogether. The trend, however, is in the direction of shortened food preparation time and higher ratios of equipment to employment.

*Food preparation.* According to a 1974 survey, 70 percent of all respondents used fresh frozen meats and 56 percent used meats prepared to some extent off premises (for example, pre-cut to meet portion standards). Seafood, fresh frozen or otherwise partially prepared, was served by more than 60 percent of all respondents, and fruits and vegetables prepared fully or partially off premises were offered by 40 percent. A significant proportion of respondents also served baked goods prepared off premise. The great majority using frozen or other partially prepared foods served them regularly, and not merely as supplements to conventionally prepared foods.<sup>19</sup> However, much of the food served is still prepared on the premises. For example, roughly 40 percent of all standard meat dishes—that is, fried chicken, meat balls, roast beef, steaks—are still prepared by restaurant staff.

Food service establishments have been substituting off-premise for on-premise prepared foods in order to reduce labor costs and to control the portions served. Almost three-fifths of the respondents in a 1972 survey gave these two reasons for serving convenience foods.<sup>20</sup> Other respondents cited the broadened menu, as well as reduction in costs per portion made possible by convenience foods. (Although a substantial proportion of off-premise prepared food originates in central kitchens or commissaries classified in the industry, some originates in food processing industries. See the appendix for a discussion of the effects on the productivity measure.)

The use of foods prepared off premise facilitates large-scale operations. Units with 25 employees or more are more likely to offer such foods than smaller firms. Frozen entrees, for example, were served by more than two-fifths of the larger establishments, compared with one-third or fewer of the smaller ones. Frozen baked goods and vegetables showed the same pattern.<sup>21</sup> Also, the use of such foods has improved the uniformity of food quality, saved on investment in inventory, and has enabled the industry to reduce the level of needed culinary skills—partly in response to the shortage of qualified cooks and chefs.

*Food processing.* The trend in the industry's capital expenditures suggests that diffusion of innovated food service equipment has been rapid for corporate establishments but slow for others. Overall, capital expenditures rose 31 percent between 1968 and 1972, but much less in constant dollars—the same rate of advance as for the plant and equipment outlays of U.S. business as a whole. Corporate food service businesses, however, raised capital expenditures by 67 percent over the period; proprietary firms and partnerships, partly because of the decline in their number, lowered capital spending by 15 percent. Hours of all persons in the industry rose 7 percent between 1968 and 1972.<sup>22</sup>

The major improvement in food service equipment has been the microwave oven. The heat generated in microwave ovens is distributed uniformly throughout the product being cooked (rather than conducted from its surface inward, as in conventional ovens). Moreover, all the energy produced is absorbed by the product, rather than by the oven walls and the surrounding air.<sup>23</sup> Hence, processing time is greatly reduced, although microwave ovens are often supplemented by auxiliary equipment so that an acceptable product texture and surface color is obtained.

Forced convection ovens have been rapidly adopted in the industry. These ovens are reported to reduce cooking time up to 50 percent by using a recirculating loop with a built-in fan to reheat the air within the cooking chamber, thereby increasing the rate of heat transfer to the product. Forced convection ovens are being installed in most new operations, and are replacing free-convection ovens in many existing facilities.<sup>24</sup>

Fat fryers have been refined for more convenient operation and better product quality. Processing control has been improved by more accurate timers and thermostats, and by automatic basket lifts which terminate cooking after a preassigned period. Pressure containers, which increase the heat to the product and thus speed up processing time, have been introduced.<sup>25</sup>

Gas burning broilers are still widely used, but commercial installations are beginning to use infrared heat to generate high temperatures and shorten cooking time. Operations producing large volumes of processed foods are increasingly using continuous-flow broilers which require only unskilled labor once the temperature and speed of the transfer belt have been set.<sup>26</sup>

*Food preservation.* Important developments have occurred in the quick freezing of fresh foods and in the efficient thawing of frozen foods. Minor but significant changes have also been taking place in other phases of food preservation. Whether or not food service establishments operate their own food proc-

essing and preservation equipment, these changes tend to reduce on-premise preparation time, improve the quality, and expand the variety of foods served.

The development of thawing equipment has been spurred by concern with the nutritional and chemical deterioration of foods allowed to unfreeze for long periods and by the larger size of frozen food packages used in the industry. Microwave thawing systems can temper frozen foods in a few minutes.<sup>27</sup> Thus, reduction in on-premise preparation time is sustained when efficient thawing systems are used.

Changes in food preservation methods, other than freezing, have been modest in their impact on the food service industry. Dehydration, the most widely used preservation method, underwent no significant evolution during the period (except for freeze-drying of coffee).<sup>28</sup> In canning, however, the aseptic process was introduced and spread rapidly. The process, which involves packing sterilized food in sterilized containers in a sterile environment, eliminates the change in flavor, texture, and appearance that usually results from thermal treatment of products for canning.<sup>29</sup> While the use of all canned foods cuts the time spent in on-premise preparation (in comparison with cooking from the raw), the introduction of aseptically canned foods enhances the acceptability and extends the variety of foods.

### Some improvements ahead

Productivity in the food service industry should continue to improve. The adoption of labor-saving equipment and off-premise prepared foods is likely to be spurred by the expansion of corporate establishments with their focus on efficient management. The continued decline in the number of smaller marginal firms, while perhaps a loss in terms of customer convenience, will nonetheless help raise industry productivity.

Developments in food processing and preservation technology will probably make for more widespread off-premise preparation of food, especially insofar as such developments improve quality and help broaden menu choices. Irradiation or radiation-pasteurization may become acceptable in preserving foods high in moisture content and therefore liable to rapid bacterial decomposition (for example, fish, fruits, and vegetables); freeze-drying may spread to products such as eggs; and aseptic canning is likely to spread.

Completely integrated food service systems, with precisely timed and mechanized transfer operations, may increasingly mark the spread of contract feeding (they are not likely to prove feasible in smaller retail operations). In such systems, also called a "cooking street," two persons operate five pieces of equipment—a steam cooker, a water cooker, a deep fat fryer, a grill, and a broiler. All pieces are removable with-



out tools, and there is a minimum of complex mechanisms. These "cooking streets" result in a very high ratio of meals served per employee;<sup>30</sup> however, menus are necessarily restricted and there is little if any floor service.

Standard menus and simple equipment have, in part, been dictated by persistent shortages of skilled kitchen personnel, and the resulting need for equipment that can be operated with minimum training by unskilled persons of whom a high turnover rate is expected. In addition, customer self-service has spread, to some extent, to full-service restaurants with buffet offering. In fast food shops, customers often accept the job of clearing their tables. Such self-service tends to reduce the industry's reliance on low-skilled labor.

Over the long term, the supply of low-skilled workers is expected to contract, assuming full or near full employment is attained. Based on that assumption, recent projections indicate a relatively small rise in the number of low-skilled or unskilled workers to the end of the decade; and a decline in the

first half of the 1980's.<sup>31</sup> Incipient labor shortages would compel the industry to upgrade its work force and to develop career progression systems.<sup>32</sup> At the same time, the industry will very likely continue to substitute capital for labor, possibly at a stepped-up rate.

Output growth in the food service industry hinges, of course, on continued gains in real family and per capita income. The expansion in the proportion of working wives should continue to raise the demand for food eaten away from home.

Some productivity advances may arise from certain changes in patterns of eating out. The traditional concept of three meals a day—tending to bunch labor inputs at peak periods—has in part given way to and in part been supplemented by a greater frequency of consuming snacks or "mini-meals." To the extent this pattern prevails, more efficient utilization of labor and capital would be attained, but food outlets would have to operate longer hours and therefore would have to generate higher output volume to ensure productivity gains. □

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FOOTNOTES

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<sup>1</sup> Eating and drinking establishments include restaurants, lunch counters, refreshments stands, cafeterias, and other facilities selling food or drink (including alcoholic beverages) for on-premise consumption. Eating facilities in department stores, hotels, and motels are excluded, unless leased to outside operators. The industry is classified as Eating and Drinking Places (code 58) in the Office of Management and Budget's 1972 *Standard Industrial Classification Manual*.

<sup>2</sup> The average annual rates of change are based on the linear least squares trend of the logarithms of the index number. Extension of the indexes will appear in the annual BLS bulletin, *Productivity Indexes for Selected Industries*.

<sup>3</sup> Corinne LeBovit, "The Changing Pattern of Eating Out," *National Food Situation*, No. 144, May 1973, p. 31. Data for recent years were derived from data compiled by the U.S. Department of Commerce.

<sup>4</sup> *Consumer Expenditure Survey Series: Diary Data 1972*, Report 448-1 (Bureau of Labor Statistics, 1975).

<sup>5</sup> Most of the 15-year real income gain of primary individuals occurred from 1965 forward—33 percent, compared with 16 percent for real family incomes. Gains in the average income of primary individuals are in part attributable to the rise in the average social security benefit which, for widows and widowers, more than tripled between 1960 and 1975. The total number eligible more than doubled. All but \$6 of the \$124 monthly increase in the average benefit occurred from 1965 forward.

<sup>6</sup> *Selected Family Characteristics and Average Weekly Expenditures by Income Classes of Family Income Before Taxes*, Consumer Expenditure Diary Survey (Bureau of Labor Statistics, 1976).

<sup>7</sup> Corinne LeBovit, "The Changing Pattern," p. 30.

<sup>8</sup> See *Institutions/Volume Feeding* (Chicago, Cahners Publishing Co.), April 1975.

<sup>9</sup> See Theodore Levitt, "Production Line Approach to Service," *Harvard Business Review*, September-October 1972, beginning on page 41. Also Thomas F. Powers, "Food Service in 1985," *The Cornell H. R. A. Quarterly*, May 1976, p. 47.

<sup>10</sup> Unpublished data on work experience of the population in 1962 and 1975, Bureau of Labor Statistics.

<sup>11</sup> "The food services have been drastically reducing the number of skilled workers by simplifying the operation so that it can be run by

quickly trained, low-paid, high-turnover employees." See Daniel M. Seifer, "The Service Industries: Automation, Minimum Wages, Unemployment," *Bulletin of Business Research*, The Ohio State University, Vol. 46, No. 8; G. E. Livingston, "Changes in the Food Service Industry," *The Cornell H. R. A. Quarterly*, May 1974, p. 15; and "Young Women Who Work, An Interview With Myra Wolfgang," Irving Howe, ed., *The World of The Blue-Collar Worker* (New York, Dissent Publishing Co., 1972), p. 26.

<sup>12</sup> See Thomas F. Powers, "Labor Supply, Payroll Costs and Changes," *The Cornell H. R. A. Quarterly*, May 1974, beginning on page 5.

<sup>13</sup> Andrew Kostecka, *Franchising in the Economy, 1974-76* (Washington, D.C., U.S. Department of Commerce, 1976), p. 7. See also Philip B. Dvoskin, "Fast Food Franchises: Market potentials for agriculture products in foreign and domestic markets," *Marketing and Transportation Situation*, No. 196, February 1975, beginning on page 20.

<sup>14</sup> Quoted in Thomas F. Powers, ed., *The Future of Food Service: A Basis for Planning* (University Park, Pa., The Pennsylvania State University, Food Service and Housing Administration, 1974), pp. 35 and 41.

<sup>15</sup> For some applications of industrial engineering to food services, see Raymond Pedderson et al, *Increasing Productivity in Food Service* (Chicago, Institutions/Volume Feeding Management, 1973), 206 pp. Economies through centralized purchasing appear in large measure to have been achieved through distributors in the wholesale industries. See Charles Sirey, Jr. "Food Service Logistics: Roadsigns in the Wilderness," *Institutions/Volume Feeding*, December 1970, beginning on page 53.

<sup>16</sup> E. Patrick McGuire, *Franchised Distribution* (New York, The Conference Board, 1971).

<sup>17</sup> The McDonald's operations manual is a 385-page book detailed down to the most minute facets of running the stand and its machinery. See Charles G. Burck, "Franchising's Troubled Dream World," *Fortune*, March 1970, p. 116.

<sup>18</sup> Marshall C. Warfel, "Convenience Foods—What is the Score?" *The Cornell H.R.A. Quarterly*, May 1971, beginning on page 33.

<sup>19</sup> See *Institutions/Volume Feeding*, December 1974.

<sup>20</sup> Ibid., September 1972.

<sup>21</sup> Ibid., December 1974.

<sup>22</sup> The long-term growth rate of capital in the food service industry (eating and drinking places) has been estimated at 3.4 percent annually for 1929-63, nearly twice that for total retail trade. The growth of capital per employee-hour has been estimated at 0.6 percent annually for the same period, which compares with 0.7 percent for total retailing. See David Schwartzman, *The Decline of Service in Retail Trade* (Pullman, Washington, State University, 1971), p. 67.

<sup>23</sup> The conversion of electrical into radiation energy remains relatively inefficient, although one manufacturer reportedly has claimed that his brand of microwave oven converts 72 percent of electrical into radiation energy. The average conversion range is estimated at 30 to 50 percent for all brands. See Frank W. Schmidt and Stephen Bartlett, "Food Processing and Preparation Equipment as It Shapes the Future of Food Service," in Thomas F. Powers, ed. *The Future of Food Service*, p. 94.

<sup>24</sup> Ibid., p. 93.

<sup>25</sup> Ibid., p. 100.

<sup>26</sup> Ibid., p. 104.

<sup>27</sup> Ibid., pp. 89-90.

<sup>28</sup> Ibid., p. 149.

<sup>29</sup> Ibid., p. 191.

<sup>30</sup> See the section on completely integrated systems in "Food Processing and Preparation Equipment," *The Future of Food Service*, beginning on page 109. Also see "Health Services," *Technological Change and Manpower Trends in Six Industries*, Bulletin 1817 (Bureau of Labor Statistics 1974) p. 58.

<sup>31</sup> See Harold Wool, "Future labor supply for lower level occupations," *Monthly Labor Review*, March 1976, pp. 27-28.

<sup>32</sup> The Employment and Training Administration of the U.S. Department of Labor has sponsored several studies on employment and career progression in the food service industry. For example, see Gary L. Hotchkin, *Development of Career Progression Systems for Employees in the Food Service Industry* (Chicago, National Restaurant Association, 1975).

### Appendix: Measurement techniques and limitations

The productivity indexes in this article reflect changes in the relation between output and the labor time involved in its production over the 1958-76 period. Although the indexes relate output to employment and hours, they do not measure the specific contributions of any one factor of production. Rather, they reflect the joint effects of such factors as changes in technology, capital investment, the level of output, utilization of capacity, layout and flow of materials, managerial skill, and skills and effort of the work force.

In constructing indexes of output it is preferable to use data on the quantities of the various services performed in the industry, each weighted (multiplied) by the hours of labor required to provide one unit of the service in some specified period. Services which require more labor than others are thus given greater importance in the output index.

Annual indexes of output for the food service industry were derived from the constant dollar value of industry receipts. These annual indexes were periodically adjusted to more comprehensive industry data available for the years for which an economic census was prepared. Indexes of sales in constant dollars weighted by gross margins were developed by type of food service outlet. These indexes were then combined with labor time (hours of all persons) weights to arrive at a benchmark level of output.

Smaller food service establishments often purchase prepared foods from other industries, that is,

from food processors, bakeries, or food wholesalers. As they increase the use of such prepared foods, they reduce their labor utilization. Such reduction cannot be viewed as a productivity gain within the eating and drinking place industry. Rather, it reflects a decrease in the degree of vertical integration within the industry. Because of a lack of pertinent data, the BLS measure has not been adjusted for changes in the industry's labor requirements originating outside the industry, and to that extent the measure may be biased upward. On the other hand, chain restaurants and chain refreshment places, which account for a growing share of the industry's total output, frequently operate local or areawide central kitchens and commissaries where they prepare meals. These kitchens and commissaries are usually classified within the industry, and changes in labor requirements associated with their operations are captured by the BLS productivity measure.

The input index of industry hours is constructed from data on employment and hours collected by the Bureau of Labor Statistics, the Internal Revenue Service, and the Census Bureau. The index includes paid supervisory and nonsupervisory employees, and the self-employed (partners and proprietors). The hours data relate to all full-time and part-time workers.

A technical note on the methods used in constructing the productivity measure for food service establishments is available from the Bureau of Labor Statistics.



# Work-sharing initiatives at home and abroad

*Western European nations have used spread-the-work programs to combat high unemployment and, unlike the United States, have provided jobless benefits to those forced to work part time*

SAR A. LEVITAN AND RICHARD S. BELOUS

Since World War II, economic stabilization policies have centered on fiscal and monetary measures. However, these traditional demand-management policies have not been adequate for reaching acceptable levels of unemployment without harmful side effects.

Arrangements affecting the supply of labor, including work sharing, have been widely tried in Western Europe and also attempted in isolated American cases. Advocates claim that reduced worktime has proved an effective short-term weapon against unemployment, one that often has involved less deficit financing than standard recession-related programs, including public service jobs, public works, unemployment insurance, and welfare payments.

## Work sharing in Europe

The recession in the mid-1970's hit Western Europe with nearly the same severity as the United States, but, by official measures, unemployment remained lower there than in the United States.

The fiscal and monetary policy response on both sides of the Atlantic was quite similar. Concern over renewed inflation and reluctance to expand the role of government discouraged massive public works

programs and other vigorous countercyclical moves. Like the United States, most Western European nations injected a moderate fiscal stimulus to increase aggregate demand.

However, some European nations also implemented programs to influence the supply of labor. In particular, the use of work sharing as an antirecessionary tool rose significantly.<sup>1</sup> Work sharing spreads the impact of an economic downturn. Under work sharing, a firm which must reduce its total hours worked by, say, 30 percent because of a slump in demand can reduce each employee's workweek by 30 percent. In contrast, a layoff system would deprive 30 percent of the firm's workers of their jobs.

The American system of unemployment insurance discourages work sharing because part-time workers are normally not eligible for benefits. However, many European nations have specifically designed their benefits to promote work sharing. Generally, employees in a European work-sharing program are compensated either directly or through the firm for a percentage of wages lost due to reduced hours.

*West Germany.* West German work-sharing plans pay benefits amounting to 68 percent of lost wages. German short-time workers consistently have higher incomes than other workers who collect unemployment benefits. During the mid-1970's recession, the eligibility for short-time benefits was extended from 6 to 12 months, and in some cases up to 24 months.

The German government recently claimed that

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short-time work compensation has been an "effective instrument of labor market policy that can be employed rapidly on a regional, sectoral, and individual enterprise basis."<sup>2</sup> Over the year ended in May 1975, the number of unemployed workers increased from 450,000 to 1 million, while short-time workers jumped from 225,000 to 925,000. The number of short-time workers declined sharply in 1976, partly because of improved economic conditions.

During 1975, a monthly average of 773,000 workers (538,000 men and 235,000 women) in 12,500 firms received short-time compensation. Half of the work sharing was concentrated in the automotive, electromechanical, and machine industries; and normal working hours in the affected firms were shortened by about one-third. Government technicians estimate that without short-time compensation, the 1975 unemployment average would have been 175,000 higher.

Some German analysts believe that work sharing made an even larger dent in unemployment levels. Assuming that three short-time workers equal one unemployed person (in accordance with the reduction in hours), work sharing reduced unemployment by about 224,000. However, this ratio is questionable. If firms manipulated the system through work assignments—and many abuses did occur—the figure would be lower. Also, it can be difficult to distinguish between firms taking advantage of the government subsidies and those experiencing rising productivity during this period.

West German analysts have also found that the cost to the government of work sharing is less than the massive unemployment insurance payments resulting from layoffs. Work sharing experiments throughout Western Europe yielded similar results.

*Other European programs.* Since the beginning of 1975, the French government has reimbursed firms for up to 90 percent of the cost of contributing to the national employment fund. Workers in these firms receive an hourly wage replacement of 50 percent for a maximum of 470 short-time hours. The plan has a floor rate of 7 francs (\$1.57) an hour. Between May 1974 and May 1975, unemployment nearly doubled to 750,000 workers, but short-time workers increased more than fourfold to 300,000.<sup>3</sup>

In the Netherlands, if a reduced hour schedule wins government approval, workers can be fully compensated for several weeks. The industry's insurance board finances 80 percent of the benefits; the company contributes the remainder. In cases of prolonged work sharing, the government also contributes. During the recession, the number of short-time workers increased 10 times as fast as the number of unemployed.

Italy provides financial support for work sharing through a wage supplement fund. In normal situations, the fund finances income replacement for up to 16 hours a week for 3 months, paying 66 percent of normal earnings. However, in a recession the government will pay up to 80-percent compensation, providing a firm is viable and is facing problems caused only by the economic downturn. In cases involving reorganization of an enterprise or local economic slumps, the wage supplement can also be paid.

Other countries have approached work sharing somewhat differently. Since 1975, Luxembourg has financed short-time compensation equal to 80 percent of a worker's normal gross salary, for firms where normal worktime has been reduced by 50 percent. The payments begin after a worker has lost 17 hours. Great Britain provides an income guarantee for 5 days in any one quarter, with a ceiling of 6 pounds per day (about \$10, or half of the average daily wage). Norway's system of daily allowances favors older workers. Those under age 50 are eligible for 21 weeks of benefits; for 50- to 64-year olds, the limit is raised to 30 weeks; and workers between ages 64 and 66 may receive benefits indefinitely. In Austria, short-time benefits are paid for 3 months, but employers must maintain employment levels for 3 subsequent months.

*Overall assessment.* Many European policymakers prefer what the Commission of European Communities called a "new phenomenon—short-term working over long periods" to the traditional layoff approach. The most frequently cited relative advantages are:

- (1) A more equitable distribution of the harsh impact of a recession on the entire work force rather than a minority of workers.
- (2) A higher degree of job attachment, which keeps employment skills fresh and also allows workers to retain fringe benefits.
- (3) A smaller cutback in consumer spending, which results in a more moderate reduction in aggregate demand.
- (4) A lower cost, at least from the government's point of view.

American supporters of work sharing mention another potential benefit for the United States. Under work sharing, they foresee a greater chance that equal employment opportunity gains will be maintained during a recession. Under a layoff system, women and minorities are too frequently the "last hired" and the "first fired."

Of course, work sharing also has its detractors. Critics charge that reduced worktime could prevent the creation of new job opportunities and cause new rigidities in labor markets. Work-sharing subsidies could discourage firms from adapting to technological and organizational changes. This school of



thought also believes that work sharing is essentially government protection of unneeded employees, and therefore constitutes an obstacle for new job applicants, who tend to be younger workers. However, some analysts who recognize these potential hazards still defend work sharing as an efficient and relatively inexpensive way of overcoming temporary economic hardships.<sup>4</sup>

### The American experience

Work sharing remains the exception rather than the rule in the United States. In Europe, work sharing did not come into being until governments created programs and institutions to support it. In the United States, as government regulations and collective bargaining arrangements now stand, it is most often in an employer's economic interest to resort to layoffs instead of work sharing. In most cases, fringe benefit costs would be larger under a work-sharing system. Moreover, collective bargaining provisions may prevent an employer from initiating work sharing, and many workers (not only those with seniority) look unfavorably upon reduced work-time schemes.

A major roadblock to work sharing is the existing unemployment insurance system. In effect, no State pays benefits to workers forced on, say, a 4-day workweek because full-time work is not available. The typical way to determine benefits for a short workweek is to first estimate a worker's potential benefits for a full week of unemployment. The worker's weekly earnings (reduced by a small work-expenses allowance) are deducted from this. The formula does not allow partial benefits for a worker who is earning slightly more than the weekly benefit. The partial benefits system is quite different in most of Western Europe, and as a result work sharing is more widely accepted.

During the last recession, the number of people employed part time for economic reasons increased by more than 38 percent to about 3.6 million. Despite the recovery, this figure had declined by only 11 percent as of May 1977. Unlike the European programs, the U.S. unemployment insurance system is not constructed to help many workers who experience this type of labor market hardship. Neither is it fashioned to make work sharing a viable alternative to layoffs.

National and State legislation has not been passed to change the unemployment insurance system. In 1975, an effort was made to amend the New York State law to allow partial unemployment benefits for work sharing, but the measure failed to win the governor's approval. The New York City Commission on Human Rights, the New York State AFL-CIO, and several public interest groups supported the bill.

Despite general governmental inaction, there are

some American examples of work-time adjustments to help solve economic problems. By mid-1974, one of every five major agreements (representing 2.1 million workers) included clauses calling for reduction of hours during slack periods. Of these 311 contracts, 119 (covering 800,000 workers) contained specific references to work sharing. However, according to a study prepared by Peter Henle for the Congressional Research Service, these clauses are very rarely invoked.

*Specific examples.* The apparel industry has a long history of work sharing. Many small clothing firms experience major fluctuations in demand, even during boom periods. To mitigate unstable employment patterns, work-sharing provisions similar to the following appear in many garment industry union agreements:

1. If the Employer is unable to supply his workers with work full time, the work available in the shop shall be divided as equally as possible among all the workers competent to do the work.
2. In such circumstances, workers may be divided into groups which will be supplied work alternately.
3. If there is not a full week's work for all cutters in the shop, the work available shall be divided equally among them by the week.
4. The managing presser shall not be entitled to more work than other pressers in the shop.<sup>5</sup>

The procedures for implementing such guidelines are usually left up to local bargaining. The work sharing often results in reduced workweeks, but during a severe economic downturn it can result in added weeks of employment.

The New York Telephone Co., a subsidiary of AT&T, used work sharing to avoid layoffs. In 1975, the company presented the union with the choice of terminating 400 operators or scheduling 2,000 of its 5,800 New York City operators on a reduced workweek. The telephone traffic union representing the operators agreed to the work-sharing proposal and 2,000 operators were put on a 4-day workweek with a 20-percent reduction in pay.<sup>6</sup>

In other recent work-sharing agreements, municipal workers in New Britain, Conn., agreed to work 4 days a week with a proportional reduction in pay, and union members of a Michigan trucking company voted to reduce worktime and salaries by one-third to avoid layoffs. In 1975, the Frederick County, Md., Chamber of Commerce launched a campaign to promote work sharing. This move resulted in reduced hours for about 750 workers, and saved an estimated 100 workers from unemployment. Local officials also felt that consumer spending would have taken a sharper plunge without work sharing.<sup>7</sup>

Work sharing has also been successfully used in isolated cases to solve problems that are not related

### Unemployment insurance could be U.S. key to work sharing

The key to any public policy [toward work sharing] that would not involve any additional resources appears to be the role of the Federal-State unemployment system. Since under present arrangements work sharing would mean a reduced volume of unemployment insurance claimants for full-week benefits, these savings in benefits might be available to help implement a work-sharing system. However, this could not be done without changing the basic legislation underlying unemployment insurance.

. . . There is no doubt that the basic intent of unemployment insurance can be extended to cover the type of short-time benefit that could encourage the adoption of work sharing. The basic law stresses the objective of income support to the worker during unemployment, helping him to maintain his previous standard of living and to preserve his skills. Each of these is part and parcel of a work-sharing arrangement.

. . . A number of practical problems would be involved in developing legislation along these lines. Each State law is unique and would require special treatment. Eligibility for benefits for a single day of idleness would have to be carefully related to a loss of earnings on a full-time job. It would be necessary to distinguish between the worker on a 4-day week because of his employer's commitment to work sharing and another worker on a 4-day week because he felt the need for a 3-day weekend.

What would be the net cost of modifying the State laws in this manner? Ideally, the savings in full-week benefits not paid to employees who would otherwise be laid off would equal the payments in short-week ben-

efits to employees whose workweek was cut back under work sharing. However, such a balance may be difficult to attain. Costs are likely to rise if, for example, eligibility cannot be limited to those under work sharing arrangements and workers regularly working short workweeks become eligible for the new benefits. Administrative costs under the proposal would certainly rise since a larger number of individuals would be receiving benefits. Part of this problem could be handled by paying benefits not weekly but every 2 or 4 weeks.

Despite these difficulties, modification of the unemployment insurance system could well constitute a feasible way to encourage the adoption of work sharing. It would be most unlikely, however, for the Congress or State legislatures to adopt such a proposal without further study or discussion. In this connection, the Congress is currently considering legislation making certain changes in the unemployment insurance system as well as directing a longer range study of the system by a new National Commission on Unemployment Compensation. Such a commission, which will include individuals drawn from management, labor, and other sections of the public, would undoubtedly explore the possibilities and implications of utilizing the unemployment insurance system to encourage work sharing.

—PETER HENLE

*Work-Sharing As An Alternative to Layoffs*  
(Congressional Research Service, July 19, 1976),  
pp. 33-36.

to demand fluctuations. For example, *The Washington Star*, a District of Columbia daily newspaper, experienced financial losses which threatened to close operations unless labor costs could be reduced. The existing agreement with the Newspaper Guild covered 550 journalists and office personnel, and established a 5-day, 37.5-hour workweek. Management proposed to cut costs by dismissing about 100 Guild workers. The union suggested instead a 4-day workweek with a 20-percent reduction in salary.

Because of fringe benefit costs, the union proposal was more expensive, but management agreed to it, and it was approved by a 347 to 44 vote. This agreement was incorporated in the regular 1975 contract between the Guild and the *Star*. Turnover of workers reduced labor costs, allowing the newspaper to restore the 37.5-hour workweek by the end of 1975.

American work-sharing experiences have demonstrated the occasional viability of this approach as an alternative to layoffs. However, these arrangements

have been so rare that it is impossible to judge the efficacy of work sharing for the entire U.S. economy.

### Future worktime trends

A longrun movement toward shorter hours has been interrupted in the postwar era. During the last three decades, the leisure time of full-time workers has not risen significantly.<sup>8</sup> Instead, a larger percentage of productivity increases has been channeled into higher wages. A combination of economic and social forces has propped up worktime since World War II. A pent-up demand for goods and services after the war, a higher birth rate and the increasing cost of raising children, a growing emphasis on health insurance and retirement pay, and more recently a high rate of inflation, have blocked worktime reductions similar to those of the prewar period.

However, many of these forces are now moving in the opposite direction. For one, the birth rate has declined to a very low level, so child rearing should



consume a smaller proportion of the family budget. Also, education levels, which are positively related to hours of work, are projected to rise at a much lower rate than in the past 35 years. Thirdly, evidence indicates that younger and older workers and women tend to prefer shorter hours to additional income. The composition of the labor force is currently shifting in the direction of these workers—in 1976, the total work force increase of 2.2 million included 1.5 million women and 127,000 teenagers.

One of the prime reasons women have placed a great emphasis on “leisure” time is that many women, in effect, have been multiple jobholders (workers in both the labor market and the home). Because of changing social mores, an increasing number of men are following suit and assuming dual responsibilities. This change, which creates a net reduction in “real” leisure, could increase the premium men place on free time and bring their income-leisure decisions closer to female patterns than in the past.

These forces, coupled with the prediction that unemployment levels will remain high for some years, suggest that pressures for reduced worktime and job security may grow. Work-sharing programs

also must contend with institutional arrangements fashioned under collective bargaining, but the recent recession and the forecasts of continued high unemployment have strengthened union interest in reduced worktime and job security provisions.

As indicated by the Western European experience and several American examples, work sharing can have a positive shortrun role in combating unemployment and diffusing the impact of an economic downturn. The economy’s ability to react to contractions or slumps is reduced if worktime, as well as wages and prices, remains sticky even during a severe recession. The consequences can be massive layoffs and unused productive capacity. Programs to reduce worktime rigidities often have demonstrated sizable benefits to workers, companies, and society; and the associated costs have often been less than with standard recession-related measures.

In the long run, however, reduced worktime by itself—without proper economic stimulus—would probably prove ineffective. Work sharing and other innovative worktime programs can complement fiscal and monetary policies, to spread the work and provide more jobs for a given level of output. □

—FOOTNOTES—

<sup>1</sup> *Report on the Development of the Social Situation in the Communities in 1975* (Commission of the European Communities, April 1976); reprinted in a special report, National Commission for Manpower Policy, *Reexamining European Manpower Policies* (Government Printing Office, August 1976), p. 231.

<sup>2</sup> “Short-time Work Compensation,” *What’s New in Labor and Social Policy* (U.S. Embassy of the Federal Republic of Germany, April/May 1976), p. 7.

<sup>3</sup> Charles Stewart, *Recent European Manpower Policy Initiatives*, a special report to the National Commission for Manpower Policy (Wash-

ington, National Commission for Manpower Policy, November 1975), pp. 7–10.

<sup>4</sup> *Reexamining European Manpower Policies* (Washington, National Commission for Manpower Policy, August 1976), p. 32.

<sup>5</sup> Cited in Peter Henle, *Work Sharing As An Alternative to Layoffs* (Washington, Congressional Research Service, 1976), p. 11.

<sup>6</sup> *The New York Times*, September 28, 1975, p. 45.

<sup>7</sup> *The Washington Star*, April 15, 1975, Section B, p. 4.

<sup>8</sup> John D. Owen, “Workweeks and leisure: an analysis of trends, 1948–75,” *Monthly Labor Review*, August 1976, pp. 3–8.

# The end of the 12-hour day in the steel industry

*Fifty-four years ago, after pressure by the Harding Administration, the steel industry finally agreed to reduce the workday in the mills*

WILLIAM T. MOYE

On an inside page, almost hidden behind the banner headlines announcing the death of President Warren Gamaliel Harding, *The New York Times* of August 3, 1923, carried a notice of historic importance to American labor: The directors of the American Iron and Steel Institute had adopted plans for the "total elimination" of the 12-hour day.<sup>1</sup> Harding's Administration, not known as a friend to labor, had achieved a breakthrough for the American workingman. The Secretary of Labor, James John Davis, in a Labor Day statement that year, proclaimed:<sup>2</sup>

It was through the untiring . . . devotion to the ideals of American labor of President Harding that this Labor Day finds that archaic institution, the 12-hour day and the 7-day week, practically eliminated from the great basic industry of our country—the steel industry.

The storm over the long day in steel had raged intermittently for three decades. Successive waves of criticism had beat upon the institution, building to a crest around 1912 and receding during World War I before breaking through in 1923. In the end, an aroused public opinion led by the President and his Administration swept the reluctant

steel magnates into reorganizing their work schedules.

The 12-hour day arose from the nature of the iron and steel industry. The basic process of the industry required continuous operation 24 hours a day, 7 days a week. The simplest method of achieving this was to operate two shifts of approximately 12 hours each, with workers alternating from daywork to nightwork every week or two, sometimes working through a "long shift" of up to 24 hours.

To the workers, the question of hours necessarily involved the issue of wages. Many workmen showed little enthusiasm for shorter hours as long as it carried with it the prospect of reduced earnings. To counter this attitude, advocates of the shorter day coined the jingle, "Whether you work by the piece or work by the day, Decreasing the hours increases the pay."<sup>3</sup> From the 1890's on, union leaders in the industry pushed the need for reform.

The wage factor complicated the hours discussion, as employers claimed that the majority of workers wanted the longer hours and larger income and that the drive for shorter hours amounted to an indirect attempt to raise wages.<sup>4</sup> Moreover, manufacturers objected to increased production costs. Although

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quick to slash wages and hours during a depression to "spread the work," employers returned to the long hours during boom times. Thus, shorter hours tended to result from slack times, not from long-term decisions by the steel bosses.

Large corporations vigorously fought efforts to unionize their employees. At the conclusion of the unsuccessful struggle of the Amalgamated Association of Iron and Steel Workers against the Carnegie Steel Co. at Homestead, Pa., in 1892, the Homestead Works continued using the 12-hour shifts. After the strike against U.S. Steel in 1901 failed, the corporation operated certain departments 12 hours a day, including Sunday. From 1890 to 1911, the average size of plants grew larger, and the percentage of unskilled labor increased. Almost without exception, employers chose the long day.<sup>5</sup>

Criticism of the long hours mounted as conditions reached their worst during the boom of 1906–07. In response, the finance committee [executive committee] of U.S. Steel, in April of 1907, passed a resolution that "Sunday labor be reduced to the minimum."<sup>6</sup> That example was not followed by other manufacturers. A short depression hit the industry, which in itself resulted in shorter hours, but, by late 1909, every plant in the country was being operated to its full capacity and with longer hours. Seven-day work again became common in U.S. Steel plants, as elsewhere.

In February 1910, workers of the Bethlehem Steel Corp. went on strike, one of their major grievances being long hours. On March 20, the U.S. Senate ordered an investigation. The next day, Judge Elbert H. Gary, chairman of U.S. Steel, sent a telegram to the presidents of subsidiary companies instructing them to implement the "spirit" of the 1907 resolution.<sup>7</sup>

### Stockholder opens drive

At this time, Charles M. Cabot, a Boston broker and stockholder in U.S. Steel, opened a campaign against the 12-hour day. Calling himself "only a damn fool small stockholder," Cabot urged the 1911 annual meeting of the corporation to establish a committee to investigate hours and conditions. Very graciously, Judge Gary voted the majority of stock and appointed the committee.<sup>8</sup>

At the annual meeting in April 1912, the committee reported, "We are of the opinion that a 12-hour day of labor, followed continuously by any group of men for any considerable number of years, means a decreasing of the efficiency and lessening of the vigor and virility of such men." The Committee recommended that "steps should be taken now" with a view to "reducing the long hours of labor," but it

expressed doubts as to the ability of one employer to effect the change without unanimity within the industry.<sup>9</sup>

The next month, the finance committee appointed a special committee to consider ways of reducing the 12-hour day. This second group produced a negative report, cementing the argument followed by the corporation for the next 10 years:<sup>10</sup>

It is believed that, unless competing iron and steel manufacturers will also enforce a less than 12-hour day, the effort to reduce the 12-hours per day at all our works will result in losing a large number of our employees.

Basically, then, U.S. Steel would not move unless the industry moved together, and besides, the workers themselves did not really want the shorter hours. The corporation publicized its welfare program as evidence of its good intentions and promised further action when conditions permitted.

Meanwhile, Congress probed conditions in the steel industry. The Senate had begun an investigation in 1910, and the House established a committee to investigate U.S. Steel the next year. Testifying before the House committee, Louis D. Brandeis, later a justice on the Supreme Court, pictured the steel worker as "a useless individual and a burden to his family at 40. . . . transmitting through another generation, and perhaps through many generations, the evil weaknesses and the degeneration which have come to him through the life to which he has been subjected."<sup>11</sup>

The Senate committee studying the issue asked the Commissioner of Labor to investigate. He reported that the steel workers faced "unusually long hours" and the alternation of daywork and nightwork. He noted that the 7-day week had been condemned and that the 12-hour day was regarded as undesirable.<sup>12</sup> For several years following 1907, efforts had been made to reduce days worked per week and hours worked by use of relief men. In 1907, 97 percent of *all* employees in blast furnaces surveyed by the Bureau of Labor worked 7 days regularly, but the figure had been cut to 82 percent in 1912. When the industry suffered a depression in 1914, the industrywide "average full-time hours per week" reached the lowest level up to that time.<sup>13</sup>

Thus, in the years preceding this country's entrance into World War I, agitation secured some reduction in hours. Both sides battled with pamphlet, speech, book, or article. Workers protested sporadically, but critics charged that the industry intentionally pursued labor policies designed to stifle internal dissent. While thousands of men in the steel mills toiled long hours under extreme conditions, management moved slowly and reluctantly toward

change, prodded to action by the glare of publicity, and generally in slack times.

The war halted this movement. The steel industry boomed, and other considerations disappeared in the "mad rush for production and profits." Computing from U.S. Steel's figures, an observer reported that the percentage of *manufacturing* employees working the 12-hour shift in 1919 stood higher than in 1911 and the actual number had almost doubled from 45,248 to about 85,000.<sup>14</sup>

After the Armistice, thousands of steel workers struck for union recognition with the shorter day one of their main demands. The strike and the various investigations prompted by it sparked a buildup of public concern. The most vehement criticism of the long day came "from outside the steel industry—from social workers, pastors, and other civic-minded citizens."<sup>15</sup> In the years immediately following the strike, U.S. Senators, social investigators, preachers, and engineers attacked the industry's refusal to abolish the 12-hour day.

Before the Senate Committee on Education and Labor which was investigating the strike, John Fitzpatrick, chairman of the National Committee for Organizing Iron and Steel Workers, stated, "The home life of the entire family is destroyed where a 12-hour day obtains." He quoted some steelworkers' wives in Chicago, "It is not a question of money here; we do not want the money; what we want is happiness, and we cannot get happiness with the 12-hour day." Fitzpatrick went on to describe a father looking in on his sleeping children before going to the mill at 5 o'clock in the morning and returning home at 7 in the evening to find them asleep again. The worker was so tired he could do little more than fall into bed himself.<sup>16</sup>

The committee reported:<sup>17</sup>

The policy of working men 10 and 12 hours per day in the steel mills is, it seems to the committee, an unwise and un-American policy. . . . An 8-hour day with a living wage that will enable men to support their families and bring up their children according to the standards of American life ought to be a cardinal part of our industrial policy.

Judge Gary later issued a statement to stockholders of U.S. Steel and to presidents of its subsidiaries. Acknowledging the pressure of public opinion, he said, "Gentlemen, it will have to be done. The 12-hour day must go. Public opinion demands it."<sup>18</sup> Nonetheless, he said he would not put the U.S. Steel Corp. too far out in front of its competitors. The steel manufacturers would have to move together.

"Civic-minded citizens" and social investigators, dissatisfied with the outcome of the unsuccessful

3½-month strike, intensified their efforts to arouse the public, encourage studies by engineers, and build support among politicians and financiers. The Cabot Fund, using monies from Charles Cabot's will, financed a number of studies by economists and engineers. Samuel McCune Lindsay of Columbia University helped enlist the crucial aid of Herbert Hoover, President Harding's Secretary of Commerce.<sup>19</sup>

### Condemned by church panel

The single most important event in the campaign occurred in July 1920, when the Commission of Inquiry of the Interchurch World Movement released its *Report on the Steel Strike of 1919*. An immediate sensation, the report chastised the industry, and U.S. Steel in particular, saying, "The 12-hour day is the most iniquitous of the byproducts of the corporation's labor policy which is to get cheap labor and keep it cheap."<sup>20</sup>

The *Report* further spotlighted the effects of the long day.

Americanism is a farce, night schools are worthless, Carnegie libraries on the hill-tops are a jest, churches and welfare institutions are ironic while the steel worker is held to the 12-hour day. . . . Not only has he no energy left, he has literally no time left after working such schedules. He has not even time for his own family.<sup>21</sup>

Americanization of the steel workers cannot take place while the 12-hour day persists. Human beings un-Americanized by the 12-hour day in such scores of thousands are a stiff price paid by America for the profits of steel companies.<sup>22</sup>

With the issue before the public, opponents of the long day tried to press their advantage, pouring out articles undercutting the rationale for the policy. Significantly, Herbert Hoover took an increasingly strong personal interest in the question.

As Secretary of Commerce, Hoover undertook the lead in the Cabinet, with assistance from Secretary of Labor James J. Davis. Hoover thought the long hours in steel a "black spot on American industry" and ordered a Department of Commerce study.<sup>23</sup> Davis commented, "The 12-hour day and the 7-day week in American industry must go. . . . Society cannot afford to permit any industry to unmake men in order to manufacture any product."<sup>24</sup>

With the public aroused and with facts from studies in hand, Hoover approached Harding. When Judge Gary again failed to recommend the 8-hour day at the annual meeting of U.S. Steel in April 1922, Hoover urged Harding to action. The Secretary drafted a letter for the President to send Gary, suggesting that Gary's "lead in this matter would have a tremendously helpful effect throughout the coun-



try" and offering "any consistent assistance in securing the acceptance of the same principle in other large establishments."<sup>25</sup>

At a White House dinner on May 18, 1922, attended by some 40 steel industry executives, Harding took a cautious, deferential approach, not wanting to put the Administration in the position of forcing the steel industry. His goal was to persuade the steel men on social and economic grounds and to promote industrywide action.<sup>26</sup> At the dinner, Secretary of Labor Davis supported the move, and Secretary of Commerce Hoover presented reports and statistics.

Hoover later wrote of the "bitter discussion" as Judge Gary and Charles M. Schwab of Bethlehem Steel labeled his suggestions "unsocial and uneconomic." He left the dinner, Hoover wrote, "much disheartened, in less than a good humor, resolved to lay the matter before the public."<sup>27</sup> The Secretary and the President did, however, gain agreement from the steel barons to create a special committee to be headed by Gary to consider possibilities.

Several days later, Secretary Davis wrote a friend:<sup>28</sup>

The President of the United States is trying to abolish the 12-hour system and I am sure he is going to accomplish it. He may not do it in a day or a week or a month, but I am sure that he will eventually accomplish it.

Hoover sought to keep the issue before the public, hoping to gain this important social benefit without resort to legislation. In his *Memoirs*, he wrote, "I held that the government could be an influence in bringing better relations about, not by compulsory laws or by fanning class hate, but by leadership."<sup>29</sup>

He encouraged publication of a study sponsored by the Federated American Engineering Societies and wrote the forward to it which Harding signed:<sup>30</sup>

It has seemed to me for a long time that the 12-hour day and the type of worker it produces have outlived their usefulness and their part in American life in the interests of good citizenship, of good business, and of economic stability. The old order of the 12-hour day must give way to a better and wiser form of organization of the productive forces of the Nation, so that proper family life and citizenship may be enjoyed suitably by all of our people.

### Management unmoved

Despite the prodding of Hoover and the obvious wishes of the President, management held firm. In May 1923, at the annual meeting of the Iron and Steel Institute, Gary and Schwab read the report of the committee appointed the previous year. The committee held that the 12-hour day had not been "an injury to the employees, physically, mentally, or

morally." It claimed that shortening the workday would increase production costs by 15 percent and require some 60,000 additional workers, unavailable because of immigration restrictions. The report concluded, "The committee cannot, at this time, report in favor of the total abolition of the 12-hour day."<sup>31</sup>

John A. Fitch, longtime critic of conditions in the steel industry, called the report a "superficial trifling with a great social question."<sup>32</sup> In a memorandum to the President dated June 1, Secretary Davis commented:<sup>33</sup>

In the interest of the industries themselves; in the interest of the present form of ownership and operation of such industries; in the interest of economic and industrial peace; in the interest of family, home, and humanity, the 12-hour workday and the 7-day workweek must go. Clearly it is to the best interests of all concerned that this matter be taken up and settled by the industries themselves.

Herbert Hoover charged that the committee's report showed "an inability to grasp the great groundswell of social movements among our people,"<sup>34</sup> and he drafted a letter for Harding to send Judge Gary. Meanwhile, as one observer noted, "The white heat of public disapproval beat without respite upon the steel heads."<sup>35</sup>

On June 6, the Federal Council of the Churches of Christ in America joined with the National Catholic Welfare Council and the Central Conference of American Rabbis to condemn management intransigence.<sup>36</sup>

The public has waited long for the fulfillment of a virtual promise from the industry that the 12-hour day would be abandoned. . . . The forces of organized religion in America are now warranted in declaring that this morally indefensible regime of the 12-hour day must come to an end.

Gary maintained that the industry's decision to retain the long day was not a final one. Moreover, the report contained something of a loophole. The committee would support abolishing the long day if, among other conditions, "labor should become sufficient to permit it."<sup>37</sup>

In his letter to the judge, dated June 18, Harding expressed his disappointment in the committee report and asked if the steel barons could pledge to make the change instead of laying off workers during a recession or "at any time when there is a surplus of labor available." He also implied the threat of further public action, saying, "I still entertain the hope that these questions of social importance should be solved by action inside the industries themselves."<sup>38</sup>

Because Harding had scheduled an extensive

speaking tour in connection with a trip to Alaska, it appeared that he might mount a public campaign on the issue and that the steel leaders inferred as much.<sup>39</sup> The steel committee held another meeting.

In a letter to Harding dated June 27, the directors of the American Iron and Steel Institute stated, "We are determined to exert every effort at our command to secure in the iron and steel industry of this country a total abolition of the 12-hour day at the earliest time practicable." Furthermore, "We think it can be brought about without undue delay when, as you state it, 'there is a surplus of labor available.'"<sup>40</sup>

Speaking in Tacoma, Wash., on July 5, the President congratulated the steel industry on its action:<sup>41</sup>

It will heal a sore in American industrial life which has been the cause of infinite struggle and bitterness for over a generation, and it marks an accomplishment from the conscience of industry itself, a recognition of responsibility from employer to employee.

That same day, to keep the pressure on, Hoover released to the press, copies of the correspondence between Harding and Gary. The next day, commenting to the press about the pledge, Gary promised the industry would "commence to act in that direction very soon and be very diligent in their efforts."<sup>42</sup> It appears that the Harding-Hoover strategy, especially the letter of June 18, was instrumental in securing these assurances from the spokesman for the steel industry.<sup>43</sup>

On August 2, the Iron and Steel Institute adopted plans for the "total elimination" of the long day "as rapidly as the supply of labor will permit." The Institute also agreed on a rate increase for the affected workers equivalent to a 25-percent rise in the hourly and base rates.<sup>44</sup> On August 9, officials announced that, on August 16, some of the 12-hour departments would go on the 8-hour shift system. The long struggle had finally wrung the vital concession from the steel manufacturers. By early 1924, the number of men on the 12-hour shift had been greatly reduced, and the long day was on the way to becoming a footnote in American industrial history.

"We went over without a ripple. The striking thing about it was how easily it was done," said a high official of a large steel company in the Pittsburgh

district.<sup>45</sup> Even critics admitted that U.S. Steel undertook the change "in an energetic and thorough-going fashion." A "decided diminution in the amount of new business offered" during mid-1923 caused a slackening in the labor market and facilitated the move. Furthermore, the industry was employing increasing numbers of Southern blacks and Mexican immigrants.<sup>46</sup>

Complicating factors had delayed implementation of the reform and colored the arguments on both sides. Indeed, hours had never constituted a unique concern for the industry, since other questions always intruded. Wages were closely interrelated with hours, and both figured prominently in unionization controversies. By the 1920's, the immigration issue permeated all aspects of labor relations. In the end, presidential politics played a major role in ending the 12-hour day in steel. Public pressure had proved irresistible. At a time of violent conflict in other major industries, the Administration achieved a significant social benefit in steel without a bloody confrontation.

When finally made, the change apparently proved profitable to U.S. Steel and its stockholders. Increased costs initially ran in the 3.5 to 5.5-percent range, but the ratio of operating costs to gross revenue fell, increasing net earnings. Perhaps coincidentally, the company declared extra, increased, or special dividends in 1924, 1925, and 1926.<sup>47</sup>

Thousands of workers had more leisure time, although some still toiled 12 hours a day, and more labored 7 days a week. The percentage of blast furnace employees in all occupations working 72 and 84 hours a week plummeted from 1922 to 1926, and the average full-time hours per week dropped from 72.3 to 59.8 in the same period. In 1926, the average full-time hours for *all* employees in *all* occupations stood at 54.4, down from 63.2 in 1922.<sup>48</sup>

"Reckon that's how I spend my time now—findin' out what's goin' on in the world," commented a steelworker. No longer was he so tired at the end of the shift that food and sleep constituted his only desires. He was glad of the change, saying he would not go back to the long day "for anything in the world." He might like more money, but in his view, "The rest makes up for the money."<sup>49</sup> □

—FOOTNOTES—

<sup>1</sup> *The New York Times*, Aug. 3, 1923, pp. 1, 8.

<sup>2</sup> James J. Davis Papers, Library of Congress, Articles and Speeches.

<sup>3</sup> Foster Rhea Dulles, *Labor in America* (New York, Thomas Y. Crowell, 1949), p. 107.

<sup>4</sup> U.S. Congress, Senate, Committee on Education and Labor, 66th Cong., 1st Sess., *Investigation of Strike in Steel Industries*, p. 240.

<sup>5</sup> Jesse Squibb Robinson, *The Amalgamated Association of Iron, Steel*

*and Tin Workers*. Johns Hopkins University Studies in Historical and Political Science (Baltimore, The Johns Hopkins Press, 1920), p. 109n; Marion Cotter Cahill, *Shorter Hours* (New York, Columbia University Press, 1932), p. 208.

<sup>6</sup> U. S. Congress, Senate, 62d Cong., 1st Sess., Commissioner of Labor, *Report on Conditions of Employment in the Iron and Steel Industry in the United States*, vol. III, *Working Conditions and the Relations of Employers and Employees*, p. 165.



<sup>7</sup> *Ibid.*, pp. 165–66; Charles A. Gulick, Jr., *Labor Policy of the United States Steel Corporation* (New York, Columbia University, 1924), p. 26.

<sup>8</sup> Paul Kellogg, "Shapers of Things," *Survey Graphic*, Jan., 1938, p. 18; Harvey O'Connor, *Steel-Dictator* (New York, The John Day Co., 1935), pp. 110–11.

<sup>9</sup> Senate, *Investigation*, pp. 231–32.

<sup>10</sup> "Havoc Wrought by the Shorter Work Day in Steel," *Survey*, Jan. 1, 1927, p. 465.

<sup>11</sup> U.S. Congress, House, Committee on Investigation of U.S. Steel Corp., *United States Steel Corporation*, vol. IV, *Hearings* (Washington, GPO, 1912), p. 2841

<sup>12</sup> Senate, Commissioner of Labor, *Report*, pp. 159–60.

<sup>13</sup> U.S. Department of Labor, Bureau of Labor Statistics, *Wages and Hours of Labor in the Iron and Steel Industry: 1907 to 1915*, Bulletin 218, pp. 17, 68; Gulick, *Labor Policy*, p. 31.

<sup>14</sup> Gulick, *Labor Policy*, pp. 31, 32, 39, 40.

<sup>15</sup> Douglas Alan Fisher, *Steel Serves the Nation* (U.S. Steel Corp. 1951), p. 74.

<sup>16</sup> Senate, *Investigation*, p. 40.

<sup>17</sup> U. S. Congress, Senate, Committee on Education and Labor, *Investigating Strike in Steel Industries: Report, 1919*, p. 15.

<sup>18</sup> Ida M. Tarbell, *The Life of Elbert H. Gary* (New York, D. Appleton and Co., 1925), p. 292.

<sup>19</sup> Kellogg, "Shapers," p. 18; Robert H. Zieger, *Republicans and Labor, 1919–1929* (Lexington, University of Kentucky Press, 1969), p. 99.

<sup>20</sup> The Commission of Inquiry, The Interchurch World Movement, *Report on the Steel Strike of 1919* (New York, Harcourt, Brace and Howe, 1920), p. 81.

<sup>21</sup> *Ibid.*, p. 82.

<sup>22</sup> *Ibid.*, p. 84.

<sup>23</sup> Herbert Hoover, *The Memoirs of Herbert Hoover: The Cabinet and the Presidency, 1920–1933* (New York, The Macmillan Co., 1952), p. 103.

<sup>24</sup> "Industrial Relations and Labor Conditions," *Monthly Labor Review*, May, 1923, p. 923.

<sup>25</sup> Zeiger, *Republicans*, p. 100; Tarbell, *Gary*, p. 293.

<sup>26</sup> Samuel Hopkins Adams, *Incredible Era* (Boston, Houghton Mifflin Co., 1939), pp. 267–68.

<sup>27</sup> Hoover, *Memoirs*, p. 103.

<sup>28</sup> Department of Labor Records, National Archives, 163/127–B, Secretary to Mr. J. A. Bowers, May 28, 1922.

<sup>29</sup> Hoover, *Memoirs*, pp. 101–02; Zeiger, *Republicans*, p. 100.

<sup>30</sup> The Committee on Work-Periods in Continuous Industry of the Federated American Engineering Societies, *The Twelve-Hour Shift in Industry* (New York, E. P. Dutton & Co., 1922), p. ix.

<sup>31</sup> Gulick, *Labor Policy*, pp. 43–45.

<sup>32</sup> John A. Fitch, "A Confession of Helplessness," *Survey*, June 15, 1923, p. 321.

<sup>33</sup> James J. Davis Papers, Library of Congress, Articles and Speeches.

<sup>34</sup> Zeiger, *Republicans*, p. 104.

<sup>35</sup> Frederick W. MacKenzie, "Steel Abandons the Twelve-Hour Day," *American Labor Legislation Review*, Sept., 1923, p. 180.

<sup>36</sup> Gulick, *Labor Policy*, p. 47.

<sup>37</sup> Tarbell, *Gary*, pp. 294–95.

<sup>38</sup> *Twelve-Hour Day: Letters between the President of the United States and American Iron and Steel Institute, also Interview with Elbert H. Gary, Chairman* (July 6, 1923), p. 3.

<sup>39</sup> Kellogg, "Shapers," p. 19; Adams, *Incredible Era*, p. 370.

<sup>40</sup> *Twelve-Hour Day*, p. 4.

<sup>41</sup> *The New York Times*, July 6, 1923, p. 2.

<sup>42</sup> *Twelve-Hour Day*, p. 8.

<sup>43</sup> David Brody, *Steelworkers in America: The Nonunion Era* (Cambridge, Harvard University Press, 1960), p. 274n.

<sup>44</sup> *The New York Times*, Aug. 3, 1923, p. 8.

<sup>45</sup> S. Adele Shaw, "Now that Jerry Has Time to Live," *Survey*, Sept. 1, 1924, p. 568.

<sup>46</sup> Gulick, *Labor Policy*, pp. 51–52; *Twenty-second Annual Report of the United States Steel Corporation* (1923), p. 25; Brody, *Steelworkers*, p. 266.

<sup>47</sup> Cahill, *Shorter Hours*, pp. 215–216; O'Connor, *Steel-Dictator*, p. 115; "Havoc," *Survey*, p. 465.

<sup>48</sup> U.S. Department of Labor, Bureau of Labor Statistics, *Wages and Hours of Labor in the Iron and Steel Industry: 1907 to 1926*, Bulletin 442, pp. 3, 6.

<sup>49</sup> Shaw, "Now that Jerry," p. 568.

# Communications



## Lifetime jobs and wage security: vintage wine in new containers?

MAURICE F. NEUFELD

Since the 1830's, organized labor has believed that workers are the principal producers of true wealth and do not receive shares commensurate with their contribution. Adolph Strasser and Samuel Gompers, the founders of the modern labor movement in the United States, fused these ideas into the seemingly conservative philosophy which their liberal and radical opponents summarized as business unionism.

When Strasser testified before a Senate committee in 1885, he refused to speculate on the eventual goals of trade unionism. He said when pressed for an answer: "We have no ultimate ends. We are going on from day to day. We are fighting only for immediate objects—objects that can be realized in a few years."<sup>1</sup>

Samuel Gompers reaffirmed this doctrine during his testimony before the Commission on Industrial Relations almost 30 years later. Prodded by Morris Hillquit, the famous Socialist leader, who wanted to know where and when the labor movement's demands would end, Gompers stated: "I say that the workers, as human beings, will never stop in any effort, nor stop at any point in the effort to secure greater improvements in their condition, a better life in all its phases. And wherever that may lead, whatever that may be, so far in my time and my age I decline to permit my mind or my activities to be labeled by any particular ism. . . ."<sup>2</sup>

Two closely related concepts asserted by organized craftsmen during the time of President Andrew Jackson, and which the labor movement has continued to affirm, are the economic and social primacy of the producing classes in the creation of true wealth and the steady impoverishment of these classes as inequality of wealth grew. At the very start

of the Nation's earliest labor movement in Philadelphia, the first citywide federation of local unions in the United States and in the world declared in its Preamble of 1827:

Do not all the streams of wealth which flow in every direction and are emptied into and absorbed by the coffers of the unproductive, exclusively take their rise in the bones, marrow, and muscles of the industrious classes?<sup>3</sup>

These concepts did not disappear with the collapse of America's first national labor movement during the depression of 1837. They persisted as major elements in the thought of trade unionists during the 19th and 20th centuries.

William H. Sylvis, the leading spirit of the second nationwide labor movement in the United States, rose to public eminence as one of the principal founders of the National Labor Union in 1866 and its President in 1868. He termed the "laboring classes" as "the producers of all wealth . . ." and as "the foundation, the cornerstone of the entire political and social structure. . . ."<sup>4</sup>

The Knights of Labor, America's third national labor movement, began to flourish during the 1880's. The Preamble of its Constitution listed among its aims: "To secure to the workers the full enjoyment of the wealth they create. . . ." Uriah S. Stephens, the first Grand Master Workman of the Knights contrasted "productive labor" with "absorbent capital" at the second annual meeting of the General Assembly in 1879. Speakers at later conventions declared that workers "did not realize that they were the creators of all values," that "human labor produces all wealth . . ." and that "whole classes of the creators of wealth" suffered abject poverty, while "other classes, that are not creators of wealth, have accumulated . . . enormous amounts of the earnings of labor. . . ."<sup>6</sup>

In 1888, 2 years after Gompers became the first president of the fourth national labor movement, the newly established AFL, he insisted that "the wages of the workers can never be considered as a payment of the value of the work performed . . ." since labor alone created the total product. On April 19, 1899, Gompers told the U.S. Industrial Commission "that

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there is a constant struggle . . . between the wealth possessors and those who produce wealth. . . ." He added that as long as the wage system lasted, "it is our purpose to secure a continually larger share for labor, for the wealth producers." However, he was unprepared to say whether "the time shall come, as this constantly increasing share to labor goes on, when profits shall be entirely eliminated, and the full product of labor, the net result of production, go to the laborer, thus abolishing the wage system. . . ." <sup>8</sup> In 1914, Gompers repeated in his pamphlet, *The American Labor Movement*, that one "of the functions of organized labor is to increase the share of the workers in the product of their labor." <sup>9</sup>

With the advent of industrial unionism and the Congress of Industrial Organizations during the 1930's, the labor movement expressed these ideas in less direct form. Walter Reuther, as president of the United Automobile, Aircraft and Agricultural Implement Workers of America (UAW), stressed the cardinal role of the producing classes and persistent inequality of wealth by proposing to feature the guaranteed annual wage in the negotiations of 1955. He calculated that the president of the General Motors Corporation earned \$329 an hour and that the semiretired chairman of the Board of Directors earned \$2,178 an hour in 1954. <sup>10</sup> His unspoken question must have rung in the ears of every delegate to the UAW's 15th constitutional convention: What

did those two men, as compared with you, produce to earn that much money an hour?

Three years earlier, during his acceptance speech upon becoming the president of the CIO on December 4, 1952, Reuther commented on the decision handed down by the Supreme Court during the steel strike: "All the learned men with all their wisdom . . . cannot produce one ton of steel. Steel will be produced . . . and we will make all of the other things that we need, but free American labor will insist that while doing these things labor is entitled to a full measure of social justice." <sup>11</sup>

The two concepts continued to attract organized workers beyond the 1950's. Eighty percent of hourly wage workers, when polled in 1973, agreed with the statement that "companies benefit from increased productivity at the expense of workers." <sup>12</sup>

This concern that workers create wealth but do not share fairly in its distribution was hardly allayed during the recent recession and the energy cutbacks of this past winter when few companies laid off managers to the same degree that they laid off blue-collar workers.

The United Steelworkers' recent proposal for lifetime wage and job security is the latest of ideas espoused by the American labor movement. <sup>13</sup> The concept was patterned 140 years ago, and such lifetime guarantee, if it does come, will not be the end. In collective bargaining, there is no final goal. □

—FOOTNOTES—

<sup>1</sup> U.S. Senate, Committee on Education and Labor, *Report of the Committee of the Senate upon the Relations between Labor and Capital, and Testimony Taken by the Committee (1883-1885)*, Vol. I (Washington, D.C., Government Printing Office, 1885), p. 460.

<sup>2</sup> U.S. Senate, Commission on Industrial Relations (1912-1916), *Final Report and Testimony*, Senate Document 415, Vol. II (Washington, D.C., Government Printing Office, 1916), p. 1528.

<sup>3</sup> John R. Commons and Associates, *A Documentary History of American Industrial Society*, Vol. V (New York, Russell and Russell, 1958), p. 85.

<sup>4</sup> James C. Sylvis, ed., *The Life, Speeches, Labors & Essays of William H. Sylvis* (New York, Augustus M. Kelley, 1968), p. 82.

<sup>5</sup> Knights of Labor, *Constitution of the General Assembly; and for State, National Trade, District, and Local Assemblies of the Order of the Knights of Labor of America* (Philadelphia, The General Assembly, 1888), p. 3.

<sup>6</sup> Knights of Labor, *Record of the Proceedings of the Second Regular Session of the General Assembly, Held at St. Louis, Missouri, January 14-17, 1879*, p. 56; *Record of the Proceedings of the Eighth Regular Session of the General Assembly, Held at Philadelphia, Pennsylvania, September 1-10, 1884*, p. 569; *Record of the Proceedings of the Ninth Regular Session of the General Assembly, Held at Hamilton, Ontario,*

*October 5-13, 1885*, p. 118; *Record of the Proceedings of the Tenth Regular Session of the General Assembly, Held at Richmond, Virginia, October 4-20, 1886*, p. 293.

<sup>7</sup> Stuart Bruce Kaufman, *Samuel Gompers and the Origins of the American Federation of Labor 1848-1896* (Westport, Conn., Greenwood Press, 1973), p. 171.

<sup>8</sup> U.S. Industrial Commission (1898-1901), *Report of the Industrial Commission on the Relations and Conditions of Capital and Labor Employed in Manufactures and General Business*, Vol. VII (Washington, D.C., Government Printing Office, 1901), pp. 644-645.

<sup>9</sup> Samuel Gompers, *The American Labor Movement: Its Makeup, Achievements and Aspirations* (Washington, D.C., American Federation of Labor, 1914), p. 20, as quoted in Louis S. Reed, *The Labor Philosophy of Samuel Gompers* (Port Washington, N.Y., Kennikat Press, 1966), p. 12.

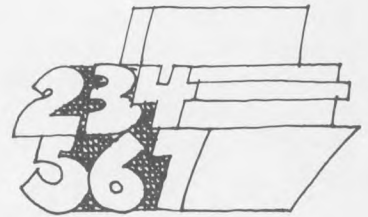
<sup>10</sup> Walter P. Reuther, *Selected Papers*, Henry M. Christman, ed. (New York, Macmillan, 1961), p. 65.

<sup>11</sup> *Ibid.*, p. 51.

<sup>12</sup> John Q. Jennings, "Pay Wins in the Profit Shareout," *The New York Times*, Nov. 10, 1974, Sec. 3, p. 14.

<sup>13</sup> See, "Developments in industrial relations," *Monthly Labor Review*, June 1977, pp. 62-64.

# The Anatomy of Price Change



## Inflation rate high in second quarter, but prices of raw materials declined

TOSHIKO NAKAYAMA AND CRAIG HOWELL

The Consumer Price Index (CPI) rose at a seasonally adjusted annual rate of 8.1 percent in the 3 months ended in June, compared with 10 percent in the first quarter of the year, and 4.2 percent in the final quarter of 1976. Large increases in food prices—at a 14.6-percent rate in the first quarter and 12.7 percent in the second—have contributed greatly to the high inflation rate this year. In addition, increases in energy items at a 9.8-percent rate in the second quarter were faster than in the first quarter. The 9.4-percent rate of increase for services was about the same as in the first quarter. Price rises moderated, however, for commodities other than food and energy items—to a 4.1-percent rate from 7.3 in the first quarter. (See table 1.)

In the Wholesale Price Index (WPI), prices of finished goods rose at an 8.4-percent rate from March to June, about the same as in the first quarter. Prices of finished consumer goods—the component most nearly comparable to the commodities component of the CPI—rose at a 9.2-percent rate in the second quarter, about the same as in the first. Finished consumer food prices in the WPI rose at a slightly faster rate (13.8) than in the first quarter (12.7 percent). Prices of finished consumer goods other than food rose at a slower rate (6.5 percent) than in the first (8.5 percent). Prices of producer finished goods—the other major component of the total finished goods index—increased at a 6.3-percent rate, somewhat more than in the first quarter.

The relatively rapid increases in prices of finished goods in the second quarter were due in part to

increases in material costs in earlier months. In the second quarter, however, prices declined for crude agricultural and industrial commodities and price rises moderated for industrial materials and components at the intermediate stage of processing. The rise in the overall Wholesale Price Index, therefore, slowed to a 3.6-percent rate in the second quarter, from 10.2 percent in the first quarter.

### Consumer goods

*Food.* The sharp rise in consumer food prices in the second quarter—12.7 percent in the CPI and 13.8 percent in the WPI—was due to higher prices for a broad range of products such as coffee, dairy products, cereal and bakery products, fats and oil products, and meats. Fresh fruit and vegetable prices, however, turned down sharply, and egg prices continued to decline. (See table 2.)

Almost 40 percent of the rise in food prices at the retail level was due to coffee price increases, which accelerated as earlier increases at the producer level were passed through. However, wholesale prices for green coffee declined during the second quarter for the first time in nearly 2 years. A drop in consumer sales in reaction against previous steep price advances led to excess inventories of green coffee.

Retail and producer prices for dairy products advanced sharply in the second quarter, following declines in late 1976 and early 1977. This reversal was partly the result of increased demand and higher prices for fluid milk used in processed dairy products. In addition, milk price support levels were increased about 9 percent on April 1.

Increases in retail prices of cereal and bakery products accelerated in the second quarter. Prices for rice turned up at retail as processors' prices soared at an annual rate of nearly 150 percent in response to good export demand and tight supplies. Prices for some bakery products also rose in the second quarter, reflecting earlier increases for ingredients, particularly flour and sugar. Grain prices, however, fell rapidly in the second quarter as export demand slowed and weather conditions improved in most domestic growing areas. Despite fears last winter that much of the wheat crop in major growing areas

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in the Great Plains had suffered extensively from drought and wind erosion, good rains this spring offset much of this damage. Export demand for grains declined in anticipation of good crops in the Soviet Union and many other major producing nations.

Prices of sugar and sweets advanced at a 39.4-percent rate in the second quarter, even sharper than the 23.9-percent rate registered in the first period, reflecting price rises early in the year for raw sugar. The duty on imported sugar was nearly tripled in the final quarter of 1976 to curtail the flow of foreign-produced sugar into the United States. However, sugar and confectionery prices in the WPI held nearly steady in the second quarter as a rapid increase in April was nearly offset by declines in May and June. Lagging demand and the failure of producing and consuming countries to agree on a price-stabilization program were major influences in these declines. Retail and producer prices of chocolate candy bars also continued to rise, reflecting earlier increases in prices of ingredients, particularly cocoa beans and sugar. Prices of cocoa beans turned down in the second quarter.

**Table 1. Changes in selected components of the Consumer and Wholesale Price Indexes, 1976-77**

Index	Compound annual rate, seasonally adjusted for 3 months ended—				
	1976			1977	
	June	Sept.	Dec.	Mar.	June
<b>CONSUMER PRICE INDEX</b>					
All items .....	6.1	5.3	4.2	10.0	8.1
Food .....	6.2	1.6	0	14.6	12.7
Commodities less food .....	5.6	5.5	5.7	7.4	4.2
Services .....	6.5	7.5	5.1	9.8	9.4
All items less food and energy items .....	5.8	6.5	4.6	8.3	7.1
Commodities less food and energy items .....	5.7	5.3	4.7	7.3	4.1
Services less energy items .....	6.5	6.9	4.0	9.4	9.7
Energy items (gas, electricity, fuel oil, coal, gasoline, motor oil) .....	10.9	10.9	13.1	7.7	9.8
<b>WHOLESALE PRICE INDEX</b>					
All commodities .....	6.6	3.5	7.1	10.2	3.6
Farm products and processed foods and feeds .....	13.4	-12.0	6.6	19.1	-2.5
Crude foods and feeds .....	21.0	-25.0	6.2	26.5	-12.0
Intermediate materials for food manufacturing .....	15.5	-27.4	-8.0	25.7	28.4
Consumer foods .....	13.2	-13.6	8.4	12.7	13.8
Industrial commodities .....	4.8	8.0	7.6	7.9	5.3
Crude materials except foods <sup>1</sup> .....	16.4	10.6	21.8	21.7	-2.0
Intermediate materials except foods .....	3.5	8.3	7.5	7.6	4.7
Producer finished goods .....	4.3	4.7	9.2	5.5	6.3
Consumer finished goods except foods .....	3.6	7.7	5.2	8.5	6.5
Industrials except fuels .....	4.3	6.7	6.1	6.4	4.0
Crude materials except foods less fuels .....	31.3	2	-5.5	10.1	-7.5
Intermediate materials except foods less fuels .....	3.8	6.5	7.5	6.9	3.6
Consumer finished goods except foods less fuels .....	3.3	6.1	3.5	7.6	5.6
Fuels and fuel products .....	5.7	18.9	16.6	18.0	13.4

<sup>1</sup> Crude materials, excluding foods, feeds, and fibers.

NOTE: In the Wholesale Price Index, monthly data for January 1976 through December 1976 have been revised to reflect the availability of late reports and corrections by respondents. For this reason, some of the figures shown above and elsewhere in this article for this period differ from those previously published.

**Table 2. Changes in wholesale and retail prices for consumer goods and services, 1976-77<sup>1</sup>**

Index	Relative Importance Dec. 1976		Index	Compound annual rate, seasonally adjusted, for 3 months ended—				
	CPI	WPI		1976			1977	
				June	Sept.	Dec.	Mar.	June
Consumer Price Index .....	-----	-----	-----	6.1	5.3	4.2	10.0	8.1
Goods .....	100.0	100.0	CPI	6.0	3.9	3.4	10.4	7.4
			WPI	6.9	-5	6.3	9.9	9.2
Food .....	37.9	35.7	CPI	6.2	1.6	0	14.6	12.7
			WPI	13.2	-13.6	8.4	12.7	13.8
Meats, poultry, fish .....	9.1	12.7	CPI	6.3	-16.3	-7.9	8.6	8.7
			WPI	-1.1	-25.6	21.0	-2.8	-7
Dairy products .....	4.5	5.9	CPI	7.2	11.6	-8.9	-7	15.0
			WPI	11.6	2.1	-10.6	1.2	27.7
Cereal and bakery products .....	4.1	4.8	CPI	7.6	1.5	-9.5	2.7	9.5
			WPI	7.3	-12.7	-9.5	9.7	9.2
Fresh fruits and vegetables .....	2.8	2.1	CPI	-14.1	34.8	25.6	63.9	-33.7
			WPI	-58.2	156.3	-10.2	106.7	-69.6
Commodities less food .....	62.1	64.3	CPI	5.6	5.5	5.7	7.4	4.2
			WPI	3.6	7.7	5.2	8.5	6.5
Nondurables less food <sup>2</sup> .....	36.5	39.7	CPI	5.0	6.0	5.4	5.5	5.2
			WPI	3.8	9.1	6.5	9.5	7.0
Apparel less footwear .....	10.3	8.6	CPI	4.3	6.2	1.9	4.4	4.6
			WPI	6.9	3.8	4.9	210.2	2.5
Footwear .....	2.2	1.4	CPI	6.1	6.6	3.5	5.3	4.4
			WPI	11.0	8.3	4.5	6.7	5.4
Gasoline <sup>3</sup> .....	5.1	9.3	CPI	7.2	10.2	9.5	2.6	4.2
			WPI	-2.4	21.6	23.0	3.1	6.7
Fuel oil <sup>4</sup> .....	1.6	2.1	CPI	7.7	11.2	8.7	28.1	10.9
			WPI	-4.2	17.8	14.1	25.1	13.4
Tobacco products .....	3.0	2.1	CPI	1.8	2.0	6.6	5.7	1.5
			WPI	5.4	5.6	16.6	12.0	-2
Durables <sup>2</sup> .....	25.6	24.6	CPI	6.5	5.0	6.0	10.5	2.5
			WPI	3.1	5.1	3.3	7.0	6.0
New cars .....	3.1	14.1	CPI	1.5	6.4	6.9	4.1	4.0
			WPI	3.5	7.9	5.7	4.2	7.2
Furniture .....	2.0	2.8	CPI	5	1.3	7.6	2.9	4.2
			WPI	6.5	6.1	5.8	4.6	7.5
Appliances, including radio and television .....	2.2	4.3	CPI	4.7	1.6	1.0	2.3	3.2
			WPI	3.7	1.0	-2.0	2.3	3.7
Services .....	100.0	-----	CPI	6.5	7.5	5.1	9.8	9.4
Rent .....	12.1	-----	CPI	5.4	5.4	5.3	6.3	6.3
Household less rent .....	43.2	-----	CPI	6.5	6.8	2.0	12.2	10.8
Medical care .....	15.9	-----	CPI	8.2	8.9	13.2	9.4	10.0
Transportation .....	14.1	-----	CPI	7.0	10.3	6.4	8.9	11.1
Other services .....	14.8	-----	CPI	5.4	6.9	5.8	6.7	5.8

<sup>1</sup> See Note, table 1.

<sup>2</sup> Includes items not listed.

<sup>3</sup> CPI includes motor oil.

<sup>4</sup> CPI includes coal.

NOTE: Consumer goods represent 62.5 percent and services 37.5 percent of all items in the Consumer Price Index. Consumer goods represent 30 percent of all commodities in the Wholesale Price Index.

Prices of vegetable oil end products at the retail and manufacturer levels also advanced rapidly in the second quarter because of earlier increases in ingredient costs. Prices for soybeans rose sharply early in the second quarter but subsequently declined due to lower export demand and an increase in soybean acreage. Lower soybean prices in turn resulted in a decline in prices for soybean meal and refined soybean oil, as well as a deceleration in price increases for crude soybean oil.

Retail prices for beef and veal rose at a 11.5-per-

cent rate in the second quarter, following a decline of 8.1 percent in the first quarter; beef prices at the processors' level and cattle prices declined but not as much as in the first quarter. The increases in beef prices occurred early in the second quarter when cattle supplies were tight. By the end of the quarter, producer prices were down because marketings of grass-fed steers had risen substantially as a result of unusually early hot weather and a lack of rainfall in some grazing areas.

Pork prices increased at a 17.6-percent rate at the retail level, not as rapidly as in the first quarter. However, prices for pork at the processors' level rose at a 43.7-percent rate, and for hogs, a 69-percent rate. These price increases accelerated as hog marketings were reduced, partly because of a heavy death rate for hogs during the harsh winter.

Prices of both live and processed poultry in the WPI rose at annual rates of nearly 40 percent from March to June, the second consecutive quarter of advances in excess of 30 percent. Poultry prices rose steeply early in the quarter because of the continued adverse effects of the severe cold on poultry supplies, but prices retreated later in the quarter as output began to recover. Poultry prices in the CPI advanced rapidly in May before dropping back in June.

Prices of fresh fruits and vegetables turned around dramatically in the second quarter. Retail prices of fresh fruits and vegetables had climbed at a 63.9-percent rate in the first quarter before dropping at a rate of 33.7 percent in the second. Similarly, at the producer level, prices by June had fallen to the lowest level since last July, after advancing at a 106.7-percent rate from December to March. These reversals resulted largely from increased shipment of new crops following substantial losses during the winter caused by drought in Northern California and frosts in Florida. Prices for processed fruits and vegetables, however, continued to advance in both the WPI and the CPI, partly because of diminished stocks.

Following increases in the final quarter of 1976 and early 1977, egg prices declined at a rate of 35.8 percent in the CPI and at a 16.8-percent rate in the WPI. Consumer demand dropped substantially in reaction to the earlier advances. At the same time, egg production recovered after a sharp reduction in output during the severe winter.

*Consumer nonfood commodities.* Both retail and wholesale prices of consumer goods other than food increased less in the second quarter of 1977 than in the first. The CPI for nonfood commodities rose at an annual rate of 4.2 percent, compared with 7.4 percent in the first quarter. The corresponding WPI component advanced at a 6.5-percent rate, after rising at an 8.5-percent rate in the first quarter. Exclud-

ing used car and home purchases prices—which are not included in the WPI—the index for commodities other than food at the retail level rose at a 4.6-percent rate from March to June, following a 5.2-percent rate in the preceding quarter. In addition to a sharp downturn in used cars, retail price increases were smaller in the second quarter for fuel oil and footwear. The slowdown in the WPI component was primarily due to much smaller increases for fuel oil and apparel than in the first quarter.

The rise in fuel oil prices in both the CPI and WPI was much less than in the first quarter, as producers were able to rebuild depleted inventories. On the other hand, price increases accelerated for gasoline in the CPI and WPI, as refiners continued to pass through the January increases in crude oil prices by the Organization of Petroleum Exporting Countries.

Used car prices declined in the second quarter—the first quarterly decline in almost 3 years. The demand for full- and intermediate-size used cars, which was unusually strong during the first quarter, slowed considerably in the second quarter. On the other hand, demand for new cars was heavy throughout the second quarter. Price increases were registered for new cars at both the retail and producer levels, reflecting changes in rebate programs and higher costs for steel and labor. In addition, prices for imported cars rose partly because of a decline in the value of the U.S. dollar.

Price increases for apparel slowed considerably in the second quarter at the manufacturing level, reflecting an easing in prices of some fabrics and fibers. In contrast, increases in retail prices for apparel were about the same as in the first quarter. After almost no change in the first quarter, the women's and girls' apparel category in the CPI registered a sharp increase when some fall items were introduced. However, prices for men's and boys' apparel in the CPI were almost unchanged after a sharp increase in the first quarter. Retail and producer prices of footwear moved up less than in the preceding quarter, partly in response to lower prices for leather.

Strong demand and increased costs for aluminum and steel had an upward effect on prices for household durables such as appliances and furniture. Price increases for these items accelerated at both the manufacturer and retail level.

### **Producer finished goods**

Prices for producer finished goods rose somewhat faster in the second quarter (a 6.3-percent rate) than in the preceding 3 months (a 5.5-percent rate). Motor truck prices rose more than in the first quarter (a 9.9-percent rate vs. 4.5 percent), partly because of the pass-through of earlier increases for steel and labor. The discontinuance of dealer incentive pro-



grams for some models, following an upturn in demand, also contributed to this price movement. Price increases for commercial furniture also accelerated, reflecting strong demand and higher costs for metal components and hardwood lumber. In the machinery and equipment group, prices for the general purpose and special industry categories rose more than in the first quarter. However, price increases were about the same or smaller in the second quarter for most other machinery categories.

### Crude and intermediate materials

In the food sector, prices of intermediate materials used in food manufacturing rose at a 28.4-percent rate, somewhat more than in the first quarter, as earlier advances in raw farm products continued to be reflected in prices of ingredients used in food manufacturing. Prices for crude food and feeds, however, declined at a 12-percent rate in the second quarter, after rising at a 26.5-percent rate in the first quarter. As favorable weather conditions in many growing sections of the country raised expectations of good crops, prices at the farm level turned down during the quarter. Declines were widespread late in the quarter. As a result of lower prices for raw farm products, processors' prices for food at the intermediate and finished levels moved down by the end of the second quarter.

In the industrial sector, prices for crude industrial materials declined at a rate of 2.0 percent in the second quarter. This was the first decrease in more than 2 years and followed four quarters of rapid increases. The downturn was primarily due to scrap metals. Lower steel mill production restricted demand for iron and steel scrap. Decreases in copper scrap prices reflected continued heavy production of copper in many countries despite inadequate demand. Prices for hides and skins and crude natural rubber also turned down after rising from December to March. Increases for crude fuels (coal, natural gas, and crude petroleum) were considerably less than in the previous quarter.

Prices of industrial materials and components at the intermediate stage of processing increased at a 4.7-percent rate in the second quarter, compared with an average rise of 7.8 percent in each of the three preceding quarters. Increases among intermediate fuels and metals were generally smaller than in the first quarter, and declines for lumber and wood products were more. On the other hand, price increases accelerated for many intermediate products in the nonmetallic minerals, chemicals, and rubber and plastic products groups.

In the fuels group, lower demand and increased inventory levels resulted in smaller increases for diesel and jet fuels and declines for residual fuel. Pro-

pane prices, however, rose because of higher costs for natural gas feedstock. The electric power index rose, partly because of rate increases granted to electric utilities to cover higher costs for fuels, materials, and equipment. In the metals group, weaker world demand and a buildup in inventories resulted in lower prices for copper and zinc, but prices of aluminum products rose as fuel-related costs continued to climb.

Demand for construction materials advanced strongly from March to June, primarily reflecting the increased pace of residential construction activity. However, lumber prices dropped during the second quarter as production of some species outran demand. Plywood also moved down in April and May, but advanced sharply in June because of improved demand and reduced inventories. Stronger demand for residential construction was also a major influence in the acceleration of price increases for non-metallic mineral products. Prices for these commodities rose at an annual rate of 12.0 percent from March to June, the largest quarterly advance for this group in more than 2 years.

Fuel-related costs and stronger demand contributed to the faster rises for industrial and agricultural chemicals in the second quarter than in the first quarter. Among rubber and plastic products, synthetic rubber prices moved up because of tight supplies of butadiene, a feedstock. Higher crude rubber prices contributed to advances for products such as rubber hosing. Strong construction-related demand was reflected in higher prices for plastic construction products. Within the textile products group, price increases for synthetic fibers, processed yarns and threads, and finished fabrics accelerated in the second quarter, largely because of improved demand for knit fabrics. Sharp decreases in raw cotton prices in the latter part of the second quarter had not yet been reflected in cotton textile prices.

### Services

In the second quarter, prices of consumer services rose at an annual rate of 9.4 percent, about the same as in the first quarter of 1977 but higher than the rate of increase throughout most of 1976. Charges for transportation services increased at a slightly faster rate in the second quarter than in the first, while charges for rent, household services other than rent, and medical care services increased at about the same rate in both quarters.

Transportation services rose at an annual rate of 11.1 percent in the second quarter, the fastest rate since mid-1976. Among auto-related services, parking fees rose at a faster rate in the second than in the first quarter. Auto insurance rates continued to rise rapidly, as companies sought further rate increases

to cover higher repair bills for newer model autos. The rise in auto insurance rates in the first and second quarter—at a 13-percent annual rate—was substantial, but not as fast as in 1976 when they rose 22.4 percent and in 1975 when they rose 17.9 percent. Public transportation charges rose at a rate of 8.9 percent in the second quarter, about the same as in the previous quarter. Railroad fares increased sharply, partly reflecting attempts by railroad companies to cover higher winter-related maintenance expenses. Intercity bus fares also rose substantially.

Charges for medical care services increased at a 10-percent rate in the second quarter, compared with 9.4 percent in the first quarter. Physicians' fees, fees charged for other professional services such as routine lab tests, and hospital service charges continued to rise at rapid rates. Higher hospital charges reflected increased costs for payroll, utilities, equipment, and supplies.

Charges for household services other than rent have risen at a faster rate in the first two quarters of this year than in any quarter during 1976. The rise in the second quarter of this year was 10.8 percent and in the first quarter, 12.2 percent. Property taxes, which had soared at a rate exceeding 20 percent in the first quarter, rose only about one-fourth as much in the June quarter. The index for mortgage interest rates rose at an 8.4-percent rate, compared with 9.9 percent in the first quarter. Despite a rising demand for loans and a rapid increase in home construction, the supply of lendable funds remained strong; nevertheless, some lenders were hesitant to lower interest rates because of general economic uncertainty and concern over the money supply situation in the United States. Property insurance rates rose more rapidly than in the first quarter as fire and extended coverage rates jumped sharply in many areas.

Among other household services, utility rates—water and sewerage, natural gas, and electricity—all increased more in the second quarter than in the first. Natural gas prices rose at about a 17-percent rate in the second quarter. Early in 1977, the Federal Government restructured the rate scheme of natural gas sold in interstate commerce in an attempt to induce producers to sell in other States rather than hold the gas in reserve or sell in the unregulated intrastate market. Higher charges passed through by gas distribution companies were reflected in consumer gas bills during the second quarter. Electricity rates rose at a 7.8-percent rate, nearly twice as much as in the first quarter. Higher fuel adjustments, partly the result of higher imported oil prices, and rate changes contributed to the increase.

The rent index advanced at a rate of 6.3 percent for the second consecutive quarter. This quarterly rate of increase, which was higher than the rates in

1975 and 1976, reflected the low rental vacancy rate and the relaxation of rent controls in some areas. Landlords continued to face rising costs for nearly all phases of operating rental units.

Among other services in the CPI, charges for barber and beauty shop services, shoe repairs, and automatic laundry services increased at a faster rate in the second than in the first quarter. However, increases slowed for recreational services as indoor facilities such as bowling alleys and movie theaters instituted lower seasonal rates. □

## Changes in the distribution of consumer spending

EVA JACOBS

Between the 1960's and 1970's, expenditures for transportation increased more than spending for food or housing. A new analysis of consumer spending, comparing nationwide surveys of consumer expenditures conducted in 1960-61 and in 1972-73, found that the transportation share of total spending rose by more than 40 percent (table 1).

Consumer expenditures are defined as those made for consumption within the household. Excluded are gifts to persons outside the household, contributions to charitable and political organizations, and personal insurance, including social security taxes and other retirement payments. The definition of consumption also excludes principal payments on mortgages from housing costs. Principal payments are repayments of loans, and are therefore considered reductions in liabilities. Homeowner costs do include interest, taxes, insurance, and maintenance and repair costs.

Transportation expenditures rose from 15 percent of consumption in the early 1960's to 21 percent a decade later. This is largely attributable to expenditures connected with automobiles—such as vehicle purchases, finance charges, maintenance costs, insurance, and gasoline. Associated with this rise was an increase in the average number of autos from 1.0 per family to 1.3 per family, an increase of 37 million automobiles. Autos were owned by 80 percent of the families in the 1970's, compared with 76 percent earlier.

During this decade, housing costs also increased as a share of total expenditures. The proportion of fami-

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**Table 1. Consumption expenditure patterns, 1960-61 and 1972-73**

Component	1960-61		1972-73 <sup>p</sup>	
	Average Expenditure	Percent of total	Average Expenditure	Percent of total
Total current consumption .....	\$5,054	100.0	\$8,282	100.0
Food, total .....	1,234	24.4	1,664	20.1
Food at home .....	989	19.6	1,162	14.0
Food away from home .....	246	4.9	501	6.0
Housing, total .....	1,433	28.4	2,604	31.4
Shelter .....	664	13.1	1,362	16.4
Rent .....	269	5.3	572	6.9
Owned dwelling .....	349	6.9	719	8.7
Other shelter .....	46	.9	51	.6
Utilities .....	249	4.9	409	4.9
Household operations .....	253	5.0	447	5.4
Housefurnishing and equipment ..	266	5.3	387	4.7
Clothing materials and services ..	553	10.9	647	7.8
Medical care .....	340	6.7	528	6.4
Transportation, total .....	770	15.2	1,768	21.4
Private transportation .....	693	13.7	1,566	18.9
Public and other transportation ..	77	1.5	201	2.4
Recreation, personal care, education ..	612	12.2	952	11.4
Recreation .....	200	4.0	388	4.7
Personal care .....	145	2.9	165	2.0
Education .....	53	1.0	103	1.2
Reading .....	45	.9	48	.6
Alcoholic beverages .....	78	1.5	118	1.4
Tobacco .....	91	1.8	130	1.6
Miscellaneous .....	111	2.2	120	1.5

p= preliminary.

lies that were homeowners increased only slightly, probably because the under-25 age group, which consists mostly of renters, constituted a larger part of the total population in the later period. The same factor may account for the decline in the share of homefurnishings in the family budget.

At the same time, the shares going to food and clothing declined. In part, this reflects the decline in average family size from 3.2 to 2.9 persons. In the early 1960's, 45 percent of the families were one- and two-person families, compared with more than 50 percent in the later period. However, although the food-at-home share declined by 29 percent, there was a decided shift to food away from home, which rose from 20 to 30 percent of total food expenditures.

There are several reasons for this shift. For one, there has been a relative increase in the number of one-person households, in which a higher than average proportion of food budgets is spent on food away from home. The development of the fast-food industry and the greater participation of married women in the labor force also contributed to the shift, which was found throughout the income distribution.

The budget share accounted for by health expenditures declined slightly, which may seem surprising in light of public concern about the rapidly rising costs

of health care. However, medical costs as reported in the surveys refer only to out-of-pocket expenses of families and do not include health insurance premiums paid by employers or the government. Since 1960-61, employer and government-financed insurance plans have grown tremendously. Increases in these costs are reflected in the costs of business and government, not in direct expenditures by families for health insurance.

In general, the movements shown in the table continue the direction of the changes in consumption patterns that occurred between the 1950's and 1960's. However, the increase in automobile transportation expenditures greatly exceeded the increase during the previous decade.

The 1972-73 survey results were collected from a sample of 20,000 families.<sup>1</sup> The data are arranged so that the components are comparable to published expenditure data from earlier surveys. Historically, consumer expenditure surveys have been conducted every 10 or 12 years to provide a basis for revising the market basket for the Consumer Price Index (CPI). The survey data also serve other important objectives, including market research and economic analysis.

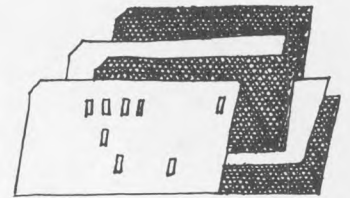
The population coverage and definition of components of the CPI differ from those of the data presented here. For example, the consumption expenditures data are for the entire population, but the current CPI covers only urban wage earners and clerical workers. There are several differences in the treatment of homeownership. Most importantly, the consumption expenditures table excludes home purchase expenditures, while the CPI includes the price of homes purchased during the survey period.

A series of reports containing additional data from the diary and interview portions of the 1972-73 survey has been published. These reports contain tabulations of expenditures for the United States and various regions by family characteristics, such as income, age of head, and size of family. Single copies of these reports are available from the Bureau of Labor Statistics, Washington, D.C. 20212, or from the BLS regional offices. □

## FOOTNOTE

<sup>1</sup> As in all sample surveys, the data are subject to both sampling and nonsampling errors. Sampling errors occur because observations are not taken from the entire population. Nonsampling errors result in part from the inability or unwillingness of the respondent to answer correctly. Historically, the alcoholic beverages and tobacco components have experienced particularly low levels of reporting in household interview surveys.

# Research Summaries



## Southward shift of textile finishers dampens industry's wage increases

The advance of the nationwide wage level in textile dyeing and finishing plants has been restrained by the growth in the proportion of the work force employed in the Southeast—up from 30 percent in July 1946 to 67 percent in June 1976. Bureau of Labor Statistics surveys showed a 329-percent rise in the national wage average for production workers in these plants—from 89 cents to \$3.82. However, had regional employment remained as in 1946, the increase would have been 352 percent, or \$4.03 in June 1976. The southward shift halved the proportion of textile dyeing workers in the higher-paying Middle Atlantic and New England regions to about 15 percent each in 1976.

Regionally, June 1976 average pay levels were \$3.66 in the Southeast, \$3.97 in New England, and \$4.45 in the Middle Atlantic. Earnings also varied by community and establishment size, labor-management contract status, type of finisher (commission or for own account), and textile (cotton or manmade), as well as by occupation, sex, and method of wage payment. Regression analysis of survey data found higher wage levels to be significantly associated with location outside the South, larger-sized plants, and, to a lesser degree, union mills and mills primarily processing manmade rather than cotton fibers.

Among the occupations studied separately, machine printers received the highest average hourly earnings, \$7.79. Outside the printing department, average hourly earnings ranged from \$3.15 for janitors to \$4.83 for maintenance electricians. Yarn winders, the largest occupation studied, averaged \$3.31.

Paid holidays, typically 5 to 9 annually, paid vacations, commonly 1 to 3 weeks annually, and at least part of the cost of life, hospitalization, and surgical insurance were provided to virtually all production workers covered by the survey. Pension plans and other forms of health insurance (such as medical coverage) were also widespread in the industry.

The 1976 survey covered establishments employing 20 workers or more engaged primarily in bleach-

ing, dyeing, printing, and other mechanical finishing (such as preshrinking, calendering, or napping) of textiles. Separate releases for States and areas with heavy concentration of workers, are available from the Bureau of Labor Statistics or its regional offices. A comprehensive bulletin is in preparation. □

## BLS launches survey of shipyard industry

Workers building and repairing vessels averaged \$5.66 an hour in September 1976, according to the Bureau of Labor Statistics first study of private shipbuilders in 35 years. Straight-time earnings were between \$4 and \$7.50 an hour for 94 percent of the 104,015 production workers within the scope of the survey. Regionally, workers in Atlantic Coast shipyards (slightly more than two-fifths of the work force) averaged \$5.55 an hour. Averages for other ports studied were \$5.26 at Gulf Coast shipyards, \$5.56 at the Great Lakes, and \$6.83 at the Pacific Coast.

Shipbuilding worker earnings were concentrated within relatively narrow bands compared with other industries. The index of wage dispersion (middle range divided by the median) was 21 for shipbuilding production workers—lower than all but about 6 of 70 industries studied by the Bureau as part of its Industry Wage Studies program. Major factors contributing to the clustering of production worker earnings in this industry are the predominance of single-rate pay systems, the highly unionized work force, and the relatively small average wage differences among occupations.

Nationwide, averages among the occupations selected for study ranged from \$4.34 for guards to \$6.58 for loft workers who lay out ship plans and construct patterns, such as templates and molds. The shipfitters (8,514) who lay out, fabricate, and brace metal structural parts within a ship's hull, were the largest group of workers studied and averaged \$6.90 an hour.



Nearly all shipyard workers covered by the survey received paid holidays—typically 10 or 11 per year—paid vacations, life insurance, various health insurance plans paid in full or in part by the employer, and pension plans.

The survey covered private shipyards employing at least 250 workers building and repairing all types of ships, barges, and lighters, whether propelled by motor or towed. Included were yards converting and altering ships; excluded were separate auxiliary units (such as central offices), establishments fabricating structural assemblies, and subcontractors.

A summary of the survey's findings is available from the Bureau of Labor Statistics or its regional offices. A comprehensive bulletin, which includes a brief description of pay structure at U.S. Navy facilities, is in preparation. □

## Occupational wages in the box industry

The straight-time earnings of production and related workers in the corrugated and solid fiber box industry averaged \$4.65 an hour in March 1976, according to a Bureau of Labor Statistics national survey. Hourly earnings in the eight regions studied ranged from \$4.15 in the Southeast to \$5.62 in the Pacific. Workers in the two largest regions of industry employment—the Great Lakes and Middle Atlantic—earned an average of \$4.75 an hour.

Two-thirds of the industry's work force were in the occupations surveyed. These occupations were predominantly staffed by men; women were usually employed in less skilled jobs. The men's wages (\$4.73 an hour) averaged 18 percent more than the women's. Average hourly earnings ranged from a low of \$4.05 for hand strippers to a high of \$5.78 for maintenance electricians.

The survey covered nearly 62,000 workers in plants manufacturing corrugated and solid fiber boxes from stock consisting of two or more plies of paperboard. The industry's products include corrugated and solid fiberboard boxes, pads, partitions, display items, pallets, single-face products, and corrugated sheets.

Individual reports for eight metropolitan areas of industry concentration—Chicago, Jersey City, Los Angeles–Long Beach, Milwaukee, Newark, New York, Philadelphia, and St. Louis—are available from the Bureau or any of its regional offices. A comprehensive report on the survey is being prepared. □

## Wages and benefits in the cigarette industry

Straight-time earnings of production and related workers in the cigarette manufacturing industry averaged \$5.71 an hour in May 1976. The earnings level had risen 55 percent since 1971, when the Bureau of Labor Statistics conducted a similar survey of wages and benefits in this industry. During the same 5-year period, a 42-percent increase was recorded for all nondurable manufacturing.

Hourly averages of the occupations surveyed separately ranged from nearly \$5 for janitors to at least \$7 for machine adjusters, maintenance carpenters, electricians, and machinists. The largest occupational group, cigarette-making machine operators, averaged \$5.93 an hour. This was 4 percent more than cigarette machine packers, 10 percent more than catchers who inspect and stack, and 20 percent more than catchers who only inspect.

The survey covered approximately 33,000 workers in cigarette plants primarily located in North Carolina, Virginia, and Kentucky. These workers received paid vacations after qualifying periods of service, as well as 9 to 11 paid holidays annually. Most workers were covered by pension and health insurance plans which were usually entirely financed by the employer.

A comprehensive report on the survey is available from the Bureau or any of its regional offices. □

## Nuclear energy employment measured in 1975 survey

The nuclear energy labor force has continued to expand, totaling 197,500 persons in 1975. More than 45 percent of these workers were employed in Government-owned, contractor-operated establishments. The remaining 55 percent of the labor force held jobs in privately owned facilities, which outnumber their publicly financed counterparts by more than 16 to 1.

At the time of the 1975 survey, almost half of the nuclear energy labor force was made up of engineers, scientists, and technicians. Comparisons of occupational employment data with previous years, however, are difficult because of fluctuations in the number of establishments surveyed.

The 1975 survey was conducted by the Bureau of Labor Statistics for the Energy Research and Devel-

opment Administration. As in earlier surveys, the universe included only those establishments that the energy agency believed to be engaged in nuclear energy activities.

Additional findings from the survey are presented in a report entitled *Employment in Nuclear Energy Activities, 1975* (ERDA 76-111), which is available from the Energy Research and Development Administration. □

## State and local governments found to underemploy women and minorities

Women and members of minority groups continue to be underpaid and underemployed in State and local government, according to a June 1974 Equal Employment Opportunity Commission survey. Some improvements have been made since the 1973 survey, but government jurisdictions did not take full advantage of opportunities to hire and promote minorities and women—they were still underrepresented in well-paying jobs and inequalities in occupational distributions and in median annual salaries still persisted. Even when employed in identical job categories, minority members generally earned less than their white counterparts.

From June 1973 to June 1974, employment increased by about 9 percent for minorities and 7 percent for women, compared with 4 percent each for whites and men. The median annual salary increased 8 percent for minorities and 6 percent for whites. However, these gains for minorities and women are marginal, because their progress was made from a lower base than that for whites.

Minorities were concentrated in low-paying occupations. One-fifth of the minorities (compared with one-third of the whites) were employed in well-paying jobs as officials, administrators, or professional and technical workers. On the other hand, one-third of the minorities, but only one-seventh of the whites, held low-paying service and maintenance jobs. Comparisons of minority group participation in State and local government with their participation in the civilian labor force reveals that Spanish surnamed Americans and American Indians were equally represented, blacks more heavily represented in government, and Asian Americans, underrepresented.

In June 1974, 6 of 10 women in State and local government were employed in low-paying paraprofessional or office and clerical jobs (compared with 1 of 10 men) and received annual salaries \$1,100

to \$1,200 lower than those of men in similar occupations. In fact, in every job category, women were paid less than men—overall their median annual salary was \$2,700 less per year than for men.

The EEO-4 survey, *Minorities and Women in State and Local Government-1974*, is published in 6 volumes. Volume I presents data for the United States; volumes II through VI cover five levels of government—State, county, municipal, township, and special district. Copies are available from the Equal Employment Opportunity Commission, 2401 E Street, N.W., Washington, D.C. 20506. □

## More than half of women who work part time have pre-school children

The Employment and Training Administration (ETA) of the U.S. Department of Labor has published a compendium of data on women and work. The volume primarily reviews what has been learned about women workers from research projects sponsored by ETA.

Several chapters in the volume report on peripheral workers—that is, those who work part time (a short workweek) or intermittently (less than a full year). Six of 10 women who work are in this category.

About one-fifth of adult women working in 1973 were employed part time (as distinguished from those who work longer weekly hours but are employed intermittently throughout the year). Increases in part-time work can be attributed mainly to the rapid increase in young married mothers who work, and the reentry of many older women into the labor force. Working mothers are more likely to be part-time workers than other working women (1 of 3). More than half of all part-time women workers had preschool children.

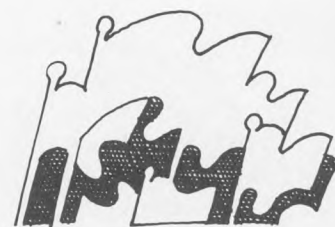
Many part-time workers earn lower wages than those doing similar full time work, and most do not receive paid holidays or vacation benefits, or life and health insurance coverage. Employers use part-time help largely to meet peak loads or expand hours of customer service.

The volume lists efforts that have been made to upgrade the labor market status of women and explores some directions that future policies might follow.

*Women and Work*, (Research and Development Monologue 46) is available from the Employment and Training Administration, U.S. Department of Labor, Washington, D.C. 20213. □



# Foreign Labor Developments



## Cost-of-living indexes for Americans living abroad

The U.S. Department of State has calculated new indexes of living costs for Americans residing in Canberra, Mexico City, and Manila. The Manila index is 6 percent higher than the index calculated in 1975.

The indexes for Mexico City and Canberra are 20 and 6 percent lower than indexes calculated 19 and 5 months earlier. These and indexes for 17 other selected cities are shown in table 1.

In Canberra, Mexico City, and Manila, living costs for Americans, unadjusted for exchange rate changes, rose more than in Washington, D.C. For Mexico City and Canberra, however, devaluations of the peso and the Australian dollar more than offset the living-cost increases. Living costs for Americans rose 40 percent more in Mexico City than in Washington, D.C., over the 19 months, but the peso devaluation increased the value of the U.S. dollar by 76 percent. While living costs for Americans in Canberra rose about 7 percent more than costs in Washington, the Australian devaluation increased the value of the U.S. dollar by 13 percent. For Manila, a 6-percent appreciation in the value of the dollar relative to the Philippine peso, over the 2 years, only partially offset a 12-percent greater rise in living costs.

Because international currency exchange rates are subject to sudden shifts, it is advisable to check the prevailing rates whenever using the indexes of living costs abroad. A complete list of indexes for all reporting cities and an explanation of the methods of their construction and use, along with Department of State quarters allowances, are available upon request from the Office of Publications, Bureau of Labor Statistics. □

**Table 1. Indexes of living costs abroad, excluding housing and education, May 1977**

[Washington, D.C. = 100]

Country and city	Survey date	Monetary unit	Rate of exchange per US\$1	Local index
Argentina: Buenos Aires .....	May 1976	Peso	245	69
Australia: Canberra .....	Nov. 1976	Dollar	0.9174	112
Belgium: Brussels .....	Aug. 1976	Franc	38.0	147
Brazil: Sao Paulo .....	July 1976	Cruzeiro	10.9	111
Canada: Ottawa .....	Sept. 1976	Dollar	0.97	111
France: Paris .....	May 1976	Franc	4.90	139
Germany: Frankfurt .....	Feb. 1976	Mark	2.50	148
Hong Kong: Hong Kong .....	Dec. 1975	Dollar	5.04	116
India: New Delhi .....	Aug. 1976	Rupee	8.90	94
Italy: Rome .....	Apr. 1975	Lira	630	123
Japan: Tokyo .....	Feb. 1976	Yen	300	154
Mexico: Mexico, D.F. ....	Feb. 1977	Peso	22.0	78
Netherlands: The Hague .....	Feb. 1976	Guilder	2.70	126
Philippines: Manila .....	Dec. 1976	Peso	7.40	88
South Africa: Johannesburg .....	Feb. 1975	Rand	0.6711	105
Spain: Madrid .....	July 1976	Peseta	68.0	106
Sweden: Stockholm .....	June 1976	Krona	4.38	164
Switzerland: Geneva .....	Mar. 1976	Franc	2.50	162
United Kingdom: London .....	May 1976	Pound	0.5714	95
Venezuela: Caracas .....	Aug. 1976	Bolivar	4.28	136

SOURCE: U.S. Department of State, Allowances Staff.

# Significant Decisions In Labor Cases



## Saturday services

In 1972, Congress amended Title VII of the 1964 Civil Rights Act to define “religion” in the context of employment discrimination. The amendment unequivocally affirmed an Equal Employment Opportunity Commission guideline that employers must “reasonably accommodate” the religious needs of their employees—as long as no “undue hardship” is imposed upon the employer. However, neither Congress nor the EEOC provided any specific examples as to how far an employer must go to satisfy his obligation.

The Supreme Court recently reduced this definitional void by ruling that an employer is not required to arrange Saturdays off for an employee so that he may observe his Sabbath, if in doing so the employer would incur more than minimal costs—such as overtime pay for a replacement. The Court also ruled that, if employees’ work schedules are determined on the basis of seniority, an employer is not required to violate the seniority privileges of others so that an employee can observe a Saturday Sabbath. (*Trans World Airlines, Inc. v. Hardison*.<sup>1</sup>)

Larry Hardison, hired in 1967 as a clerk by Trans World Airlines, became active in the Worldwide Church of God in 1968. The religion observes a Saturday Sabbath whereby believers must refrain from any work between sunset Friday and sunset Saturday. Because he had accumulated some seniority (the basis for determining shift assignments), Hardison was able to arrange his work schedule so that he could observe his Sabbath. However, when he requested and received a transfer to another building, his seniority status at the new job was insufficient to enable him to take Saturdays off on a regular basis.

TWA gave his union permission to change Hardison’s work assignments, but the union refused to do so because of the seniority provisions in its contract. In addition, the company would not allow Hardison to work a 4-day week; because it was crucial, the company said, his position would

have had to be filled either by an employee from another area, which would have impaired the efficiency of that operation, or by someone not scheduled to work Saturdays, requiring the company to pay overtime.

Hardison, the company, and the union could reach no alternative solution. When he refused to report to work on Saturdays, Hardison was given a hearing and discharged for insubordination. He then filed suit in Federal court against both the company and the union, claiming that their actions violated Title VII’s religious discrimination provisions. The District Court rejected his claim, holding that TWA had “satisfied its ‘reasonable accommodation’ obligations.” Additionally, the trial court ruled that the union was not required to disregard its seniority system.

The Eighth Circuit Court of Appeals reversed the favorable judgment for TWA, ruling that the company had not fulfilled its “accommodation” requirement. The court held that none of the possible solutions available to the company, involving overtime pay, loss of efficiency, or a breach of the seniority system provisions of the contract, imposed an “undue hardship” on TWA. However, because Hardison apparently failed to contest it, the court affirmed the judgment in favor of the union without ruling on its “substantive merits.”

In reversing the Appeals Court, the Supreme Court ruled that TWA had met its obligation under Title VII. Thus, the Court avoided the question of whether the “reasonable accommodation” provision of the statute might be “an establishment of religion” contrary to the First Amendment to the Constitution.

The Court’s decision reflected a concern that the rights of many should not be sacrificed for the rights of a few. The majority opinion, written by Justice Byron White, states:

It is essential to TWA’s business to require Saturday and Sunday work from at least a few employees even though most employees preferred those days off. Allocating the burdens of weekend work was a matter for collective bargaining. In considering criteria to govern this allocation, TWA and the union had two alternatives: adopt a neutral system, such as seniority, a lot-

<sup>1</sup>“Significant Decisions in Labor Cases” was written this month by Gregory J. Mounts, of the *Monthly Labor Review* staff.



tery, or rotating shifts; or allocate days off in accordance with the religious needs of its employees. TWA would have had to adopt the latter in order to assure Hardison and others like him of getting the days off necessary for strict observance of their religion, but it would have done so only at the expense of others who had strong, but perhaps nonreligious reasons for not working on weekends. There were no volunteers to relieve Hardison on Saturdays, and to give Hardison Saturdays off, TWA would have had to deprive another employee of his shift preference at least in part because he did not adhere to a religion that observed the Saturday Sabbath.

. . . . It would be anomalous to conclude that by "reasonable accommodation" Congress meant that an employer must deny the shift and job preference of some employees, as well as deprive them of their contractual rights, in order to accommodate or prefer the religious needs of others, and we conclude that Title VII does not require an employer to go that far.

White concluded that the same rationale applies to any additional costs an employer might have to pay in order to grant employees time off for religious observance. He reasoned: ". . . to require TWA to bear additional costs when no such costs are incurred to give other employees the days off that they want would involve unequal treatment of employees on the basis of their religion."

In dissent, Justices Thurgood Marshall and William Brennan, Jr., state that, in terms of social policy, the Court's decision is "deeply troubling." In Marshall's words, ". . . a society that truly values religious pluralism cannot compel adherents of minority religions to make the cruel choice of surrendering their religion or their job." He also felt that the majority had exceeded its judicial authority, "for the Court adopts the very position that Congress expressly rejected in 1972, as if we were free to disregard congressional choices that a majority of this Court thinks unwise . . . [D]espite Congress' best efforts, one of this Nation's pillars of strength—our hospitality to religious diversity—has been seriously eroded. All Americans will be a little poorer until today's decision is erased."

### Layoff aid denied

A State can withhold jobless benefits from workers laid off as a result of a strike against their employer, the Supreme Court recently ruled, even when they are not involved in the strike because it occurs at another location. In an 8 to 0 decision, the Court determined that the "labor dispute disqualification" in Ohio's unemployment compensation statute does not conflict with Federal law, nor does it violate the due process and equal protection guarantees of the Fourteenth Amendment

to the Constitution. (*Ohio Bureau of Employment Services v. Hodory*.<sup>2</sup>)

In 1974, Leonard Hodory was employed as a millwright apprentice with United States Steel Corp. in Youngstown, Ohio. The manufacturing facilities operated with fuel produced by company-owned coal mines located throughout the country. As a result of a United Mine Workers' strike, however, fuel supplies dwindled, and the Youngstown plant was eventually forced to close.

After being laid off, Hodory filed for unemployment compensation, but his claim was denied because, at the time, State law disqualified persons who were unemployed "due to a labor dispute other than a lockout at any factory . . . owned or operated by the employer . . ." Hodory then filed a class action suit in Federal court, claiming that the statute violated the Federal laws that established—and continue to influence—the State-run unemployment compensation programs. Although the trial court did not resolve this statutory issue, it upheld Hodory's additional contention that the Ohio law violated his constitutional rights. The three-judge court reasoned that the State had no rational or legitimate interest in discriminating against "individuals who were unemployed through no fault of their own and neither participated in nor benefited from the labor dispute involving another union and their employer."<sup>3</sup>

In considering the case, the Supreme Court reviewed the issue of Federal pre-emption, which the trial court had left unresolved. The Court discounted Hodory's assertion that, in designing the scheme of unemployment compensation, the congressional intent was to award benefits to all "involuntarily unemployed" persons. The justices could find only one reference in the "voluminous legislative history of the Social Security Act"<sup>4</sup> that, "on its face," could possibly support his claim. However, they found that, when viewed in context, the single sentence "is only an expression of caution that funds should not be dispensed too freely, and is not a direction that funds must be dispensed."

After surveying the remaining Federal legislative history of unemployment compensation, Justice Harry Blackmun, writing for the Court, said:

" . . . when Congress wished to impose or forbid a condition for compensation, it was able to do so in explicit terms. . . . The fact that Congress has chosen not to legislate on the subject of labor dispute disqualifications confirms our belief that neither the Social Security Act nor the Federal Unemployment Tax Act intended to restrict the States' freedom to legislate in this area."

In reversing the lower court on the constitutional question, the High Court focused on whether the

statute had a "rational relation to a legitimate State interest." In previous cases questioning legislative actions, the Court has acknowledged that the legislative task of creating distinctions is one where "[p]erfection . . . is neither possible nor necessary."<sup>5</sup>

Blackmun reasoned that, in legislating its unemployment compensation program, the State was compelled to consider the effects not only for the benefit recipients but for the contributors to the fund and for the fiscal integrity of the fund itself. Therefore, he found:

Looking only at the face of the statute, an acceptable rationale immediately appears. The disqualification is triggered by "a labor dispute other than a lockout." In other words, if a union goes on strike the employer's contributions are not increased, but if the employer locks out, all his employees thus put out of work are compensated and the employer's contributions accordingly are increased. Although one might say that this system provides only "rough justice," its treatment of the employer is far from irrational.

The Court also affirmed the State's contention that, by limiting the number of recipients, the statute served a legitimate interest in protecting the fiscal integrity of the fund.

Although the lower court's decision in favor of *Hodory* was reversed, there was some consolation for him—and the class he represented. Acting before the trial court had delivered its verdict, the Ohio Legislature amended the contested statute to permit benefits for a person unemployed as a result of a strike at another location "if it is shown that he is not financing, participating in, or directly interested in such labor dispute."

### Jobless fathers defined by State

Benefit eligibility was also the subject of another case recently decided by the Supreme Court. This time, the issue concerned welfare benefits for families of unemployed fathers, and, as it did in *Hodory*, the Court affirmed the authority of States to deny payments if the father is unemployed as a result of a strike. The close (5 to 4) decision upheld a Federal regulation that allows individual States to determine when a father is "unemployed" for purposes of receiving benefits. (*Batterton v. Francis*<sup>6</sup>)

When the Aid to Families with Dependent Children—Unemployed Fathers program was established by Congress in 1961, States were given the authority to establish their own criteria for "unemployment." However, to eliminate variations in coverage, Congress amended the statute in 1968 so that the definition of "unemployment" would be "(as determined in accordance with the standards pre-

scribed by the Secretary [of Health, Education, and Welfare])."

The HEW regulation that suddenly became the basis for a "uniform national standard" provided only an "hours-worked" criterion for unemployment. Thus, because Maryland continued to deny AFDC-UF benefits using more extensive criteria (unemployment due to a labor dispute other than a lockout, dismissal for misconduct, or voluntarily quitting a job), two jobless fathers who were denied benefits brought suit in the U.S. District Court. The Court's holding, summarily affirmed by the Supreme Court, was that the State law violated the national standards established by the Federal regulation. (*Francis v. Davidson*.)<sup>7</sup>

To "nullify the effect" of the judicial decision, HEW amended its regulation to give the States the option of denying benefits to families when the father's unemployment "results from participation in a labor dispute or . . . by reason of conduct or circumstances which would result in disqualification for unemployment compensation under the State's law."<sup>8</sup>

In *Davidson*, the District Court had enjoined Maryland from enforcing its own criteria for "unemployment," but, based on the amended HEW regulation, the State petitioned the court to lift the injunction. The court ruled that there was no longer a conflict between the Federal and State regulations, but it continued the injunction on the grounds that the amended Federal regulation conflicted with the congressional statute "because it delegated the question of coverage to the States without providing a uniform national standard." The State appealed, but the Fourth Circuit upheld the lower court's decision.

In the Supreme Court's decision, the central question was whether the Secretary of HEW had properly carried out the statutory responsibility delegated to him by Congress. Writing for the majority, Justice Harry Blackmun reasoned that, because the Federal regulation in this case has a "legislative effect, . . . [i]t can be set aside only if the Secretary exceeded his authority or if the regulation is 'arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with law'." He found, however, that the regulation "does not even approach the limits of delegated authority."

Blackmun acknowledged that the congressional intent of the 1968 amendment was "to retract some of the authority previously delegated to the States," but he reasoned that this did not require the Secretary "to adopt a regulation that precludes any recognition of local policies." The majority declared that ". . . we have no quarrel with the statement in the legislative history that the Secretary is *authorized* to



adopt such a uniform [national] definition; we simply hold that he is not *required* to do so.”

In dissent, Justice Byron White, joined by Justices William Brennan, Jr., Thurgood Marshall, and John Stevens, claimed that “literally *all* of the relevant legislative history repeatedly and unequivocally affirms the strong congressional objective of creating a Federal definition of unemployment.” White agreed with the majority that the Court should “defer to any reasonable definition given by the Secretary to the term ‘unemployment.’” However, he asserted, the effect of the present regulation is to circumvent the congressional intent by returning to the States the authority to define “unemployment.”

### In brief . . .

WHEN IN DEBT, IT HELPS TO BE A ‘PERSON.’ Found to have violated its contract by engaging in an unauthorized strike, Teamsters Local 600 in St. Louis, Mo., was faced with \$6 million in damages. The union, seeking relief, successfully filed a petition for bankruptcy.

The employers, a group of more than 60 trucking companies, contested the bankruptcy court’s ruling to no avail. However, the truckers took their case to District Court, and, there, the judge held that only a “person” is entitled to the benefits of voluntary bankruptcy. The definition of a “person” includes “corporations,” but, the court said, “[u]nlike a corporation, a labor union does not pool capital for the purposes of investment and profit. Its assets are mainly its members who can collectively obtain bargaining leverage in labor-management negotiations. Its other financial functions are ancillary to this pur-

pose.” (*Highway and City Freight Drivers, Dockmen, and Helpers.*<sup>9</sup>)

In overruling the bankruptcy court, the Federal judge found that the legislative history of the Bankruptcy Act—amended in 1926 to provide the current definition of a corporation—indicates that Congress was “well aware” of labor union activity at the time. Thus, he ruled that, because unions are not specifically covered by the Act, the law should not be construed to include them.

NLRB EXTENDS SOVEREIGNTY. When they occur within the United States, commercial activities of foreign governments or their agents will now be subject to the full jurisdiction of the National Labor Relations Board.<sup>10</sup> Although the Board had consistently declined to assert its jurisdiction over such employers since 1967, the members unanimously agreed that the Chicago branch of the State Bank of India has a sufficient impact on interstate commerce and “meets the Board’s present jurisdictional standards for the assertion of jurisdiction thereover.”

The Board said that its decision is “reinforced” by the Foreign Sovereign Immunities Act of 1976. The Act stipulates that, in regards to commercial activity, foreign states will be treated in the same manner by the courts as any private individual within the territorial limits of the United States. Thus, the Board stated, “. . . we find that it will effectuate the purposes of the Act to assert jurisdiction herein.”

The union involved in the case sought to represent the employees in the Chicago branch of the bank. The Board’s decision, reversing the order of the regional director, provides for a secret-ballot election and requires all eligible employees to vote. □

### FOOTNOTES

<sup>1</sup> *Trans World Airlines, Inc. v. Hardison*, 45 U.S.L.W. 4672 (U.S. June 16, 1977).

<sup>2</sup> *Ohio Bureau of Employment Services v. Hodory*, 45 U.S.L.W. 4544 (U.S. May 31, 1977).

<sup>3</sup> *Hodory*, 408 F. Supp. at 1022 (ND Ohio).

<sup>4</sup> Report of the Committee on Economic Security, as reprinted in Hearings on S. 1130 before the Committee on Finance of the United States Senate, 74th Cong., 1st Sess., pp. 1311-1328 (1935).

<sup>5</sup> From the opinion of the Court in *Dandridge v. Williams*, 397 U.S. at 485

<sup>6</sup> *Batterton v. Francis*, 45 U.S.L.W. 4768 (U.S. June 20, 1977)

<sup>7</sup> *Francis v. Davidson*, 340 F. Supp. 351 (Md.), affirmed 409 U.S. 904 (1972)

<sup>8</sup> 38 Fed. Reg. 49 (1973).

<sup>9</sup> *In the matter of Highway and City Freight Drivers, Dockmen, and Helpers, Local No. 600*, 127 DAILY LAB. REP. A-9 (E.D. Mo., In Bankruptcy No. 77-131 C(3), June 20, 1977).

<sup>10</sup> *State Bank of India and Chicago Joint Board, Amalgamated Clothing and Textile Workers Union, AFL-CIO*, 229 NLRB No. 137, May 26, 1977.

# Major Agreements Expiring Next Month



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

Employer and location	Industry	Union'	Number of workers
American Can Co. (Interstate)	Fabricated metal products	Steelworkers	12,000
American Can Co. (Naheola, Ala.)	Paper	Paperworkers	1,850
American Chain and Cable Co., Inc. (Connecticut and Pennsylvania)	Fabricated metal products	Steelworkers	1,150
American Steel Foundries (Interstate)	Primary metals	Steelworkers	3,500
Bemis Co., Inc. (Talladega, Ala.)	Textiles	Textile Workers (UTWA)	1,000
Bendix Corp., Electrical Components Division (Sidney, N.Y.)	Electrical products	Machinists	2,050
Boeing Co., Boeing Vertol Co. Division (Delaware and Pennsylvania)	Transportation equipment	Auto Workers (Ind.)	3,000
Boeing Co. (Interstate)	Transportation equipment	Machinists	26,700
Bristol Manufacturing Corp. (Bristol, R.I.)	Rubber	Rubber Workers	1,150
Commercial Shearing and Stamping Co. (Interstate)	Fabricated metal products	Steelworkers	1,250
Continental Group, Inc. (Interstate)	Fabricated metal products	Steelworkers	10,550
Crown Cork and Seal Co., Inc. (Interstate)	Fabricated metal products	Steelworkers	1,300
Cyclops Corp., Empire-Detroit Steel Division (Mansfield, Ohio)	Primary metals	Steelworkers	1,300
Dana Corp., Parish Frame Division (Reading, Pa.)	Transportation equipment	Steelworkers	2,000
Dayton Malleable, Inc. (Columbus and Dayton, Ohio)	Primary metals	Steelworkers	1,700
Dye and Machine Print Cos. (Interstate) <sup>2</sup>	Textiles	Clothing and Textile Workers	5,000
Emerson Electric Co., E. L. Wiegand Division (Pittsburgh, Pa.)	Electrical products	Auto Workers (Ind.)	1,000
First National Stores, Inc. (New York and New Jersey)	Retail trade	Meat Cutters	1,700
Foster Grant, Inc. (New Hampshire and Massachusetts)	Rubber	Retail, Wholesale and Department Store	1,100
General Foods Corp. (Battle Creek, Mich.)	Food products	Retail, Wholesale and Department Store	1,600
Great Atlantic and Pacific Tea Co., Inc., Louisville Unit (Interstate)	Retail trade	Meat Cutters	1,950
Great Atlantic and Pacific Tea Co., Inc., Altoona Division (Interstate)	Retail trade	Meat Cutters	1,100
Greyhound Lines, Inc. (Interstate)	Transit	Amalgamated Transit Union	15,000
Gulf States Paper Corp. (Tuscaloosa, Ala.)	Paper	Paperworkers	1,300
Hawaiian Electric Co., Inc. (Honolulu, Hawaii)	Utilities	Electrical Workers (IBEW)	1,100
Ingersoll-Rand Corp. (New Jersey and Pennsylvania)	Machinery	Steelworkers	2,200
Koppers Co., Inc., Metal Products Division (Maryland)	Machinery	Machinists	1,600
Kroger Co., Pittsburgh Stores (Interstate)	Retail trade	Meat Cutters	2,500
Libbey-Owens-Ford Co. (Interstate)	Stone, clay, and glass products	Glass and Ceramic Workers	6,000
Lincoln Telephone and Telegraph Co. (Nebraska)	Communications	Communications Workers	1,500
Lockheed Aircraft Corp., 3 agreements (Interstate)	Transportation equipment	Machinists	26,850
McCall Printing Co. (Dayton, Ohio)	Printing and publishing	Graphic Arts	1,500
McDonnell Douglas Corp., Douglas Aircraft Co. (Long Beach, Calif.)	Transportation equipment	Auto Workers (Ind.)	8,500
McDonnell Douglas Corp., McDonnell Douglas Astronautics Co.-West (California)	Transportation equipment	Machinists	5,850
McLouth Steel Corp. (Detroit, Mich.)	Primary metals	Steelworkers	4,000
Mesta Machine Co. (West Homestead, Pa.)	Machinery	Steelworkers	1,200

See footnotes at end of table.



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Continued—Major agreements expiring next month

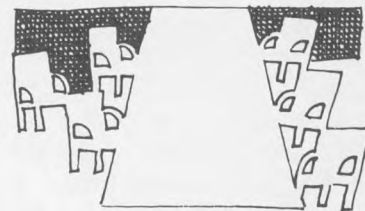
Employer and location	Industry	Union <sup>1</sup>	Number of workers
National Can Corp. (Interstate)	Fabricated metal products	Steelworkers	3,750
National-Standard Co. (Interstate)	Primary metals	Steelworkers	1,150
Northwest Industries, Inc., Lone Star Steel subsidiary (Lone Star, Tex.)	Primary metals	Steelworkers	3,000
Ohio Ferro-Alloys Corp. (Ohio)	Primary metals	Steelworkers	1,200
Olin Corp. (Pisgah Forest, N.C.)	Paper	Paperworkers	1,650
Outboard Marine Corp., Johnson Outboards Division (Waukegon, Ill.)	Machinery	Independent Marine and Machinists Association (Ind.)	3,200
Owens-Illinois, Inc., Consumer and Technical Products Division (Vineland, N.J.)	Stone, clay, and glass products	Flint Glass Workers	1,200
Owens-Illinois, Inc., Libbey Products (Toledo, Ohio)	Stone, clay, and glass products	Flint Glass Workers	1,300
Pan American World Airways, Inc., 2 agreements (Interstate) <sup>3</sup>	Air transportation	Transport Workers	10,600
Pullman, Inc., Pullman-Standard Division (Interstate)	Transportation equipment	Steelworkers	6,000
Revere Copper and Brass, Inc. (Rome, N.Y.)	Primary metals	Mechanics	1,000
Rockwell International Corp. (California)	Transportation equipment	Auto Workers (Ind.)	11,500
Seatrains Lines, Inc., Seatrain Shipbuilding Corp. subsidiary (Brooklyn, N.Y.)	Transportation equipment	Seafarers	2,000
Southwest Forest Industries, Riegel Products subsidiary (Hunterdon County, N.J.)	Paper	Paperworkers	1,000
Titanium Metals Corp. of America, Standard Steel Division (Burnham, Pa.)	Primary metals	Steelworkers	1,650
TRW, Inc., Marlin-Rockwell Division (New York and Connecticut)	Machinery	Auto Workers (Ind.)	1,200
Union Carbide Corp., Chemicals and Plastics Operations Division (South Charleston, W.Va.)	Chemicals	Machinists	1,200
United Airlines, Inc., Flight Attendants (Interstate) <sup>3</sup>	Air transportation	Air Line Pilots	7,300
Vought Corp., Vought Systems Division (Dallas, Tex.)	Ordnance	Auto Workers (Ind.)	5,150
White Consolidated Industries, Franklin Manufacturing Co. (St. Cloud, Minn.)	Electrical products	Machinists	1,600
Youngstown Steel Door Co. (Youngstown, Ohio)	Transportation equipment	Steelworkers	1,250
	<b>Government activity</b>	<b>Employee organization<sup>1</sup></b>	
Tennessee: Memphis City Schools, Custodial-Maintenance, and Cafeteria employees	Education	State, County and Municipal Employees	1,900
Washington: Seattle Metropolitan Transit Division	Transit	Amalgamated Transit Union	1,500

<sup>1</sup>Affiliated with AFL-CIO except where noted as independent (Ind.).

<sup>2</sup>Industry area (group of companies signing same contract).

<sup>3</sup>Information is from newspaper reports.

# Developments in Industrial Relations



## **Kennecott settlements end walkouts**

The Kennecott Copper Corp. and a coalition of 26 unions (led by the Steelworkers) reached a 3-year settlement shortly after walkouts began on June 30 at seven major copper producers. The agreement provided total raises of 85 cents hourly for 10,000 workers over the life of the contract. Shortly afterwards, a similar settlement was reached at Magma Copper Co. for 4,500 workers. Magma's settlement also resolved local issues and its workers immediately ended the walkout. Similar settlements were reached in late July at Cities Service, Inc., and Anaconda Co.

The Kennecott settlement provided general wage increases of 21 cents an hour on July 1, 1977, 1978, and 1979. In addition, workers will receive job increment increases between job classes of 0.43 cents per hour on each of those dates. The job classification system, to be revised in the second year, will result in an average 10 cents additional increase. The escalator clause, which provides quarterly cost-of-living adjustments of 1 cent for each 0.3 point change in the Consumer Price Index was continued, and 38 cents of the prior cost-of-living adjustments was incorporated into base rates. Basic pension benefits were raised to \$13 a month for each of the first 15 years of service, \$14.50 for each of the next 15 years, and \$16 for each year in excess of 30.

Sickness and accident weekly benefits were increased by \$10 in July 1977 and July 1978, and by \$15 in July 1979. Kennecott's contribution to the Supplemental Unemployment Benefit fund was increased by 2 cents, raising the total to 5 cents hourly.

The Kennecott agreement did not end strikes against the company as walkouts continued over local issues in five States. By July 20, all 9,000 workers had returned as agreement was reached over the number of absentee days allowed at Kennecott's Arizona plant. (Local issues had already been resolved in Utah, Nevada, New Mexico, and Maryland.) In early August, workers were still on strike against

Phelps Dodge Corp., Asarco, Inc., Inspiration Consolidated Copper Co., and U.S. Metals Refining Co.

## **Apparel accord provides wage increase of \$1.10**

The Amalgamated Clothing and Textile Workers Union and the Clothing Manufacturers Association of the USA negotiated a 40-month contract for more than 80,000 workers in the men's and boys' tailored clothing industry. The June settlement, which involves about 700 companies throughout the country, provides for wage increases of 30 cents an hour on June 1, 1977, January 30, 1978, and October 2, 1978, and 20 cents on October 1, 1979. The revised cost-of-living formula provides for an adjustment up to 15 cents on October 2, 1978, calculated at 5 cents an hour for each percentage-point increase in the Consumer Price Index in excess of 7.5 percent between April 1977 and April 1978, and for an adjustment up to 10 cents on October 1, 1979, calculated at 5.3 cents for each percentage-point increase in the Index in excess of 6 percent between April 1978 and April 1979.

Employers will contribute an additional 2 percentage points of gross payroll to the pension fund to finance a three-step increase in the benefit rate, to \$5.75 a month for each year of credited service, from \$5, and to end a \$200-a-month limit on pensions. This means that employers will pay a total of 6.9 percent of gross payroll to the pension fund. The agreement also provides for improved health insurance benefits, two additional holidays (bringing the total to 10), a reduction to 1,000 hours (from 1,200) in the work requirement to qualify for pay for the second and third weeks of vacation, guaranteed 5 hours' pay (instead of 4) for reporting to work, and a broadened definition of "immediate family" for bereavement pay purposes.

## **Airline mechanics' wages tied to company profits**

Eastern Airlines' 11,300 mechanics have agreed to a plan tying a portion of their wages to the company's profits. The plan is similar to the earlier agreements between the airline and its pilots

"Developments in Industrial Relations" is prepared by Leon Bornstein and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and is largely based on information from secondary sources.



and flight attendants (*Monthly Labor Review*, June 1977, p. 65). Nonunion employees agreed to the plan in October 1976. Under the agreement, 3.5 percent of an employees monthly wages are withheld until yearend when the money will be repaid if Eastern's annual profits amount to 2 percent of sales. If profits exceed 2 percent, employees could receive an additional amount ranging up to another 3.5 percent of earnings. If profits are less than 2 percent, some or all of the money could be used to boost the profit level. Pay deductions began July 4 for the plan which is scheduled to remain in effect for 5 years.

### **Chrysler, UAW announce legal service plan**

The United Auto Workers' union and the Chrysler Corp. announced a new legal assistance program under which hourly paid Chrysler workers and retirees in the United States, their dependents, and surviving spouses can obtain personal legal services at no cost to the worker or his family through a group plan. The program will cover most legal services of a personal nature, including traffic violations, social security claims, divorces, wills, bankruptcies, property damage claims, and other personal services. Once approval is obtained from the Internal Revenue Service, pilot plans will start at Chrysler locals in selected areas. The UAW Legal Services Plan is expected to eventually cover about 150,000 UAW-Chrysler families in the United States (including retirees) and would be the largest such group legal services plan in the Nation.

The program will be financed by using a portion of the assets of the UAW-Chrysler SUB Reserve Fund. (During the 1974-75 recession, money from the reserve fund was used to pay for insurance protection for laid-off workers who would have lost that protection when the regular Chrysler SUB Fund became exhausted). The SUB plan was restructured in 1976, and Chrysler "has been trying to transfer this Reserve Fund into the regular SUB Fund, in order to reduce its contribution," according to the union. Vice President Marc Stepp (UAW director for Chrysler) asserted, "Rather than allow this, the UAW has now achieved this precedent-setting benefit through the use of assets from this fund."

The 1976 tax reform law encourages the formation of group legal plans by making money negotiated to finance such plans and benefits received from such plans tax exempt. (Although the plan would initially be financed by the SUB Reserve Fund, this tax exemption would apply to any future company or employee contributions if the Fund eventually becomes depleted.)

### **Gimbels' workers win 3-year contract**

United Storeworkers Local 2 in New York negotiated a 3-year contract with Gimbels Bros., Inc. The agreement covers 6,000 employees at Gimbels' midtown Manhattan store and branches in Westchester, Long Island, New Jersey, and Connecticut. Wages were raised by \$8 weekly in June 1977 with another \$2 scheduled for December. In the second year, the union won its demand that wage increases match those of Storeworkers' Local 3 in 1978 bargaining with Bloomingdale Bros. In the third year, increases would be contingent on the results of an unrestricted reopener on wages and working conditions, with the union free to strike without cancellation of the contract. Among other provisions, Gimbels increased its contribution to the employee medical plan to 7 percent of the payroll (from 6.75 percent) effective June 10, 1977.

A major obstacle to a peaceful settlement was the union's insistence on a longer than 1-year contract. (Storeworkers questioned whether the company, now British owned, would stay in the area.) In view of Gimbels' insistence on a 1-year agreement, the concerned membership voted to strike if a longer agreement, along with a company statement that it had no intention of suspending operations, was not forthcoming. The deadline for a strike was set for June 7, 1 week after the prior agreement expired. The union members approved the 3-year package on the eve of the strike deadline after receiving a letter of intent to stay in operation from Gimbels. Martin S. Kramer, chairman of Gimbels' board of directors, stated that Brown and Williamson, Gimbels' parent company, had provided "assurance of complete financial support," and the New York division is "planning major improvements in its various stores."

### **Paperworkers settle**

Members of the Paperworkers union ratified a 2-year agreement with the International Paper Co. The contract covered 10,000 paperworkers at plants in Mississippi, Alabama, Florida, Louisiana, Arkansas, and South Carolina. The settlement provided for a 10.5-percent wage increase the first year, and 10 percent the second year. Minimum pension benefits increased from \$7.50 a month for each year's credited service to \$9, and the company agreed to repay contributions made by employees before the plan became noncontributory. The union estimated that about 8,000 workers would receive an average of \$3,000 in three installments.

The contract also improved vacation schedules, shift differentials, meal allowances, and funeral leave provisions. The firm raised its contributions to the hospitalization and surgical plans by \$10 a month to

include coverage for dependents. Additional general wage adjustments ranging from 2 to 18.5 cents an hour were negotiated on a plant-by-plant basis for the 10 participating facilities.

### **Texas telephone workers win pay increases**

The Communications Workers of America and the General Telephone Co. of the Southwest, San Angelo, Tex., negotiated a 3-year contract covering 6,000 employees. The agreement calls for hourly pay increases of 8.06 percent retroactive to May 18, and 2.31 percent in December 1977; 4.85 percent in May and 2.03 percent in December 1978; and 4.88 percent in May and 1.89 percent in December 1979. The contract also increased night shift differentials to 40 cents an hour (from 30 cents), and provided double-time pay for those working over 50 hours a week.

Vacation provisions were improved and, effective in 1978, a 10th paid holiday (floating) will be added. Major medical coverage was raised from \$50,000 to \$75,000, with the company now paying the full premium cost. A dental plan was established, as was optional life insurance for employee's dependents. The annual pension benefit was raised to 1.3 percent (from 1.25) of the average of the employee's highest 5 years of earnings.

### **OSHA streamlines reporting forms**

Secretary of Labor Ray Marshall announced a reduction in the number of forms needed for job injury and illness recordkeeping and reporting requirements. Under the new format, businesses will use a simple check-off procedure rather than code numbers, and will summarize illness and injuries by using a "running total." The change will reduce the number of entries from 80 to 19 for 1.5 million businesses. For the Nation as a whole, this will result in a reduction of more than 91.5 million entries.

Noting President Carter's concern with reducing the burdens of government paperwork, Marshall said, "This Administration is committed to preserving the health and safety of American workers. But we don't believe OSHA has to be a burden on anyone's back."

Dr. Eula Bingham, Assistant Secretary for Occupational Safety and Health, said, "Any effort which streamlines and simplifies compliance serves to increase worker and health safety. The best way for businesses to reduce their paperwork burden is by reducing accidents and illnesses."

In related actions, the Department also disclosed a proposal giving workers access to job illness and injury data at their workplace, and OSHA and the Bureau of Labor Statistics announced that the num-

ber of firms required to participate in the BLS annual survey of occupational injuries and illnesses has been reduced to 332,000. When added to prior adjustments, this reduction represents a 50-percent cut from the 1972 sample size of 650,000. Also, businesses with 10 or fewer workers will be exempt from all recordkeeping requirements unless selected for the BLS annual survey.

### **Bias against handicapped charged**

In the first reported cases of their kind, the U.S. Department of Labor threatened to withhold Federal contracts from two airlines and a Hawaiian construction firm accused of discriminating against handicapped workers. Acting under the Vocational Rehabilitation Act of 1973, which bars job discrimination against qualified handicapped workers, the Labor Department issued citations to United Air Lines, Trans World Airlines, and E. E. Black, Ltd. The companies have 20 days to respond and may request a hearing on the complaints.

The United Air Lines case involved a job repairing ticket and reservation computer terminals in Honolulu. The Labor Department said United denied an applicant the job, asserting high noise levels would aggravate a hearing problem, and moving equipment might injure a previously broken ankle. The Department's investigators found, however, that the job did not involve working in high noise areas, and the employee's ankle had healed completely. In Chicago, a United spokesperson said the carrier "is proud of the record of hiring qualified handicapped employees and doesn't believe it has failed to provide equal employment opportunities for them," and added that United would respond to the specific allegations after reviewing the citation.

TWA was accused of bias against a former pilot in Kansas City who, after recovering from a heart attack, was denied another job with the airline. By refusing to hire him in a different position TWA discriminated against a qualified handicapped worker, according to the Department. TWA responded that it had been unable to find a suitable position for the man, given his medical history and qualifications. However, a spokesperson said TWA was continuing to make an effort and would review the matter.

E. E. Black, a Honolulu-based construction firm, refused to employ a construction worker with a congenital spine deformity. The Labor Department charged the worker had been cleared for heavy labor by previous examinations and had already worked in the construction industry for 3 years. There was no immediate public comment from company officials.



### Boot and Shoe Workers merge with Retail Clerks

Delegates to the 27th Boot and Shoe Workers convention approved a proposal to merge the 30,000-member union with the 700,000-member Retail Clerks International Association (RCIA). The action came after 5 years of talks between Boot and Shoe Workers and United Shoe Workers about a merger. When that effort was not successful, the focus of the talks shifted toward merging the two shoeworker unions into the Retail Clerks union. The Boot and Shoe Workers and the RCIA agreed to merger terms; but negotiations were continuing with the United Shoe Workers. (Meanwhile, the Retail Clerks union was involved in merger discussions with the Meat Cutters and Butcher Workmen and the Retail, Wholesale and Department Store Union.)

President John E. Mara, reelected at the Boot and Shoe Workers' convention, told the delegates that

the "overwhelming benefits" to shoeworkers outweighed the "understandable sadness" of the occasion. He cited greater coordination of industrywide bargaining, increased political strength, stepped-up organizing campaigns, and added strength in negotiations as practical reasons for the merger. He stated, "We need the strength and the assurance of the Retail Clerks to win the thousands of unorganized shoeworkers still outside the pale." Under the terms of the merger agreement, Mara heads the shoe division within the Retail Clerks.

The delegates also heard from Retail Clerks' Secretary-Treasurer William Wynn and Vice President Jay Foreman on items of transition and administration involved in completing the merger, effective September 1. The Retail Clerks had approved the merger by a unanimous vote of the union's executive board following the Boot and Shoe Workers' convention. □

### The status of collective bargaining

The increasing acceptance of collective bargaining is a result not only of its spread beyond the union movement but also its extension by presidential executive order and State legislation to Federal, State, and municipal workers. These official moves by Federal and State Governments brought whole new areas of employers and employees under the umbrella of collective bargaining agreements, and in so doing, widened the coverage and acceptability of collective bargaining. Of equal import, for the first time, the government extended organizing and bargaining rights to its own employees. This it had failed or refused to do when extending the same rights to employees in the private sector more than 25 years earlier. Both Federal and State Governments now placed themselves squarely behind the process of collective bargaining; such a commitment to public employees could not help but raise the practice to a more prestigious status. Indeed, in very quick order, the Federal and State Governments effected more change in public employer-employee relations than in any comparable period in the past.

Because of the prestigious role in labor-management

relations achieved in the last decade, collective bargaining has, in its own right, assumed a position of major importance among the institutions of our society. Although there remains the question as to whether unions, as such, are viable enough to meet the broad and complex problems emerging, such does not seem to be the case with collective bargaining. As a result of the willingness of many groups to experiment with new methods, collective bargaining remains vital and operative. Some issues and situations are not amenable to crisis bargaining or frequent strikes. Such issues are finding their answer more and more in innovative changes in bargaining procedures. Less attention is being given today to alternatives and substitutes and more to innovative methods of improving the effectiveness of collective bargaining.

—REED C. RICHARDSON

*Collective Bargaining By Objectives:  
A Positive Approach* (Englewood Cliffs,  
N.J., Prentice-Hall, Inc., 1977),  
p. 55.

# Book Reviews



## Perspectives on working women

*Women and the American Economy: A Look to the 1980's.* Edited by Juanita M. Kreps. New York, The American Assembly, Columbia University, 1976. 177 pp. \$8.95, cloth; \$4, paper.

This short and highly readable book is a useful addition to the growing literature on women in the labor force. The eight essays in this volume were originally written as background papers for an American Assembly conference in the fall of 1975. The book includes essays by social scientists from several disciplines and presents a perspective on all dimensions of women's past, present, and future economic roles. It should find a wide readership among concerned lay people, students in the social sciences, and specialists seeking a broader viewpoint. However, the lack of footnotes and bibliography is a major drawback for readers interested in research.

In the first essay, "Looking Backward in Order to Look Forward," William Chafe provides an excellent historical overview of the evolution of women's economic role. He stresses two important and related themes: (1) the historical contrast between the experience of white middle-class women and black and immigrant women and (2) the contemporary contrast between the reality of rapidly rising labor force participation and the persistence of traditional attitudes toward[s] women's proper place.

In their essay entitled "Family and Work," Karl Taeuber and James Sweet present a life cycle approach to the analysis of certain critical aspects of a woman's life, such as education, marriage, children, and career. They point out the important difference between cross-sectional comparisons and cohort analysis. Given the rapid increases in the labor force participation rate of young mothers, cross-sectional comparisons provide inaccurate predictions of the future labor force participation of young women today.

Juanita Kreps and R. John Leaper's essay on "Home Work, Market Work and the Allocation of Time" presents an economic approach to the analysis of women's choices. They highlight the important

fact that women's rising labor force participation has meant a decline in leisure time for most women as their increased hours in the market have only partially been balanced by a reduction in hours worked at home.

Harris Schrank and John Riley's essay on "Women in Work Organization" uses one unnamed organization as a case study and demonstrates the ways in which internal labor markets reinforce inequality in the labor market through sex-linked job pools.

Isabel Sawhill and Kristin Moore's essay, "Implications of Women's Employment for Home and Family Life," is an example of multidisciplinary work at its best. Written jointly by an economist and a sociologist, it should satisfy the needs of many who feel that a purely economic approach to marriage and the family is inappropriate. They interpret the "recent upsurge in divorce rates [as] reflect[ing] both greater economic independence among women and the marital strains engendered by changing attitudes about the position of women."

Phyllis Wallace's essay on the "Impact of Equal Employment Opportunity Laws" reviews the legislation that covers sex discrimination and concludes on a cautious note, underlining the crucial

### Books reviewed in this issue

- Juanita M. Kreps, ed., *Women and the American Economy: A Look to the 1980's*. Reviewed by Cynthia B. Lloyd.  
William Gorham and Nathan Glazer, eds., *The Urban Predicament*. Reviewed by Richard F. Muth.  
Benjamin Aaron and others, *The Future of Labor Arbitration in America*. Reviewed by Paul D. Staudohar.  
Robert Stewart Smith, *The Occupational Safety and Health Act: Its Goals and Its Achievements*. Reviewed by Aldona DiPietro.  
Harold Wool, *The Labor Supply for Lower-Level Occupations*. Reviewed by Ann P. Bartel.  
H. Meltzer and Frederic R. Wickert, eds., *Humanizing Organizational Behavior*. Reviewed by Craig C. Lundberg.



importance of a healthy economy for women's future position in the labor market. Nancy Barrett picks up this theme in her essay, "The Economy Ahead of Us," and points to the 1980's as a critical period for women; a period in which present gains could be eroded through slower growth and greater competition for skilled jobs, or a period in which new gains could be made in the development of flexible work schedules and a more equal distribution of nonmarket work.

Martha Griffiths in "Requisites for Equality" underlines the importance of passage of the Equal Rights Amendment for true equality between the sexes. She illustrates this by bringing out the ways in which a woman's dollar buys less than a man's in the form of credit or taxes paid relative to benefits received.

Juanita Kreps has done a good job of choosing scholars and editing selections which complement each other in presenting the major issues confronting American women today. Although one can fault the volume for not presenting a sufficiently critical point of view, I have no doubt that the book will be instrumental in developing a greater awareness of the dramatic changes that have occurred and some of the problems that lie ahead.

—CYNTHIA B. LLOYD  
Assistant Professor of Economics  
Barnard College

### Problems central to central cities

*The Urban Predicament.* Edited by William Gorham and Nathan Glazer. Washington, The Urban Institute, 1976. 363 pp. \$10, cloth; \$4.95, paper.

This book is a collection of essays on five major urban problems. According to the preface, its aim is not to present a comprehensive examination of life in cities but rather to "throw . . . shafts of light into 'areas of major concern.'" In my judgment the book succeeds admirably. I found myself largely in agreement with those essays on areas such as housing, in which I have some expertise. I found it instructive in those areas, such as crime, about which I know little. In general, the essays are highly readable, thoughtful, and well-balanced. The authors take empirical evidence seriously. I highly recommend this collection, both to scholars and to laymen.

The introductory chapter by the editors documents previous urban programs and examines major demographic trends affecting our cities. George Pet-

erson, in the chapter on "Finance," examines the fiscal difficulties of central city governments and discusses a variety of policies for ameliorating these difficulties. In the chapter on "Housing," Frank de Leeuw, Anne Schnare, and Raymond Struyk point to the recent improvement in urban housing quality, observe that little decline in black residential segregation occurred during the 1960's, and correctly suggest that the slum housing problem is largely one of low income.

James Wilson and Barbara Boland, in the chapter on "Crime," discuss trends in crime rates and analyze cross-sectional differences. They evaluate various means for reducing crime or its impact. An essay on "Education," by James Coleman and Sara Kelly, examines the progress of school desegregation from 1968 to 1972 and presents evidence on recent changes in educational achievement. The final chapter, "Transportation," by Michael Kemp and Melvyn Cheslow, documents the decline in public transit use and the ascendancy of the private automobile. Emphasizing the growing concern over the latter, the authors examine developments such as techniques for better traffic management and promotion of public transportation, including recent investment in new transit facilities.

It is difficult to evaluate a collection of essays on such diverse and specialized topics. I do, however, have two general criticisms. First, the individual chapters focus too narrowly on alleviating immediate problems and devote relatively little attention to promoting optimal resource use for the long run. The chapter on finance, for example, does not evaluate local fiscal arrangements from this larger perspective. The transportation chapter, in asking why transit should be subsidized, virtually ignores the now classic economic arguments for marginal cost pricing. Secondly, the book fails to speak out strongly enough for certain promising reforms. The transportation chapter readily dismisses congestion pricing proposals and alternative modes of transportation, such as jitney buses. The housing chapter yields too quickly to political opposition to income maintenance and housing allowance programs.

Although these faults are not insignificant, they should be taken in conjunction with my overall judgment that the book is of exceptional quality. The editors and authors deserve high praise for a volume which should considerably improve public understanding and discussion of urban problems.

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## Toward an understanding of negotiations

*The Future of Labor Arbitration in America.* By Benjamin Aaron and others. New York, American Arbitration Association, 1976. 304 pp. \$7.50, AAA members; \$10, nonmembers.

Recent years have seen the passage of important labor legislation, including Title VII of the Civil Rights Act of 1964 and a number of public sector bargaining statutes. In 1975, the American Arbitration Association held a conference to examine the impact of these legal developments on the arbitration process and what is in store for the future. Seven law professors were invited to prepare papers on assigned topics, and the book is comprised of these papers.

The first essay, by Benjamin Aaron, documents the considerable influence that the private sector system has had on public employment grievance arbitration. Considering the reverse effect, the author has some interesting insights on the possibility of extending constitutional protections against unfair discipline and discharge to private industry. Already emerging in law cases he discusses, judicial review on constitutional grounds would provide protection to private sector employees not covered by collective bargaining agreements.

Thomas G. S. Christensen next explores the relationship between the National Labor Relations Board and the arbitration process, on procedural and substantive legal issues. A principal conclusion is that deferral by the NLRB to arbitration, pursuant to its *Collyer* decision, is questionable because arbitration cannot adequately substitute for the NLRB's expertise in determining unfair labor practice issues.

Christensen's essay illustrates shortcomings of arbitrators in dealing with complex legal issues on which they may be inadequately trained or informed. David E. Feller takes this premise further. He notes that recent legal developments have substantially diminished the role of the negotiated agreement by removing essential elements from its control. Because the future of arbitration is so closely tied to the agreement, decline in the arbitrator's role is seen as inevitable. Feller maintains that by interpreting the agreement and not the law the arbitrator would best serve the parties and the process. The many observers who feel that arbitrators should consider the law in their decisions would bridle at Feller's thesis, but few would contend that he has not presented it for-  
mida-  
bly.

While the next essay, by Robert F. Koretz and Robert J. Rabin, takes a more sanguine view of the arbitrator's role, it is no less critically examined. The duty of fair representation by a union of a grievant

and individual rights in arbitration form the subject matter. A heavy responsibility would be placed on arbitrators by the authors to ensure that the individual's case is adequately presented, in contrast to those who believe the arbitrator should take a more passive stance.

In his paper, Clyde W. Summers contends that the protections against unjust discipline found in negotiated agreements should be extended to employees not covered by agreements. He therefore would put to rest the practice of discharging employees at the employer's sole discretion. Principles of just cause would be used to protect against arbitrary discipline. While it appears that this is an idea whose time has come, as it has in nearly all other industrialized nations, a Federal program providing uniform coverage to all employees would seem to be more appropriate than the State legislation the author suggests.

The final essay, by Charles J. Morris, is on interest arbitration used to achieve settlement of new terms and conditions of employment. It constitutes nearly a third of the book. Materials are mostly descriptive, dealing with the War Labor Board and laws in Australia, Canada, and the U.S. public sector. These experiences have been amply explored in the literature and little that is new is presented. However, it is a valuable compendium, and the author's ideas on circumspect use of interest arbitration are well presented in light of past experience.

On the whole, the authors' views may strike the reader as random and impressionistic. Nonetheless they represent carefully formulated and tightly reasoned premises and conclusions on the past, present, and future of labor arbitration. As such, their analyses deserve, and will doubtless get, close attention. Since the issues considered in the book are of great significance to the understanding and evolution of the arbitration process, both the authors and the American Arbitration Association should be lauded for their efforts.

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## The cost of job safety regulation

*The Occupational Safety and Health Act: Its Goals and Its Achievements.* By Robert Stewart Smith. Washington, American Enterprise Institute for Public Policy Research, 1976. 104 pp. \$3.

The Occupational Safety and Health Act was passed in 1970 and the Occupational Safety and



Health Administration (OSHA) was established in 1971. This study analyzes the goals and achievements of OSHA from an economic viewpoint. While economists will find the book interesting, it is written in a manner that can also be understood by lay people.

Professor Robert Stewart Smith discusses how, in the absence of government regulation, the level of safety and health would be determined in a competitive market with perfect information. Because the production of safety and health is not costless, Smith argues that without government regulation occupational injury and illness rates would be greater than zero.

After a discussion of OSHA's mandate, Smith turns to the operational aspects of the agency. He describes OSHA's enforcement program and presents an analysis of the standards-setting process, using the noise standard as an example. Smith is critical of the enforcement effort, citing low fines and low probabilities of firms being inspected. As for the standards-setting process, he emphasizes the need to do cost-benefit analyses of standards and is critical of OSHA for not doing these studies. The monograph concludes with a discussion of alternative means of promoting occupational safety and health, including an injury tax.

Smith's study is a valuable contribution and worthwhile reading for anyone interested in government regulation of safety and health, particularly OSHA's enforcement effort and philosophy toward standards during its formative years. Not all of the statements concerning OSHA's operational aspects are entirely applicable today. For example, efforts are underway to improve enforcement activities, and OSHA is now attempting to do cost-benefit analyses of proposed standards.

The major point of Smith's monograph appears to involve a comparison of safety and health determination in the presence and absence of governmental regulation. In a competitive labor market with perfect information economic theory suggests that government regulation is not necessary because workers will be compensated for assuming higher risks of injury or illness. However, as Smith states, "Governmental regulation must rest on how well the job safety and health market functions." Advocates of government regulation in safety and health argue that markets are not competitive and information is not perfect. Smith himself states that with respect to occupational health, information is a major problem and standards may be an appropriate policy prescription. In either case, appropriate government policy depends upon the degree to which labor markets are com-

petitive and aware of safety and health problems. This key evaluation still needs to be made.

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### Who will do menial work in 1985?

*The Labor Supply for Lower-Level Occupations.* By Harold Wool (with the assistance of Bruce Dana Phillips). New York, Praeger Publishers, 1976. 383 pp., bibliography.

The dramatic growth in the service sector of the U.S. economy has resulted in an increased demand for manpower to perform many tasks related to service activities. Examples of these jobs are food service workers, hospital attendants, cleaning service workers, domestics, and laundry operatives. Yet the continued increase in the educational attainment of the labor force suggests that it may become more and more difficult to staff these low-level positions, which are crucial to the functioning of the service sector.

In this book, Harold Wool seeks to direct the attention of manpower specialists to this problem. He first documents the ways in which the American economy has traditionally met low-level manpower needs. Prior to 1960, employers tended to rely on black workers, immigrants, and farm migrants who had few job options open to them. During the 1960s, however, nonwhite workers began to leave the low-status occupations as increased education and the rise of equal employment opportunity programs broadened their job opportunities. Fortunately, employers were able to replace these exiting workers by turning to two new vast labor supply sources: young white workers (age 16 to 24) and adult white women. Both groups proved to be ideal for the low-level jobs because these jobs required little training and could often be performed on a part-time basis.

In the second part of his study, Wool attempts to analyze, through multiple regression techniques, the determinants of occupational wage differentials both over time and in the cross-section. His time-series results, however, are weak primarily because he did not take account of the simultaneous relationship between changes in wages and changes in employment. In his cross-sectional analysis, Wool does estimate a reduced-form equation and finds that several labor supply variables are important in explaining interarea differences in occupational wages. For example, increases in the concentration of black or

young workers (or both) are shown to have a negative effect on relative wages.

The third part of the study is an attempt to make projections about the labor supply and labor demand for low-level occupations in the 1980's. Wool does this in two ways. He first examines the 1960-70 changes in the occupational distribution of workers, stratified by age, sex, and education, and extrapolates these occupational participation rates to 1980 and 1985. This labor supply measure is then compared to a labor demand forecast made by the Bureau of Labor Statistics. In the second method, Wool examines the outlook for four low-level occupations—household maids, unskilled construction laborers, apparel operatives, and hospital attendants—by utilizing a case-study approach. Both methods yield the same prediction: by the 1980's, we will be experiencing a serious labor shortage in the low-level occupations primarily because of the projected slowdown in the entry of women and youth into the labor force.

The main contribution of this book is its identification of the problems related to the staffing of low-level occupations. Wool's conclusions present those interested in manpower issues with the task of finding ways to ameliorate this serious situation. Labor economists who prefer analytical studies will find this book overly descriptive and unsophisticated in its approach. While the section that analyzes wage differentials may be most appealing to them, it suffers from econometric problems, and, perhaps most important, does not contribute anything to the existing literature on the subject. Many readers will probably find this book unnecessarily long. While Wool's topic is quite important and his conclusions are certainly provocative, one must wonder whether the same results could have been achieved in a more concisely written study.

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### New paths in organizational theory

*Humanizing Organizational Behavior*. Edited by H. Meltzer and Frederic R. Wickert. Springfield, Ill., Charles C Thomas, Publisher, 1976. 438 pp. \$29.75.

This volume stems from the 1973 and 1974 American Psychological Association symposia on humanizing organizational psychology. It contains six updated presentations from those symposia, nine essays written expressly for the book, and five previously published papers. The book is a representative presentation of the progress and potential of a signifi-

cant modern process—humanizing the world of work. Divided into four parts (where organizational humanization now stands, where it's heading, what can be done, and how to go about it), each with an introduction by the editors, it is directed toward consultants, practitioners, and graduate students.

The essays, although "think pieces," contain sound analyses and informed predictions (most of the authors have strong research credentials). A number of orientations and interests are represented, including economics (Ginzberg), unions (Rosen), minorities (Cavanagh), organizational development (Beer and Huse), physical settings (Steele), aging (Meltzer), personnel (Sutermeister), humanism (Massarik, Argyris), applied psychology (Dunnette, Bass), and organizational behavior (Alderfer, Lawler, Nord). This is not surprising, because the boundaries of the field of organizational behavior are not yet clearly defined. The essays (with possibly two exceptions) are excellent. Two main themes are the context of organizational membership and the concept of man as an end rather than a means. Particular attention is given to changing political and economic conditions, contemporary social problems, and changing work force characteristics.

This book contains many provocative new ideas, as well as thoughtful syntheses and applications, and lucid criticisms of organizational behavior. Massarik offers criteria for defining humanistic organizations; Alderfer discusses the consequences of overly permeable or overly rigid organizational boundaries; Bass details the constraints which zero economic growth puts on humanization; Lawler suggests how an increased attention to individual differences can help shape an organization to individuals rather than the reverse; Nord penetrates assumptions of differential power and organizational goals in analyzing humanizing efforts; and Wickert cogently points out how a variety of concepts, from job enrichment to T-groups, have taken the place of engineering oriented "one best ways"—this is just a sampling.

*Humanizing Organizational Behavior* is surprisingly successful. Although vestiges of band-aid approaches to humanization (that is, simply adding a "new" technology of job redesign or participative decisionmaking to conventional systems) are present, the general prescription (to alter the "culture" of work and workplaces) is admirably sustained. No anthology is ever without defects; here they are the exclusion of third-sector and public organizations, the lack of clear paradigm delineation, the absence of some seemingly useful notions (such as attribution or enactment) and the explicit use of existential and phenomenological philosophic orientations.

This book is valuable because it goes beyond the



soft admonitions and simple solutions of recent literature on the quality of worklife and industrial and personnel psychology. This reviewer found it compelling enough to read word for word—surely a plaudit in this age of information overload. The book deserves the attention of a wide audience.

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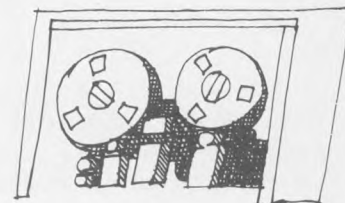
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## NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. 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 "Appendix A. The BLS Seasonal Factor Method," *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), pp. 272-78, and *X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (Bureau of the Census, 1967). Seasonally adjusted employment data in tables 2-7 were last revised in the March 1977 issue of the *Review* to reflect the preceding year's experience. Annual revision of the seasonally adjusted payroll data in tables 11, 13, 16, and 18 were last introduced in the January 1977 issue of the *Review*. New seasonal factors for productivity data in tables 33 and 34 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are published for numerous Consumer and Wholesale Price Index series. However, seasonally adjusted indexes are not published for either the U.S. average All Items CPI or the All Commodities and Industrial Commodities WPI. Only seasonally adjusted percent changes are available for these 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 1976*, Bulletin 1905, 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 and from unemployment insurance records 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 *Wholesale Prices and Price Indexes*. Selected key statistical series are presented graphically in the monthly *Chartbook on Prices, Wages, and Productivity*.

### 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
Wholesale Price Index .....	September 1	August	October 6	September	26-29
Employment situation .....	September 2	August	October 7	September	1-11
Consumer Price Index .....	September 21	August	October 21	September	22-25
Real earnings .....	September 21	August	October 21	September	14-20
Labor turnover in manufacturing .....	September 29	August	October 28	September	12-13
Major collective bargaining settlements .....	-----	-----	October 28	3rd quarter	35-36
Work Stoppages .....	September 29	August	October 31	September	37

## EMPLOYMENT DATA FROM 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 47,000 households, selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

### Definitions

**Employed persons** 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 were available for work but did not 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 long-term illness, those discouraged from seeking work because of personal or job market factors and those who are voluntarily idle. The **noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy.

**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.

The reclassification of census occupations introduced in January 1971 affected comparisons of 1971 occupational employment data with data for prior years. Additional information on changes in the occupational classification system and other census adjustments may be found in the monthly "Explanatory Notes" section of *Employment and Earnings*, published by the Bureau of Labor Statistics.

Data in tables 2-7 are seasonally adjusted, based on the seasonal experience through December 1976.

**1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950-76**

[Numbers in thousands]

Year	Total non-institutional population	Total labor force		Civilian labor force						Not in labor force
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agriculture	Nonagricultural industries	Number	Percent of labor force	
1950	106,645	63,858	59.9	62,208	58,920	7,160	51,760	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,171	6,449	55,724	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	84,239	61.1	80,733	77,902	3,606	74,296	2,831	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	85,936	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



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2. Employment status by sex, age, and race, seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>TOTAL</b>															
Total noninstitutional population <sup>1</sup> .....	153,449	156,048	156,142	156,367	156,595	156,788	157,006	157,176	157,381	157,584	157,782	157,986	158,228	158,456	158,682
Total labor force .....	94,793	96,917	97,329	97,498	97,387	97,449	98,020	98,106	97,649	98,282	98,677	98,892	99,286	99,770	99,440
Civilian noninstitutional population <sup>1</sup> ..	151,268	153,904	154,002	154,220	154,451	154,642	154,857	155,031	155,248	155,447	155,643	155,854	156,101	156,327	156,547
Civilian labor force .....	92,613	94,773	95,189	95,351	95,242	95,302	95,871	95,960	95,516	96,145	96,539	96,760	97,158	97,641	97,305
Employed .....	84,783	87,485	87,783	87,834	87,794	87,738	88,220	88,441	88,558	88,962	89,475	90,023	90,408	90,679	90,561
Agriculture .....	3,380	3,297	3,333	3,372	3,278	3,310	3,248	3,257	3,090	3,090	3,116	3,260	3,386	3,338	3,213
Nonagricultural industries .....	81,403	84,188	84,450	84,462	84,516	84,428	84,972	85,184	85,468	85,872	86,359	86,763	87,022	87,341	87,348
Unemployed .....	7,830	7,288	7,406	7,517	7,448	7,564	7,651	7,519	6,958	7,183	7,064	6,737	6,750	6,962	6,744
Unemployment rate .....	8.5	7.7	7.8	7.9	7.8	7.9	8.0	7.8	7.3	7.5	7.3	7.0	6.9	7.1	6.9
Not in labor force .....	58,655	59,130	58,813	58,869	59,209	59,340	58,986	59,071	59,732	59,302	59,104	59,094	58,943	58,686	59,242
<b>Men, 20 years and over</b>															
Civilian noninstitutional population <sup>1</sup> .....	63,357	64,561	64,586	64,688	64,796	64,902	65,001	65,140	65,250	65,342	65,423	65,522	65,641	65,743	65,845
Civilian labor force .....	50,855	51,527	51,675	51,698	51,851	51,912	52,066	52,078	51,842	52,092	52,061	52,089	52,282	52,497	52,494
Employed .....	47,427	48,486	48,544	48,638	48,701	48,684	48,773	48,859	48,961	49,091	49,267	49,465	49,531	49,859	49,794
Agriculture .....	2,422	2,359	2,429	2,393	2,341	2,334	2,283	2,273	2,209	2,230	2,208	2,280	2,373	2,372	2,305
Nonagricultural industries .....	45,005	46,128	46,115	46,245	46,360	46,350	46,490	46,586	46,752	46,861	47,059	47,185	47,158	47,487	47,489
Unemployed .....	3,428	3,041	3,131	3,060	3,150	3,228	3,293	3,219	2,881	3,001	2,794	2,624	2,751	2,638	2,700
Unemployment rate .....	6.7	5.9	6.1	5.9	6.1	6.2	6.3	6.2	5.6	5.8	5.4	5.0	5.3	5.0	5.1
Not in labor force .....	12,502	13,034	12,911	12,990	12,945	12,990	12,935	13,062	13,408	13,250	13,362	13,433	13,359	13,246	13,351
<b>Women, 20 years and over</b>															
Civilian noninstitutional population <sup>1</sup> .....	71,650	72,917	72,966	73,078	73,196	73,288	73,401	73,445	73,550	73,654	73,757	73,863	73,987	74,101	74,217
Civilian labor force .....	32,959	34,276	34,487	34,562	34,540	34,444	34,848	34,938	34,740	34,982	35,295	35,455	35,634	35,675	35,667
Employed .....	30,310	31,730	31,853	31,883	31,906	31,811	32,208	32,340	32,331	32,477	32,750	32,985	33,288	33,116	33,212
Agriculture .....	505	511	486	532	520	553	558	573	488	485	496	577	597	564	525
Nonagricultural industries .....	29,805	31,218	31,367	31,351	31,386	31,258	31,650	31,767	31,843	31,992	32,254	32,408	32,691	32,552	32,687
Unemployed .....	2,649	2,546	2,634	2,679	2,634	2,633	2,640	2,598	2,409	2,505	2,545	2,470	2,346	2,559	2,455
Unemployment rate .....	8.0	7.4	7.6	7.8	7.6	7.6	7.4	6.9	6.9	7.2	7.2	7.0	6.6	7.2	6.9
Not in labor force .....	38,691	38,641	38,479	38,516	38,656	38,844	38,553	38,507	38,810	38,672	38,462	38,408	38,355	38,426	38,550
<b>Both sexes, 16-19 years</b>															
Civilian noninstitutional population <sup>1</sup> .....	16,261	16,426	16,450	16,454	16,458	16,452	16,455	16,446	16,448	16,451	16,464	16,468	16,473	16,483	16,485
Civilian labor force .....	8,799	8,970	9,027	9,091	8,851	8,946	8,957	8,944	8,934	9,071	9,183	9,216	9,242	9,469	9,144
Employed .....	7,046	7,269	7,386	7,313	7,187	7,243	7,239	7,242	7,266	7,394	7,458	7,573	7,589	7,704	7,555
Agriculture .....	453	427	418	447	417	423	407	411	393	375	412	403	416	402	383
Nonagricultural industries .....	6,593	6,842	6,968	6,866	6,770	6,820	6,832	6,831	6,873	7,019	7,046	7,170	7,173	7,302	7,172
Unemployed .....	1,752	1,701	1,641	1,778	1,664	1,703	1,718	1,702	1,668	1,677	1,725	1,643	1,653	1,765	1,589
Unemployment rate .....	19.9	19.0	18.2	19.6	18.8	19.0	19.2	19.0	18.7	18.5	18.8	17.8	17.9	18.6	17.4
Not in labor force .....	7,462	7,455	7,423	7,363	7,607	7,506	7,498	7,502	7,514	7,380	7,281	7,252	7,231	7,014	7,341
<b>WHITE</b>															
Civilian noninstitutional population <sup>1</sup> .....	133,501	135,569	135,643	135,822	136,005	136,165	136,336	136,475	136,654	136,810	136,972	137,139	137,337	137,522	137,698
Civilian labor force .....	82,084	83,876	84,254	84,403	84,313	84,511	84,816	84,854	84,616	85,086	85,482	85,642	85,937	86,268	85,968
Employed .....	75,713	78,021	78,295	78,370	78,276	78,384	78,647	78,828	78,923	79,365	79,832	80,249	80,603	80,813	80,752
Unemployed .....	6,371	5,855	5,959	6,033	6,037	6,127	6,169	6,026	5,693	5,721	5,650	5,393	5,334	5,455	5,216
Unemployment rate .....	7.8	7.0	7.1	7.1	7.2	7.2	7.3	7.1	6.7	6.7	6.6	6.3	6.2	6.3	6.1
Not in labor force .....	51,416	51,692	51,389	51,419	51,692	51,654	51,520	51,621	52,038	51,724	51,490	51,497	51,400	51,254	51,730
<b>BLACK AND OTHER</b>															
Civilian noninstitutional population <sup>1</sup> .....	17,768	18,335	18,359	18,398	18,445	18,476	18,521	18,555	18,594	18,637	18,672	18,714	18,763	18,805	18,850
Civilian labor force .....	10,529	10,897	10,868	10,979	10,906	10,910	11,114	11,109	11,030	11,163	11,104	11,071	11,171	11,325	11,236
Employed .....	9,070	9,464	9,464	9,484	9,508	9,444	9,618	9,623	9,648	9,697	9,690	9,711	9,730	9,833	9,758
Unemployed .....	1,459	1,433	1,404	1,495	1,398	1,466	1,496	1,486	1,382	1,466	1,414	1,360	1,441	1,492	1,478
Unemployment rate .....	13.9	13.1	12.9	13.6	13.8	13.4	13.5	13.4	12.5	13.1	12.7	12.3	12.9	13.2	13.2
Not in labor force .....	7,239	7,438	7,491	7,419	7,539	7,566	7,407	7,446	7,564	7,474	7,568	7,643	7,592	7,480	7,614

<sup>1</sup>As in table 1, population figures are not seasonally adjusted.

### 3. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>CHARACTERISTICS</b>															
Total employed, 16 years and over . . . . .	84,783	87,485	87,783	87,834	87,794	87,738	88,220	88,441	88,558	88,962	89,475	90,023	90,408	90,679	90,561
Men . . . . .	51,230	52,391	52,507	52,596	52,546	52,576	52,643	52,799	52,918	53,046	53,270	53,575	53,722	53,987	53,900
Women . . . . .	33,553	35,095	35,276	35,238	35,248	35,162	35,577	35,642	35,640	35,916	36,205	36,448	36,686	36,692	36,661
Married men, spouse present . . . . .	37,882	38,078	38,146	38,179	38,140	37,989	37,895	37,998	38,195	38,159	38,294	38,536	38,509	38,582	38,434
Married women, spouse present . . . . .	19,561	20,291	20,353	20,402	20,470	20,384	20,482	20,498	20,511	20,756	20,963	21,076	20,962	20,831	20,846
<b>OCCUPATION</b>															
White-collar workers . . . . .	42,227	43,700	43,503	43,731	44,023	44,207	44,297	44,648	44,521	44,451	44,495	44,851	44,766	44,798	45,105
Professional and technical . . . . .	12,748	13,329	13,291	13,471	13,581	13,427	13,597	13,544	13,444	13,408	13,439	13,591	13,483	13,638	13,863
Managers and administrators, except farm . . . . .	8,891	9,315	9,226	9,309	9,446	9,436	9,491	9,564	9,613	9,502	9,543	9,434	9,400	9,570	9,583
Salesworkers . . . . .	5,460	5,497	5,442	5,504	5,555	5,551	5,597	5,815	5,633	5,815	5,617	5,765	5,695	5,673	5,716
Clerical workers . . . . .	15,128	15,558	15,544	15,447	15,441	15,793	15,612	15,725	15,831	15,726	15,896	16,061	16,188	15,917	15,943
Blue-collar workers . . . . .	27,962	28,958	29,100	28,912	28,745	28,921	29,001	29,150	29,636	29,917	29,944	30,193	30,423	30,432	30,063
Craft and kindred workers . . . . .	10,972	11,278	11,329	11,286	11,340	11,352	11,353	11,302	11,626	11,668	11,709	11,896	11,894	11,891	11,887
Operatives, except transport . . . . .	9,637	10,085	10,131	10,015	9,820	9,885	9,970	10,231	10,341	10,351	10,574	10,394	10,530	10,378	10,270
Transport equipment operatives . . . . .	3,219	3,271	3,275	3,266	3,275	3,297	3,258	3,283	3,358	3,448	3,487	3,482	3,552	3,551	3,397
Nonfarm laborers . . . . .	4,134	4,325	4,365	4,345	4,310	4,387	4,420	4,334	4,309	4,450	4,255	4,421	4,447	4,612	4,509
Service workers . . . . .	11,657	12,005	12,178	12,265	12,165	11,972	12,026	11,880	11,874	12,017	12,272	12,254	12,372	12,697	12,460
Farmworkers . . . . .	2,936	2,822	2,861	2,913	2,772	2,829	2,743	2,791	2,624	2,663	2,652	2,779	2,904	2,838	2,743
<b>MAJOR INDUSTRY AND CLASS OF WORKER</b>															
Agriculture:															
Wage and salary workers . . . . .	1,280	1,318	1,306	1,339	1,309	1,310	1,285	1,380	1,246	1,280	1,282	1,310	1,325	1,381	1,271
Self-employed workers . . . . .	1,715	1,637	1,686	1,700	1,608	1,671	1,627	1,530	1,490	1,511	1,513	1,548	1,655	1,595	1,561
Unpaid family workers . . . . .	386	342	336	352	344	343	342	340	354	338	319	366	393	378	363
Nonagricultural industries:															
Wage and salary workers . . . . .	75,298	78,042	78,250	78,423	78,440	78,498	78,766	78,957	79,205	79,520	79,869	80,306	80,429	80,814	80,738
Government . . . . .	14,525	14,593	14,942	15,262	15,143	14,998	15,045	14,967	15,013	14,913	14,923	14,960	15,075	14,961	15,131
Private industries . . . . .	60,774	63,088	63,308	63,161	63,297	63,500	63,721	63,990	64,192	64,607	64,946	65,346	65,354	65,853	65,607
Private households . . . . .	1,348	1,358	1,433	1,384	1,400	1,377	1,448	1,384	1,391	1,317	1,313	1,320	1,305	1,388	1,445
Other industries . . . . .	59,426	61,730	61,875	61,777	61,897	62,123	62,273	62,606	62,801	63,290	63,633	64,026	64,049	64,465	64,162
Self-employed workers . . . . .	5,626	5,689	5,640	5,661	5,701	5,632	5,771	5,798	5,853	5,854	5,919	5,954	6,050	5,997	5,896
Unpaid family workers . . . . .	478	458	447	444	433	448	449	460	419	516	536	499	550	518	523
<b>PERSONS AT WORK<sup>1</sup></b>															
Nonagricultural industries . . . . .	76,396	79,024	79,257	78,991	79,796	79,469	79,940	80,369	79,832	80,837	81,330	81,005	81,771	81,618	82,572
Full-time schedules . . . . .	62,325	64,810	65,261	64,687	64,965	64,955	65,385	65,846	65,700	66,144	66,659	66,436	67,219	67,126	67,867
Part time for economic reasons . . . . .	3,490	3,272	3,136	3,178	3,376	3,448	3,545	3,454	3,320	3,438	3,276	3,174	3,290	3,368	3,371
Usually work full time . . . . .	1,627	1,317	1,311	1,350	1,378	1,339	1,289	1,234	1,112	1,335	1,212	1,167	1,314	1,341	1,440
Usually work part time . . . . .	1,863	1,955	1,825	1,828	1,998	2,109	2,256	2,220	2,208	2,103	2,064	2,007	1,976	2,027	1,931
Part time for noneconomic reasons . . . . .	10,581	10,942	10,860	11,126	11,455	11,066	11,010	11,069	10,812	11,255	11,395	11,395	11,262	11,124	11,334

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

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## 4. Selected unemployment indicators, seasonally adjusted

Employment status	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Total, 16 years and over .....	8.5	7.7	7.8	7.9	7.8	7.9	8.0	7.8	7.3	7.5	7.3	7.0	6.9	7.1	6.9
Men, 20 years and over .....	6.7	5.9	6.1	5.9	6.1	6.2	6.3	6.2	5.6	5.8	5.4	5.0	5.3	5.0	5.1
Women, 20 years and over .....	8.0	7.4	7.6	7.8	7.6	7.6	7.6	7.4	6.9	7.2	7.2	7.0	6.6	7.2	6.9
Both sexes, 16-19 years .....	19.9	19.0	18.2	19.6	18.8	19.0	19.2	19.0	18.7	18.5	18.8	17.8	17.9	18.6	17.4
White, total .....	7.8	7.0	7.1	7.1	7.2	7.2	7.3	7.1	6.7	6.7	6.6	6.3	6.2	6.3	6.1
Men, 20 years and over .....	6.2	5.4	5.5	5.4	5.7	5.7	5.7	5.5	5.0	5.2	4.9	4.6	4.7	4.5	4.6
Women, 20 years and over .....	7.5	6.8	7.0	7.1	6.9	7.2	7.0	6.8	6.3	6.4	6.5	6.1	5.9	6.4	6.2
Both sexes, 16-19 years .....	17.9	16.9	16.2	17.1	16.6	16.8	17.2	17.2	18.1	16.3	16.6	16.1	15.7	16.1	14.3
Black and other, total .....	13.9	13.1	12.9	13.6	12.8	13.4	13.5	13.4	12.5	13.1	12.7	12.3	12.9	13.2	13.2
Men, 20 years and over .....	11.7	10.6	10.6	10.3	9.8	10.9	11.6	11.3	10.2	9.9	9.4	8.5	9.9	9.6	10.1
Women, 20 years and over .....	11.5	11.3	11.4	11.9	11.4	11.5	11.0	11.5	10.8	12.4	11.6	12.3	11.8	11.9	10.9
Both sexes, 16-19 years .....	36.9	37.1	34.2	40.0	38.3	38.0	36.5	34.8	36.1	37.2	40.1	36.2	38.7	39.4	40.7
Married men, spouse present .....	5.1	4.2	4.4	4.3	4.5	4.4	4.5	4.3	3.8	4.1	3.7	3.6	3.6	3.4	3.4
Married women, spouse present .....	7.9	7.1	7.4	7.6	7.3	7.3	7.2	7.0	6.5	6.7	6.7	6.6	6.3	6.8	6.6
Women who head families .....	10.0	10.0	10.2	11.0	10.7	10.7	9.8	10.2	9.0	9.4	9.6	9.2	8.4	9.4	9.3
Full-time workers .....	8.1	7.3	7.3	7.5	7.5	7.6	7.6	7.5	6.7	6.9	6.7	6.5	6.5	6.5	6.5
Part-time workers .....	10.3	10.1	10.6	10.0	9.6	10.3	10.5	9.8	10.2	10.7	11.1	9.9	9.9	10.7	9.2
Unemployed 15 weeks and over .....	2.7	2.5	2.4	2.5	2.4	2.5	2.6	2.6	2.4	2.3	2.0	1.9	1.9	1.8	1.9
Labor force time lost <sup>1</sup> .....	9.1	8.3	8.1	8.4	8.4	8.6	8.6	8.4	8.0	7.9	7.8	7.4	7.5	7.5	7.4
<b>OCCUPATION</b>															
White-collar workers .....	4.7	4.6	4.7	4.9	4.6	4.6	4.7	4.5	4.5	4.6	4.7	4.4	4.3	4.2	4.0
Professional and technical .....	3.2	3.2	3.1	3.1	3.0	3.2	3.4	3.3	3.3	3.3	3.1	3.2	2.9	3.0	2.8
Managers and administrators, except farm .....	3.0	3.1	3.4	3.5	3.2	3.0	3.1	3.1	3.0	2.8	3.4	2.9	2.8	2.7	2.6
Salesworkers .....	5.8	5.4	5.4	5.8	5.6	5.4	5.7	5.0	5.7	5.6	5.5	5.1	5.5	5.2	5.4
Clerical workers .....	6.6	6.4	6.6	7.0	6.2	6.2	6.3	6.1	6.0	6.4	6.5	6.0	5.7	5.7	5.4
Blue-collar workers .....	11.7	9.4	9.7	9.8	9.8	9.8	9.7	9.6	8.4	8.7	8.4	7.8	7.9	7.7	8.2
Craft and kindred workers .....	8.3	6.9	7.2	7.0	6.9	6.8	7.0	7.0	6.1	6.5	6.0	4.9	5.6	5.6	5.6
Operatives, except transport .....	14.7	10.8	11.1	11.3	11.5	11.6	11.3	11.0	9.2	9.6	9.2	9.3	8.9	9.4	10.1
Transport equipment operatives .....	8.5	7.7	8.2	8.1	8.0	8.3	8.2	8.1	7.2	7.7	6.9	6.0	6.7	5.7	7.5
Nonfarm laborers .....	15.6	13.7	13.4	14.5	14.6	14.0	13.5	13.9	12.9	12.8	13.2	12.6	12.5	10.9	10.7
Service workers .....	8.6	8.7	8.6	8.5	8.7	9.4	9.3	9.0	8.6	8.4	7.9	8.1	9.0	8.2	7.7
Farmworkers .....	3.5	4.5	4.3	3.6	4.0	4.2	5.1	6.1	4.8	6.7	5.4	4.8	4.4	4.8	3.8
<b>INDUSTRY</b>															
Nonagricultural private wage and salary workers <sup>2</sup> .....	9.2	7.9	8.0	8.2	8.1	8.2	8.2	7.9	7.4	7.6	7.4	7.0	7.1	6.9	6.8
Construction .....	18.1	15.6	17.0	16.5	15.7	15.1	15.4	14.1	14.9	15.2	14.2	12.0	13.0	12.6	12.1
Manufacturing .....	10.9	7.9	7.8	8.1	8.1	8.2	8.2	8.2	6.9	7.1	6.6	6.7	6.2	6.3	6.7
Durable goods .....	11.3	7.7	7.5	7.7	7.6	8.0	7.7	8.0	6.5	7.0	6.1	6.0	5.7	5.6	6.1
Nondurable goods .....	10.4	8.1	8.4	8.7	8.9	8.5	8.9	8.6	7.4	7.3	7.3	7.7	7.0	7.3	7.6
Transportation and public utilities .....	5.6	5.0	5.2	4.8	5.4	5.6	5.7	5.2	4.7	4.6	5.1	4.4	4.3	4.1	4.7
Wholesale and retail trade .....	8.7	8.6	8.6	8.9	8.9	8.9	9.0	8.2	8.4	8.7	8.4	7.8	8.3	7.9	7.7
Finance and service industries .....	6.6	6.5	6.4	6.6	6.4	6.7	6.8	6.8	6.2	6.2	6.4	6.1	6.6	6.0	5.7
Government workers .....	4.0	4.4	4.5	4.4	3.9	4.4	4.3	4.4	4.3	4.5	4.0	4.0	4.1	4.2	3.9
Agricultural wage and salary workers .....	10.3	11.7	11.8	10.4	11.2	11.5	13.2	14.0	12.6	13.4	13.2	12.3	11.5	11.0	9.7
<b>VETERAN STATUS</b>															
Males, Vietnam-era veterans: <sup>3</sup>															
20 to 34 years .....	9.3	7.9	8.3	7.6	8.9	8.7	8.5	8.3	7.6	7.0	6.8	7.3	7.5	7.6	7.9
20 to 24 years .....	19.8	17.4	20.4	16.1	19.2	19.0	16.8	16.8	16.8	15.8	17.1	14.4	13.6	18.1	16.3
25 to 29 years .....	7.9	7.3	6.8	7.1	7.9	7.9	8.6	8.7	7.9	6.7	6.6	7.7	7.8	7.1	7.2
30 to 34 years .....	5.9	4.8	5.5	5.1	6.2	5.7	5.0	4.7	3.6	3.9	3.3	4.3	5.1	4.5	5.8
Males, nonveterans:															
20 to 34 years .....	9.8	8.7	8.7	8.7	8.2	8.9	9.3	9.1	8.2	8.6	7.9	6.8	7.2	6.9	7.6
20 to 24 years .....	13.4	11.3	10.9	11.2	10.5	11.9	12.1	12.4	10.6	11.6	10.4	10.1	10.2	8.9	9.9
25 to 29 years .....	8.0	7.0	8.4	7.9	7.2	7.6	7.9	7.2	7.7	7.3	7.0	5.7	5.4	6.3	6.8
30 to 34 years .....	5.7	5.1	5.1	5.0	5.4	5.1	5.8	5.4	4.2	4.8	4.3	4.2	4.1	4.0	4.6

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

<sup>2</sup>Includes mining, not shown separately.

<sup>3</sup>Vietnam-era veterans are those who served between Aug. 5, 1964, and May 7, 1975.



### 5. Unemployment rates, by sex and age, seasonally adjusted

Sex and age	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Total, 16 years and over .....	8.5	7.7	7.8	7.9	7.8	7.9	8.0	7.8	7.3	7.5	7.3	7.0	6.9	7.1	6.9
16 to 19 years .....	19.9	19.0	18.2	19.6	18.8	19.0	19.2	19.0	18.7	18.5	18.8	17.8	17.9	18.6	17.4
16 to 17 years .....	21.4	21.1	20.8	22.1	20.6	21.3	21.6	20.7	21.1	19.8	22.2	19.2	20.4	21.3	19.9
18 to 19 years .....	18.9	17.4	15.9	18.0	17.5	17.5	17.6	17.7	17.0	17.5	16.6	16.8	16.3	16.5	15.3
20 to 24 years .....	13.6	12.0	11.4	11.9	11.7	12.6	12.7	12.5	11.4	12.0	11.4	10.8	10.7	10.5	10.6
25 years and over .....	6.0	5.6	5.9	5.6	5.8	5.7	5.6	5.5	5.1	5.2	5.1	4.9	4.8	5.0	5.0
25 to 54 years .....	6.4	5.7	6.0	5.9	5.9	6.0	5.9	5.9	5.3	5.3	5.2	5.1	5.1	5.3	5.2
55 years and over .....	4.7	4.6	4.9	4.8	4.8	4.6	4.6	4.2	4.1	4.8	4.3	4.1	4.0	3.8	3.9
Men, 16 years and over .....	7.9	7.0	7.1	7.0	7.2	7.4	7.5	7.3	6.6	6.9	6.5	6.1	6.3	6.2	6.2
16 to 19 years .....	20.1	19.2	18.3	18.7	19.1	19.6	19.7	19.1	17.4	18.6	18.7	17.0	17.0	18.6	16.9
16 to 17 years .....	21.6	21.4	20.8	21.5	21.3	22.3	22.2	21.0	19.5	19.3	22.2	17.9	18.7	22.7	20.2
18 to 19 years .....	19.0	17.6	16.6	16.8	17.3	17.7	18.1	17.4	16.1	17.9	16.1	16.0	16.0	15.5	14.7
20 to 24 years .....	14.3	12.0	12.0	11.8	11.7	12.7	12.6	12.9	11.3	12.1	11.2	10.5	10.6	9.9	10.6
25 years and over .....	5.6	4.8	5.1	5.0	5.2	5.1	5.2	5.0	4.6	4.6	4.3	4.1	4.2	4.1	4.2
25 to 54 years .....	5.7	4.9	5.2	5.1	5.2	5.3	5.4	5.2	4.7	4.6	4.3	4.3	4.4	4.3	4.3
55 years and over .....	4.5	4.4	4.2	4.6	4.6	4.4	4.4	3.9	4.0	4.7	4.4	3.7	3.9	3.3	3.6
Women, 16 years and over .....	9.3	8.6	8.8	9.1	8.8	8.8	8.7	8.6	8.3	8.4	8.5	8.2	7.9	8.4	8.0
16 to 19 years .....	19.7	18.7	18.0	20.6	18.4	18.3	18.5	18.9	20.1	18.4	18.9	18.8	19.0	18.7	17.9
16 to 17 years .....	21.2	20.7	20.8	22.9	19.8	20.1	20.8	20.2	23.0	20.4	22.2	20.8	22.5	19.7	19.5
18 to 19 years .....	18.7	17.3	15.2	19.4	17.6	17.3	17.1	18.0	18.1	16.9	17.1	17.7	16.6	17.5	16.0
20 to 24 years .....	12.7	11.9	10.6	11.9	11.8	12.4	12.8	11.9	11.4	11.9	11.7	11.2	10.9	11.0	10.5
25 years and over .....	7.0	6.4	7.1	6.7	6.7	6.6	6.4	6.4	5.9	6.1	6.1	6.0	5.7	6.3	6.2
25 to 54 years .....	7.5	6.8	7.2	7.1	7.1	7.1	6.7	6.9	6.2	6.3	6.6	6.5	6.1	6.7	6.4
55 years and over .....	5.1	4.9	5.9	5.2	5.2	4.9	5.1	4.7	4.3	4.9	4.2	4.6	4.3	4.6	4.4

### 6. Unemployed persons, by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	1976						1977						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>NUMBER OF UNEMPLOYED</b>													
Lost last job .....	3,758	3,790	3,727	3,756	3,802	3,736	3,207	3,396	3,143	2,953	3,038	2,927	3,075
On layoff .....	1,142	1,191	1,222	1,107	1,067	1,057	791	1,001	865	754	749	827	919
Other job losers .....	2,616	2,599	2,505	2,649	2,735	2,679	2,416	2,395	2,278	2,199	2,289	2,100	2,156
Left last job .....	957	994	934	936	858	831	932	852	919	846	944	954	841
Reentered labor force .....	1,879	1,941	1,912	1,927	2,061	1,957	1,991	1,963	2,013	2,001	1,993	1,889	1,822
Seeking first job .....	794	955	926	894	920	942	905	936	1,003	972	893	1,077	974
<b>PERCENT DISTRIBUTION</b>													
Total unemployed .....	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers .....	50.9	49.3	49.7	50.0	49.8	50.0	45.6	47.5	44.4	43.6	44.2	42.7	45.8
On layoff .....	15.5	15.5	16.3	14.7	14.0	14.2	11.2	14.0	12.2	11.1	10.9	12.1	13.7
Other job losers .....	35.4	33.8	33.4	35.3	35.8	35.9	34.3	33.5	32.2	32.5	33.3	30.7	32.1
Job leavers .....	13.0	12.9	12.5	12.5	11.2	11.1	13.2	11.9	13.0	12.5	13.7	13.9	12.5
Reentrants .....	25.4	25.3	25.5	25.6	27.0	26.2	28.3	27.5	28.4	29.5	29.0	27.6	27.1
New entrants .....	10.7	12.4	12.3	11.9	12.0	12.6	12.9	13.1	14.2	14.4	13.0	15.7	14.5
<b>UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE</b>													
Job losers .....	3.9	4.0	3.9	3.9	4.0	3.9	3.4	3.5	3.3	3.1	3.1	3.0	3.2
Job leavers .....	1.0	1.0	1.0	1.0	.9	.9	1.0	.9	1.0	.9	1.0	1.0	.9
Reentrants .....	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1	1.9	1.9
New entrants .....	.8	1.0	1.0	.9	1.0	1.0	.9	1.0	1.0	1.0	.9	1.1	1.0

### 7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Less than 5 weeks .....	2,894	2,790	2,931	2,867	2,852	2,952	2,759	2,765	2,762	2,804	3,005	3,100	2,782	3,058	2,830
5 to 14 weeks .....	2,452	2,159	2,093	2,433	2,426	2,367	2,494	2,319	2,083	2,107	2,098	1,857	2,093	2,023	1,969
15 weeks and over .....	2,483	2,339	2,247	2,341	2,311	2,360	2,517	2,514	2,283	2,182	1,823	1,816	1,836	1,737	1,834
15 to 26 weeks .....	1,290	1,003	1,058	1,127	1,118	1,094	1,188	1,130	1,038	947	777	715	800	798	917
27 weeks and over .....	1,193	1,336	1,189	1,214	1,193	1,266	1,329	1,384	1,245	1,235	1,146	1,101	1,036	939	917
Average (mean) duration, in weeks .....	14.1	15.8	15.6	15.4	15.4	15.3	15.5	15.6	15.5	14.7	14.0	14.3	14.9	14.4	14.1

## 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 160,000 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 contract construction; and nonsupervisory workers in transportation and public utilities, in wholesale and retail trade, in finance, insurance, and real estate, and in service 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 sea-

sonal 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 is 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 September 1975 data (November 1975 issue of the *Review*). An interim revision was introduced with the release of January 1977 data (March 1977 issue of the *Review*).

For a detailed discussion of the interim revision, along with revised historical data on all industries affected, see "Interim Revision of Selected Establishment Series," *Employment and Earnings*, February 1977, p. 161.

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 tax 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 1939-77, see *Employment and Earnings*, August 1977, pp. 10-15.

### 8. Employment by industry, 1948-76

[Nonagricultural payroll data, in thousands]

Year	Total	Mining	Contract construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
						Total	Wholesale trade	Retail trade			Total	Federal	State and local
1948	44,891	994	2,169	15,582	4,189	9,272	2,489	6,783	1,829	5,206	5,650	1,863	3,787
1949	43,778	930	2,165	14,441	4,001	9,264	2,487	6,778	1,857	5,264	5,856	1,908	3,948
1950	45,222	901	2,333	15,241	4,034	9,386	2,518	6,868	1,919	5,382	6,026	1,928	4,098
1951	47,849	929	2,603	16,393	4,226	9,742	2,606	7,136	1,991	5,576	6,389	2,302	4,087
1952	48,825	898	2,634	16,632	4,248	10,004	2,687	7,317	2,069	5,730	6,609	2,420	4,188
1953	50,232	866	2,623	17,549	4,290	10,247	2,727	7,520	2,146	5,867	6,645	2,305	4,340
1954	49,022	791	2,612	16,314	4,084	10,235	2,739	7,496	2,234	6,002	6,751	2,188	4,563
1955	50,675	792	2,802	16,882	4,141	10,535	2,796	7,740	2,335	6,274	6,914	2,187	4,727
1956	52,408	822	2,999	17,243	4,244	10,858	2,884	7,974	2,429	6,536	7,277	2,209	5,069
1957	52,894	828	2,923	17,174	4,241	10,886	2,893	7,992	2,477	6,749	7,616	2,217	5,399
1958	51,363	751	2,778	15,945	3,976	10,750	2,848	7,902	2,519	6,806	7,839	2,191	5,648
1959 <sup>1</sup>	53,313	732	2,960	16,675	4,011	11,127	2,946	8,182	2,594	7,130	8,083	2,233	5,850
1960	54,234	712	2,885	16,796	4,004	11,391	3,004	8,388	2,669	7,423	8,353	2,270	6,083
1961	54,042	672	2,816	16,326	3,903	11,337	2,993	8,344	2,731	7,664	8,594	2,279	6,315
1962	55,596	650	2,902	16,853	3,906	11,566	3,056	8,511	2,800	8,028	8,890	2,340	6,550
1963	56,702	635	2,963	16,995	3,903	11,778	3,104	8,675	2,877	8,325	9,225	2,358	6,868
1964	58,331	634	3,050	17,274	3,951	12,160	3,189	8,971	2,957	8,709	9,596	2,348	7,248
1965	60,815	632	3,186	18,062	4,036	12,716	3,312	9,404	3,023	9,087	10,074	2,378	7,696
1966	63,955	627	3,275	19,214	4,151	13,245	3,437	9,808	3,100	9,551	10,792	2,564	8,227
1967	65,857	613	3,208	19,447	4,261	13,606	3,525	10,081	3,225	10,099	11,398	2,719	8,679
1968	67,951	606	3,306	19,781	4,311	14,099	3,611	10,488	3,381	10,622	11,845	2,737	9,109
1969	70,442	619	3,525	20,167	4,435	14,704	3,733	10,971	3,562	11,228	12,202	2,758	9,444
1970	70,920	623	3,536	19,349	4,504	15,040	3,816	11,225	3,687	11,621	12,561	2,731	9,830
1971	71,222	609	3,639	18,572	4,457	15,352	3,823	11,529	3,802	11,903	12,887	2,696	10,192
1972	73,714	625	3,831	19,090	4,517	15,975	3,943	12,032	3,943	12,392	13,340	2,684	10,656
1973	76,896	644	4,015	20,068	4,644	16,674	4,107	12,568	4,091	13,021	13,739	2,663	11,075
1974	78,413	694	3,957	20,046	4,696	17,017	4,223	12,794	4,208	13,617	14,177	2,724	11,453
1975	77,051	745	3,512	18,347	4,498	17,000	4,177	12,824	4,223	14,006	14,720	2,748	11,973
1976	79,443	783	3,594	18,956	4,509	17,694	4,263	13,431	4,316	14,644	14,948	2,733	12,215

<sup>1</sup>Data include Alaska and Hawaii beginning in 1959.

### 9. Employment by State

[Nonagricultural payroll data, in thousands]

State	June 1976	May 1977	June 1977 <sup>P</sup>	State	June 1976	May 1977	June 1977 <sup>P</sup>
Alabama	1,208.0	1,250.2	1,264.4	Montana	253.2	259.6	261.5
Alaska	183.2	154.6	159.0	Nebraska	584.9	583.5	592.6
Arizona	755.5	787.0	778.6	Nevada	285.4	300.4	306.7
Arkansas	663.4	692.0	700.7	New Hampshire	318.3	328.0	335.0
California	8,176.8	8,467.1	8,565.7	New Jersey	2,788.3	2,803.7	2,850.7
Colorado	991.6	999.3	1,007.4	New Mexico	395.9	410.8	418.9
Connecticut	1,255.2	1,257.3	1,273.3	New York	6,836.7	6,765.3	6,817.5
Delaware	239.2	236.6	238.7	North Carolina	2,056.0	2,105.7	2,125.1
District of Columbia	578.2	576.7	580.9	North Dakota	218.8	224.4	226.7
Florida	2,759.7	2,882.4	2,863.3	Ohio	4,146.7	4,226.7	4,265.1
Georgia	1,852.8	1,918.1	1,928.0	Oklahoma	931.6	975.3	984.6
Hawaii	347.8	347.7	351.6	Oregon	889.4	899.2	918.9
Idaho	295.0	305.0	311.2	Pennsylvania	4,530.2	4,534.6	4,563.5
Illinois	4,518.3	4,563.3	4,601.6	Rhode Island	371.8	373.0	376.4
Indiana	2,038.0	2,066.8	2,091.5	South Carolina	1,052.4	1,084.5	1,095.2
Iowa	1,019.6	1,036.4	1,039.4	South Dakota <sup>1</sup>	226.2	225.6	231.4
Kansas	838.3	857.9	863.5	Tennessee	1,585.7	1,630.0	1,637.8
Kentucky	1,118.8	1,135.4	1,151.1	Texas	4,718.6	4,836.9	4,853.3
Louisiana	1,292.0	1,312.7	1,302.1	Utah	464.2	482.2	482.2
Maine	387.1	385.7	396.1	Vermont	168.8	173.7	176.6
Maryland	1,519.4	1,538.4	1,548.7	Virginia	1,871.4	1,895.2	1,920.7
Massachusetts	2,333.9	2,364.5	2,382.4	Washington <sup>1</sup>	1,286.7	1,324.8	1,343.5
Michigan	3,284.0	3,418.7	3,443.2	West Virginia	598.6	613.4	618.7
Minnesota	921.0	941.7	948.5	Wisconsin	1,742.4	1,780.8	1,815.0
Mississippi	730.6	757.4	766.1	Wyoming	162.8	165.8	174.8
Missouri	1,753.7	1,787.5	1,792.4				

<sup>1</sup>Revised series; not strictly comparable with previously published data.



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10. Employment by industry division and major manufacturing group

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>a</sup>	July <sup>a</sup>
<b>TOTAL</b> .....	77,051	79,443	79,242	79,555	80,277	80,572	80,943	81,099	79,473	79,734	80,547	81,332	82,029	82,903	82,159
<b>MINING</b> .....	745	783	804	766	804	804	807	805	806	807	827	838	844	870	835
<b>CONTRACT CONSTRUCTION</b> .....	3,512	3,594	3,821	3,869	3,815	3,815	3,742	3,547	3,198	3,251	3,451	3,681	3,853	4,048	4,144
<b>MANUFACTURING</b> .....	18,347	18,956	18,821	19,171	19,408	19,185	19,232	19,128	19,001	19,005	19,183	19,327	19,470	19,758	19,606
Production workers .....	13,070	13,625	13,470	13,797	14,040	13,807	13,839	13,730	13,606	13,600	13,763	13,893	14,021	14,259	14,089
<b>Durable goods</b> .....	10,679	11,026	10,958	11,108	11,278	11,131	11,218	11,189	11,141	11,108	11,246	11,348	11,442	11,597	11,492
Production workers .....	7,543	7,866	7,787	7,922	8,092	7,941	8,021	7,989	7,936	7,899	8,025	8,118	8,207	8,336	8,226
Ordnance and accessories .....	170.6	158.3	156.8	157.1	156.9	156.0	156.3	157.1	156.9	155.8	155.4	155.5	155.2	156.5	153.5
Lumber and wood products .....	556.9	605.6	623.4	629.0	626.9	622.5	617.0	614.2	602.1	606.0	614.0	626.1	637.0	661.4	663.0
Furniture and fixtures .....	450.7	489.5	478.4	491.8	499.0	498.4	498.1	495.9	493.4	493.7	498.4	501.0	504.1	511.1	502.9
Stone, clay, and glass products .....	613.5	626.2	641.8	644.6	643.7	641.8	640.9	623.7	609.1	597.6	625.9	643.6	655.7	671.5	675.4
Primary metal industries .....	1,179.7	1,190.0	1,208.8	1,214.8	1,220.0	1,192.6	1,182.8	1,182.3	1,180.2	1,170.6	1,190.8	1,205.4	1,217.8	1,233.5	1,220.4
Fabricated metal products .....	1,335.8	1,387.1	1,374.0	1,396.7	1,421.3	1,406.5	1,411.4	1,409.4	1,403.3	1,397.7	1,415.9	1,423.4	1,440.1	1,463.1	1,447.3
Machinery, except electrical .....	2,068.8	2,074.3	2,064.9	2,069.2	2,110.4	2,072.2	2,110.6	2,122.1	2,130.9	2,140.6	2,148.1	2,152.1	2,161.0	2,180.6	2,171.9
Electrical equipment .....	1,760.6	1,831.6	1,806.3	1,837.6	1,866.7	1,868.9	1,878.6	1,876.2	1,871.9	1,878.9	1,886.6	1,901.8	1,915.1	1,937.7	1,926.2
Transportation equipment .....	1,649.1	1,733.0	1,679.8	1,724.2	1,782.1	1,772.1	1,778.9	1,778.6	1,769.0	1,735.8	1,775.4	1,800.5	1,811.0	1,828.1	1,793.9
Instruments and related products .....	488.8	509.4	510.3	512.3	513.7	514.0	517.4	518.7	519.2	521.1	521.8	522.2	525.4	530.3	527.6
Miscellaneous manufacturing .....	404.4	420.9	413.1	430.4	437.6	435.8	427.9	410.6	404.5	409.7	413.5	416.5	419.9	423.4	410.3
<b>Nondurable goods</b> .....	7,668	7,930	7,863	8,063	8,130	8,054	8,014	7,939	7,860	7,897	7,937	7,979	8,028	8,161	8,114
Production workers .....	5,528	5,759	5,683	5,875	5,948	5,866	5,818	5,741	5,670	5,701	5,738	5,775	5,814	5,923	5,863
Food and kindred products .....	1,676.4	1,709.5	1,749.5	1,835.2	1,837.1	1,777.9	1,733.5	1,694.3	1,659.5	1,652.5	1,661.4	1,664.5	1,673.9	1,722.4	1,758.5
Tobacco manufacturers .....	78.3	76.4	73.2	85.0	84.8	84.2	81.8	79.4	74.1	71.4	63.9	66.8	63.2	65.0	65.2
Textile mill products .....	901.5	966.2	951.3	974.9	973.0	964.8	964.6	962.8	956.2	962.8	969.8	978.4	983.5	995.7	980.6
Apparel and other textile products .....	1,235.1	1,299.2	1,255.0	1,299.7	1,298.9	1,295.7	1,293.6	1,266.9	1,252.0	1,277.8	1,286.9	1,286.2	1,295.9	1,317.5	1,269.3
Paper and allied products .....	642.7	676.0	678.7	684.7	684.8	681.9	685.8	683.9	680.3	680.3	682.9	689.4	696.0	707.9	703.0
Printing and publishing .....	1,079.3	1,080.0	1,076.4	1,079.1	1,084.9	1,080.4	1,093.6	1,097.3	1,089.3	1,094.2	1,096.4	1,100.5	1,105.4	1,111.4	1,108.0
Chemicals and allied products .....	1,012.5	1,033.6	1,041.9	1,048.5	1,040.6	1,037.5	1,039.9	1,038.5	1,036.2	1,041.0	1,047.5	1,053.2	1,056.4	1,068.2	1,073.0
Petroleum and coal products .....	197.4	202.8	207.1	207.1	205.2	204.6	203.7	202.5	200.3	198.9	202.0	206.4	209.8	214.2	215.8
Rubber and plastics products, n.e.c. ....	587.6	614.2	564.8	576.5	652.4	652.6	651.9	650.0	651.7	655.8	661.4	667.7	673.9	684.6	675.1
Leather and leather products .....	256.8	271.5	265.0	272.7	268.1	264.2	265.1	263.3	260.6	262.4	264.8	266.3	269.7	274.2	265.5
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	4,498	4,509	4,540	4,528	4,560	4,538	4,546	4,553	4,499	4,494	4,522	4,538	4,577	4,626	4,615
<b>WHOLESALE AND RETAIL TRADE</b> .....	17,000	17,694	17,723	17,754	17,870	17,922	18,122	18,559	17,791	17,653	17,799	18,026	18,176	18,322	18,297
Wholesale trade .....	4,177	4,263	4,297	4,302	4,300	4,322	4,321	4,326	4,297	4,291	4,310	4,332	4,353	4,399	4,412
Retail trade .....	12,824	13,431	13,426	13,452	13,570	13,600	13,801	14,233	13,494	13,362	13,489	13,694	13,823	13,923	13,885
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	4,223	4,316	4,368	4,368	4,347	4,355	4,368	4,385	4,379	4,391	4,422	4,450	4,476	4,533	4,565
<b>SERVICES</b> .....	14,006	14,644	14,825	14,869	14,813	14,849	14,858	14,861	14,740	14,887	15,028	15,182	15,288	15,454	15,473
Hotels and other lodging places .....	989.7	1,058.4	1,194.1	1,211.3	1,109.6	1,043.8	1,016.3	1,025.9	1,017.7	1,024.0	1,031.6	1,050.8	1,061.5	1,116.8	-----
Personal services .....	834.6	821.4	824.1	818.3	815.8	820.7	816.6	814.0	801.0	797.3	801.6	805.4	808.9	812.3	-----
Medical and other health services .....	4,193.5	4,440.7	4,443.4	4,489.6	4,500.6	4,519.4	4,548.0	4,563.3	4,570.3	4,594.1	4,624.3	4,648.3	4,676.4	4,745.7	-----
Educational services .....	1,216.1	1,258.5	1,073.0	1,054.2	1,210.1	1,339.4	1,353.2	1,334.3	1,291.0	1,353.4	1,371.6	1,364.0	1,339.3	1,225.9	-----
<b>GOVERNMENT</b> .....	14,720	14,948	14,340	14,230	14,660	15,104	15,268	15,261	15,059	15,246	15,315	15,290	15,345	15,292	14,624
Federal .....	2,748	2,733	2,775	2,754	2,717	2,711	2,720	2,725	2,697	2,705	2,714	2,716	2,728	2,765	2,782
State and local .....	11,973	12,215	11,565	11,476	11,943	12,393	12,548	12,536	12,362	12,541	12,601	12,574	12,617	12,527	11,842

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

[Nonagricultural payroll data, in thousands]

Industry division and group	1976						1977						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	July <sup>P</sup>
<b>TOTAL</b> .....	79,513	79,618	79,918	79,819	80,106	80,344	80,561	80,824	81,395	81,686	81,921	82,095	82,351
<b>MINING</b> .....	791	752	798	800	805	808	817	823	842	847	845	855	821
<b>CONTRACT CONSTRUCTION</b> .....	3,608	3,579	3,565	3,582	3,619	3,605	3,561	3,645	3,759	3,842	3,861	3,877	3,913
<b>MANUFACTURING</b> .....	18,945	18,979	19,100	18,941	19,065	19,095	19,211	19,233	19,404	19,528	19,600	19,619	19,690
Production workers .....	13,618	13,627	13,749	13,575	13,675	13,691	13,801	13,810	13,958	14,066	14,145	14,144	14,200
<b>Durable goods</b> .....	11,034	11,083	11,146	11,018	11,128	11,158	11,236	11,230	11,370	11,423	11,469	11,490	11,527
Production workers .....	7,878	7,911	7,975	7,833	7,929	7,955	8,026	8,011	8,128	8,177	8,233	8,241	8,280
Ordnance and accessories .....	156	157	156	155	156	156	156	156	156	157	157	157	153
Lumber and wood products .....	605	605	613	613	621	626	625	626	633	639	638	638	643
Furniture and fixtures .....	490	486	495	491	491	493	494	497	503	507	509	510	515
Stone, clay, and glass products .....	631	628	630	630	636	629	631	620	641	651	654	658	663
Primary metal industries .....	1,206	1,215	1,216	1,194	1,186	1,182	1,183	1,178	1,199	1,208	1,217	1,218	1,218
Fabricated metal products .....	1,387	1,394	1,404	1,387	1,396	1,404	1,413	1,416	1,432	1,433	1,447	1,451	1,460
Machinery, except electrical .....	2,084	2,090	2,115	2,078	2,106	2,107	2,125	2,134	2,142	2,150	2,165	2,168	2,192
Electrical equipment .....	1,815	1,843	1,848	1,849	1,860	1,863	1,874	1,888	1,906	1,919	1,931	1,932	1,936
Transportation equipment .....	1,728	1,737	1,737	1,695	1,749	1,766	1,790	1,766	1,808	1,808	1,802	1,810	1,801
Instruments and related products .....	512	510	512	511	514	517	521	524	526	526	526	528	529
Miscellaneous manufacturing .....	420	418	420	415	413	415	424	425	424	425	423	420	417
<b>Nondurable goods</b> .....	7,911	7,896	7,954	7,923	7,937	7,937	7,975	8,003	8,034	8,105	8,131	8,129	8,163
Production workers .....	5,740	5,716	5,774	5,742	5,746	5,736	5,775	5,799	5,830	5,889	5,912	5,903	5,920
Food and kindred products .....	1,719	1,715	1,711	1,706	1,711	1,710	1,721	1,727	1,734	1,743	1,735	1,733	1,727
Tobacco manufactures .....	80	78	76	76	75	75	74	73	68	73	71	72	71
Textile mill products .....	970	969	971	961	960	957	958	964	973	981	988	987	1,000
Apparel and other textile products .....	1,299	1,292	1,281	1,273	1,276	1,271	1,278	1,280	1,283	1,291	1,298	1,307	1,314
Paper and allied products .....	680	679	681	677	680	680	684	688	688	697	703	701	704
Printing and publishing .....	1,082	1,082	1,086	1,087	1,089	1,089	1,090	1,095	1,097	1,102	1,109	1,110	1,114
Chemicals and allied products .....	1,037	1,040	1,035	1,032	1,038	1,041	1,044	1,050	1,051	1,060	1,063	1,061	1,068
Petroleum and coal products .....	201	202	202	202	203	204	205	205	207	211	210	210	210
Rubber and plastics products, n.e.c. .....	572	572	643	645	642	647	656	656	666	680	685	681	684
Leather and leather products .....	271	267	268	264	263	263	265	265	267	267	269	267	271
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	4,508	4,501	4,528	4,506	4,519	4,553	4,549	4,553	4,568	4,575	4,586	4,576	4,583
<b>WHOLESALE AND RETAIL TRADE</b> .....	17,737	17,764	17,839	17,824	17,808	17,898	17,981	18,067	18,189	18,203	18,235	18,227	18,285
Wholesale trade .....	4,271	4,272	4,283	4,292	4,291	4,304	4,323	4,334	4,354	4,371	4,384	4,373	4,386
Retail trade .....	13,466	13,492	13,556	13,532	13,517	13,594	13,658	13,733	13,835	13,832	13,851	13,854	13,899
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	4,312	4,312	4,338	4,359	4,381	4,403	4,423	4,431	4,453	4,463	4,480	4,488	4,506
<b>SERVICES</b> .....	14,664	14,751	14,798	14,819	14,873	14,936	15,010	15,068	15,149	15,182	15,197	15,241	15,305
Hotels and other lodging places .....	1,060	1,061	1,068	1,069	1,071	1,090	1,099	1,084	1,090	1,092	1,071	1,057	-----
Personal services .....	823	823	817	814	809	808	808	807	809	809	805	804	-----
Medical and other health services .....	4,417	4,476	4,505	4,519	4,548	4,577	4,584	4,603	4,629	4,658	4,681	4,722	-----
Educational services .....	1,248	1,252	1,266	1,283	1,277	1,271	1,269	1,282	1,288	1,290	1,287	1,286	-----
<b>GOVERNMENT</b> .....	14,948	14,980	14,952	14,988	15,036	15,046	15,009	15,004	15,031	15,046	15,117	15,212	15,248
Federal .....	2,723	2,732	2,728	2,730	2,734	2,720	2,721	2,721	2,725	2,719	2,723	2,735	2,730
State and local .....	12,225	12,248	12,224	12,258	12,302	12,326	12,288	12,283	12,306	12,327	12,394	12,477	12,518

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**12. Labor turnover rates in manufacturing, 1974 to date**

[Per 100 employees]

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	4.2	4.2	3.6	4.0	4.4	5.1	5.4	4.8	5.4	4.9	3.8	2.4	1.8
1975	3.7	3.0	2.7	3.2	3.7	3.9	4.5	4.5	5.1	4.6	3.7	2.8	2.2
1976	3.9	3.8	3.5	4.2	3.9	4.4	4.8	4.2	5.1	4.4	3.5	3.0	2.2
1977	-----	3.7	3.7	4.0	3.8	4.6	P4.9	-----	-----	-----	-----	-----	-----
New hires													
1974	3.2	3.2	2.7	3.0	3.3	3.9	4.3	3.7	4.2	3.9	2.9	1.7	1.0
1975	2.0	1.3	1.2	1.3	1.6	2.0	2.5	2.6	3.1	3.0	2.4	1.7	1.3
1976	2.6	2.1	2.1	2.6	2.5	3.0	3.6	2.8	3.5	3.2	2.5	1.9	1.3
1977	-----	2.2	2.1	2.6	2.7	3.4	P3.7	-----	-----	-----	-----	-----	-----
Total separations													
1974	4.8	4.9	4.0	4.4	4.2	4.4	4.2	4.9	6.1	5.4	5.0	5.0	5.2
1975	4.2	6.2	4.5	4.2	4.0	3.9	3.6	4.4	4.6	4.3	4.0	3.5	3.4
1976	3.8	3.7	3.1	3.5	3.5	3.4	3.5	4.3	4.9	4.6	4.1	3.4	3.5
1977	-----	3.9	3.4	3.4	3.4	3.5	P3.5	-----	-----	-----	-----	-----	-----
Quits													
1974	2.3	2.2	1.9	2.3	2.4	2.6	2.5	2.5	4.0	3.2	2.2	1.4	0.9
1975	1.4	1.1	.9	1.0	1.1	1.3	1.3	1.5	2.4	2.0	1.6	1.2	.9
1976	1.7	1.3	1.2	1.5	1.6	1.7	1.8	1.8	2.8	2.4	1.7	1.2	1.0
1977	-----	1.4	1.3	1.6	1.7	1.9	P1.9	-----	-----	-----	-----	-----	-----
Layoffs													
1974	1.5	1.7	1.2	1.1	0.9	0.8	0.8	1.4	1.1	1.2	1.8	2.8	3.6
1975	2.1	4.1	2.9	2.5	2.1	1.8	1.5	2.0	1.3	1.4	1.6	1.7	1.9
1976	1.3	1.6	1.1	1.1	1.1	.9	.9	1.6	1.1	1.3	1.5	1.5	1.8
1977	-----	1.7	1.4	1.0	.9	.8	P.8	-----	-----	-----	-----	-----	-----

**13. Labor turnover rates in manufacturing, by major industry group**

[Per 100 employees]

Major industry group	Accession rates						Separation rates								
	Total			New hires			Total			Quits			Layoffs		
	June 1976	May 1977	June 1977 <sup>P</sup>	June 1976	May 1977	June 1977 <sup>P</sup>	June 1976	May 1977	June 1977 <sup>P</sup>	June 1976	May 1977	June 1977 <sup>P</sup>	June 1976	May 1977	June 1977 <sup>P</sup>
<b>Manufacturing</b>	4.8	4.6	4.9	3.6	3.4	3.7	3.5	3.5	3.5	1.8	1.9	1.9	0.9	0.8	0.8
Seasonally adjusted	3.8	4.1	3.9	2.7	3.0	2.8	3.9	3.8	3.9	1.8	1.9	1.9	1.3	1.1	1.2
<b>Durable goods</b>	4.4	4.3	4.5	3.2	3.2	3.4	3.2	3.0	3.1	1.5	1.5	1.6	.8	.6	.6
Ordnance and accessories	1.8	2.1	2.7	1.1	1.3	1.7	1.6	1.4	1.4	.5	.5	.6	.6	.3	.3
Lumber and wood products	7.4	7.3	7.8	6.2	5.8	6.5	4.7	5.2	4.9	3.1	3.6	3.3	.7	.6	.5
Furniture and fixtures	5.5	6.3	5.7	4.6	5.5	5.0	5.2	5.7	4.8	3.0	3.5	3.0	1.1	1.0	.8
Stone, clay, and glass products	5.4	5.1	5.2	3.8	3.7	4.1	3.4	3.2	3.2	1.7	1.7	1.8	.8	.6	.4
Primary metal industries	3.9	3.7	3.4	2.1	2.4	2.4	2.3	2.0	2.1	.7	.8	.8	.7	.5	.4
Fabricated metal products	5.0	4.9	5.0	3.8	3.7	3.9	3.8	3.5	3.5	1.7	1.8	1.8	1.2	.8	.8
Machinery, except electrical	3.3	3.1	3.6	2.3	2.3	2.8	2.4	2.3	2.5	1.0	1.1	1.3	.6	.5	.4
Electrical equipment	3.9	3.6	4.0	2.7	2.6	3.0	3.0	2.6	2.9	1.3	1.2	1.4	.7	.6	.7
Transportation equipment	4.3	4.6	-----	3.0	3.2	-----	3.2	3.2	-----	1.3	1.4	-----	.9	.8	-----
Instruments and related products	3.9	3.0	3.1	3.2	2.4	2.7	2.3	2.2	2.3	1.2	1.1	1.2	.4	.4	.3
Miscellaneous manufacturing	6.3	5.2	5.6	4.9	3.8	4.5	4.5	4.5	4.6	2.1	2.2	2.2	1.3	1.3	1.1
<b>Nondurable goods</b>	5.3	5.1	5.4	4.2	3.8	4.2	4.1	4.2	4.1	2.2	2.4	2.3	1.1	1.0	1.0
Food and kindred products	7.6	6.8	8.1	5.8	4.8	6.1	4.8	5.2	5.4	2.5	2.6	2.8	1.5	1.8	1.8
Tobacco manufactures	3.5	2.5	-----	1.3	1.0	-----	2.2	4.5	-----	.6	1.0	-----	.9	2.6	-----
Textile mill products	5.4	5.4	5.2	4.4	4.5	4.3	4.7	4.9	4.7	3.0	3.2	3.1	.7	.6	.6
Apparel and other products	6.1	6.5	6.2	4.5	4.5	4.4	6.0	6.5	5.8	3.2	4.0	3.2	1.9	1.6	1.7
Paper and allied products	4.0	3.6	3.6	3.2	2.8	2.8	2.5	2.2	2.2	1.2	1.1	1.1	.6	.4	.5
Printing and publishing	3.7	3.7	3.8	3.0	2.8	3.1	2.8	3.3	2.9	1.6	1.8	1.8	.6	.8	.6
Chemicals and allied products	2.9	2.4	2.9	2.2	1.8	2.2	1.6	1.7	1.7	.7	.7	.8	.4	.4	.3
Petroleum and coal products	3.3	3.0	3.7	2.7	2.6	3.2	1.6	1.5	1.6	.6	.7	.7	.5	.2	.3
Rubber and plastics products, n.e.c.	6.2	6.1	6.1	5.3	4.9	5.0	5.3	4.4	4.4	3.0	2.7	2.6	1.2	.6	.7
Leather and leather products	6.7	7.4	7.1	5.4	5.8	5.7	6.2	6.4	6.2	4.0	4.2	4.1	1.0	1.0	1.0



### 14. Hours and earnings, by industry division, 1947-76

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

Year	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
	Total private			Mining			Contract construction			Manufacturing		
1947	\$45.58	40.3	\$1.131	\$59.94	40.8	\$1.469	\$58.87	38.2	\$1.541	\$49.17	40.4	\$1.217
1948	49.00	40.0	1.225	65.56	39.4	1.664	65.27	38.1	1.713	53.12	40.0	1.328
1949	50.24	39.4	1.275	62.33	36.3	1.717	67.56	37.7	1.792	53.88	39.1	1.378
1950	53.13	39.8	1.335	67.16	37.9	1.772	69.68	37.4	1.863	58.32	40.5	1.440
1951	57.86	39.9	1.45	74.11	38.4	1.93	76.96	38.1	2.02	63.34	40.6	1.56
1952	60.65	39.9	1.52	77.59	38.6	2.01	82.86	38.9	2.13	67.16	40.7	1.65
1953	63.76	39.6	1.61	83.03	38.8	2.14	86.41	37.9	2.28	70.47	40.5	1.74
1954	64.52	39.1	1.65	82.60	38.6	2.14	88.91	37.2	2.39	70.49	39.6	1.78
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.70	40.7	1.86
1956	70.74	39.3	1.80	95.06	40.8	2.33	96.38	37.5	2.57	78.78	40.4	1.95
1957	73.33	38.8	1.89	98.65	40.1	2.46	100.27	37.0	2.71	81.59	39.8	2.05
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.71	39.2	2.11
1959 <sup>1</sup>	78.78	39.0	2.02	103.68	40.5	2.56	108.41	37.0	2.93	88.26	40.3	2.19
1960	80.67	38.6	2.09	105.44	40.4	2.61	113.04	36.7	3.08	89.72	39.7	2.26
1961	82.60	38.6	2.14	106.92	40.5	2.64	118.08	36.9	3.20	92.34	39.8	2.32
1962	85.91	38.7	2.22	110.43	40.9	2.70	122.47	37.0	3.31	96.56	40.4	2.39
1963	88.46	38.8	2.28	114.40	41.6	2.75	127.19	37.3	3.41	99.63	40.5	2.46
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.06	38.8	2.45	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.34	41.3	2.72
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.90	40.6	2.83
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	155.23	43.0	3.61	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.46	37.1	3.22	164.40	42.7	3.85	195.45	37.3	5.24	133.73	39.8	3.36
1971	127.28	37.0	3.44	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.16	37.1	3.67	187.43	42.5	4.41	222.51	36.9	6.03	154.69	40.6	3.81
1973	145.43	37.1	3.92	201.03	42.5	4.73	235.69	37.0	6.37	166.06	40.7	4.08
1974	154.45	36.6	4.22	220.90	42.4	5.21	249.08	36.9	6.75	176.40	40.0	4.41
1975	163.89	36.1	4.54	249.57	42.3	5.90	265.35	36.6	7.25	189.51	39.4	4.81
1976	176.29	36.2	4.87	274.78	42.8	6.42	284.93	37.1	7.68	207.60	40.0	5.19
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1947	-----	-----	-----	\$38.07	40.5	\$0.940	\$43.21	37.9	\$1.140	-----	-----	-----
1948	-----	-----	-----	40.80	40.4	1.010	45.48	37.9	1.200	-----	-----	-----
1949	-----	-----	-----	42.83	40.5	1.060	47.63	37.8	1.260	-----	-----	-----
1950	-----	-----	-----	44.55	40.5	1.100	50.52	37.7	1.340	-----	-----	-----
1951	-----	-----	-----	47.79	40.5	1.18	54.67	37.7	1.45	-----	-----	-----
1952	-----	-----	-----	49.20	40.0	1.23	57.08	37.8	1.51	-----	-----	-----
1953	-----	-----	-----	51.35	39.5	1.30	59.57	37.7	1.58	-----	-----	-----
1954	-----	-----	-----	53.33	39.5	1.35	62.04	37.6	1.65	-----	-----	-----
1955	-----	-----	-----	55.16	39.4	1.40	63.92	37.6	1.70	-----	-----	-----
1956	-----	-----	-----	57.48	39.1	1.47	65.68	36.9	1.78	-----	-----	-----
1957	-----	-----	-----	59.60	38.7	1.54	67.53	36.7	1.84	-----	-----	-----
1958	-----	-----	-----	61.76	38.6	1.60	70.12	37.1	1.89	-----	-----	-----
1959 <sup>1</sup>	-----	-----	-----	64.41	38.8	1.66	72.74	37.3	1.95	-----	-----	-----
1960	-----	-----	-----	66.01	38.6	1.71	75.14	37.2	2.02	-----	-----	-----
1961	-----	-----	-----	67.41	38.3	1.76	77.12	36.9	2.09	-----	-----	-----
1962	-----	-----	-----	69.91	38.2	1.83	80.94	37.3	2.17	-----	-----	-----
1963	-----	-----	-----	72.01	38.1	1.89	84.38	37.5	2.25	-----	-----	-----
1964	\$118.37	41.1	\$2.88	74.28	37.9	1.96	85.79	37.3	2.30	\$69.84	36.0	\$1.94
1965	125.14	41.3	3.03	76.53	37.7	2.03	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.02	37.1	2.13	92.13	37.3	2.47	77.04	35.5	2.17
1967	131.22	40.5	3.24	81.76	36.5	2.24	95.46	37.0	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	86.40	36.0	2.40	101.75	37.0	2.75	83.97	34.7	2.42
1969	148.15	40.7	3.64	90.78	35.6	2.55	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	95.66	35.3	2.71	113.34	36.8	3.08	96.66	34.4	2.81
1971	169.24	40.2	4.21	100.39	35.1	2.86	120.66	36.9	3.27	103.28	34.2	3.02
1972	187.92	40.5	4.64	105.65	35.1	3.01	126.88	37.1	3.42	110.14	34.1	3.23
1973	204.62	40.6	5.04	111.04	34.7	3.20	132.10	36.9	3.58	117.64	34.0	3.46
1974	218.29	40.2	5.43	118.33	34.1	3.47	140.19	36.7	3.82	127.46	33.9	3.76
1975	234.43	39.6	5.92	126.75	33.8	3.75	150.75	36.5	4.13	137.23	33.8	4.06
1976	257.75	39.9	6.46	133.39	33.6	3.97	159.58	36.6	4.36	146.06	33.5	4.36

<sup>1</sup>Data include Alaska and Hawaii beginning in 1959.

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**15. Weekly hours, by industry division and major manufacturing group**

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

Industry division and group	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	July <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	36.1	36.2	36.6	36.6	36.2	36.2	36.1	36.4	35.4	35.9	36.0	36.0	36.1	36.4	36.5
<b>MINING</b> .....	42.3	42.8	42.7	41.2	43.8	43.8	43.6	43.7	42.4	43.3	43.7	43.9	44.1	44.6	44.0
<b>CONTRACT CONSTRUCTION</b> .....	36.6	37.1	37.9	37.9	36.8	38.2	36.8	36.8	33.9	36.6	36.8	37.0	37.5	37.4	37.7
<b>MANUFACTURING</b> .....	39.4	40.0	40.0	40.0	40.1	40.0	40.3	40.6	39.0	39.9	40.2	40.0	40.3	40.8	40.1
Overtime hours .....	2.6	3.1	3.1	3.1	3.4	3.2	3.2	3.3	3.0	3.0	3.2	3.1	3.3	3.5	3.3
<b>Durable goods</b> .....	39.9	40.6	40.5	40.5	40.6	40.6	40.9	41.3	39.5	40.4	40.8	40.7	41.0	41.5	40.6
Overtime hours .....	2.5	3.1	3.2	3.2	3.4	3.2	3.3	3.5	3.1	3.1	3.3	3.3	3.5	3.7	3.5
Ordnance and accessories .....	41.3	40.7	40.5	40.3	40.2	40.6	40.8	41.6	40.4	40.6	40.8	41.0	41.0	41.0	39.9
Lumber and wood products .....	39.1	40.2	40.4	40.6	40.2	40.6	39.9	40.4	38.7	40.2	39.8	40.0	40.3	40.7	40.2
Furniture and fixtures .....	37.9	38.7	38.2	39.0	38.6	38.8	38.8	39.3	36.4	37.5	38.1	37.9	38.4	39.2	38.5
Stone, clay, and glass products .....	40.6	41.2	41.2	41.5	41.4	41.8	41.3	41.3	39.0	40.7	41.2	41.4	41.8	42.0	41.6
Primary metal industries .....	40.0	40.6	41.0	40.6	40.8	40.1	40.3	40.5	40.0	40.4	41.0	41.4	41.5	41.7	40.6
Fabricated metal products .....	40.0	40.7	40.6	41.0	40.9	40.6	41.0	41.2	39.4	40.4	40.8	40.5	41.0	41.6	40.6
Machinery, except electrical .....	40.9	41.1	40.8	41.0	41.0	41.2	41.7	42.3	40.5	41.3	41.5	41.1	41.4	41.9	41.2
Electrical equipment .....	39.5	40.0	39.5	40.0	40.0	40.2	40.6	40.9	39.1	40.3	40.2	39.9	40.1	40.6	39.7
Transportation equipment .....	40.3	41.6	42.0	40.9	41.5	41.4	42.0	42.6	40.6	41.0	42.4	42.0	42.8	43.2	41.9
Instruments and related products .....	39.5	40.4	40.3	40.2	40.2	40.3	40.8	41.4	39.5	40.6	40.3	40.0	40.3	40.7	40.3
Miscellaneous manufacturing .....	38.3	38.7	38.4	38.5	38.4	38.9	39.3	39.3	37.6	39.3	39.3	38.9	39.0	39.3	38.3
<b>Nondurable goods</b> .....	38.8	39.3	39.2	39.2	39.4	39.2	39.4	39.7	38.3	39.1	39.3	39.1	39.3	39.7	39.3
Overtime hours .....	2.7	3.0	3.0	3.0	3.3	3.0	3.0	3.1	2.8	2.9	2.9	2.9	3.0	3.2	3.0
Food and kindred products .....	40.3	40.3	40.4	40.7	40.9	40.4	40.4	40.5	39.2	39.7	39.6	39.6	39.7	40.1	40.1
Tobacco manufactures .....	38.0	37.8	33.8	37.3	37.8	38.7	38.1	38.3	35.7	38.5	37.7	37.8	38.1	38.5	36.9
Textile mill products .....	39.2	40.1	39.9	39.6	39.4	39.5	40.0	40.4	39.3	40.2	40.5	40.1	40.6	40.9	40.2
Apparel and other textile products .....	35.1	35.6	35.6	35.6	35.2	35.3	35.4	35.3	33.5	35.3	35.5	35.0	35.5	36.1	35.6
Paper and allied products .....	41.6	42.4	42.3	42.4	42.6	42.3	42.6	43.1	41.8	42.1	42.4	42.8	42.7	43.1	42.5
Printing and publishing .....	37.0	37.5	37.6	37.7	37.8	37.6	37.8	38.3	37.0	37.5	37.6	37.4	37.5	37.7	37.7
Chemicals and allied products .....	40.9	41.6	41.3	41.1	42.0	41.6	41.8	42.1	41.4	41.5	41.7	41.9	41.7	42.0	41.5
Petroleum and coal products .....	41.6	42.2	42.6	42.0	42.8	42.5	42.3	42.4	41.6	41.8	42.6	42.7	42.6	42.9	43.5
Rubber and plastics products, n.e.c. ....	39.7	40.7	39.9	40.1	40.9	44.1	41.4	41.9	40.7	41.3	41.2	41.0	41.1	41.3	40.2
Leather and leather products .....	37.4	37.3	37.4	36.9	36.3	36.3	36.5	36.8	34.7	36.5	36.3	36.7	37.3	38.1	37.1
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	39.6	39.9	40.2	40.4	40.1	40.0	40.2	40.5	39.5	40.2	39.9	39.9	40.0	40.1	40.5
<b>WHOLESALE AND RETAIL TRADE</b> .....	33.8	33.6	34.5	34.3	33.6	33.3	33.2	33.9	32.8	33.0	33.1	33.1	33.2	33.6	34.1
Wholesale trade .....	38.6	38.8	39.3	39.0	38.9	38.7	38.7	39.0	38.5	38.8	38.7	38.7	38.7	39.0	39.0
Retail trade .....	32.4	32.1	33.0	33.0	32.1	31.8	31.6	32.5	31.1	31.3	31.4	31.5	31.6	32.1	32.7
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	36.5	36.6	36.7	36.9	36.6	36.7	36.6	36.7	36.8	36.7	36.6	36.6	36.6	36.6	36.7
<b>SERVICES</b> .....	33.8	33.5	34.0	34.0	33.5	33.5	33.4	33.4	33.3	33.4	33.3	33.3	33.3	33.5	33.9

### 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	1976						1977						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>p</sup>	July <sup>p</sup>
<b>TOTAL PRIVATE</b> .....	36.1	36.1	36.0	36.0	36.2	36.2	35.8	36.3	36.3	36.2	36.3	36.2	36.1
<b>MINING</b> .....	42.6	41.2	43.5	43.3	43.3	43.7	42.9	43.6	44.4	44.4	44.0	44.0	43.9
<b>CONTRACT CONSTRUCTION</b> .....	36.9	36.8	35.9	37.3	37.4	37.3	35.4	37.8	37.1	37.3	37.4	36.8	36.7
<b>MANUFACTURING</b> .....	40.1	40.0	39.7	39.9	40.1	40.0	39.5	40.3	40.4	40.3	40.4	40.5	40.3
Overtime hours .....	3.1	3.0	3.0	2.9	3.1	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.3
<b>Durable goods</b> .....	40.9	40.8	40.2	40.5	40.8	40.5	40.0	40.8	41.0	40.8	41.1	41.2	41.0
Overtime hours .....	3.3	3.1	3.0	3.0	3.2	3.3	3.4	3.3	3.4	3.6	3.6	3.7	3.6
Ordnance and accessories .....	40.9	40.7	40.1	40.6	40.6	41.0	40.5	40.6	40.6	41.2	41.1	40.9	40.3
Lumber and wood products .....	40.6	40.2	39.8	40.3	40.3	40.3	39.9	40.5	40.1	40.0	40.0	39.9	40.4
Furniture and fixtures .....	38.6	38.5	38.0	38.4	38.6	38.6	37.0	38.1	38.6	38.4	38.7	38.8	38.9
Stone, clay, and glass products .....	41.0	41.1	40.9	41.4	41.2	41.2	39.9	41.4	41.4	41.7	41.7	41.7	41.4
Primary metal industries .....	41.2	40.9	40.3	40.2	40.3	40.1	40.0	40.6	41.1	41.5	41.6	41.6	40.8
Fabricated metal products .....	41.0	41.0	40.6	40.4	40.8	40.5	39.9	40.8	41.0	40.7	41.0	41.3	41.0
Machinery, except electrical .....	41.5	41.4	40.8	41.2	41.5	41.2	40.6	41.3	41.5	41.3	41.6	41.9	42.0
Electrical equipment .....	40.1	40.1	39.7	40.0	40.3	40.2	39.4	40.6	40.3	40.0	40.1	40.4	40.3
Transportation equipment .....	42.0	41.9	41.1	41.2	42.0	41.1	41.4	41.4	42.8	41.9	42.7	42.9	41.9
Instruments and related products .....	40.8	40.4	39.9	40.3	40.4	40.7	39.8	40.8	40.4	40.1	40.4	40.7	40.8
Miscellaneous manufacturing .....	38.8	38.5	38.2	38.7	39.0	38.9	38.2	39.5	39.3	38.9	39.0	39.1	38.7
<b>Nondurable goods</b> .....	39.1	38.9	39.0	39.1	39.2	39.3	38.7	39.6	39.5	39.5	39.5	39.6	39.3
Overtime hours .....	2.9	2.8	2.9	2.8	3.0	3.1	3.0	3.2	3.1	3.2	3.1	3.1	2.9
Food and kindred products .....	40.0	40.1	40.2	40.3	40.4	40.1	39.5	40.3	40.2	40.3	39.9	40.0	39.7
Tobacco manufactures .....	35.0	36.8	37.1	37.5	36.9	37.5	36.1	39.4	38.4	38.3	38.6	38.6	38.2
Textile mill products .....	40.2	39.3	39.0	39.4	39.8	40.1	39.7	40.5	40.8	40.5	40.7	40.5	40.5
Apparel and other textile products .....	35.5	35.2	34.9	35.0	35.1	35.3	34.2	35.7	35.6	35.1	35.7	36.0	35.5
Paper and allied products .....	42.3	42.1	42.2	42.1	42.4	42.6	41.9	42.7	42.8	43.3	43.0	42.9	42.5
Printing and publishing .....	37.7	37.5	37.4	37.5	37.6	37.7	37.4	37.9	37.7	37.7	37.6	37.7	37.8
Chemicals and allied products .....	41.4	41.3	41.9	41.6	41.7	41.7	41.6	41.7	41.8	41.9	41.7	41.9	41.6
Petroleum and coal products .....	42.2	42.3	42.2	42.0	41.9	42.5	42.3	42.5	43.0	42.7	42.6	42.7	43.1
Rubber and plastics products, n.e.c. ....	40.3	40.0	40.5	41.1	41.2	41.5	40.9	41.4	41.2	41.2	41.3	41.1	40.6
Leather and leather products .....	37.0	36.7	36.5	36.4	36.4	36.5	35.3	36.7	36.4	37.4	37.1	37.3	36.7
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	39.8	40.0	39.9	39.8	40.2	40.5	39.8	40.5	40.3	40.1	40.2	39.9	40.1
<b>WHOLESALE AND RETAIL TRADE</b> .....	33.6	33.6	33.6	33.5	33.4	33.6	33.2	33.4	33.5	33.5	33.4	33.3	33.3
Wholesale trade .....	39.1	38.9	38.8	38.7	38.7	38.6	38.7	39.1	38.9	39.0	38.7	38.9	38.8
Retail trade .....	32.0	32.0	32.1	32.0	31.9	32.2	31.6	31.8	31.9	31.9	31.9	31.7	31.7
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	36.6	36.8	36.7	36.7	36.7	36.7	36.8	36.6	36.7	36.6	36.7	36.6	36.6
<b>SERVICES</b> .....	33.4	33.5	33.5	33.6	33.5	33.5	33.5	33.6	33.5	33.5	33.5	33.3	33.3



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**17. Hourly earnings, by industry division and major manufacturing group**

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

Industry division and group	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	July <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	\$4.54	\$4.87	\$4.86	\$4.89	\$4.96	\$4.98	\$5.00	\$5.02	\$5.07	\$5.09	\$5.11	\$5.15	\$5.19	\$5.21	\$5.23
<b>MINING</b> .....	5.90	6.42	6.39	6.29	6.60	6.56	6.62	6.71	6.76	6.76	6.78	6.80	6.81	6.84	6.81
<b>CONTRACT CONSTRUCTION</b> .....	7.25	7.68	7.68	7.71	7.81	7.85	7.86	7.88	7.96	7.88	7.87	7.88	7.91	7.95	7.97
<b>MANUFACTURING</b> .....	4.81	5.19	5.20	5.21	5.31	5.28	5.34	5.42	5.46	5.43	5.48	5.52	5.56	5.60	5.63
<b>Durable goods</b> .....	5.14	5.55	5.55	5.58	5.66	5.62	5.68	5.78	5.81	5.79	5.84	5.88	5.95	6.00	6.00
Ordnance and accessories .....	5.23	5.72	5.75	5.77	5.85	5.89	5.98	6.05	6.06	6.06	6.12	6.14	6.16	6.15	6.16
Lumber and wood products .....	4.28	4.71	4.81	4.83	4.87	4.87	4.86	4.88	4.95	4.91	4.89	4.94	4.97	5.01	5.07
Furniture and fixtures .....	3.75	3.98	3.97	4.01	4.05	4.06	4.07	4.13	4.15	4.16	4.19	4.21	4.23	4.27	4.26
Stone, clay, and glass products .....	4.89	5.29	5.33	5.36	5.43	5.43	5.45	5.47	5.50	5.54	5.57	5.66	5.73	5.78	5.83
Primary metal industries .....	6.17	6.80	6.83	6.92	6.95	6.90	6.94	7.00	7.03	7.06	7.13	7.22	7.39	7.43	7.48
Fabricated metal products .....	5.04	5.43	5.42	5.46	5.54	5.49	5.53	5.62	5.58	5.57	5.65	5.67	5.73	5.81	5.80
Machinery, except electrical .....	5.36	5.76	5.75	5.79	5.86	5.83	5.91	5.99	6.01	6.02	6.04	6.07	6.10	6.15	6.18
Electrical equipment .....	4.58	4.91	4.90	4.95	5.02	5.03	5.07	5.15	5.16	5.17	5.18	5.20	5.23	5.28	5.29
Transportation equipment .....	6.02	6.54	6.50	6.52	6.67	6.58	6.69	6.94	6.95	6.87	7.00	7.01	7.10	7.18	7.14
Instruments and related products .....	4.56	4.87	4.88	4.90	4.93	4.95	4.99	5.09	5.10	5.10	5.10	5.11	5.13	5.14	5.21
Miscellaneous manufacturing .....	3.79	4.01	4.02	4.00	4.02	4.06	4.08	4.18	4.24	4.25	4.27	4.27	4.31	4.31	4.32
<b>Nondurable goods</b> .....	4.35	4.68	4.69	4.70	4.80	4.80	4.84	4.90	4.95	4.93	4.95	4.99	4.99	5.03	5.09
Food and kindred products .....	4.57	4.96	4.96	4.98	5.02	5.04	5.09	5.16	5.22	5.22	5.22	5.26	5.28	5.29	5.33
Tobacco manufactures .....	4.51	4.91	5.00	4.62	4.65	4.69	4.87	5.04	5.16	5.37	5.36	5.59	5.58	5.83	5.81
Textile mill products .....	3.40	3.67	3.71	3.75	3.78	3.79	3.81	3.83	3.83	3.84	3.85	3.87	3.86	3.90	4.03
Apparel and other textile products .....	3.19	3.41	3.39	3.42	3.49	3.49	3.50	3.52	3.57	3.55	3.57	3.57	3.56	3.61	3.58
Paper and allied products .....	4.99	5.43	5.47	5.50	5.58	5.57	5.62	5.66	5.69	5.69	5.72	5.79	5.80	5.87	5.97
Printing and publishing .....	5.36	5.69	5.67	5.71	5.79	5.77	5.82	5.86	5.92	5.93	5.97	5.98	6.02	6.06	6.07
Chemicals and allied products .....	5.37	5.89	5.92	5.93	6.04	6.04	6.09	6.14	6.18	6.18	6.21	6.27	6.29	6.33	6.41
Petroleum and coal products .....	6.42	7.14	7.13	7.13	7.22	7.20	7.26	7.29	7.40	7.63	7.68	7.70	7.69	7.72	7.76
Rubber and plastics products, n.e.c. ....	4.35	4.62	4.40	4.40	4.85	4.86	4.94	5.01	5.07	5.03	5.03	5.06	5.05	5.12	5.15
Leather and leather products .....	3.23	3.44	3.41	3.45	3.48	3.47	3.50	3.53	3.57	3.60	3.61	3.61	3.63	3.64	3.63
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	5.92	6.46	6.46	6.56	6.61	6.63	6.65	6.65	6.70	6.74	6.71	6.80	6.83	6.85	6.89
<b>WHOLESALE AND RETAIL TRADE</b> .....	3.75	3.97	3.96	3.98	4.04	4.06	4.08	4.07	4.17	4.20	4.20	4.23	4.25	4.26	4.27
Wholesale trade .....	4.89	5.18	5.17	5.21	5.26	5.28	5.31	5.34	5.41	5.40	5.41	5.48	5.52	5.51	5.55
Retail trade .....	3.34	3.55	3.54	3.55	3.61	3.63	3.65	3.65	3.73	3.76	3.76	3.78	3.80	3.81	3.82
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	4.13	4.36	4.36	4.40	4.39	4.41	4.40	4.43	4.52	4.52	4.51	4.54	4.58	4.55	4.58
<b>SERVICES</b> .....	4.06	4.36	4.32	4.32	4.42	4.44	4.49	4.52	4.60	4.61	4.62	4.64	4.67	4.66	4.67

**18. Hourly Earnings Index for production or nonsupervisory workers on private nonagricultural payrolls, by industry division**

[Seasonally adjusted data: 1967 = 100]

Industry	1976						1977						Percent change		
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	July <sup>P</sup>	June 1977 to July 1977	July 1976 to July 1977
<b>TOTAL PRIVATE (in current dollars)</b> .....	185.6	186.8	187.5	188.4	189.7	190.6	192.7	193.2	194.1	195.3	196.5	197.4	198.5	0.5	6.9
Mining .....	199.1	202.3	203.8	205.5	205.0	206.8	207.8	210.1	210.4	212.1	213.1	214.3	215.1	.3	8.0
Contract construction .....	188.0	187.1	186.4	187.9	189.2	189.5	192.4	190.8	191.6	192.6	193.1	194.6	195.6	.5	4.0
Manufacturing .....	185.4	186.7	188.1	188.4	189.8	191.0	192.3	193.3	194.3	195.4	196.8	198.4	199.5	.6	7.6
Transportation and public utilities .....	199.9	200.9	201.6	202.4	203.7	203.1	205.1	206.2	206.7	208.6	210.1	211.3	211.7	.2	5.9
Wholesale and retail trade .....	178.8	179.8	180.8	182.1	183.4	184.6	186.4	187.6	188.5	189.8	190.7	191.0	192.4	.7	7.6
Finance, insurance, and real estate .....	170.8	173.1	172.0	173.5	173.1	172.9	176.5	175.7	175.9	177.4	179.0	177.5	179.5	1.1	5.1
Services .....	188.3	189.8	190.0	191.3	193.0	194.6	197.7	197.7	198.7	199.7	200.7	201.6	202.3	.4	7.4
<b>TOTAL PRIVATE (in constant dollars)</b> .....	108.5	108.7	108.7	108.9	109.3	109.4	109.7	109.0	108.8	108.6	108.6	108.5	108.7	.2	.1

### 19. Weekly earnings, by industry division and major manufacturing group

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

Industry division and group	Annual average		1976						1977						
	1975	1976	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>p</sup>	July <sup>p</sup>
<b>TOTAL PRIVATE</b> .....	\$163.89	\$176.29	\$177.88	\$178.97	\$179.55	\$180.28	\$180.50	\$182.73	\$179.48	\$182.73	\$183.96	\$185.40	\$187.36	\$189.64	\$190.90
<b>MINING</b> .....	249.57	274.78	272.85	259.15	289.08	287.33	288.63	293.23	286.62	292.71	296.29	298.52	300.32	305.06	299.64
<b>CONTRACT CONSTRUCTION</b> .....	265.35	284.93	291.07	292.21	287.41	299.87	289.25	289.98	269.84	288.41	289.62	291.56	296.63	297.33	300.47
<b>MANUFACTURING</b> .....	189.51	207.60	208.00	208.40	212.93	211.20	215.20	220.05	212.94	216.66	220.30	220.80	224.07	228.48	225.76
<b>Durable goods</b> .....	205.09	225.33	224.78	225.99	229.80	228.17	232.31	238.71	229.50	233.92	238.27	239.32	243.95	249.00	243.60
Ordnance and accessories .....	216.00	232.80	232.88	232.53	235.17	239.13	243.98	251.68	244.82	246.04	249.70	251.74	252.56	252.15	245.78
Lumber and wood products .....	167.35	189.34	194.32	196.10	195.77	197.72	193.91	197.15	191.57	197.38	194.62	197.60	200.29	203.91	203.81
Furniture and fixtures .....	142.13	154.03	151.65	156.39	156.33	157.53	157.92	162.31	151.06	156.00	159.64	159.56	162.43	167.38	164.01
Stone, clay, and glass products .....	198.53	217.95	219.60	222.44	224.80	226.97	225.09	225.36	214.50	225.48	229.48	234.32	239.51	242.76	242.53
Primary metal industries .....	246.80	276.08	280.03	280.95	283.56	276.69	279.68	283.50	281.20	285.22	292.33	298.91	306.69	309.83	303.69
Fabricated metal products .....	201.60	221.00	220.05	223.86	226.59	222.89	226.73	231.54	219.85	225.03	230.52	229.64	234.93	241.70	235.48
Machinery, except electrical .....	219.22	236.74	234.60	237.39	240.26	240.20	246.45	253.38	243.41	248.63	250.66	249.48	252.54	257.69	254.62
Electrical equipment .....	180.91	196.40	193.55	198.00	200.80	202.21	205.84	210.64	201.76	208.35	208.24	207.48	209.72	214.37	210.01
Transportation equipment .....	242.61	272.06	273.00	266.67	276.81	272.41	280.98	295.64	282.17	281.67	296.80	294.42	303.88	310.18	299.17
Instruments and related products .....	180.12	196.75	196.66	196.98	198.19	199.49	203.59	210.73	201.45	207.06	205.53	204.40	206.74	209.20	209.96
Miscellaneous manufacturing .....	145.16	155.19	154.37	154.00	154.37	157.93	160.34	164.27	159.42	167.03	167.81	166.10	168.09	169.38	165.46
<b>Nondurable goods</b> .....	168.78	183.92	183.85	184.24	189.12	188.16	190.70	194.53	189.59	192.76	194.54	195.11	196.11	199.69	200.04
Food and kindred products .....	184.17	199.89	200.38	202.69	205.32	203.62	205.64	208.98	204.62	207.23	206.71	208.30	209.62	212.13	213.73
Tobacco manufactures .....	171.38	185.60	169.00	172.33	175.77	181.50	185.55	193.03	184.21	206.75	202.07	211.30	212.60	224.46	214.39
Textile mill products .....	133.28	147.17	148.03	148.50	148.93	149.71	152.40	154.73	150.52	154.37	155.93	155.19	156.72	159.51	162.01
Apparel and other textile products .....	111.97	121.40	120.68	121.75	122.85	123.20	123.90	124.26	119.60	125.32	126.74	124.95	126.38	130.32	127.45
Paper and allied products .....	207.58	230.23	231.38	233.20	237.71	235.61	239.41	243.95	237.84	239.55	242.53	247.81	247.66	253.00	253.73
Printing and publishing .....	198.32	213.38	213.19	215.27	218.86	216.95	220.00	224.44	219.04	222.38	224.47	223.65	225.75	228.46	228.84
Chemicals and allied products .....	219.63	245.02	244.50	243.72	253.68	251.26	254.56	258.49	255.85	256.47	258.96	262.71	262.29	265.86	266.02
Petroleum and coal products .....	267.07	301.31	303.74	299.46	309.02	306.00	307.10	309.10	307.84	318.93	327.17	328.79	327.59	331.19	337.56
Rubber and plastics products, n.e.c. .....	172.70	188.03	175.56	176.44	198.37	199.75	204.52	209.92	206.35	207.74	207.24	207.46	207.56	211.46	207.03
Leather and leather products .....	120.80	128.31	127.53	127.31	126.32	125.96	127.75	129.90	123.88	131.40	131.04	132.49	135.40	138.68	134.67
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	234.43	257.75	259.69	265.02	265.06	265.20	267.33	269.33	264.65	270.95	267.73	271.32	273.20	274.69	279.05
<b>WHOLESALE AND RETAIL TRADE</b> .....	126.75	133.39	136.62	136.51	135.74	135.20	135.46	137.97	136.78	138.60	139.02	140.01	141.10	143.14	145.61
Wholesale trade .....	188.75	200.98	203.18	203.19	204.61	204.34	205.50	208.26	208.29	209.52	209.37	212.08	213.62	214.89	216.45
Retail trade .....	108.22	113.96	116.82	117.15	115.88	115.43	115.34	118.63	116.00	117.69	118.06	119.07	120.08	122.30	124.91
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	150.75	159.58	160.01	162.36	160.67	161.85	161.04	162.58	166.34	165.88	165.07	166.16	167.63	166.53	168.09
<b>SERVICES</b> .....	137.23	146.06	146.88	146.88	148.07	148.74	149.97	150.97	153.18	153.97	153.85	154.51	155.51	156.11	158.31

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**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		Worker with 3 dependents				Worker with no dependents		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	99.63	108.65	79.82	87.04	87.58	95.51
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	95.06	100.59	78.99	83.59	86.30	91.32	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	112.34	115.58	91.57	94.21	99.45	102.31
1967	101.84	101.84	83.38	83.38	90.86	90.86	114.90	114.90	93.28	93.28	101.26	101.26
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	119.46	102.72	95.94	82.49	104.61	89.95	133.73	114.99	106.62	91.68	115.90	99.66
1971	127.28	104.93	103.78	85.56	112.41	92.67	142.44	117.43	114.97	94.78	124.24	102.42
1972	136.16	108.67	111.65	89.11	121.09	96.64	154.69	123.46	125.32	100.02	135.56	108.19
1973	145.43	109.26	117.54	88.31	127.41	95.73	166.06	124.76	132.29	99.39	143.20	107.59
1974	154.45	104.57	124.14	84.05	134.37	90.97	176.40	119.43	139.90	94.72	151.25	102.40
1975	163.89	101.67	132.74	82.34	145.93	90.53	189.51	117.56	150.71	93.49	165.33	102.56
1976	176.29	103.40	145.90	84.40	156.50	91.79	207.60	121.76	166.55	97.68	180.03	105.59
1976: July	177.88	103.96	145.05	84.77	157.70	92.17	208.00	121.57	166.85	97.52	180.33	105.39
August	178.97	104.11	145.84	84.84	158.52	92.22	208.40	121.23	167.15	97.24	180.63	105.08
September	179.55	104.03	146.26	84.74	158.95	92.09	212.93	123.37	170.54	98.81	184.04	106.63
October	180.28	104.03	146.78	84.70	159.50	92.04	211.20	121.87	169.24	97.66	182.74	105.45
November	180.50	103.86	146.94	84.55	159.67	91.87	215.20	123.82	172.23	99.10	185.74	106.87
December	182.73	104.84	148.55	85.23	161.34	92.56	220.05	126.25	175.86	100.90	189.39	108.66
1977: January	179.48	102.38	146.20	83.40	158.90	90.64	212.94	121.47	170.54	97.28	184.04	104.99
February	182.73	103.18	148.55	83.88	161.34	91.10	216.66	122.34	173.33	97.87	186.84	105.50
March	183.96	103.23	149.44	83.86	162.27	91.06	220.30	123.63	176.05	98.79	189.58	106.39
April	185.40	103.23	150.48	83.79	163.35	90.95	220.80	122.94	176.42	98.23	189.95	105.76
May	187.36	103.74	151.89	84.10	164.82	91.26	224.07	124.07	178.86	99.04	192.41	106.54
June <sup>p</sup>	189.64	104.31	157.17	86.45	173.21	95.28	228.48	125.68	184.52	101.50	202.61	111.45
July <sup>p</sup>	190.90	104.55	158.07	86.57	174.20	95.40	225.76	123.64	182.62	100.01	200.57	109.84

NOTE: The earnings expressed in 1967 dollars have been adjusted for changes in purchasing power as measured by the Bureau's Consumer Price Index. These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation," **Employment and Earnings and Monthly Report**

on the Labor Force, February 1969, pp.6-13. See also "Spendable Average Weekly Earnings Formulas, 1939-77," **Employment and Earnings**, August 1977, pp. 10-15.



## 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 the State, Ex-Servicemen, and UCFE programs, and the Railroad Insurance Act.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed.

Persons not covered by unemployment insurance (about 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	1976							1977					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
All programs:													
Insured unemployment .....	3,457	3,642	3,446	3,235	3,217	3,453	3,884	34,442	4,448	3,972	3,506	3,105	2,937
State unemployment insurance program: <sup>1</sup>													
Initial claims <sup>2</sup> .....	1,603	1,868	1,473	1,399	1,513	1,767	2,252	2,552	1,995	1,483	1,357	1,325	-----
Insured unemployment (average weekly volume) .....	2,642	2,831	2,646	2,455	2,466	2,694	3,103	3,638	3,647	3,173	2,752	2,414	2,289
Rate of insured unemployment .....	4.0	4.3	4.0	3.7	3.7	4.1	4.7	5.5	5.5	4.8	4.1	3.6	3.4
Weeks of unemployment compensated .....	9,823	9,746	9,614	8,725	8,032	9,001	10,893	12,497	12,423	13,328	9,923	8,793	-----
Average weekly benefit amount for total unemployment .....	\$74.27	\$73.66	\$73.91	\$74.40	\$75.47	\$75.95	\$77.29	\$78.61	\$80.48	\$79.59	\$78.63	\$77.08	-----
Total benefits paid .....	\$715,226	\$703,015	\$695,839	\$633,657	\$590,598	\$666,666	\$818,983	\$955,282	\$975,618	\$1,038,503	\$763,713	\$666,014	-----
Unemployment compensation for ex-servicemen: <sup>3</sup>													
Initial claims <sup>1</sup> .....	37	38	37	37	34	33	35	33	29	31	26	26	-----
Insured unemployment (average weekly volume) .....	86	93	95	93	92	96	101	103	101	95	87	78	74
Weeks of unemployment compensated .....	389	390	409	398	370	397	442	435	396	448	358	327	-----
Total benefits paid .....	\$30,732	\$31,092	\$32,787	\$32,182	\$30,116	\$32,390	\$36,014	\$35,583	\$32,524	\$36,880	\$29,581	\$27,158	-----
Unemployment compensation for Federal civilian employees: <sup>4</sup>													
Initial claims .....	22	23	18	19	21	20	24	26	17	18	16	16	-----
Insured unemployment (average weekly volume) .....	45	51	51	50	50	52	55	60	59	57	50	43	41
Weeks of unemployment compensated .....	194	196	214	205	191	214	235	239	225	254	195	170	-----
Total benefits paid .....	\$14,811	\$15,087	\$16,656	\$16,204	\$15,162	\$17,024	\$18,572	\$19,057	\$18,168	\$20,709	\$15,856	\$13,998	-----
Railroad unemployment insurance:													
Applications .....	18	21	14	9	7	9	6	8	8	5	3	2	11
Insured unemployment (average weekly volume) .....	23	20	23	23	22	25	26	29	29	25	21	17	13
Number of payments .....	53	40	55	47	45	51	52	61	62	71	48	38	33
Average amount of benefit payment .....	\$171.95	\$188.06	\$195.31	\$189.71	\$190.37	\$187.17	\$193.83	\$191.97	\$192.53	\$193.65	\$188.68	\$186.48	\$185.46
Total benefits paid .....	\$9,398	\$6,963	\$9,510	\$9,197	\$8,574	\$9,459	\$10,103	\$11,022	\$10,943	\$13,492	\$9,066	\$6,174	\$6,737
Employment service: <sup>5</sup>													
New applications and renewals .....	15,072	16,275	17,335	18,411	1,775	3,207	4,469	5,823	7,014	8,351	9,439	10,647	-----
Nonfarm placements .....	3,200	3,545	3,859	4,159	362	647	876	1,100	1,325	1,612	1,871	2,167	-----

<sup>1</sup>Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

<sup>2</sup>Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

<sup>3</sup>Excludes data on claims and payments made jointly with other programs.

<sup>4</sup>Includes the Virgin Islands. Excludes data on claims and payments made jointly with State programs.

<sup>5</sup>Cumulative total for fiscal year (October 1-September 30).

NOTE: Data for Puerto Rico included. Dashes indicate data not available.

## PRICE DATA

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and wholesale 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 of goods and services purchased by urban wage earners and clerical workers for day-to-day living. It is based on prices of about 400 "market basket" items selected to represent all consumption goods and services purchased by these workers. 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 about 40,000 tenants and 18,000 retail establishments in 56 urban areas across the country. All taxes directly associated with the purchase and use of the 400 items are included in the index. Since the **CPI** is based on the expenditures of a specific population group, it may not accurately reflect the experience of other families and individuals 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. For geographic comparisons of living costs, see the **BLS** family budget studies, Bulletins 1570-5 and 1570-6, and their supplements.

The **Wholesale Price Index** measures average price changes of all commodities and products, classified according to their use or composition, rather than industry of origin. For each product sold in large quantities in open markets, the price of only the first commercial transaction is reflected in the index; for crude, manufactured, and processed goods, prices at each level of processing are included. Monthly price data come from establishments in the sample which voluntarily return questionnaires by mail. Reported prices generally do not include transportation charges from the production point or excise taxes, nor do they apply to interplant transfers, military production, and goods sold to household consumers directly by producing establishments. Each commodity price series in the index represents a class of prices weighted by its own relative importance in primary markets plus the importance of other commodities not priced directly but whose prices are known or assumed to move similarly. All weights refer to the shipment value of the commodity.

**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

As of January 1976, the Wholesale Price Index incorporated a revised weighting structure reflecting 1972 values of shipments. Changes in the classification structure, titles, and composition of some wholesale indexes were made at the same time. Titles and indexes under the revised classification structure may differ from data previously published. In the July issue of the *Review*, monthly data for May 1976 through October 1976, in tables 26 through 30, were revised to reflect the availability of late reports and corrections by respondents.

For a discussion of the general method of computing consumer, wholesale, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13-15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review*, August 1965, pp. 974-82.

Methods of calculating indexes by population-size group (and areas included) are outlined in Richard C. Bahr, Mark R. Meiners, and Toshiko Nakayama, "New consumer price indexes by size of city," *Monthly Labor Review*, August 1972, pp. 3-8. For an explanation of regional indexes, see Toshiko Nakayama and Diane Warsky, "Measuring regional price changes in urban areas," *Monthly Labor Review* Reprint 2920, October 1973. For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics 1976*, Bulletin 1905 (Bureau of Labor Statistics, 1976), tables 128-141. Additional data and analysis of price changes are provided in the *CPI Detailed Report* and *Wholesale Prices and Prices Indexes*, both monthly publications of the Bureau of Labor Statistics.

## 22. Consumer and Wholesale Price Indexes, annual averages and changes, 1953-76

[1967 = 100]

Year	Consumer prices						Wholesale prices					
	All items		Commodities		Services		All commodities		Farm products, processed foods and feeds		Industrial commodities	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1953	80.1	.8	86.7	-.3	67.3	4.3	87.4	-1.4	96.0	-6.5	84.8	.8
1954	80.5	.5	85.9	-.9	69.5	3.3	87.6	.2	95.7	-.3	85.0	.2
1955	80.2	-.4	85.1	-.9	70.9	2.0	87.8	.2	91.2	-4.7	86.9	2.2
1956	81.4	1.5	85.9	.9	72.7	2.5	90.7	3.3	90.6	-.7	90.8	4.5
1957	84.3	3.6	88.6	3.1	75.6	4.0	93.3	2.9	93.7	3.4	93.3	2.8
1958	86.6	2.7	90.6	2.3	78.5	3.8	94.6	1.4	98.1	4.7	93.6	.3
1959	87.3	.8	90.7	.1	80.8	2.9	94.8	.2	93.5	-4.7	95.3	1.8
1960	88.7	1.6	91.5	.9	83.5	3.3	94.9	.1	93.7	.2	95.3	0
1961	89.6	1.0	92.0	.5	85.2	2.0	94.5	-.4	93.7	0	94.8	-.5
1962	90.6	1.1	92.8	.9	86.8	1.9	94.8	.3	94.7	1.1	94.8	0
1963	91.7	1.2	93.6	.9	88.5	2.0	94.5	-.3	93.8	-1.0	94.7	-.1
1964	92.9	1.3	94.6	1.1	90.2	1.9	94.7	.2	93.2	-.6	95.2	.5
1965	94.5	1.7	95.7	1.2	92.2	2.2	96.6	2.0	97.1	4.2	96.4	1.3
1966	97.2	2.9	98.2	2.6	95.8	3.9	99.8	3.3	103.5	6.6	98.5	2.2
1967	100.0	2.9	100.0	1.8	100.0	4.4	100.0	.2	100.0	-3.4	100.0	1.5
1968	104.2	4.2	103.7	3.7	105.2	5.2	102.5	2.5	102.4	2.4	102.5	2.5
1969	109.8	5.4	108.4	4.5	112.5	6.9	106.5	3.9	108.0	5.5	106.0	3.4
1970	116.3	5.9	113.5	4.7	121.6	8.1	110.4	3.7	111.7	3.4	110.0	3.8
1971	121.3	4.3	117.4	3.4	128.4	5.6	114.0	3.3	113.9	2.0	114.1	3.7
1972	125.3	3.3	120.9	3.0	133.3	3.8	119.1	4.5	122.4	7.5	117.9	3.3
1973	133.1	6.2	129.9	7.4	139.1	4.4	134.7	13.1	159.1	30.0	125.9	6.8
1974	147.7	11.0	145.5	12.0	152.1	9.3	160.1	18.9	177.4	11.5	153.8	22.2
1975	161.2	9.1	158.4	8.9	166.6	9.5	174.9	9.2	184.2	3.8	171.5	11.5
1976	170.5	5.8	165.2	4.3	180.4	8.3	182.9	4.6	183.1	-.6	182.3	6.3

## 23. Consumer Price Index—U.S. city average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	Annual average 1976	1976							1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	
All items	170.5	171.1	171.9	172.6	173.3	173.8	174.3	175.3	177.1	178.2	179.6	180.6	181.8	182.6	
All items (1957-59 = 100)	198.3	199.0	200.0	200.8	201.5	202.1	202.7	203.8	206.0	207.2	208.8	210.0	211.5	212.4	
Food	180.8	182.1	182.4	181.6	181.6	181.1	181.7	183.4	87.7	188.6	190.9	191.7	193.6	194.6	
Food at home	179.5	180.9	181.0	179.9	179.6	178.9	179.3	181.2	186.2	186.9	189.3	189.8	191.9	192.8	
Food away from home	186.1	186.9	187.8	188.7	189.3	190.0	190.9	192.2	193.6	195.2	197.5	199.3	200.6	201.7	
Housing	177.2	177.5	178.4	179.5	180.1	180.7	181.6	183.1	184.3	185.5	186.7	187.6	189.0	190.5	
Rent	144.7	145.0	145.6	146.2	146.9	147.5	148.3	149.5	150.2	150.8	151.6	152.2	152.9	153.6	
Homeownership	191.7	192.2	193.4	194.4	194.8	194.8	195.0	196.7	198.1	199.3	201.0	202.3	203.9	206.2	
Apparel and upkeep	147.6	146.5	148.1	150.2	150.9	151.9	151.8	150.0	150.8	151.7	152.3	153.4	153.9	153.4	
Transportation	165.5	167.6	168.5	169.5	170.9	171.4	171.4	172.1	173.3	174.8	176.8	178.2	179.2	179.3	
Health and recreation	163.3	163.7	164.4	165.3	166.1	167.3	168.0	169.0	169.8	170.7	171.4	172.3	173.2	174.1	
Medical care	184.7	185.5	186.8	187.9	188.9	191.3	192.3	194.1	195.8	197.6	199.1	200.5	201.8	203.5	
Special groups															
All items less shelter	168.3	169.0	169.7	170.4	171.0	171.6	172.2	173.1	175.0	176.1	177.5	178.4	179.7	180.2	
All items less food	167.5	167.9	168.9	170.0	170.8	171.6	172.2	172.9	174.0	175.1	176.3	177.3	178.4	179.2	
All items less medical care	169.7	170.3	171.1	171.7	172.4	172.7	173.2	174.2	176.0	177.0	178.4	179.4	180.6	181.4	
Appliances (including radio and TV)	123.3	123.5	123.6	124.2	124.4	124.8	124.7	124.8	125.0	125.0	125.2	125.6	125.7	125.9	
Commodities	165.2	166.0	166.6	167.0	167.4	167.7	168.1	168.7	170.9	171.8	173.3	174.3	175.4	175.8	
Nondurables	169.2	169.7	170.4	170.7	171.0	171.3	171.7	172.4	175.0	175.9	177.4	178.3	179.7	180.1	
Durables	154.3	155.8	156.4	156.9	157.8	158.0	158.4	158.9	159.7	160.8	162.2	163.4	163.9	164.3	
Services	180.4	180.7	181.8	183.2	184.1	185.1	185.8	187.5	188.7	190.0	191.3	192.3	193.7	195.3	
Commodities less food	156.6	157.1	158.0	158.9	159.6	160.3	160.6	160.6	161.6	162.6	163.6	164.7	165.4	165.6	
Nondurables less food	158.3	158.1	159.1	160.4	161.0	161.9	162.3	161.9	163.1	163.9	164.7	165.7	166.6	166.6	
Apparel commodities	145.8	144.4	146.2	148.5	149.2	150.1	149.9	147.6	148.5	149.3	149.8	150.9	151.3	150.6	
Apparel commodities less footwear	144.9	143.4	145.2	147.8	148.5	149.4	149.2	146.5	147.4	148.1	148.6	149.7	150.2	149.6	
Nondurables less food and apparel	165.7	166.3	166.8	167.4	168.1	169.0	169.7	170.5	171.8	172.6	173.5	174.5	175.6	176.1	
Household durables	146.0	146.5	146.3	146.7	147.2	147.8	148.2	148.4	148.8	149.7	150.7	151.2	151.6	151.8	
Household furnishings	150.7	150.9	150.8	151.7	152.2	152.9	153.2	153.0	153.7	154.7	155.5	155.9	156.6	156.4	
Services less rent	186.8	187.2	188.4	189.8	190.8	191.8	192.6	194.4	195.6	197.1	198.4	199.5	201.1	202.8	
Household services less rent	198.4	198.7	200.1	201.5	202.3	202.6	203.5	205.7	206.8	208.4	209.7	210.8	212.9	215.4	
Transportation services	174.3	174.7	175.5	177.3	178.9	180.2	180.8	182.2	183.6	185.1	186.9	187.7	189.0	189.6	
Medical care services	197.1	197.9	199.4	200.6	201.7	204.5	205.7	207.6	209.4	211.5	213.1	214.6	216.0	217.9	
Other services	161.1	161.2	162.0	163.6	164.3	165.2	165.7	166.7	167.5	168.1	168.9	169.6	170.5	171.2	

See footnotes at end of table.



MONTHLY LABOR REVIEW September 1977 • Current Labor Statistics: Consumer Prices

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

[1967 = 100 unless otherwise specified]

Group, subgroup, and selected items	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>FOOD</b>	180.8	182.1	182.4	181.6	181.6	181.1	181.7	183.4	187.7	188.6	190.9	191.7	193.6	194.6
Food away from home	196.1	186.9	187.8	188.7	189.3	190.0	190.9	192.2	193.6	195.2	197.5	199.3	200.6	201.7
Restaurant meals	185.1	185.8	186.7	187.6	188.1	188.9	189.8	190.8	192.0	193.5	195.3	197.0	198.1	198.7
Snacks	191.2	192.2	193.1	193.7	194.9	195.5	196.0	199.2	201.0	203.4	208.0	210.2	212.5	215.8
Food at home	179.5	180.9	181.0	179.9	179.6	178.9	179.3	181.2	186.2	186.9	189.3	189.8	191.9	192.8
Cereals and bakery products	180.6	180.9	180.3	180.4	180.1	179.9	179.3	179.9	180.0	181.3	182.6	182.5	182.8	183.3
Flour	154.7	155.2	155.1	153.7	152.4	150.3	147.2	147.8	144.7	145.6	144.0	144.8	145.4	143.4
Cracker meal	223.5	223.8	223.4	224.0	222.9	222.1	222.0	223.9	227.2	229.7	232.7	233.2	233.1	233.6
Corn flakes	165.5	165.0	165.0	165.0	164.7	164.8	165.0	165.1	166.1	170.5	179.2	182.5	183.6	183.0
Rice	198.7	199.2	198.5	194.8	192.1	191.2	187.9	187.8	185.0	184.6	184.2	180.8	183.7	183.7
Bread, white	162.7	162.9	162.8	163.1	162.6	162.4	162.0	161.8	161.6	161.6	163.6	162.8	161.7	163.0
Bread, whole wheat	178.2	178.4	178.2	178.8	180.2	180.3	179.2	181.0	180.6	180.4	182.6	180.4	182.6	181.0
Cookies	189.6	191.3	187.9	191.4	192.2	187.8	191.6	189.8	192.3	201.1	197.2	199.7	196.2	202.0
Layer cake	185.1	184.7	183.1	183.5	184.9	186.2	187.2	187.4	186.9	188.1	189.6	190.3	192.2	193.3
Cinnamon rolls	195.9	196.5	196.6	195.9	195.0	198.7	196.0	197.0	196.4	196.0	197.1	196.1	197.4	195.8
Meats, poultry, and fish	179.4	184.0	181.5	179.3	174.8	172.0	170.2	172.3	174.7	175.0	174.6	175.9	178.5	180.4
Meats	178.2	182.9	180.1	177.4	172.7	169.7	167.4	169.9	171.3	170.8	170.1	171.3	174.4	175.8
Beef and veal	164.5	166.9	163.3	162.3	158.7	159.4	160.7	162.1	161.5	160.7	161.2	162.8	164.8	164.2
Steak, round	162.9	164.5	159.4	159.8	154.2	157.1	158.2	160.2	160.6	160.6	161.7	162.9	160.8	160.3
Steak, sirloin	163.5	168.8	164.3	161.7	155.5	156.0	159.8	160.6	155.7	155.9	158.2	162.0	170.4	169.7
Steak, porterhouse	177.9	183.8	177.5	178.1	173.0	172.2	174.6	175.9	170.5	170.4	173.3	175.6	188.0	189.4
Rump roast	159.2	160.2	154.0	157.1	152.7	153.5	157.9	159.3	156.7	157.5	155.5	156.3	158.0	153.7
Rib roast	188.4	189.6	186.7	184.7	182.2	181.9	187.8	190.9	187.9	185.0	180.7	186.3	192.3	194.6
Chuck roast	166.0	168.8	161.7	161.4	160.2	162.5	161.1	163.9	165.9	163.3	164.6	163.8	164.2	163.4
Hamburger	160.7	162.9	162.1	159.5	156.9	157.6	156.4	156.5	158.0	156.4	156.3	158.3	157.4	156.7
Beef liver	127.4	127.3	126.8	123.6	124.1	121.9	122.7	119.4	121.3	122.4	125.3	123.3	125.5	121.7
Veal cutlets	186.4	189.6	187.7	184.4	182.7	182.3	181.7	188.4	191.1	187.9	190.2	191.2	192.4	192.9
Pork	199.5	208.7	206.0	200.7	191.7	182.4	174.7	180.1	185.1	184.1	181.7	182.0	187.0	192.0
Chops	182.5	192.5	189.7	182.6	172.8	168.4	159.7	169.6	181.1	175.8	173.6	171.7	177.2	184.8
Loin roast	197.7	209.9	205.5	197.4	187.1	179.6	168.4	176.2	187.6	182.8	182.1	177.7	186.7	195.9
Pork sausage	226.6	233.3	232.8	229.0	224.0	213.5	204.4	203.2	201.6	207.7	210.1	212.3	217.2	220.4
Ham, whole	199.6	202.0	199.3	193.7	191.6	183.2	190.4	197.0	187.1	189.2	180.2	183.0	185.6	189.9
Picnics	184.0	196.7	188.6	182.6	173.6	168.7	163.4	169.5	172.5	167.5	167.9	164.4	167.8	169.4
Bacon	210.4	224.0	222.7	220.8	207.4	189.7	176.7	178.1	184.9	187.3	182.8	188.2	192.5	195.1
Other meats	178.4	181.9	181.0	178.0	176.7	174.5	171.8	172.6	173.6	174.5	173.7	175.1	178.0	179.0
Lamb chops	185.9	196.4	194.1	185.9	184.6	183.3	181.2	183.2	188.1	188.9	187.9	192.5	195.6	198.1
Frankfurters	166.9	168.8	167.5	165.6	162.8	160.3	157.0	157.9	158.3	157.0	161.2	167.4	167.4	167.6
Ham, canned	205.2	204.4	204.2	200.1	203.2	200.8	194.9	198.0	195.1	195.2	187.1	192.2	191.8	193.2
Bologna sausage	176.1	180.8	178.7	177.6	173.4	171.6	169.2	168.0	169.7	172.4	173.9	172.1	175.9	175.8
Salami sausage	167.7	170.8	171.0	168.3	167.8	166.8	165.5	164.3	165.9	164.4	166.0	166.7	170.5	172.2
Liverwurst	168.0	168.8	169.1	169.9	167.9	163.5	162.2	163.2	163.3	164.9	164.3	164.7	165.5	165.7
Poultry	155.7	161.9	158.2	155.1	149.2	144.5	144.0	144.5	152.9	158.3	157.7	157.6	157.6	161.2
Frying chicken	157.6	165.3	160.4	157.0	149.8	143.7	143.5	144.2	155.1	161.8	161.4	160.2	159.6	163.9
Chicken breasts	161.5	167.0	164.3	162.0	157.0	155.6	156.2	156.9	160.2	163.8	167.5	165.1	167.2	170.5
Turkey	141.4	141.1	142.1	139.2	138.9	137.5	134.7	133.8	135.5	137.0	130.9	138.6	138.7	139.5
Fish	227.3	227.9	229.3	234.4	234.4	235.5	237.6	258.0	241.1	241.5	244.0	248.8	250.8	254.3
Shrimp, frozen	222.8	225.6	223.3	232.2	230.9	231.2	231.3	233.1	236.7	235.9	235.8	246.4	246.1	249.2
Fish, fresh or frozen	249.4	251.3	256.3	261.3	263.8	263.8	267.3	269.2	272.3	275.2	279.1	282.6	282.9	283.8
Tuna fish, canned	186.9	186.3	188.4	189.6	189.7	193.5	193.6	195.0	199.7	197.4	200.7	205.2	209.6	215.8
Sardines, canned	248.9	247.3	248.4	253.5	252.2	252.8	257.3	253.8	255.3	256.8	259.7	260.7	264.1	267.8
Dairy products	169.3	168.0	169.0	171.1	172.7	171.7	171.4	171.3	171.1	171.2	171.4	173.1	174.3	174.1
Milk, fresh, grocery	160.7	159.1	159.3	161.1	163.7	162.7	161.8	161.7	161.7	161.5	161.4	161.5	162.4	161.5
Milk, fresh, skim	176.8	175.3	174.7	177.5	179.6	179.8	179.4	179.5	179.2	179.1	178.5	179.4	180.0	179.5
Milk, evaporated	204.8	204.7	204.6	205.9	207.4	208.6	2209.4	209.8	209.9	210.8	212.2	215.3	218.2	219.8
Ice cream	158.6	156.3	157.6	160.3	162.4	160.7	163.6	162.9	161.6	162.3	161.0	166.6	169.5	170.1
Cheese, American process	198.6	197.1	197.9	201.4	202.6	200.7	201.3	201.8	200.0	200.6	201.9	203.9	204.7	205.2
Butter	153.1	152.7	161.7	163.8	159.0	156.5	154.5	154.1	154.2	154.9	157.0	162.7	163.9	164.0
Fruits and vegetables	175.3	177.3	178.3	170.8	175.5	174.8	175.5	177.6	194.7	196.8	203.0	195.1	196.8	194.1
Fresh fruits and vegetables	170.2	175.0	176.6	163.6	126.9	170.7	171.4	174.9	203.6	205.4	214.3	200.8	202.1	197.1
Fresh fruits	160.8	169.3	177.1	163.4	166.2	166.9	165.1	164.1	172.3	180.9	185.8	185.8	197.4	197.1
Apples	155.6	166.3	178.6	160.0	151.9	158.1	166.6	168.0	173.1	177.8	186.3	193.0	205.2	218.2
Bananas	151.3	154.2	153.1	150.1	150.8	148.8	145.1	147.6	154.6	176.5	176.2	176.2	174.8	159.3
Oranges	153.6	154.5	162.8	163.1	169.2	168.4	155.7	148.5	158.4	162.1	161.0	164.3	171.3	172.5
Orange juice, fresh	154.1	155.3	155.5	156.8	156.7	156.9	157.0	156.7	157.4	161.5	165.0	165.9	169.0	171.3
Grapefruit	159.5	173.2	183.1	184.6	197.3	158.6	147.0	146.1	169.0	160.9	158.2	157.3	172.9	184.5
Grapes <sup>1</sup>	216.0	225.0	246.2	167.7	211.6	233.2	-----	-----	-----	-----	-----	-----	-----	279.1
Strawberries <sup>1</sup>	151.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	181.2	145.1	161.5	-----
Watermelon <sup>1</sup>	183.6	177.4	172.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	229.3	185.9
Fresh vegetables	178.0	179.7	176.5	164.0	176.7	173.9	176.7	183.8	228.9	225.3	237.5	213.1	206.1	197.4
Potatoes	200.1	222.1	201.2	175.0	164.3	164.6	168.0	164.8	193.2	197.2	201.6	226.6	268.6	253.6
Onions	170.5	169.2	171.											



MONTHLY LABOR REVIEW September 1977 • Current Labor Statistics: Consumer Prices

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

[1967 = 100 unless otherwise specified]

Group, subgroup, and selected items	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>HOUSING—Continued</b>														
Furniture and bedding	152.2	152.3	152.9	152.0	152.3	152.9	154.3	154.8	154.6	154.3	157.6	158.0	158.4	158.3
Bedroom furniture, chest and dresser <sup>2</sup>	133.3	133.6	133.5	134.5	135.1	136.4	136.9	136.4	136.4	137.5	138.1	139.1	140.3	140.4
Dining room chairs <sup>2</sup>	136.6	135.9	136.0	137.0	138.9	140.2	141.2	140.6	140.2	141.8	143.2	144.6	145.4	146.2
Sofas, upholstered	141.2	142.9	141.8	141.5	141.3	142.6	142.6	142.5	142.0	142.8	145.1	144.4	144.6	143.5
Sofas, convertible	139.0	139.3	139.7	139.3	138.4	139.0	139.3	139.3	139.6	140.5	142.2	142.0	142.5	143.0
Bedding, mattress, and box springs <sup>3</sup>	134.3	134.7	135.3	135.3	135.8	136.8	137.8	137.6	137.5	137.8	138.1	138.7	138.9	138.6
Cribs	154.0	155.2	154.7	154.3	155.9	157.5	157.4	161.1	159.1	160.2	161.5	162.4	163.6	163.9
Cocktail table <sup>4</sup>	130.7	130.8	130.0	130.1	131.4	134.0	134.4	131.1	130.5	132.1	134.1	131.9	131.5	130.9
Recliner, upholstered <sup>4</sup>	112.0	112.2	111.6	112.7	112.2	113.2	112.8	113.8	113.5	114.9	114.7	114.2	113.5	113.1
Floor coverings	136.5	137.4	137.2	137.3	138.0	137.8	138.4	138.6	138.6	139.1	140.0	140.2	140.3	140.4
Broadloom carpeting, manmade fibers	124.4	125.3	125.0	125.3	125.6	125.3	125.8	126.3	125.8	125.7	126.8	127.2	127.6	127.2
Vinyl sheet goods	164.1	165.1	165.6	164.9	166.7	166.6	168.0	167.1	169.0	170.8	170.6	170.5	169.3	171.3
Vinyl asbestos tile	165.0	165.6	165.4	165.7	167.1	167.3	167.4	167.4	167.9	170.0	170.7	170.3	170.0	170.7
Appliances (excluding radio and TV)	135.3	135.6	136.0	136.7	137.2	137.7	137.6	137.8	138.2	138.3	138.8	139.6	139.8	140.1
Washing machines, automatic	141.0	141.7	141.8	142.7	143.0	143.2	143.3	143.2	143.6	144.5	144.1	144.9	144.8	145.1
Vacuum cleaners	121.0	120.7	121.6	122.2	122.4	123.8	123.0	123.3	123.3	124.1	124.9	126.0	126.6	126.1
Refrigerator-freezer, electric	134.8	134.5	135.8	136.5	136.6	136.9	136.5	137.2	138.0	138.1	138.3	138.9	139.0	139.3
Ranges, freestanding, gas or electric	138.7	139.3	139.2	140.1	140.5	140.4	141.1	141.0	140.8	142.1	143.2	143.0	143.2	143.5
Clothes dryers, electric	148.6	149.7	149.9	150.1	151.8	152.1	151.5	151.6	151.9	152.7	153.0	154.6	154.9	155.8
Air conditioners, demountable <sup>1</sup>	129.5	129.9	130.1	129.8	-----	-----	-----	-----	-----	-----	133.3	135.3	134.9	135.8
Room heaters, electric, portable <sup>1</sup>	130.3	-----	-----	-----	131.4	133.5	134.0	133.4	133.9	130.1	-----	-----	-----	-----
Garbage disposal units	134.3	134.7	135.0	135.8	135.9	136.0	135.9	136.9	137.3	137.8	138.1	139.1	139.9	139.8
Other house furnishings:														
Dinnerware, fine china	190.6	192.4	193.0	193.2	192.8	191.9	192.1	194.8	198.0	200.9	202.6	202.1	203.5	206.5
Flatware, stainless steel	181.3	181.5	181.4	182.1	181.8	181.9	181.8	182.4	183.6	185.1	185.8	185.2	187.4	187.2
Table lamps, with shade	148.2	147.9	147.6	148.1	148.5	147.1	149.4	149.3	150.1	151.4	152.0	150.6	151.0	149.8
Housekeeping supplies														
Laundry soaps and detergents	174.9	175.9	176.7	177.2	177.2	178.0	178.9	180.3	181.8	183.2	184.2	184.7	186.2	187.1
Paper napkins	219.9	218.3	221.2	220.7	222.8	224.6	227.2	229.0	230.6	231.0	232.5	233.9	237.3	241.1
Toilet tissue	234.4	231.6	233.4	237.2	243.9	248.7	254.2	255.3	256.8	258.3	260.0	262.6	265.5	268.5
Housekeeping services:														
Domestic service, general housework	211.2	210.6	211.2	213.5	214.7	214.7	214.8	215.9	218.7	219.3	219.4	221.1	222.3	222.9
Babysitter service	214.6	216.8	217.2	218.6	219.7	220.9	221.5	222.3	224.4	225.6	225.2	225.7	227.5	227.9
Postal charges	222.3	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6	225.6
Laundry, flatwork	203.9	204.3	205.9	206.5	207.7	209.2	210.6	213.7	214.9	216.2	218.0	219.6	222.0	223.1
Licensed day care service, preschool child	162.8	162.9	163.7	164.5	164.9	165.9	166.3	166.4	168.9	169.3	169.8	169.9	170.4	171.1
Washing machine repair	200.4	200.2	201.2	203.0	203.8	204.8	205.5	206.3	206.3	208.7	209.2	209.6	210.9	211.1
<b>APPAREL AND UPKEEP</b>	147.6	146.5	148.1	150.2	150.9	151.9	151.8	150.0	150.8	151.7	152.3	153.4	153.9	153.4
Men's and boys'	147.2	145.6	147.5	150.1	150.1	150.8	150.7	148.8	150.6	152.6	153.1	154.3	153.8	152.6
Men's:														
Topcoats, wool or all weather coats, polyester blend <sup>1</sup>	149.4	149.1	151.2	152.0	153.9	154.0	154.1	151.7	150.6	153.4	153.4	154.5	154.9	153.0
Suits, year-round weight	140.8	136.7	137.4	146.1	142.7	145.0	142.9	137.2	139.7	144.0	143.1	143.2	141.8	136.3
Jackets, lightweight	139.1	137.1	138.3	140.1	140.7	142.4	142.8	144.3	145.0	144.5	148.6	147.5	147.2	145.0
Slacks, wool, manmade fibers or blends	120.1	119.1	120.9	121.7	121.9	119.6	120.7	115.5	116.3	119.0	117.6	119.2	119.0	116.3
Slacks, cotton, manmade fibers or blends	145.9	143.6	145.6	146.7	148.8	150.5	152.0	149.8	150.8	151.4	148.9	151.7	150.1	149.7
Trousers, work	161.0	162.5	162.6	163.3	164.0	165.1	165.7	167.1	169.3	170.7	172.2	173.7	173.1	173.0
Shirt, work	159.1	160.9	161.6	161.8	162.0	162.2	162.5	164.8	168.9	169.6	171.4	172.7	174.3	175.4
Shirts, business or dress	133.1	132.3	135.1	136.3	137.0	138.4	137.8	137.0	138.9	141.6	142.4	142.8	142.7	142.0
T-shirts	159.2	159.3	159.7	161.0	161.5	161.9	162.2	164.9	170.9	173.5	174.4	177.3	177.3	178.1
Socks	134.7	133.6	135.1	136.6	135.4	137.4	137.6	137.9	137.8	138.0	138.1	138.5	138.7	139.0
Handkerchiefs	161.9	160.3	162.3	163.8	164.5	165.4	164.7	166.2	167.3	170.4	170.9	170.5	169.2	169.3
Boys':														
Coats, all purpose, cotton or cotton blend <sup>1</sup>	118.9	-----	-----	126.9	127.8	126.5	123.8	116.8	113.8	118.1	119.1	-----	-----	-----
Sport coats, wool or blend <sup>1</sup>	126.4	-----	-----	126.4	129.3	129.0	128.8	126.4	127.1	126.8	-----	-----	-----	-----
Dungarees, cotton or blend	190.0	191.6	193.3	194.1	195.7	196.8	197.1	199.0	200.7	202.6	203.5	206.2	207.4	206.7
Undershorts, cotton	156.4	158.6	156.5	157.9	157.7	158.3	158.2	159.9	162.8	166.2	166.6	168.6	170.0	171.2
Women's and girls'	141.9	140.2	142.2	145.0	146.1	147.3	146.9	143.0	143.3	143.3	143.6	144.7	146.0	145.6
Women's:														
Coats, heavyweight, wool or wool blend <sup>1</sup>	149.3	-----	154.6	161.7	163.3	165.9	159.3	145.6	140.5	137.6	-----	-----	-----	-----
Skirts, winter weight	157.3	-----	-----	157.4	160.6	165.2	163.5	151.3	146.3	154.4	153.3	-----	-----	-----
Skirts, summer weight	146.8	138.1	143.9	141.0	141.5	-----	-----	149.6	158.2	160.6	162.2	163.4	158.3	150.0
Blouses	142.8	137.6	143.0	145.1	145.6	148.5	147.8	143.1	145.4	146.1	146.8	147.8	145.3	145.6
Dresses, street, chiefly manmade fiber	149.3	145.6	148.7	151.7	151.6	153.5	153.7	151.4	153.4	154.8	153.5	154.0	154.3	151.9
Slips, nylon	125.2	124.6	124.3	125.1	127.2	130.4	130.8	131.8	131.2	132.7	134.3	135.4	135.1	135.9
Panties, acetate or nylon	150.3	151.5	151.8	152.2	152.2	154.1	154.5	155.5	154.3	155.1	155.0	156.3	158.4	159.6
Girdles, manmade blend	133.5	133.1	134.1	134.8	133.5	136.4	135.9	134.7	137.0	138.3	139.1	138.3	134.2	135.7
Brassieres, nylon	150.4	151.7	152.0	151.1	152.8	153.6	153.9	153.5	154.9	155.2	155.2	155.6	156.0	156.6
Hose or panty hose, nylon, seamless	92.4	93.1	93.2	92.7	91.8	93.2	93.0	92.7	91.8	92.5	92.7	93.0	92.9	93.1
Anklets or knee-length socks, various fibers	135.2	134.9	133.8	136.1	137.0	138.1	138.2	138.6	139.0	140.2	138.8	138.8	139.2	138.9
Gloves, fabric, nylon	129.0	129.4	128.6	127.7	127.7	129.4	129.7	129.5	129.9	131.5	133.1	134.5	135.0	133.6
Handbags, rayon faille or plastic	170.5	170.0	167.9	173.6	174.5	175.2	177.3	173.7	174.5	174.4	175.0	173.9	171.2	171.4

See footnotes at end of table.



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

[1967 = 100 unless otherwise specified]

Group, subgroup, and selected items	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>APPAREL AND UPKEEP—Continued</b>														
Girls:														
Raincoats, vinyl plastic or chiefly cotton <sup>1</sup>	130.8	-----	-----	141.8	143.7	141.6	140.3	135.6	137.3	128.1	124.3	123.3	123.6	-----
Skirts, wool or wool blend <sup>1</sup>	156.3	151.6	162.6	164.0	164.0	163.2	161.9	152.9	154.1	154.8	154.6	155.8	156.7	-----
Dresses, cotton manmade fibers or blends	134.3	129.1	139.8	140.2	138.4	140.2	137.0	135.8	131.2	136.6	136.0	136.1	137.9	136.1
Slacks	171.2	168.7	171.9	172.8	177.0	174.4	177.3	173.0	170.2	171.9	-----	177.4	176.9	174.4
Slips, cotton blend	134.6	133.6	137.7	138.6	138.8	139.8	140.2	140.6	141.6	142.3	142.6	142.3	143.0	143.6
Handbags	140.7	137.2	141.5	143.1	146.0	145.6	148.4	151.2	150.3	149.4	149.9	150.0	151.6	150.6
Footwear														
Men's:														
Shoes, street (oxford or buckle strap)	155.3	156.9	157.8	159.4	158.7	160.8	161.0	160.6	162.0	162.3	164.7	165.3	165.3	164.2
Shoes, work, high	170.6	171.8	172.5	172.4	174.4	176.2	177.2	178.2	178.7	180.3	181.5	182.6	183.2	184.7
Women's:														
Shoes, street, pump	143.0	139.3	144.5	145.2	146.1	147.8	145.4	144.3	145.7	148.1	147.3	147.2	146.4	141.9
Shoes, evening, pump	134.8	134.5	134.7	135.8	137.3	137.9	138.0	136.7	137.8	137.8	138.7	139.6	139.6	139.5
Shoes, casual, pump	151.5	150.3	152.1	155.3	155.4	155.7	154.9	153.7	155.6	157.1	158.0	159.4	159.1	156.9
Houseslippers, scuff	146.8	147.2	148.4	148.8	149.1	149.5	149.8	151.0	151.4	150.4	150.4	150.7	150.9	151.9
Children's:														
Shoes, oxford	151.9	153.1	155.2	155.7	156.3	153.9	153.4	154.7	156.3	158.5	159.3	158.6	158.5	159.0
Sneakers, boys', oxford type	149.4	149.5	148.1	149.1	148.9	150.4	151.1	150.7	152.3	151.4	152.8	156.2	155.9	155.7
Dress shoes, girls', strap or pump	159.7	159.0	158.5	161.3	161.5	161.9	162.2	163.1	163.6	166.1	166.4	168.2	167.3	167.5
Miscellaneous apparel:														
Diapers, cotton gauze or disposable	190.2	189.8	191.3	190.8	196.1	198.8	200.4	201.3	204.0	202.1	204.6	207.6	204.5	203.5
Yard goods, polyester blend	160.4	159.1	160.2	161.2	162.9	165.8	166.5	167.2	168.0	169.6	171.2	172.8	174.3	174.2
Apparel services:														
Drycleaning, men's suits and women's dresses	160.6	160.7	161.5	161.9	162.8	164.4	165.2	166.0	166.8	168.1	168.9	169.9	170.8	171.0
Automatic laundry service	143.4	143.2	143.2	144.4	145.0	147.0	147.4	148.2	147.8	150.9	155.1	156.7	159.1	160.6
Laundry men's shirts	164.9	165.0	167.7	168.1	168.7	169.3	170.0	171.7	172.9	174.0	175.2	176.1	177.2	177.5
Tailoring charges, hem adjustment	161.9	163.1	163.4	163.7	165.0	165.5	166.3	166.9	167.0	167.9	167.6	168.1	169.3	174.0
Shoe repairs, women's heel lift	149.6	149.4	149.9	150.6	151.7	154.7	155.5	156.2	157.2	158.2	159.5	160.7	162.0	162.4
<b>TRANSPORTATION</b>														
Private														
Automobiles, new	135.7	134.4	134.4	134.2	139.1	139.7	140.4	141.1	140.7	140.9	140.6	141.4	141.7	141.6
Automobiles, used	167.9	177.5	179.6	180.1	179.9	179.0	178.0	177.7	179.1	182.7	187.8	191.4	192.2	190.6
Gasoline, regular and premium	177.9	180.6	181.8	182.1	182.0	181.7	181.2	181.3	183.5	184.9	180.2	189.2	190.6	190.9
Motor oil, premium	159.7	159.8	160.2	160.6	161.0	161.7	161.9	162.5	163.0	163.9	164.7	165.6	165.7	166.2
Tires, new, tubeless	133.0	130.5	132.3	135.9	138.0	139.5	138.9	140.4	140.0	138.3	137.2	135.0	135.1	135.7
Auto repairs and maintenance <sup>9</sup>	189.7	189.9	191.2	192.0	192.9	193.8	194.4	196.4	198.3	200.3	201.3	202.3	203.1	204.1
Auto insurance rates	187.9	189.4	190.7	194.1	196.1	199.0	199.7	200.5	203.8	206.0	210.1	210.3	212.4	213.5
Auto registration	132.8	132.8	132.8	132.8	132.8	132.8	132.8	137.5	137.5	137.5	142.2	142.2	142.2	142.2
Public														
Local transit fares	174.2	174.4	174.6	176.9	177.4	177.6	178.0	177.8	178.9	180.4	180.4	181.5	183.2	183.5
Taxicab fares	173.3	173.4	173.5	175.7	175.7	175.8	175.8	177.0	177.0	177.4	177.4	179.1	178.9	179.2
Railroad fares, coach	176.9	176.8	177.7	177.1	179.9	181.5	181.6	181.7	182.5	187.7	187.7	188.2	190.5	191.4
Plane fares, chiefly coach	165.3	168.8	168.8	168.8	169.1	169.3	169.4	169.4	169.4	173.6	173.6	173.6	185.9	185.9
Bus fares, intercity	172.2	173.4	173.4	177.3	177.7	177.7	177.8	177.8	177.8	180.7	180.7	180.7	181.1	181.1
Bus fares, intercity	196.9	192.6	192.6	203.6	203.6	203.6	211.2	211.2	211.2	211.2	211.2	211.2	232.2	232.2
<b>HEALTH AND RECREATION</b>														
Medical care														
Drugs and prescriptions	126.0	126.4	126.9	127.4	127.9	128.5	128.9	129.8	130.7	131.4	132.4	133.3	134.2	134.7
Over-the-counter items	138.9	139.2	139.9	140.6	141.4	142.1	142.5	143.7	144.3	145.0	146.3	147.9	149.0	149.6
Multiple vitamin concentrates	105.7	105.6	106.6	105.8	106.2	106.9	106.9	107.7	107.6	108.0	108.1	108.3	108.4	108.7
Aspirin compounds	139.0	138.6	139.5	140.1	140.6	141.0	140.7	142.4	142.1	143.9	145.6	147.6	148.2	148.7
Liquid tonics	120.5	121.1	121.2	121.3	121.4	121.7	121.6	121.8	121.5	121.9	122.0	122.2	122.3	122.6
Adhesive bandages, package	182.8	184.3	185.1	186.9	189.2	191.0	192.7	195.9	198.3	198.8	204.0	208.1	212.0	213.6
Cold tablets or capsules	131.1	131.3	131.5	132.6	132.9	133.6	133.2	133.5	134.3	134.1	134.2	134.8	135.5	135.9
Cough syrup	145.5	145.8	147.2	147.8	148.8	149.4	150.7	151.4	152.3	152.3	153.7	155.2	156.3	157.0
Prescriptions														
Anti-infectives	115.2	115.7	116.0	116.4	116.6	117.1	117.5	118.2	119.3	120.1	120.7	121.2	121.9	122.2
Sedatives and hypnotics	73.0	73.2	73.1	73.1	73.2	73.6	73.6	73.8	74.1	74.3	74.9	75.0	75.0	74.9
Ataractics	163.8	164.3	165.0	165.8	166.2	167.5	167.8	168.7	169.9	171.1	171.1	172.2	173.2	173.4
Anti-spasmodics	113.2	113.9	114.6	115.1	115.7	116.1	116.3	116.5	116.8	117.1	117.1	117.0	117.0	116.8
Cough preparations	136.1	136.5	137.4	138.6	139.3	140.3	140.6	141.8	144.5	146.8	148.5	149.0	150.9	151.5
Cardiovasculars and antihypertensives	181.4	183.7	184.6	184.9	184.9	185.5	186.9	190.3	193.4	197.2	199.0	200.3	201.3	202.7
Analgesics, internal	121.1	121.8	121.4	121.6	121.6	122.0	122.4	122.8	123.9	124.3	124.6	125.1	125.3	125.8
Hormones	121.0	121.2	121.1	121.0	121.0	121.0	121.9	122.2	123.0	123.4	123.7	124.3	124.9	125.0
110.5	111.0	111.1	111.6	111.9	112.1	112.6	113.8	115.5	116.6	117.7	118.6	120.2	120.8	
Professional services:														
Physicians' fees	188.5	189.4	190.6	192.2	193.1	194.9	195.6	197.1	198.8	201.3	203.0	204.3	205.7	207.0
General physician, office visits	193.8	194.5	196.2	197.8	198.8	201.1	201.7	203.0	204.6	207.7	209.1	210.4	211.7	213.0
General physician, house visits	189.8	190.9	191.5	193.2	193.5	195.4	196.7	198.9	200.1	202.0	203.0	204.3	204.9	205.8
Obstetrical cases	192.1	193.8	194.9	196.8	197.8	198.6	198.7	201.4	202.2	203.3	204.5	205.2	206.3	207.3
Pediatric care, office visits	192.7	194.7	195.3	195.9	195.8	198.5	200.1	203.1	206.2	208.7	209.5	211.5	212.7	214.4
Psychiatrist, office visits	163.9	163.5	164.2	165.6	165.8	166.5	166.6	167.1	167.8	169.0	171.9	172.7	173.9	173.9
Herniorrhaphy, adult	169.3	170.3	171.9	173.0	174.6	175.9	176.7	177.6	178.6	179.6	181.7	182.1	182.7	183.7
Tonsillectomy and adenoidectomy	179.2	180.2	180.2	182.8	183.6	184.2	185.4	186.1	189.4	191.7	196.2	197.8	201.9	203.6

See footnotes at end of table.

MONTHLY LABOR REVIEW September 1977 • Current Labor Statistics: Consumer Prices

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

[1967 = 100 unless otherwise specified]

Group, subgroup, and selected items	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>HEALTH AND RECREATION—Continued</b>														
Dentists' fees	172.2	172.0	173.5	174.5	175.6	176.6	177.9	178.7	179.9	180.9	181.9	183.2	184.1	185.7
Fillings, adult, amalgam, one surface	177.4	177.2	178.7	179.6	180.4	181.8	183.3	184.2	185.6	186.7	188.2	189.5	190.5	192.3
Extractions, adult	171.5	171.1	173.0	174.4	176.0	176.8	178.1	179.1	180.8	181.9	182.8	183.9	184.6	186.6
Dentures, full uppers	162.3	162.4	163.3	164.1	165.3	165.8	166.4	167.1	167.5	168.1	168.2	169.5	170.6	171.3
Other professional services:														
Examination, prescription, and dispensing of eyeglasses	158.9	159.5	159.8	160.5	161.1	161.8	162.4	163.5	164.3	165.2	165.9	166.7	167.6	168.7
Routine laboratory tests, urinalysis	160.5	162.0	163.4	164.0	164.0	163.7	163.9	163.9	164.6	165.6	167.7	169.2	169.3	170.0
Hospital service charges <sup>6</sup>	148.7	149.7	151.0	151.6	152.5	153.8	154.8	156.7	158.2	159.7	161.1	162.5	163.6	165.4
Semiprivate rooms	268.6	270.8	273.8	275.2	276.6	279.3	281.5	285.3	288.3	291.2	293.5	295.9	298.1	302.6
Operating room charges	274.8	277.4	280.5	281.8	285.2	287.5	290.3	296.1	300.6	302.6	304.3	307.2	309.7	312.9
X-ray, diagnostic series, upper G.I.	174.6	175.9	178.5	179.1	179.4	179.9	181.0	182.9	183.7	184.6	186.8	187.7	188.7	190.9
Laboratory test, urinalysis <sup>6</sup>	140.7	140.6	140.7	140.8	142.7	143.5	144.0	144.9	145.9	147.1	148.3	149.8	149.9	150.2
Anti-infective, tetracycline, HCL <sup>6</sup> and Meprobamate	123.2	125.1	123.5	123.4	123.8	126.2	126.6	127.3	127.9	130.0	131.3	131.8	132.2	131.7
Tranquilizer, chlorzepoxide, HCL <sup>6</sup>	129.3	128.9	129.8	129.6	130.2	131.4	131.4	133.1	133.8	136.5	138.0	141.0	142.3	143.3
Electrocardiogram <sup>6</sup>	136.6	137.4	137.8	137.9	138.5	139.1	140.2	141.3	142.7	143.2	143.9	145.1	145.3	145.9
Intravenous solution, saline <sup>6</sup>	144.0	144.6	146.0	146.6	147.1	148.2	148.8	149.6	150.5	151.5	152.2	154.0	154.8	155.6
Physical therapy, whirlpool bath <sup>6</sup>	148.8	148.0	151.9	153.4	154.4	154.3	155.1	156.4	158.2	159.2	162.4	164.7	167.8	168.7
Oxygen, inhalation therapy <sup>6</sup>	130.5	129.8	131.2	132.1	133.5	133.7	134.0	136.0	136.6	138.0	138.7	139.1	141.0	142.6
Personal care														
Toilet goods	160.5	160.5	161.6	162.8	163.9	164.8	165.2	166.2	166.7	167.3	168.4	169.5	170.6	171.3
Toilet goods	158.5	158.6	159.3	159.9	161.0	162.0	162.3	163.4	163.5	164.1	165.3	166.1	167.4	167.9
Toothpaste, standard dentifrice	137.7	136.6	137.0	138.7	140.5	141.6	140.6	140.7	142.5	142.9	143.2	144.0	143.7	143.3
Toilet soap, hard milled	193.5	192.7	192.2	191.4	192.1	193.3	192.9	194.9	194.1	196.3	200.1	204.6	208.9	209.7
Hand lotions, liquid	163.3	162.7	164.9	165.6	166.7	167.5	168.2	168.3	170.5	171.0	172.3	172.1	172.8	174.2
Shaving cream, aerosol	135.0	135.6	137.4	136.7	138.0	138.6	139.0	140.3	139.9	137.4	139.8	139.0	140.7	138.5
Face powder, pressed	166.5	168.7	170.8	170.9	171.7	173.3	174.1	175.1	172.4	173.7	173.8	171.7	171.4	171.9
Deodorants, aerosol	120.3	120.0	121.0	121.5	122.3	123.0	123.5	123.4	121.6	124.6	125.1	125.7	125.7	125.9
Cleansing tissues	217.1	217.4	215.4	219.2	220.4	224.2	224.2	227.3	228.2	228.8	230.1	232.3	235.8	235.8
Home permanent wave sets	128.6	129.4	129.9	129.7	130.9	130.6	130.4	131.5	133.3	132.9	134.3	134.9	135.9	137.1
Personal care services	162.5	162.4	164.0	165.7	166.8	167.6	168.2	169.0	170.0	170.6	171.6	173.0	173.8	174.8
Men's haircuts	163.3	163.3	164.4	166.8	167.7	168.3	168.6	169.3	170.2	170.7	171.5	172.4	173.4	174.2
Beauty shop services	162.0	161.9	163.9	165.1	166.2	167.2	168.0	168.9	170.0	170.6	171.9	173.6	174.3	175.4
Reading and recreation														
Recreational goods	151.2	151.2	151.4	152.8	153.5	154.1	154.4	154.9	155.5	155.8	156.0	156.8	157.6	157.7
Recreational goods	127.4	127.6	127.8	128.2	128.4	128.7	128.7	129.9	129.2	129.6	129.7	130.2	130.5	130.5
TV sets, portable and console	102.9	102.7	102.6	102.9	102.6	103.0	102.9	102.8	102.4	102.2	101.9	101.6	101.4	101.2
TV replacement tubes	166.1	166.7	166.7	166.9	166.9	167.2	168.0	169.2	170.8	171.1	172.8	177.1	177.5	174.1
Radios, portable and table model	105.2	105.7	105.3	105.2	105.0	105.6	105.0	105.4	105.1	105.3	105.3	105.0	105.1	105.4
Tape recorders, portable	95.9	96.1	96.2	96.4	96.5	96.0	96.4	95.9	95.9	95.5	95.3	95.4	95.2	94.9
Phonograph records, stereophonic	123.7	122.8	123.6	123.7	124.0	123.9	124.1	123.5	123.9	123.7	124.1	124.8	125.7	126.2
Movie cameras, Super 8, zoom lens	95.3	95.8	95.4	95.9	95.5	95.7	95.7	95.7	95.9	95.8	95.8	95.9	96.2	96.2
Film, 35mm, color	125.3	126.9	126.9	127.8	128.2	128.0	128.4	128.7	130.3	131.3	131.4	132.2	132.7	133.4
Bicycle, boys'	145.2	145.6	146.4	146.8	146.7	146.7	146.0	146.6	146.3	146.7	146.2	147.0	146.7	147.4
Tricycles	150.0	151.0	151.5	151.8	152.1	152.9	152.5	153.6	152.8	153.3	153.1	152.8	154.3	155.3
Recreational services														
Indoor movie admissions	155.3	156.0	156.5	156.9	157.7	158.0	158.5	159.5	160.2	160.3	160.6	160.8	161.4	161.8
Drive-in movie admissions, adult	177.5	179.4	179.6	179.6	180.0	179.6	180.7	182.3	184.8	183.7	183.5	184.0	183.7	184.7
Bowling fees, evening	146.8	145.3	145.5	147.2	149.0	151.1	151.4	152.4	153.2	153.5	154.2	154.0	153.8	153.5
Golf greens fees <sup>1</sup>	166.5	167.2	167.4	167.7	167.2	-----	-----	-----	-----	-----	171.1	169.9	173.7	174.6
TV repairs, picture tube replacement	107.1	106.3	106.6	107.3	108.8	109.0	109.3	109.5	110.0	109.7	109.8	110.0	109.5	109.5
Film developing, color	123.9	124.1	124.0	123.6	123.7	123.8	123.6	123.0	121.2	123.0	122.3	121.9	121.6	121.8
Reading and education:														
Newspapers, street sale and delivery	182.1	182.3	182.5	182.6	183.4	185.2	185.3	185.7	187.8	188.5	189.1	189.4	194.1	194.1
Piano lessons, beginner	145.6	145.2	145.7	148.0	148.4	149.3	150.7	151.2	151.5	151.7	152.1	153.0	153.0	153.2
<b>OTHER GOODS AND SERVICES</b>														
Tobacco products	153.5	153.6	153.8	153.9	154.4	155.3	155.9	156.7	156.9	157.3	157.7	158.0	158.4	159.1
Cigarettes, nonfilter tip, regular size	160.5	160.4	160.5	160.6	161.0	162.7	163.7	165.4	165.8	166.0	166.2	166.2	166.4	167.2
Cigarettes, filter, king size	162.7	162.5	162.7	162.7	163.1	165.0	166.0	167.8	168.1	168.2	168.3	168.4	168.5	169.4
Cigarettes, filter, king size	163.2	163.2	163.2	163.2	163.6	165.3	166.4	168.2	168.7	168.9	169.0	169.1	169.5	170.2
Cigars, domestic, regular	129.9	129.9	130.1	130.4	131.4	132.6	132.8	133.2	133.6	134.1	134.3	134.3	134.6	135.2
Alcoholic beverages														
Beer	146.8	147.5	147.6	147.7	148.3	148.6	148.8	148.8	148.8	149.3	149.8	150.3	150.7	151.4
Whiskey, spirit blended and straight bourbon	143.7	144.6	144.2	144.0	144.8	145.4	145.8	144.7	144.3	145.0	145.3	145.9	145.5	146.2
Wine, dessert and table	116.0	116.2	116.2	116.5	116.5	116.0	115.7	115.8	116.5	116.7	116.6	117.2	116.9	117.6
Beer, away from home	116.0	157.7	157.9	158.2	158.2	158.9	158.9	158.9	159.2	159.4	159.6	159.9	160.7	161.9
Beer, away from home	165.5	166.3	167.1	167.6	168.4	168.5	169.0	170.3	170.3	170.7	172.0	172.4	173.9	174.4
Financial and miscellaneous personal expenses:														
Funeral services, adult	149.8	149.9	150.4	150.8	151.1	151.5	152.2	152.9	153.9	154.4	154.9	155.1	156.2	156.5
Bank service charges, checking accounts	127.3	127.2	128.9	129.4	130.1	131.6	131.9	132.2	132.4	132.1	132.2	132.6	133.0	133.0
Legal services, will	199.9	201.2	201.0	201.6	201.9	203.0	203.6	207.5	208.5	211.8	212.3	212.4	214.6	215.3

<sup>1</sup>Priced only in season.

<sup>2</sup>March 1970 = 100.

<sup>3</sup>June 1970 = 100.

<sup>4</sup>December 1971 = 100.

<sup>5</sup>Includes prices for water pump replacement, motor tune-up, automatic transmission repair, front-

end alignment, and chassis lubrication; does not include prices for auto body repairs. In the CPI, this component represents consumers' direct out-of-pocket expenses for automobile repairs and maintenance.

<sup>6</sup>January 1972 = 100.

24. Consumer Price Index, by population size and by region

[1967 = 100]

Population size group and region	Annual average		1974		1975				1976				1977	
	1975	1976	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June
<b>POPULATION SIZE GROUP<sup>1</sup></b>														
All items:														
3.5 million or more (A-1)	162.5	171.6	153.9	157.3	159.4	161.3	165.0	167.6	168.7	171.1	173.9	175.4	178.9	182.1
1.4 to 3.5 million (A-2)	160.4	169.8	150.7	154.3	157.0	160.2	162.8	165.0	167.0	169.4	171.9	174.0	178.1	181.6
250,000-1.4 million (B)	160.3	169.4	150.4	154.4	156.9	159.9	162.7	165.2	166.3	169.2	171.6	173.3	177.2	181.2
50,000-250,000 (C)	160.7	169.9	150.7	154.7	157.0	160.5	163.1	166.2	166.7	169.8	171.9	173.5	177.6	181.5
2,500-50,000 (D)	161.3	171.0	150.8	155.1	157.6	161.1	163.6	166.6	168.2	170.7	173.0	174.6	178.8	182.7
Food:														
3.5 million or more (A-1)	176.4	181.7	166.4	171.6	172.9	175.4	178.5	182.1	179.5	181.9	182.5	183.1	189.0	193.7
1.4 to 3.5 million (A-2)	175.1	181.1	164.8	169.1	171.0	174.8	177.9	180.5	179.2	181.5	182.5	181.7	189.0	194.9
250,000-1.4 million (B)	174.8	180.4	163.9	168.9	171.0	174.2	177.6	180.3	178.6	180.5	181.3	181.8	189.1	194.0
50,000-250,000 (C)	173.5	179.2	163.8	167.3	169.0	172.7	176.7	179.7	177.5	179.2	180.4	179.5	187.5	192.7
2,500-50,000 (D)	174.4	179.7	164.6	169.1	170.6	173.9	177.1	179.3	178.1	180.1	180.7	180.2	187.7	192.9
Housing:														
3.5 million or more (A-1)	166.8	176.2	157.0	161.1	164.4	166.0	168.7	171.8	173.5	175.5	178.4	180.4	184.1	186.7
1.4 to 3.5 million (A-2)	163.6	173.6	152.5	156.9	160.8	163.5	165.7	168.1	170.6	172.5	175.5	179.4	182.9	185.8
250,000-1.4 million (B)	165.7	176.2	153.3	158.6	162.1	165.7	168.1	170.9	173.4	175.6	178.6	180.3	184.1	188.6
50,000-250,000 (C)	167.9	178.9	154.9	160.5	164.2	167.9	170.1	173.7	175.4	178.8	181.1	183.3	187.4	191.5
2,500-50,000 (D)	169.1	181.4	154.9	160.9	165.3	168.9	171.2	176.0	179.2	180.5	183.7	185.4	190.1	193.7
Apparel and upkeep:														
3.5 million or more (A-1)	139.2	142.7	139.6	139.0	138.6	137.2	141.2	140.4	140.3	140.4	146.0	145.8	144.5	146.1
1.4 to 3.5 million (A-2)	143.8	148.5	140.2	143.1	142.7	142.8	144.4	146.2	146.9	147.5	149.7	151.6	152.8	153.4
250,000-1.4 million (B)	144.0	151.1	140.5	142.8	142.2	142.6	145.1	147.5	147.4	150.4	153.6	155.9	155.9	158.8
50,000-250,000 (C)	145.4	151.0	141.2	145.0	142.9	145.3	145.3	149.4	147.7	150.8	152.2	155.5	156.7	159.2
2,500-50,000 (D)	143.3	150.4	138.0	142.4	140.6	143.8	143.2	147.0	146.8	150.8	151.7	154.8	155.2	158.3
Transportation:														
3.5 million or more (A-1)	155.9	173.2	146.0	147.7	148.9	153.4	162.0	165.1	167.6	173.0	177.6	179.4	182.8	187.1
1.4 to 3.5 million (A-2)	150.2	167.2	141.4	143.0	144.9	150.4	154.0	155.8	162.2	168.0	171.3	173.0	177.7	181.8
250,000-1.4 million (B)	147.7	160.5	140.7	141.5	142.4	147.5	151.8	153.1	154.4	161.2	164.3	166.7	169.6	174.0
50,000-250,000 (C)	148.9	161.8	140.1	141.4	143.3	148.5	153.0	155.3	156.4	162.3	165.3	166.9	169.8	174.7
2,500-50,000 (D)	148.1	161.4	140.0	141.2	142.4	147.9	152.4	154.2	155.6	161.9	165.3	167.3	170.8	175.2
Health and recreation:														
3.5 million or more (A-1)	156.3	167.3	147.6	150.7	154.0	155.9	158.2	160.4	164.3	166.9	169.7	172.0	175.1	177.7
1.4 to 3.5 million (A-2)	153.5	163.6	143.3	146.4	150.3	153.5	156.2	158.0	161.0	162.9	165.6	168.5	171.4	173.8
250,000-1.4 million (B)	152.9	162.0	143.2	146.9	150.7	152.5	154.7	156.9	159.6	161.6	163.7	166.4	169.3	171.5
50,000-250,000 (C)	150.9	159.9	141.2	145.1	148.7	150.7	152.7	154.9	157.2	159.3	161.8	164.7	166.6	169.0
2,500-50,000 (D)	151.2	160.4	147.1	145.5	148.9	151.0	153.2	154.8	158.0	159.8	162.1	165.2	167.2	170.4
<b>REGION<sup>2</sup></b>														
All items:														
Northeast	164.0	173.3	155.5	158.9	160.7	163.1	166.3	169.2	170.7	172.9	175.2	176.7	180.2	183.4
North Central	158.5	167.6	149.1	152.9	155.2	158.1	160.8	163.3	164.5	167.4	169.8	171.5	175.7	179.5
South	163.7	172.8	153.6	157.5	160.1	163.3	166.4	168.7	169.7	172.6	175.1	176.6	180.6	184.4
West	157.7	167.3	146.7	150.9	154.4	157.3	160.2	163.0	164.0	166.7	169.7	171.8	175.6	179.7
Food:														
Northeast	177.0	183.1	166.7	171.4	173.5	176.6	179.2	182.6	181.4	183.5	183.9	183.9	190.3	194.8
North Central	173.3	179.9	163.9	168.9	169.3	172.0	175.6	180.0	177.8	180.4	181.1	180.6	187.6	193.5
South	178.7	183.1	168.2	172.6	174.6	177.7	182.5	183.4	181.4	183.1	184.2	183.6	192.0	196.2
West	169.9	173.7	159.4	163.7	166.3	170.1	172.5	174.4	171.3	173.3	174.7	176.3	182.4	188.6
Housing:														
Northeast	170.3	179.7	161.3	165.4	167.3	169.8	172.2	175.3	177.6	179.2	181.1	183.6	187.0	190.0
North Central	160.0	169.9	147.6	152.5	157.1	160.2	162.0	164.5	167.1	169.1	172.3	174.4	178.5	181.6
South	171.8	183.2	158.6	164.2	168.0	171.6	174.3	178.0	180.1	182.6	185.8	187.3	191.1	195.2
West	165.5	177.7	151.4	157.4	162.6	164.4	167.7	172.4	174.4	176.7	180.6	182.7	187.4	191.9
Apparel and upkeep:														
Northeast	143.0	147.7	141.7	142.5	141.8	141.1	144.7	145.6	144.3	145.5	150.9	152.1	150.0	152.5
North Central	142.2	147.5	139.2	142.1	140.3	141.6	142.7	145.0	144.4	147.2	149.2	151.2	152.1	154.4
South	144.0	151.4	140.1	142.8	142.3	143.4	144.6	147.3	148.4	150.9	153.7	155.4	156.7	159.1
West	139.2	143.7	136.5	138.3	137.6	138.6	140.2	141.4	142.2	143.1	144.8	146.4	147.2	148.4
Transportation:														
Northeast	154.6	173.9	144.6	146.5	147.8	151.9	159.9	164.7	169.6	174.1	177.7	179.0	183.4	187.0
North Central	149.3	162.2	142.7	143.3	143.7	148.7	153.8	154.6	155.5	162.9	166.2	168.7	172.0	177.0
South	149.2	161.6	141.2	142.2	143.6	148.9	153.6	154.8	155.8	162.3	165.1	167.4	170.2	174.7
West	148.6	162.2	138.5	140.3	143.0	148.9	152.9	154.3	155.9	161.7	167.1	168.8	171.2	175.8
Health and recreation:														
Northeast	155.8	165.4	147.2	150.6	153.6	155.4	157.4	159.7	162.7	164.8	167.6	169.7	172.4	174.7
North Central	154.1	164.0	144.4	148.0	151.7	153.8	156.3	157.9	161.6	163.4	165.7	168.7	171.9	174.6
South	154.7	164.2	145.4	148.6	152.6	154.5	156.6	158.5	161.4	163.7	166.0	169.1	171.2	174.1
West	147.1	157.8	136.4	140.2	144.2	146.8	149.4	151.7	154.9	157.5	159.9	162.6	165.3	167.5

<sup>1</sup>Based on 1960 Census of Population.

<sup>2</sup>Regional data exclude Anchorage (Alaska) and Honolulu (Hawaii).



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

[1967 = 100 unless otherwise specified]

Area <sup>1</sup>	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>All items</b>														
U.S. city average <sup>2</sup> .....	170.5	171.1	171.9	172.6	173.3	173.8	174.3	175.3	177.1	178.2	179.6	180.6	181.8	182.6
Atlanta, Ga .....	169.2	-----	-----	171.6	-----	-----	172.0	-----	-----	176.1	-----	-----	179.1	-----
Baltimore, Md .....	173.9	-----	-----	176.5	-----	-----	178.4	-----	-----	182.2	-----	-----	185.8	-----
Boston, Mass .....	174.5	175.3	-----	-----	176.1	-----	-----	178.2	-----	-----	182.1	-----	-----	185.0
Buffalo, N.Y .....	170.6	-----	172.0	-----	-----	173.8	-----	-----	177.5	-----	-----	-----	181.3	-----
Chicago, Ill.-Northwestern Ind .....	165.1	165.7	166.7	167.5	168.2	168.5	169.1	169.5	171.2	172.4	173.8	174.4	175.1	176.4
Cincinnati, Ohio-Kentucky .....	170.1	-----	-----	172.1	-----	-----	174.5	-----	-----	178.8	-----	-----	182.3	-----
Cleveland, Ohio .....	169.0	-----	170.6	-----	-----	173.0	-----	-----	176.6	-----	-----	179.9	-----	-----
Dallas, Tex .....	167.7	-----	-----	-----	-----	171.7	-----	-----	175.2	-----	-----	179.4	-----	-----
Detroit, Mich .....	168.8	169.2	169.7	171.3	171.4	172.5	173.1	173.8	175.1	176.8	179.0	179.3	181.0	182.5
Honolulu, Hawaii .....	162.8	-----	-----	164.0	-----	-----	165.5	-----	-----	168.3	-----	-----	170.5	-----
Houston, Tex .....	177.3	177.2	-----	-----	181.9	-----	-----	183.5	-----	-----	188.6	-----	-----	191.6
Kansas City, Mo.-Kansas .....	166.5	-----	-----	168.7	-----	-----	170.7	-----	-----	175.0	-----	-----	179.0	-----
Los Angeles-Long Beach, Calif .....	168.0	168.8	169.7	170.7	171.5	172.1	172.8	174.8	176.3	176.7	177.9	178.5	179.5	180.4
Milwaukee, Wis .....	167.1	-----	169.1	-----	-----	170.5	-----	-----	173.6	-----	-----	178.0	-----	-----
Minneapolis-St. Paul, Minn .....	170.9	171.6	-----	-----	173.4	-----	-----	175.9	-----	-----	179.6	-----	-----	184.5
New York, N.Y.-Northeastern N.J .....	176.3	176.7	177.6	178.6	179.0	179.0	179.7	180.5	182.1	182.9	183.7	184.6	186.2	186.4
Philadelphia, Pa.-N.J .....	172.4	172.7	173.1	174.5	175.1	175.6	175.5	176.7	178.7	180.4	181.9	183.1	183.8	184.8
Pittsburgh, Pa .....	168.3	168.5	-----	-----	170.9	-----	-----	172.9	-----	-----	178.1	-----	-----	180.6
Portland, Oreg.-Wash. <sup>3</sup> .....	167.0	168.1	-----	-----	169.8	-----	-----	172.4	-----	-----	177.8	-----	-----	181.5
St. Louis, Mo.-Ill .....	165.1	-----	-----	167.1	-----	-----	168.2	-----	-----	173.2	-----	-----	177.4	-----
San Diego, Calif .....	170.7	-----	172.1	-----	-----	173.9	-----	-----	176.6	-----	-----	180.6	-----	-----
San Francisco-Oakland, Calif .....	168.0	-----	-----	169.9	-----	-----	172.3	-----	-----	176.0	-----	-----	180.7	-----
Scranton, Pa. <sup>3</sup> .....	170.9	-----	171.9	-----	-----	173.3	-----	-----	176.8	-----	-----	179.0	-----	-----
Seattle, Wash .....	164.5	-----	165.7	-----	-----	167.9	-----	-----	171.4	-----	-----	176.2	-----	-----
Washington, D.C.-Md.-Va .....	171.2	-----	173.0	-----	-----	174.5	-----	-----	178.4	-----	-----	182.2	-----	-----
<b>Food</b>														
U.S. city average <sup>2</sup> .....	180.8	182.1	182.4	181.6	181.6	181.1	181.7	183.4	187.7	188.6	190.9	191.7	193.6	194.6
Atlanta, Ga .....	185.8	185.9	186.2	187.2	187.5	186.0	185.0	187.3	192.0	192.9	195.3	194.7	195.9	197.3
Baltimore, Md .....	184.3	185.9	186.7	186.5	183.8	183.7	185.0	185.6	191.6	192.2	193.2	194.5	197.8	199.2
Boston, Mass .....	183.1	185.0	185.1	184.0	183.2	182.2	180.9	182.8	186.8	186.8	189.2	189.5	192.1	194.4
Buffalo, N.Y .....	178.6	180.1	180.3	178.6	177.4	178.5	178.8	180.8	186.3	186.9	188.7	188.5	190.8	190.9
Chicago, Ill.-Northwestern Ind .....	180.1	181.9	182.4	181.3	181.9	180.7	180.5	181.2	184.8	186.7	189.1	189.0	190.8	192.9
Cincinnati, Ohio-Kentucky .....	184.0	186.2	187.3	185.6	186.8	185.7	185.9	187.4	193.1	193.4	196.6	198.0	198.0	199.1
Cleveland, Ohio .....	185.9	188.2	186.4	187.9	187.4	187.7	188.6	191.4	193.4	195.1	198.9	200.2	200.4	192.5
Dallas, Tex .....	176.9	177.9	178.2	177.0	177.3	177.7	179.3	181.5	187.4	187.7	190.3	191.0	192.6	193.1
Detroit, Mich .....	175.6	176.9	176.2	175.2	174.6	175.8	177.5	178.4	181.7	181.4	184.4	185.4	188.4	189.3
Honolulu, Hawaii .....	183.0	182.0	181.8	182.0	182.8	184.0	185.3	185.4	188.3	189.6	192.0	192.5	192.4	194.2
Houston, Tex .....	187.6	189.5	189.6	189.2	189.9	187.4	188.4	190.7	194.6	196.6	197.5	198.4	198.8	201.0
Kansas City, Mo.-Kansas .....	180.8	180.3	180.8	182.0	182.0	180.9	181.0	182.6	187.0	189.1	191.0	192.6	195.2	196.7
Los Angeles-Long Beach, Calif .....	173.5	174.9	174.9	173.5	173.7	174.6	176.0	178.3	180.4	181.4	183.5	184.5	186.7	187.6
Milwaukee, Wis .....	180.0	181.3	182.4	182.2	181.8	181.5	181.6	182.7	186.7	185.9	188.5	190.2	191.6	193.0
Minneapolis-St. Paul, Minn .....	186.6	187.7	189.0	187.0	187.3	186.4	185.7	188.4	190.5	190.6	194.6	196.1	198.8	200.2
New York, N.Y.-Northeastern N.J .....	185.4	186.8	186.6	186.3	186.4	185.5	186.8	187.7	191.9	192.2	194.0	195.2	196.9	197.8
Philadelphia, Pa.-N.J .....	186.2	186.6	186.8	186.9	186.7	186.4	186.0	189.0	194.3	196.2	197.9	198.2	199.2	200.5
Pittsburgh, Pa .....	181.1	181.4	182.7	181.5	181.9	181.2	180.7	182.5	187.8	189.2	192.7	192.9	195.6	196.0
Portland, Oreg.-Wash. <sup>3</sup> .....	177.3	179.0	-----	-----	177.9	-----	-----	179.9	-----	-----	187.7	-----	-----	191.8
St. Louis, Mo.-Ill .....	180.5	181.7	182.9	181.1	181.4	180.1	180.7	182.9	186.8	188.6	192.2	193.2	196.2	196.6
San Diego, Calif .....	179.2	179.5	180.9	181.0	179.2	180.3	182.5	183.9	185.2	186.3	187.0	190.7	191.0	190.4
San Francisco-Oakland, Calif .....	173.9	174.7	174.7	174.0	174.0	174.0	175.1	177.8	180.6	182.6	185.4	187.7	188.9	190.0
Scranton, Pa. <sup>3</sup> .....	178.4	-----	178.4	-----	-----	176.8	-----	-----	187.4	-----	-----	187.8	-----	-----
Seattle, Wash .....	175.0	175.5	176.8	176.4	176.4	177.3	177.4	179.0	182.2	181.9	184.5	187.6	189.9	190.2
Washington, D.C.-Md.-Va .....	186.5	187.5	189.9	189.7	188.2	187.8	188.3	190.0	194.7	196.3	197.7	198.7	201.6	201.1

<sup>1</sup>The areas listed include not only the central city but the entire urban portion of the Standard Metropolitan Statistical Area, as defined for the 1960 Census of Population; except that the Standard Consolidated Area is used for New York and Chicago.

<sup>2</sup>Average of 56 "cities" (metropolitan areas and nonmetropolitan urban places beginning January 1966).

<sup>3</sup>Old series (old market basket components).

NOTE: All items indexes are computed monthly for 5 areas and once every 3 months on a rotating cycle for other areas.

## 26. Wholesale Price Index, by group and subgroup of commodities

[1967 = 100 unless otherwise specified]

Code	Commodity group	Annual average 1976	1976						1977						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
	All commodities	183.0	184.4	183.8	184.8	185.3	185.6	187.1	188.0	190.0	191.9	194.3	195.2	194.4	194.8
	All commodities (1957-59 = 100)	194.2	195.6	195.0	196.1	196.6	196.9	198.5	199.5	201.6	203.6	206.2	207.1	206.3	207.6
	Farm products and processed foods and feeds	183.1	188.1	181.7	182.9	179.5	178.3	183.9	184.8	188.4	190.9	195.9	196.8	191.5	189.3
	Industrial commodities	182.4	182.7	183.8	184.8	186.3	187.1	187.4	188.4	189.9	191.6	193.2	194.2	194.6	195.8
	<b>FARM PRODUCTS AND PROCESSED FOODS AND FEEDS</b>														
01	Farm Products	191.0	196.9	189.7	191.9	186.7	183.6	191.6	193.5	199.0	202.4	208.1	204.3	192.7	190.5
01-1	Fresh and dried fruits and vegetables	178.4	164.6	159.3	180.2	192.4	166.5	174.5	198.4	212.6	219.1	205.6	201.8	176.2	182.0
01-2	Grains	205.9	224.3	207.6	205.5	186.7	175.4	180.6	184.9	185.8	183.4	184.4	171.2	157.7	153.3
01-3	Livestock	173.3	175.9	166.2	161.6	156.1	154.4	166.1	166.0	166.2	163.5	167.9	180.2	172.3	180.5
01-4	Live poultry	166.9	184.0	179.0	164.9	150.5	139.1	145.7	153.7	183.7	177.2	182.3	183.1	182.7	193.7
01-5	Plant and animal fibers	223.9	269.0	235.6	242.3	249.8	257.9	239.5	216.5	240.1	252.4	249.5	238.6	197.5	195.3
01-6	Fluid milk	201.2	193.1	200.6	203.5	206.7	204.4	202.8	200.2	198.4	195.2	197.7	198.3	199.3	202.7
01-7	Eggs	179.1	167.7	186.8	188.9	180.7	192.8	213.6	189.2	194.8	173.5	165.2	144.4	141.4	156.6
01-8	Hay, hayseeds, and oilseeds	210.4	238.4	224.4	231.7	220.1	231.9	242.3	244.9	254.5	278.0	322.4	289.8	270.2	207.7
01-9	Other farm products	223.4	218.6	227.5	252.7	256.9	271.3	290.6	295.2	313.1	367.3	385.0	357.5	341.1	334.0
02	Processed foods and feeds	178.0	182.6	176.7	177.2	174.9	174.8	179.0	179.3	181.9	183.9	188.5	192.0	190.1	187.8
02-1	Cereal and bakery products	172.1	173.6	170.2	169.7	169.9	168.7	168.6	168.4	169.9	171.5	171.6	172.0	171.3	171.3
02-2	Meats, poultry, and fish	181.6	185.3	174.7	176.1	168.5	168.4	176.9	176.6	177.4	174.2	174.9	183.8	183.4	189.5
02-3	Dairy products	168.5	170.2	173.9	170.5	169.8	168.1	167.3	166.8	166.9	168.1	173.6	174.2	174.3	175.1
02-4	Processed fruits and vegetables	170.2	169.7	171.1	172.1	174.4	175.7	175.6	175.4	182.9	184.2	185.6	185.8	187.8	188.5
02-5	Sugar and confectionery	190.9	201.3	184.9	167.3	176.4	171.4	170.5	171.9	177.6	180.2	186.4	184.4	176.3	172.7
02-6	Beverages and beverage materials	173.5	175.9	175.8	176.4	177.5	178.8	183.8	184.1	189.3	199.5	202.0	206.0	207.7	204.7
02-7	Animal fats and oils	210.2	215.8	216.7	243.4	221.4	231.5	230.9	240.9	253.0	253.0	305.8	307.7	279.9	258.7
02-72	Crude vegetable oils	162.5	186.7	163.8	186.9	170.4	186.0	178.4	171.8	190.0	222.9	253.7	248.6	229.6	181.0
02-73	Refined vegetable oils	187.5	200.3	179.8	199.3	186.4	190.3	185.2	185.7	204.9	219.9	229.1	228.9	219.2	182.0
02-74	Vegetable oil end products	174.2	173.1	172.7	180.4	177.6	180.6	178.3	177.9	182.7	187.8	206.3	214.1	216.3	209.6
02-8	Miscellaneous processed foods	174.7	173.0	173.7	175.4	177.8	178.1	182.8	182.1	183.8	183.8	184.8	192.4	192.9	194.1
02-9	Manufactured animal feeds	194.4	216.2	196.9	211.4	199.8	200.2	213.2	219.1	219.1	222.1	243.3	239.6	225.7	194.4
	<b>INDUSTRIAL COMMODITIES</b>														
03	Textile products and apparel	148.2	149.0	149.5	149.0	149.3	150.1	149.9	150.3	151.1	152.1	153.7	154.0	154.4	154.4
03-1	Synthetic fibers <sup>1</sup>	102.4	102.6	103.3	103.1	101.9	101.7	101.6	102.6	103.4	103.4	106.6	107.0	109.5	109.2
03-2	Processed yarns and threads <sup>1</sup>	99.5	101.2	99.6	98.9	98.0	97.5	97.2	96.6	97.2	98.7	101.1	102.3	103.4	103.4
03-3	Grey fabrics <sup>1</sup>	106.1	108.5	108.5	107.1	107.4	109.1	107.7	105.1	103.8	103.6	105.0	105.1	104.5	104.9
03-4	Finished fabrics <sup>1</sup>	101.1	101.0	101.1	100.5	100.3	101.4	101.5	100.4	101.2	102.7	104.2	104.9	104.5	104.3
03-5	Apparel	139.9	140.2	141.5	141.3	142.2	142.8	142.9	144.8	145.6	146.0	146.4	146.6	147.2	147.2
03-6	Textile housefurnishings	159.3	159.6	160.7	161.1	162.4	163.2	162.7	165.5	167.1	169.6	170.4	169.7	169.7	169.7
04	Hides, skins, leather, and related products	167.8	170.3	171.6	173.6	170.9	169.8	171.5	174.5	176.7	177.6	180.1	181.9	179.7	180.3
04-1	Hides and skins	258.4	278.6	284.8	292.1	251.4	231.8	251.2	278.9	282.5	285.9	305.0	313.0	288.8	291.5
04-2	Leather	188.1	192.2	196.3	197.5	193.1	191.4	191.7	192.9	201.3	201.4	204.1	210.7	202.1	198.6
04-3	Footwear	158.9	160.7	161.2	162.5	162.6	162.9	163.8	164.5	165.9	166.7	167.7	168.2	168.6	170.3
04-4	Other leather and related products	152.9	152.3	152.7	155.2	155.8	155.9	156.2	159.5	159.8	161.0	163.1	163.7	163.7	163.8
05	Fuels and related products and power	265.6	265.3	269.2	271.2	277.1	281.6	279.0	278.7	289.0	293.4	298.6	302.3	304.0	306.6
05-1	Coal	368.7	367.7	367.8	368.0	368.4	369.1	374.0	376.3	377.5	378.9	380.0	386.9	390.6	393.0
05-2	Coke	346.8	346.0	346.0	346.0	349.7	349.7	363.4	367.3	367.3	367.3	372.9	375.1	386.1	386.1
05-3	Gas fuels	286.8	277.3	286.6	289.5	330.9	365.0	337.6	322.2	363.7	70.9	379.0	390.2	386.6	391.9
05-4	Electric power	207.6	210.1	213.6	214.5	213.2	214.0	211.5	214.0	219.8	223.5	228.6	230.7	234.4	239.2
05-61	Crude petroleum	253.6	254.3	254.3	254.3	264.4	264.4	264.4	262.9	274.2	270.0	270.0	271.0	271.8	270.8
05-7	Petroleum products, refined	276.6	276.8	280.7	283.7	285.0	285.8	287.6	289.2	295.1	301.3	306.4	310.1	311.6	312.9
06	Chemicals and allied products	187.2	187.1	188.0	188.6	188.6	188.6	188.2	188.9	189.8	191.1	192.6	193.8	193.9	193.5
06-1	Industrial chemicals	219.3	219.2	221.2	221.7	222.2	222.6	221.5	222.1	222.9	222.3	223.2	224.0	224.1	224.4
06-21	Prepared paint	174.4	173.9	175.7	176.2	176.9	177.3	177.3	177.3	178.9	180.6	181.7	181.7	182.3	183.9
06-22	Paint materials	189.8	194.7	195.7	198.9	198.3	200.3	200.7	200.5	202.3	206.1	209.4	210.1	209.3	206.6
06-3	Drugs and pharmaceuticals	134.0	134.7	135.2	135.4	135.4	135.9	136.4	137.5	138.4	139.0	139.5	139.7	140.8	141.2
06-4	Fats and oils, inedible	249.9	258.9	249.4	262.9	251.2	251.2	254.6	253.9	253.9	273.7	304.9	337.5	318.8	281.9
06-5	Agricultural chemicals and chemical products	188.4	184.5	186.2	186.9	186.8	184.1	183.4	182.2	183.5	186.9	188.1	187.7	189.0	188.4
06-6	Plastic resins and materials	194.0	197.6	197.1	195.9	195.6	195.4	194.9	193.4	192.9	194.4	195.9	196.6	197.6	199.7
06-7	Other chemicals and allied products	170.7	168.9	169.2	169.3	169.9	169.9	169.4	172.2	173.4	174.6	175.0	175.9	176.0	175.9
07	Rubber and plastic products	159.2	158.3	161.1	163.9	164.6	164.8	164.7	164.5	164.0	164.3	165.9	166.4	167.4	168.9
07-1	Rubber and rubber products	163.2	160.4	166.2	169.7	171.4	171.5	171.4	170.9	168.3	168.7	172.3	172.3	172.9	174.9
07-11	Crude rubber	161.0	161.4	162.6	162.2	164.0	164.9	163.2	163.5	164.8	166.5	168.2	169.7	171.4	172.0
07-12	Tires and tubes	161.5	157.3	167.4	170.9	172.9	172.1	172.3	170.0	163.6	163.6	170.1	167.8	167.8	171.3
07-13	Miscellaneous rubber products	163.9	161.7	164.0	168.8	170.0	170.8	170.9	172.5	173.0	173.3	174.1	176.3	177.3	177.9
07-21	Plastic construction products <sup>2</sup>	127.2	128.9	129.3	129.2	129.2	129.4	129.4	129.5	129.6	129.6	129.0	130.5	134.1	136.5
07-22	Unsupported plastic film and sheeting <sup>3</sup>	154.9	155.3	155.3	157.7	157.5	157.5	157.5	157.6	159.4	159.5	159.1	159.6	160.3	160.9
07-23	Laminated plastic sheets, high pressure <sup>3</sup>	131.1	132.1	132.1	135.5	136.5	137.8	137.2	136.5	137.3	138.3	141.6	142.2	142.4	143.1
08	Lumber and wood products	205.6	203.7	207.5	212.8	213.6	214.3	220.0	222.7	224.2	228.7	229.6	229.3	228.7	235.5
08-1	Lumber	233.0	231.2	236.2	244.3	245.6	244.3	252.1	257.8	259.3	266.0	268.3	267.8	264.6	275.9
08-2	Millwork	176.9	177.4	178.2	180.2	181.5	183.0								

## 26. Continued—Wholesale Price Index, by group and subgroup of commodities

[1967 = 100 unless otherwise specified]

Code	Commodity group	Annual average 1976	1976						1977						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>INDUSTRIAL COMMODITIES—Continued</b>															
09	Pulp, paper, and allied products .....	179.4	180.5	181.0	181.6	181.6	181.5	181.8	182.9	183.0	183.6	185.1	186.1	187.3	187.7
09-1	Pulp, paper, and products, excluding building paper and board .....	180.8	181.8	182.4	183.0	183.0	181.5	181.8	184.2	184.4	184.9	186.3	187.3	188.4	188.6
09-11	Woodpulp .....	286.0	285.8	285.5	285.2	285.2	285.2	285.2	284.6	284.3	284.3	286.8	286.8	285.7	285.7
09-12	Wastepaper .....	184.9	203.0	209.8	207.0	194.0	183.9	178.4	177.8	177.4	180.6	181.8	185.3	186.3	186.3
09-13	Paper .....	182.3	184.5	184.9	185.4	185.9	186.2	186.6	188.9	189.4	191.8	193.2	194.1	194.3	195.6
09-14	Paperboard .....	176.0	178.4	178.8	179.9	177.9	177.0	175.7	174.6	173.5	172.6	174.5	179.0	179.5	180.6
09-15	Converted paper and paperboard products .....	170.0	169.8	170.3	171.2	171.7	171.9	172.5	173.7	174.0	174.1	175.3	175.7	177.4	177.2
09-2	Building paper and board .....	138.8	141.4	140.7	141.8	141.1	142.3	144.2	144.8	144.5	145.9	148.8	151.3	153.8	157.8
10	Metals and metal products .....	195.9	198.9	199.5	200.1	200.0	200.1	200.9	201.8	203.0	206.4	208.0	208.6	207.8	210.3
10-1	Iron and steel .....	215.9	220.1	219.9	218.8	218.8	218.9	222.6	224.2	224.7	227.3	228.2	227.9	226.9	231.0
10-13	Steel mill products .....	208.8	211.0	214.2	214.6	216.6	216.4	220.7	221.3	221.3	223.8	224.4	225.3	225.4	233.4
10-2	Nonferrous metals .....	181.6	187.2	187.8	189.9	188.4	187.5	185.1	185.3	188.2	195.0	199.3	200.9	197.3	198.0
10-3	Metal containers .....	202.2	204.6	204.3	204.4	204.5	204.5	204.6	204.5	204.6	216.7	217.0	216.8	216.9	217.5
10-4	Hardware .....	173.1	173.3	173.3	174.4	175.5	177.1	179.2	181.3	182.4	183.2	183.4	183.6	184.5	186.8
10-5	Plumbing fixtures and brass fittings .....	174.1	177.7	177.9	178.9	178.9	179.2	179.2	179.5	178.3	182.1	182.7	184.9	186.1	189.3
10-6	Heating equipment .....	158.0	158.4	159.3	160.3	160.1	160.9	161.8	162.9	163.1	163.7	163.5	164.0	164.5	165.4
10-7	Fabricated structural metal products .....	193.8	193.6	195.4	196.9	197.6	198.0	198.9	199.3	200.4	201.8	203.2	204.2	205.0	208.0
10-8	Miscellaneous metal products .....	186.9	187.1	189.1	189.8	190.3	191.0	190.7	192.0	192.3	192.7	192.8	193.3	194.9	197.3
11	Machinery and equipment .....	171.0	171.2	171.6	172.8	174.0	174.5	175.4	177.0	177.5	178.2	178.8	180.0	180.8	181.9
11-1	Agricultural machinery and equipment .....	183.0	182.9	183.8	185.6	186.3	188.8	190.6	192.3	193.3	194.6	194.9	195.1	196.0	196.6
11-2	Construction machinery and equipment .....	198.9	199.9	200.6	201.0	202.7	204.5	205.8	208.8	209.1	209.5	211.4	213.0	213.2	214.9
11-3	Metalworking machinery and equipment .....	182.7	182.6	183.7	184.4	185.8	187.2	188.7	190.9	192.6	193.7	194.7	195.7	197.9	199.2
11-4	General purpose machinery and equipment .....	189.8	190.3	191.0	192.3	193.8	193.7	194.5	195.7	196.6	197.3	198.1	200.2	201.5	202.6
11-6	Special industry machinery and equipment .....	188.4	189.5	189.9	190.7	191.8	192.0	193.8	195.6	196.5	197.4	199.3	200.9	202.1	203.0
11-7	Electrical machinery and equipment .....	146.7	146.4	146.7	148.2	149.2	149.5	150.0	151.3	151.1	151.7	151.8	152.7	153.0	154.1
11-9	Miscellaneous machinery .....	171.9	172.3	172.1	172.9	174.5	174.5	175.1	176.0	176.8	177.4	178.0	179.2	179.4	180.7
12	Furniture and household durables .....	145.6	145.7	146.1	146.7	147.2	147.5	147.9	148.6	149.1	149.6	150.1	150.5	151.3	151.2
12-1	Household furniture .....	153.6	153.5	153.9	155.0	156.5	157.5	158.6	158.7	158.9	159.6	160.7	161.1	162.2	162.8
12-2	Commercial furniture .....	173.5	174.9	175.5	175.6	176.4	176.4	177.3	178.2	178.8	183.3	184.9	186.7	187.4	188.4
12-3	Floor coverings .....	131.4	131.4	131.6	131.6	131.6	131.6	131.8	135.5	135.5	135.5	135.5	135.5	135.8	136.1
12-4	Household appliances .....	139.2	139.7	140.0	140.2	140.4	140.6	141.0	141.2	142.1	142.9	143.1	143.2	144.5	145.4
12-5	Home electronic equipment .....	91.3	91.2	91.2	91.2	91.3	91.0	90.9	89.6	89.3	89.3	88.4	88.4	88.3	86.8
12-6	Other household durable goods .....	179.1	178.6	179.8	181.9	182.1	182.9	183.3	186.4	187.8	188.4	187.9	189.2	189.5	190.2
13	Nonmetallic mineral products .....	186.3	187.3	188.0	188.6	189.4	189.5	189.6	192.3	193.4	195.0	198.2	198.9	200.4	201.5
13-11	Flat glass .....	150.0	152.9	152.9	152.9	152.9	152.7	152.7	153.2	159.6	159.6	159.6	159.8	161.6	160.0
13-2	Concrete ingredients .....	186.7	188.9	188.9	189.1	189.3	189.1	189.5	193.1	193.6	194.7	197.3	198.9	199.1	199.8
13-3	Concrete products .....	180.1	181.0	181.4	181.2	181.4	182.4	183.0	187.0	187.8	188.4	190.2	190.5	190.9	192.8
13-4	Structural clay products excluding refractories .....	163.5	163.1	164.9	166.1	166.2	168.2	168.8	170.1	167.8	170.7	172.7	174.2	180.2	183.8
13-5	Refractories .....	184.0	180.7	181.2	188.9	191.1	193.0	192.9	193.7	193.7	193.7	193.9	194.9	196.1	197.0
13-6	Asphalt roofing .....	238.3	237.6	247.4	245.4	245.8	239.4	234.8	230.5	230.5	242.2	242.2	243.1	246.2	253.5
13-7	Gypsum products .....	154.4	153.4	155.1	157.6	159.1	160.1	160.1	160.8	160.8	164.0	172.2	175.9	187.1	186.6
13-8	Glass containers .....	195.4	197.2	197.2	197.2	202.0	202.2	202.2	202.2	202.2	202.2	218.3	218.3	218.3	218.3
13-9	Other nonmetallic minerals .....	232.5	232.4	232.3	234.7	235.1	235.2	235.0	240.9	241.8	245.3	247.8	247.8	250.4	251.5
14	Transportation equipment <sup>1</sup> .....	151.1	149.2	150.2	151.0	156.1	156.2	157.0	157.1	157.2	158.4	158.7	159.0	159.4	159.5
14-1	Motor vehicles and equipment .....	153.8	151.7	152.8	153.5	159.0	159.2	159.5	159.2	159.4	160.7	161.0	161.3	161.8	161.8
14-4	Railroad equipment .....	216.7	216.9	218.9	219.1	222.8	222.8	223.3	227.9	227.9	230.0	231.1	231.1	232.0	234.2
15	Miscellaneous products .....	153.7	153.8	153.5	153.9	154.1	156.1	157.0	160.2	160.6	160.9	162.5	163.1	163.5	163.8
15-1	Toys, sporting goods, small arms, ammunition .....	150.0	150.7	150.4	150.7	150.9	151.0	151.1	153.8	154.1	154.4	154.2	154.4	154.8	155.1
15-2	Tobacco products .....	163.0	161.9	162.0	162.3	162.5	172.2	172.3	174.7	174.8	174.8	175.1	175.3	175.7	175.7
15-3	Notions .....	162.3	164.5	165.3	165.3	165.3	165.3	165.7	169.9	172.4	172.4	172.4	172.4	172.4	172.6
15-4	Photographic equipment and supplies .....	136.2	137.0	137.0	137.0	137.0	137.2	139.3	138.2	138.4	138.5	137.9	139.9	140.4	141.2
15-9	Other miscellaneous products .....	152.9	152.1	150.9	151.1	151.4	151.5	152.7	160.2	160.9	161.9	167.2	167.3	167.1	167.0

<sup>1</sup>December 1975 = 100.

<sup>2</sup>December 1969 = 100.

<sup>3</sup>December 1970 = 100.

<sup>4</sup>December 1968 = 100.



## 27. Wholesale Price Index for special commodity groupings

[1967 = 100 unless otherwise specified]

Commodity group	Annual average 1976 <sup>a</sup>	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
All commodities—less farm products .....	181.7	182.7	182.7	183.7	184.6	185.2	186.1	187.0	188.7	190.4	192.5	193.8	193.9	194.6
All foods .....	178.9	180.9	176.1	176.6	175.6	174.1	178.5	179.2	183.0	184.8	187.0	190.5	188.0	189.1
Processed foods .....	178.7	182.1	176.8	175.9	174.2	173.9	177.7	177.5	180.6	182.7	186.1	190.7	189.7	190.2
Selected textile mill products (Dec. 1975 = 100) ...	102.3	102.7	103.0	102.9	103.0	103.7	103.7	104.1	104.8	105.9	106.9	107.2	107.0	106.5
Hosiery .....	107.5	107.7	108.7	109.1	109.1	109.1	109.1	109.7	109.7	109.8	109.8	110.0	109.3	104.0
Underwear and nightwear .....	138.9	139.9	139.9	140.0	140.6	140.2	141.4	145.7	150.3	150.6	150.9	150.9	151.5	151.5
Chemicals and allied products, including synthetic rubber .....														
and manmade fibers and yarns .....	179.6	179.6	180.6	180.9	181.0	181.0	180.6	181.3	182.2	183.1	184.4	185.0	185.7	185.9
Pharmaceutical preparations .....	127.2	128.0	128.6	128.8	128.8	128.9	129.5	130.6	131.6	132.2	132.6	132.7	133.6	133.9
Lumber and wood products, excluding millwork and other wood products .....	220.7	217.6	223.1	230.0	230.5	230.9	239.7	243.6	244.6	250.2	250.2	249.0	247.6	258.3
Special metals and metal products <sup>1</sup> .....	181.5	182.4	183.3	183.9	186.2	186.4	187.1	187.5	188.3	190.8	191.9	192.3	192.1	193.6
Fabricated metal products .....	187.1	187.6	189.0	190.0	190.5	191.2	191.7	192.6	193.2	195.2	195.8	196.4	197.4	199.8
Copper and copper products .....	153.3	161.3	162.0	160.9	156.6	153.3	148.3	148.2	151.1	158.7	163.7	162.4	158.2	155.5
Machinery and motive products .....	165.8	165.1	165.8	166.9	169.9	170.2	171.1	172.0	172.3	173.3	173.8	174.6	175.2	175.9
Machinery and equipment, except electrical .....	185.0	185.5	186.0	187.0	188.3	189.0	190.2	191.8	192.7	193.5	194.5	195.9	196.9	198.1
Agricultural machinery, including tractors .....	184.0	183.3	184.6	186.9	187.6	190.8	192.8	194.8	195.4	196.3	196.7	197.0	197.7	198.0
Metalworking machinery .....	190.3	191.1	191.6	192.3	193.4	194.5	195.8	197.6	198.7	199.7	201.0	202.1	206.0	206.7
Numerically controlled machine tools (Dec. 1971 = 100) .....	158.8	159.2	160.0	160.9	161.5	161.7	163.1	163.7	163.7	164.8	166.9	167.3	168.0	168.1
Total tractors .....	195.3	195.7	196.9	198.2	199.4	202.0	203.5	207.5	207.6	207.9	209.4	210.8	210.1	211.0
Agricultural machinery and equipment less parts .....	181.6	181.4	182.7	184.7	185.3	188.1	189.9	191.7	192.4	193.5	193.9	194.2	194.9	195.6
Farm and garden tractors less parts .....	184.5	183.3	185.2	188.6	188.8	191.6	193.6	196.3	197.3	197.9	197.9	197.9	198.6	198.8
Agricultural machinery excluding tractors less parts .....	183.7	183.4	184.3	185.6	186.8	190.3	192.3	193.7	194.0	195.2	195.9	196.3	197.2	197.6
Industrial valves .....	206.3	207.0	208.4	208.6	209.4	209.4	210.2	212.4	213.5	214.3	214.6	215.4	216.3	217.4
Industrial fittings .....	207.5	208.7	209.7	214.7	216.1	208.8	206.4	202.1	206.7	209.8	212.8	219.3	218.6	218.6
Abrasive grinding wheels .....	179.4	177.1	177.4	177.4	177.4	188.9	191.4	191.3	191.3	191.4	191.5	191.5	191.5	191.5
Construction materials .....	187.7	187.7	189.9	192.1	192.6	192.8	194.8	196.7	197.4	199.6	201.2	201.9	202.5	206.1

<sup>1</sup>Metals and metal products, agricultural machinery and equipment, and motor vehicles and equipment.

## 28. Wholesale Price Index, by durability of product

[1967 = 100]

Commodity group	Annual average 1976 <sup>a</sup>	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
All commodities .....	183.0	184.4	183.8	184.8	185.3	185.6	187.1	188.0	190.0	191.9	194.3	195.2	194.4	194.8
Total durable goods .....	176.0	176.4	177.1	178.2	179.8	180.0	181.1	182.3	183.0	184.7	185.8	186.4	186.7	188.2
Total nondurable goods .....	188.0	190.2	188.5	189.5	189.0	189.3	191.2	191.9	195.0	197.0	200.5	201.7	199.9	199.4
Total manufactures .....	179.0	179.8	179.8	180.9	181.5	181.9	183.2	184.1	185.3	186.9	188.8	190.2	190.4	190.9
Durable .....	175.6	175.7	176.6	177.8	179.7	180.0	181.0	182.1	182.8	184.3	185.4	186.1	186.6	188.2
Nondurable .....	182.1	183.8	182.8	183.7	182.9	183.4	185.0	185.7	187.4	189.1	191.9	194.1	193.9	193.3
Total raw or slightly processed goods .....	202.3	206.9	203.1	203.9	203.1	202.9	205.6	206.8	213.8	217.4	222.3	220.4	213.8	213.2
Durable .....	187.8	203.6	196.9	190.9	178.2	176.0	178.6	184.4	188.1	201.4	202.6	195.7	186.9	183.2
Nondurable .....	202.7	206.4	202.9	204.2	204.3	204.3	206.9	207.0	215.0	217.9	223.1	221.5	215.1	214.7

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**29. Wholesale Price index, by stage of processing**

[1967 = 100]

Commodity group	Annual average 1976	1976						1977						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
All commodities .....	183.0	184.4	183.8	184.8	185.3	185.6	187.1	188.0	190.0	191.9	194.3	195.2	194.4	194.8
<b>RAW MATERIALS</b>														
Crude materials for further processing .....	205.1	211.8	206.2	206.4	204.1	204.5	207.9	208.1	215.4	219.9	226.0	224.4	215.4	213.2
Foodstuffs and feedstuffs .....	190.1	196.3	188.6	189.0	182.3	178.8	187.4	189.6	194.0	197.0	203.6	201.7	192.0	191.6
Nonfood materials except fuel .....	210.2	222.7	217.5	217.3	213.1	213.3	213.7	214.1	220.8	228.0	232.7	227.6	219.1	210.7
Manufacturing industries .....	215.7	229.6	223.7	223.4	218.7	218.9	219.4	219.4	226.8	234.7	239.8	234.0	224.3	214.8
Construction .....	161.2	162.2	162.2	162.5	162.8	162.6	163.2	166.0	166.6	168.4	169.9	170.9	171.2	171.8
Crude fuel .....	314.7	305.9	315.8	316.0	356.8	390.4	361.3	342.9	377.9	384.0	392.3	404.6	399.4	403.3
Manufacturing industries .....	309.1	298.3	310.7	310.9	362.0	403.9	366.2	342.6	386.1	393.4	403.6	417.3	410.0	414.3
Nonmanufacturing industries .....	327.1	319.8	327.7	328.0	361.0	388.3	365.8	351.4	380.0	385.2	392.2	403.4	400.0	403.7
<b>INTERMEDIATE MATERIALS</b>														
Intermediate materials, supplies and components ...	189.3	190.6	191.1	192.6	192.7	193.0	194.0	194.9	196.4	198.5	201.1	202.0	202.0	202.6
Materials and components for manufacturing ...	185.6	186.8	187.2	188.2	188.4	188.7	189.2	189.5	190.5	199.3	197.7	195.8	195.4	196.4
Materials for food manufacturing .....	180.6	187.0	177.6	176.6	174.5	174.7	175.5	174.5	178.6	182.2	189.0	191.1	185.7	180.2
Materials for nondurable manufacturing ...	183.6	184.5	184.9	185.4	184.9	185.2	184.8	184.7	185.4	186.9	189.2	190.7	190.8	190.8
Materials for durable manufacturing .....	202.3	204.4	205.7	207.3	208.4	208.6	210.0	210.8	212.1	214.7	216.4	217.5	216.7	220.4
Components for manufacturing .....	165.6	165.0	166.9	168.3	169.3	169.7	170.3	171.0	171.1	172.7	173.3	174.2	175.0	176.1
Materials and components for construction ...	188.0	188.3	190.0	191.7	192.2	192.6	193.6	195.0	195.8	197.7	199.3	200.2	201.3	204.1
Processed fuels and lubricants .....	250.9	250.9	254.2	256.6	257.2	258.8	259.5	262.5	271.1	276.0	281.9	283.9	285.7	288.4
Manufacturing industries .....	225.5	226.6	230.1	231.8	231.6	232.5	232.2	235.4	243.3	246.9	252.6	254.0	257.0	262.0
Nonmanufacturing industries .....	274.6	273.4	276.5	279.5	281.1	283.3	285.1	287.9	297.1	303.3	309.3	312.1	312.6	312.6
Containers .....	181.4	183.1	182.8	182.6	183.6	183.7	183.7	184.2	184.4	189.0	193.3	192.9	193.6	193.7
Supplies .....	179.2	182.3	180.5	183.6	182.3	182.7	184.9	186.7	187.4	188.5	192.4	191.9	190.9	186.6
Manufacturing industries .....	166.2	166.1	166.6	168.0	168.5	169.0	169.4	170.8	172.0	171.9	172.3	172.7	174.5	174.8
Nonmanufacturing industries .....	186.1	191.0	187.8	191.9	189.6	189.9	193.2	195.2	195.6	197.3	203.2	202.2	199.7	192.8
Manufactured animal feeds .....	199.2	223.6	202.6	218.1	205.8	206.2	220.6	226.9	226.7	230.2	256.4	249.4	234.5	196.2
Other supplies .....	180.5	181.0	181.9	183.4	183.3	183.6	184.4	185.5	185.9	187.3	188.7	188.9	189.2	189.2
<b>FINISHED GOODS</b>														
Finished goods (including raw foods and fuels) ....	170.3	170.5	170.0	170.7	172.2	172.3	174.0	175.1	176.5	177.5	178.8	180.3	180.5	181.3
Consumer goods .....	169.0	169.6	168.7	169.3	170.0	170.1	172.0	173.1	174.8	176.1	177.5	179.3	179.3	180.2
Foods .....	180.2	182.2	177.8	178.1	177.0	176.0	180.9	181.5	185.0	186.6	188.5	192.4	190.7	192.3
Crude .....	194.8	180.6	186.1	198.8	205.6	198.9	210.6	219.9	229.1	223.6	213.0	199.9	184.2	192.4
Processed .....	177.4	180.7	175.5	174.9	173.1	172.6	177.0	176.9	179.9	182.0	184.9	190.0	189.4	190.5
Other nondurable goods .....	173.3	173.6	175.1	176.0	176.7	177.6	178.0	179.4	180.7	182.1	183.5	184.6	185.8	186.5
Durable goods .....	144.4	143.6	143.6	144.2	147.2	147.5	147.8	148.9	149.2	149.7	150.5	150.8	151.3	151.4
Producer finished goods .....	173.2	172.6	173.1	174.0	177.2	177.6	178.7	179.8	180.2	180.7	181.6	182.4	183.1	183.8
Manufacturing industries .....	178.1	178.0	178.5	179.4	181.6	181.8	182.9	184.4	184.9	185.7	186.8	187.8	188.7	189.8
Nonmanufacturing industries .....	169.6	168.8	169.3	170.1	173.9	174.3	175.4	176.4	176.7	177.1	177.8	178.4	179.1	179.6
<b>SPECIAL GROUPINGS</b>														
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco .....	249.9	254.2	254.9	252.9	261.4	269.6	262.3	259.4	273.7	279.6	283.1	284.5	279.6	279.2
Intermediate materials, supplies and components, excluding intermediate materials for food manufacturing and manufactured animal feeds ...	189.5	190.1	191.4	192.8	193.2	193.6	194.2	195.1	196.5	198.6	200.5	201.6	202.1	203.5
Consumer finished goods, excluding consumer foods	161.8	161.6	162.5	163.2	164.9	165.6	166.0	167.2	168.1	169.1	170.3	171.0	171.9	172.4

### 30. Price indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry	Annual average 1976	1976						1977						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>MINING</b>															
1011	Iron ores (12/75 = 100)	107.2	106.5	106.5	111.2	112.1	112.1	112.1	112.1	114.2	114.2	116.4	117.1	117.1	117.1
1092	Mercury ores (12/75 = 100)	103.1	94.6	94.6	99.2	108.7	109.6	111.2	110.0	141.6	150.0	137.1	119.2	103.7	89.6
1211	Bituminous coal and lignite	367.7	366.7	366.8	367.0	367.4	368.2	373.2	375.5	376.7	378.2	379.3	386.3	389.8	392.3
1311	Crude petroleum and natural gas	266.8	263.5	267.9	268.0	293.6	308.7	294.7	285.0	308.6	308.2	312.5	317.0	314.6	315.8
1442	Construction sand and gravel	167.4	168.6	168.5	169.2	169.7	169.3	169.9	173.3	173.9	175.8	176.9	179.1	178.9	179.7
1455	Kaolin and ball clay (6/76 = 100)	-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.3	104.5	104.1	104.1	104.1	
<b>MANUFACTURING</b>															
2011	Meat packing plants	176.6	178.6	168.1	171.3	162.6	163.3	172.2	172.0	168.8	166.2	171.2	183.9	180.3	184.4
2013	Sausages and other prepared meats	184.4	191.2	182.3	179.3	170.2	168.4	176.7	167.6	174.7	172.6	169.8	178.9	178.5	183.5
2016	Poultry dressing plants	165.3	180.2	176.3	165.3	153.6	143.9	148.5	153.8	178.2	173.6	178.8	177.5	177.1	187.1
2021	Creamery butter	173.9	193.2	193.2	177.6	172.4	171.0	171.0	170.9	170.8	171.6	186.6	187.2	186.9	187.2
2022	Cheese natural and processed (12/72 = 100)	148.9	152.2	162.4	151.8	146.8	144.6	143.8	142.4	143.2	145.7	154.2	154.4	151.9	154.0
2024	Ice cream and frozen desserts (12/72 = 100)	135.7	135.0	137.5	137.9	137.7	137.8	138.0	138.9	138.2	139.0	141.7	145.1	145.3	145.3
2033	Canned fruits and vegetables	168.5	169.8	171.6	172.3	171.8	171.9	172.3	171.7	174.9	176.6	178.1	179.0	180.8	180.5
2034	Dehydrated food products (12/73 = 100)	103.3	96.9	97.5	99.3	116.1	124.1	125.3	126.5	127.1	127.0	128.3	128.7	127.3	126.3
2041	Flour mills (12/71 = 100)	153.2	160.8	147.8	150.8	144.5	140.7	139.9	140.0	139.5	136.4	135.1	130.8	128.7	123.3
2044	Rice milling	157.7	172.2	150.8	140.0	145.4	140.3	140.3	132.6	136.5	139.8	154.0	172.1	170.7	169.5
2048	Prepared foods, n.e.c. (12/75 = 100)	107.8	117.4	109.3	117.9	110.8	109.3	113.7	114.7	117.7	117.5	121.0	125.8	119.3	112.2
2061	Raw cane sugar	186.0	207.5	164.7	131.0	155.1	142.7	141.3	145.3	155.2	161.0	171.6	157.0	137.4	130.4
2063	Beet sugar	176.5	191.0	179.8	147.9	156.3	147.8	149.7	147.5	156.9	162.0	165.5	170.5	158.5	147.7
2067	Chewing gum	202.7	202.8	202.8	202.7	202.7	202.7	202.7	202.9	202.9	202.9	203.4	203.7	203.8	203.8
2074	Cottonseed oil mills	177.9	207.6	181.5	198.7	178.3	185.2	192.8	192.7	195.9	205.7	228.0	230.2	223.9	175.0
2075	Soybean oil mills	196.4	231.1	202.8	217.5	204.8	214.5	229.4	235.8	238.2	263.3	322.0	295.3	271.9	197.6
2077	Animal and marine fats and oils	243.2	271.1	235.8	257.2	237.9	243.6	264.1	269.0	260.8	277.5	305.4	328.6	297.0	248.6
2083	Malt	223.9	217.3	217.3	217.3	217.3	225.3	225.3	225.7	225.7	225.7	225.7	217.7	217.7	210.1
2085	Distilled liquor, except brandy (12/75 = 100)	100.1	100.0	100.0	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.6
2091	Canned and cured seafoods (12/73 = 100)	113.0	115.3	114.6	116.3	116.3	116.9	117.1	118.6	118.4	118.5	125.4	126.6	135.2	135.4
2092	Fresh or frozen packaged fish	276.0	284.1	257.2	273.5	270.5	278.4	287.9	303.2	297.5	302.9	312.5	296.2	291.0	295.3
2095	Roasted coffee (12/72 = 100)	188.4	202.4	201.3	202.1	207.9	213.9	237.4	239.8	263.5	316.2	328.2	346.6	353.4	335.9
2098	Macaroni and spaghetti	170.2	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	168.1	168.1	168.1
2111	Cigarettes	167.0	165.7	165.8	165.8	165.9	177.1	177.1	179.9	180.0	180.0	180.0	180.1	180.1	180.2
2121	Cigars	126.2	125.8	126.4	126.8	126.8	126.8	126.8	126.8	126.8	126.8	127.7	129.8	130.3	131.6
2131	Chewing and smoking tobacco	183.4	183.0	184.0	187.1	191.7	191.8	193.0	193.3	194.9	194.9	197.7	197.7	197.9	201.8
2211	Weaving mills, cotton (12/72 = 100)	162.8	165.8	166.8	166.6	168.4	169.8	170.0	170.0	170.4	171.5	173.3	173.8	173.6	174.2
2251	Women's hosiery, except socks (12/75 = 100)	102.8	101.7	103.5	103.5	103.5	103.5	103.5	103.6	103.6	103.7	103.8	103.8	101.1	91.1
2254	Knit underwear mills	-----	140.6	140.6	140.6	141.3	141.9	143.1	147.3	153.0	153.4	154.0	154.1	155.8	155.8
2257	Circular knit fabric mills (6/76 = 100)	-----	100.0	100.2	98.9	97.7	98.7	98.5	95.8	97.1	98.8	100.1	101.1	99.7	98.7
2261	Finishing plants, cotton (6/76 = 100)	-----	100.6	101.4	101.2	103.4	104.6	105.5	104.2	104.5	106.1	108.8	110.2	110.0	110.0
2262	Finishing plants, synthetics, silk (6/76 = 100)	-----	99.0	98.1	98.0	98.5	98.6	98.5	98.2	98.2	98.5	99.8	100.2	100.1	99.9
2271	Woven carpets and rugs (12/75 = 100)	100.3	100.4	100.4	100.3	100.3	100.2	100.3	107.9	107.9	108.0	108.0	108.0	108.1	108.1
2272	Tufted carpets and rugs	117.8	117.5	117.8	117.8	117.8	117.8	117.8	120.5	120.5	120.6	120.6	120.6	120.6	120.6
2281	Yarn mills, except wool (12/71 = 100)	162.4	171.2	167.7	167.1	166.7	166.0	166.1	164.6	165.3	167.5	168.9	169.2	168.4	168.4
2282	Throwing and winding mills (6/76 = 100)	-----	97.0	94.7	93.1	91.0	90.0	88.7	88.6	89.4	91.2	96.1	98.2	102.1	102.1
2284	Thread mills (6/76 = 100)	-----	100.3	105.7	105.9	106.0	106.1	106.1	106.0	106.0	106.0	113.0	113.0	112.5	112.4
2321	Men's and boys' shirts and nightwear	158.3	155.7	164.1	164.7	166.6	168.5	168.5	170.5	175.2	175.2	175.8	175.8	176.9	177.0
2322	Men's and boys' underwear	154.3	155.6	155.6	156.1	156.7	155.6	157.1	162.2	169.0	169.2	169.2	169.2	171.2	171.1
2323	Men's and boys' neckwear (12/75 = 100)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	103.5
2327	Men's and boys' separate trousers	140.6	142.0	142.3	143.1	143.7	143.7	143.7	147.1	147.1	147.3	147.5	147.5	147.7	147.9
2341	Women's and children's underwear (12/72 = 100)	122.3	122.2	122.2	122.2	122.5	123.0	123.3	126.6	127.0	127.1	128.3	128.4	128.0	128.0
2342	Brassieres and allied garments (12/75 = 100)	103.8	104.7	104.7	104.7	104.7	104.8	104.8	104.9	104.7	106.0	106.0	106.0	107.4	108.4
2381	Fabric dress and work gloves	179.4	179.3	179.5	179.9	182.1	185.7	186.7	193.3	193.7	195.3	199.2	200.7	200.8	200.8
2421	Sawmills and planing mills (12/71 = 100)	163.1	161.6	165.6	171.6	172.3	171.5	177.9	182.1	183.4	188.2	189.3	188.8	186.2	194.9
2436	Softwood veneer and plywood (12/75 = 100)	114.7	108.5	114.7	118.0	116.6	120.4	130.3	130.2	130.3	131.7	126.9	124.4	126.0	133.7
2439	Structural wood members, n.e.c. (12/75 = 100)	106.3	104.5	107.7	111.2	113.8	114.6	114.6	114.6	116.6	116.6	118.0	118.0	118.0	116.3
2448	Wood pallets and skids (12/75 = 100)	105.3	106.0	106.4	107.0	107.8	107.9	109.7	110.3	113.4	114.5	116.6	118.4	120.0	120.5
2451	Mobile homes (12/74 = 100)	108.1	108.7	109.1	110.4	110.5	111.7	112.1	113.7	113.7	113.9	115.0	115.2	116.7	117.3
2492	Particleboard (12/75 = 100)	100.2	99.9	99.8	100.3	99.1	99.4	102.3	103.0	104.3	105.0	107.1	109.9	113.6	120.4
2511	Wood household furniture (12/71 = 100)	134.6	134.7	134.7	134.8	137.0	137.8	138.5	138.7	138.7	139.6	139.8	140.1	141.7	142.0
2512	Upholstered household furniture (12/71 = 100)	129.5	128.8	129.7	130.7	130.9	132.4	133.9	134.0	134.4	134.4	136.7	136.7	137.0	137.1
2515	Mattresses and bedsprings	138.2	138.3	138.5	141.3	141.3	141.8	141.8	141.8	141.8	143.2	144.4	144.4	144.4	146.4
2521	Wood office furniture	166.3	167.9	167.9	168.3	168.3	168.3	168.3	168.4	170.4	172.6	174.1	176.1	178.8	180.1
2611	Pulp mills (12/73 = 100)	186.5	186.4	186.1	185.9	185.9	185.9	185.9	185.4	185.1	185.1	188.2	188.2	187.1	187.1
2621	Paper mills, except building (12/74 = 100)	106.4	107.3	107.4	107.5	107.7	107.8	107.8	108.7	108.9	109.5	110.2	110.8	110.9	111.5
2631	Paperboard mills (12/74 = 100)	103.6	104.8	105.0	105.5	104.7	104.3	103.7	103.4	103.1	102.8	103.8	105.8	106.1	106.6
2647	Sanitary paper products	212.8	210.2	214.5	217.9	219.9	221.0	223.5	225.4	225.5	225.6	228.7	235.3	238.2	238.2
2654	Sanitary food containers	154.3	156.9	156.9	155.9	155.9	156								



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30. Continued—Price indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry	Annual average 1976	1976						1977						
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
2952	Asphalt felts and coatings (12/75 = 100) . . . . .	104.3	103.9	108.3	107.4	107.6	104.7	102.7	101.2	101.3	106.3	106.3	106.7	108.2	111.2
3011	Tires and inner tubes (12/73 = 100) . . . . .	138.9	135.4	143.8	146.7	148.4	147.9	148.1	146.2	140.9	140.9	146.3	144.6	144.5	147.3
3021	Rubber and plastic footwear (12/71 = 100) . . . . .	135.9	134.5	135.1	138.4	138.8	138.8	138.8	144.3	146.1	146.1	146.1	146.2	146.2	146.4
3031	Reclaimed rubber (12/73 = 100) . . . . .	140.3	140.3	140.3	141.0	143.2	144.4	144.6	143.0	143.0	144.4	144.2	147.5	147.7	147.1
3142	House slippers (12/75 = 100) . . . . .	103.5	103.9	103.9	104.3	104.3	104.3	104.3	106.6	107.2	107.2	107.2	107.3	107.3	112.5
3143	Men's footwear, except athletic (12/75 = 100) . . . . .	106.8	107.8	108.0	109.8	110.0	109.8	109.8	110.5	112.4	113.2	114.0	114.1	114.8	116.1
3144	Women's footwear, except athletic . . . . .	146.6	147.3	148.3	148.3	148.3	148.8	148.8	149.1	149.4	149.5	150.4	152.0	151.8	152.7
3171	Women's handbags and purses (12/75 = 100) . . . . .	101.9	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	103.5	103.5	103.5
3211	Flat glass (12/71 = 100) . . . . .	123.6	125.7	125.7	125.7	125.7	125.5	125.5	126.0	131.2	131.2	131.2	131.5	132.5	130.8
3221	Glass containers . . . . .	195.4	197.1	197.1	197.1	202.0	202.0	202.0	202.3	202.3	202.3	218.3	218.3	218.3	218.3
3241	Cement, hydraulic . . . . .	212.6	216.4	216.4	216.4	216.4	216.4	216.5	221.0	221.3	221.3	225.4	227.7	227.7	228.7
3251	Brick and structural clay tile . . . . .	176.1	174.8	177.9	179.6	179.8	183.3	184.5	186.8	190.0	193.0	194.0	196.3	199.4	205.5
3253	Ceramic wall and floor tile (12/75 = 100) . . . . .	105.8	106.7	106.7	106.7	106.7	106.7	106.7	106.7	97.1	100.0	101.9	101.9	111.6	111.6
3255	Clay refractories . . . . .	188.3	186.1	186.9	191.0	193.1	196.6	196.4	198.0	198.1	198.2	198.4	199.5	199.8	200.6
3259	Structural clay products, n.e.c. . . . .	155.3	154.7	155.7	157.2	157.4	158.0	158.2	158.6	158.9	159.3	162.8	164.4	166.8	168.9
3261	Vitreous plumbing fixtures . . . . .	159.3	162.3	162.7	162.9	163.2	164.4	164.3	164.0	165.2	170.0	170.7	171.6	172.2	175.9
3262	Vitreous china food utensils . . . . .	213.1	213.9	213.9	213.9	213.9	217.2	217.2	222.0	227.2	227.3	227.3	227.3	234.0	234.0
3263	Fine earthenware food utensils . . . . .	195.9	195.6	195.6	195.6	195.6	198.8	198.8	199.6	199.9	200.1	200.3	200.3	202.2	202.2
3269	Pottery products, n.e.c. (12/75 = 100) . . . . .	101.0	101.1	101.1	101.1	101.1	102.7	102.7	103.9	105.3	105.4	105.4	107.0	107.0	107.0
3271	Concrete block and brick . . . . .	172.1	174.5	174.9	174.9	174.9	174.9	175.0	175.1	176.5	179.4	182.5	183.4	184.5	187.8
3273	Ready-mixed concrete . . . . .	183.2	184.1	183.8	184.0	184.3	185.5	186.4	191.2	191.9	192.2	194.0	194.3	194.6	196.4
3274	Lime (12/75 = 100) . . . . .	111.4	111.3	115.1	113.5	114.3	116.1	114.5	115.0	116.0	116.6	117.2	116.9	117.9	117.9
3275	Gypsum products . . . . .	154.8	153.9	155.6	158.1	159.5	160.5	160.5	161.2	161.2	164.4	172.5	176.2	187.4	187.0
3291	Abrasive products (12/71 = 100) . . . . .	149.4	148.8	149.5	149.6	150.5	154.8	156.3	157.6	159.6	159.9	160.2	160.9	160.9	161.9
3297	Nonclay refractories (12/74 = 100) . . . . .	113.5	110.9	111.1	117.9	119.4	119.5	119.4	119.5	119.6	119.6	119.6	120.2	121.4	122.1
3312	Blast furnaces and steel mills . . . . .	216.9	218.1	221.1	221.4	223.8	223.7	228.1	228.7	228.7	230.5	231.0	231.9	232.5	240.5
3313	Electrometallurgical products (12/75 = 100) . . . . .	98.4	98.5	98.5	98.7	98.7	98.7	98.1	97.9	97.8	96.4	95.5	95.6	95.5	95.5
3316	Cold finishing of steel shapes . . . . .	198.2	200.9	201.7	202.8	205.6	205.6	211.7	213.3	213.4	213.7	214.3	215.7	215.9	225.9
3317	Steel pipes and tubes . . . . .	213.9	217.1	217.0	217.1	217.0	216.8	220.0	220.1	221.3	227.9	228.5	229.0	228.9	229.0
3321	Gray iron foundries (12/68 = 100) . . . . .	211.8	219.5	208.7	209.5	212.6	212.6	212.7	214.5	214.6	214.1	216.9	217.0	217.1	208.4
3333	Primary zinc . . . . .	256.5	254.4	263.4	263.4	269.7	254.8	254.8	254.8	255.2	255.0	255.1	255.3	237.4	237.9
3334	Primary aluminum . . . . .	176.0	174.0	178.1	183.8	183.9	192.4	192.3	192.4	193.9	193.9	196.4	203.8	205.4	209.2
3351	Copper rolling and drawing . . . . .	164.8	169.9	172.4	173.1	174.2	170.2	161.9	159.4	160.6	167.2	173.0	172.9	170.2	170.4
3353	Aluminum sheet plate and foil (12/75 = 100) . . . . .	108.9	108.7	110.7	115.3	115.4	115.8	116.2	116.3	116.3	116.4	118.8	120.7	120.9	125.3
3354	Aluminum extruded products (12/75 = 100) . . . . .	106.6	105.7	108.7	113.6	113.6	113.7	113.7	113.8	113.9	119.4	119.6	119.7	125.0	125.0
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100) . . . . .	104.4	104.3	105.4	108.0	108.1	109.0	108.8	109.2	109.4	109.1	111.0	110.9	111.0	115.1
3411	Metal cans . . . . .	202.3	203.2	204.0	205.1	205.1	205.2	205.4	205.4	205.4	217.2	217.9	217.7	217.8	219.2
3425	Hand saws and saw blades (12/72 = 100) . . . . .	130.6	131.2	129.0	129.6	130.7	131.3	131.5	132.6	133.3	136.1	136.0	138.6	138.6	138.8
3431	Metal sanitary ware . . . . .	185.2	188.3	188.5	188.6	188.8	188.8	188.9	190.4	190.2	193.4	193.5	194.9	195.6	196.9
3465	Automotive stampings (12/75 = 100) . . . . .	104.3	104.6	106.3	106.6	106.9	107.3	105.9	106.8	107.2	107.3	107.5	107.7	108.7	110.2
3482	Small arms ammunition (12/75 = 100) . . . . .	102.3	101.6	102.1	102.8	103.5	104.2	104.2	111.3	111.3	111.3	108.2	109.0	109.0	110.0
3493	Steel springs, except wire . . . . .	176.3	175.8	180.4	183.8	183.9	182.4	183.7	184.0	184.1	184.9	185.3	185.6	186.7	188.9
3494	Valves and pipe fittings (12/71 = 100) . . . . .	164.9	165.9	167.0	168.0	166.6	166.7	166.9	168.4	169.6	170.7	172.5	172.8	173.6	173.6
3498	Fabricated pipe and fittings . . . . .	236.5	238.9	238.9	239.0	240.4	240.3	240.3	240.3	240.3	241.8	243.3	244.3	246.0	246.1
3519	Internal combustion engines, n.e.c. . . . .	182.1	182.4	183.5	185.1	187.7	187.7	189.2	190.9	191.3	191.7	192.1	192.6	193.3	197.3
3531	Construction machinery (12/76 = 100) . . . . .	178.5	181.4	182.0	182.4	182.9	183.1	183.9	184.9	188.3	188.9	189.9	190.3	190.6	192.3
3532	Mining machinery (12/72 = 100) . . . . .	222.1	221.0	222.9	224.1	228.0	230.6	231.4	231.9	233.6	234.6	237.7	238.5	239.9	240.6
3533	Oilfield machinery and equipment . . . . .	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
3534	Elevators and moving stairways . . . . .	173.6	175.2	175.7	176.5	176.8	177.2	177.4	180.0	181.3	182.4	182.9	184.7	191.4	192.4
3542	Machine tools, metal forming types (12/71 = 100) . . . . .	157.3	158.0	158.0	158.7	158.9	159.4	160.4	160.4	166.0	166.2	168.1	168.2	168.9	170.9
3546	Power driven hand tools (12/76 = 100) . . . . .	145.4	145.3	146.9	146.9	148.2	148.3	148.4	151.0	151.5	153.0	153.9	154.0	155.1	155.7
3552	Textile machinery (12/69 = 100) . . . . .	159.5	160.8	160.8	161.4	161.4	161.5	161.7	162.2	162.2	164.8	165.8	166.4	166.6	168.0
3553	Woodworking machinery (12/72 = 100) . . . . .	100.2	100.2	100.5	101.0	101.3	102.9	103.0	103.3	105.7	106.4	106.6	109.0	110.3	110.4
3576	Scales and balances, excluding laboratory . . . . .	142.2	141.2	141.7	142.9	144.0	144.2	144.2	145.1	145.2	146.8	148.1	148.5	150.0	151.7
3592	Carburetors, pistons, rings, valves (6/76 = 100) . . . . .	160.8	159.8	161.0	161.8	162.3	162.5	164.3	164.5	164.8	165.6	165.6	167.1	168.0	169.8
3612	Transformers . . . . .	103.9	103.6	104.7	105.7	106.1	106.1	106.9	106.8	107.9	108.3	108.5	108.6	108.8	109.6
3623	Welding apparatus, electric (12/72 = 100) . . . . .	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0
3631	Household cooking equipment (12/75 = 100) . . . . .	129.6	130.1	130.6	130.8	130.5	131.2	132.4	132.3	133.6	134.3	134.3	134.3	134.3	134.7
3632	Household refrigerators, freezers (6/76 = 100) . . . . .	123.9	125.1	125.4	125.7	125.5	125.4	125.4	125.4	126.8	127.8	127.7	127.8	128.5	128.6
3633	Household laundry equipment (12/73 = 100) . . . . .	100.1	99.9	100.0	100.0	100.6	100.7	100.7	100.5	101.4	101.6	101.4	101.4	101.4	102.2
3635	Household vacuum cleaners . . . . .	178.1	175.3	175.8	183.5	184.0	184.8	185.1	185.3	185.6	185.7	185.8	192.5	193.9	197.6
3636	Sewing machines (12/75 = 100) . . . . .	158.0	160.3	161.5	159.8	157.5	157.2	158.9	161.0	162.9	164.7	167.3	167.2	168.0	170.5
3641	Electric lamps . . . . .	102.2	102.3	103.2	103.4	103.5	103.4	103.6	103.7	104.0	104.8	104.9	105.7	105.9	107.1
3644	Noncurrent-carrying wiring devices (12/72 = 100) . . . . .	101.8	102.0	102.5	102.5	102.6	102.6	102.6	102.7	106.1	106.2	106.4	106.7	107.2	108.3
3646	Lighting equipment, n.e.c. (12/75 = 100) . . . . .	171.1	170.8	170.7	170.6	170.8	170.7	175.8	178.7	178.9	178.9	178.8	178.8	178.8	178.3
3671	Electron tubes receiving type . . . . .	96.7	97.5	96.3	96.1	95.7	95.5	94.4	92.8	92.5	91.8	91.9	91.5	90.9	90.1
3674	Semiconductors and related devices . . . . .	101.8	101.6	101.7	103.2	103.2	104.4	104.3	104.0	104.9	104.8	105.8	106.0	106.0	106.1
3675	Electronic capacitors (12/75 = 100) . . . . .	103.0	102.8	102.9	104.7	105.0	105.1	105.6	109.1	109.1	108.9	109.1	110.2	110.0	110.0
3676	Electronic resistors (12/75 = 100) . . . . .	101.6	101.0	101.0	101.1	103.5	104.4	104.6	105.6	105.8</					

## 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.

**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 non-labor 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 pay-roll 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	1968	1969	1970	1971	1972	1973	1974	1975	1976
<b>Private business sector:</b>													
Output per hour of all persons .....	59.7	69.2	78.1	94.7	103.3	103.7	104.5	107.8	111.0	113.1	<sup>1</sup> 110.0	112.0	116.6
Compensation per hour .....	41.6	54.9	71.4	88.4	107.6	115.1	123.3	131.5	138.9	150.3	<sup>1</sup> 164.3	180.2	196.5
Real compensation per hour .....	57.7	68.5	80.5	93.6	103.3	104.8	106.0	108.4	110.9	112.9	<sup>1</sup> 111.3	111.8	115.2
Unit labor cost .....	69.6	79.3	91.4	93.4	104.1	111.0	118.1	121.9	125.2	132.9	<sup>1</sup> 149.4	160.9	168.5
Unit nonlabor payments .....	73.2	80.6	85.4	95.8	103.6	104.6	105.9	113.2	119.4	125.4	<sup>1</sup> 130.8	151.9	159.7
Implicit price deflator .....	70.8	79.8	89.3	94.2	103.9	108.8	113.9	118.9	123.2	130.3	<sup>1</sup> 143.0	157.8	165.4
<b>Nonfarm business sector:</b>													
Output per hour of all persons .....	65.5	73.2	80.3	95.7	103.2	103.1	103.3	106.3	109.5	111.4	108.2	110.0	111.4
Compensation per hour .....	44.5	57.8	73.7	89.1	107.3	114.3	121.9	129.9	137.4	148.1	162.0	176.6	193.1
Real compensation per hour .....	61.7	72.1	83.1	94.3	103.0	104.1	104.8	107.1	109.7	111.3	109.7	110.2	113.2
Unit labor cost .....	67.9	79.0	91.7	93.2	103.9	110.9	118.1	122.2	125.5	133.0	149.7	161.5	168.7
Unit nonlabor payments .....	71.5	80.2	84.5	95.8	104.0	104.5	106.2	113.4	117.9	118.3	125.2	147.6	157.2
Implicit price deflator .....	68.1	79.4	89.2	94.1	104.0	108.7	114.0	119.2	122.9	128.0	141.4	156.8	164.8
<b>Nonfinancial corporations:</b>													
Output per all-employee hour .....	( <sup>1</sup> )	( <sup>1</sup> )	79.4	96.4	103.4	103.9	103.8	107.3	110.5	113.2	109.2	113.0	117.2
Compensation per hour .....	( <sup>1</sup> )	( <sup>1</sup> )	74.9	89.7	106.9	114.2	121.8	129.4	136.7	148.0	162.4	179.4	194.9
Real compensation per hour .....	( <sup>1</sup> )	( <sup>1</sup> )	84.5	94.9	102.6	104.0	104.7	106.7	109.1	111.2	110.0	111.3	114.3
Unit labor cost .....	( <sup>1</sup> )	( <sup>1</sup> )	94.3	93.0	103.4	109.9	117.4	120.6	123.7	130.7	148.8	158.8	166.3
Unit nonlabor payments .....	( <sup>1</sup> )	( <sup>1</sup> )	90.8	100.1	103.0	103.1	103.5	111.1	114.7	116.8	124.8	149.1	158.0
Implicit price deflator .....	( <sup>1</sup> )	( <sup>1</sup> )	93.1	95.5	103.3	107.5	112.5	117.2	120.5	125.8	140.2	155.3	163.4
<b>Manufacturing:</b>													
Output per all persons .....	64.9	74.0	78.8	98.2	103.6	104.9	104.5	110.3	116.0	119.4	112.8	116.3	124.2
Compensation per hour .....	45.0	60.4	77.0	90.9	107.0	114.0	121.7	129.8	137.0	147.0	161.4	179.4	194.8
Real compensation per hour .....	62.4	75.4	86.9	96.2	102.7	103.8	104.7	107.0	109.3	110.5	109.3	111.3	114.2
Unit labor cost .....	69.4	81.6	97.7	92.6	103.3	108.7	116.5	117.6	118.1	123.2	143.1	154.3	156.9
Unit nonlabor payments .....	82.4	88.6	92.4	103.3	103.9	99.3	96.2	104.8	<sup>1</sup> 107.4	<sup>1</sup> 106.3	105.6	127.5	141.4
Implicit price deflator .....	73.3	83.8	96.1	95.9	103.5	105.8	110.3	113.7	114.8	<sup>1</sup> 118.0	131.6	146.1	152.1

<sup>1</sup>Not available.

**32. Annual percent change in productivity and related data, 1966-76**

Item	Year											Annual rate of change	
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1950-76	1960-76
<b>Private business sector:</b>													
Output per hour of all persons	3.2	2.3	3.3	0.3	0.7	3.2	2.9	1.9	'2.7	'1.8	'4.2	2.7	2.4
Compensation per hour	7.0	5.6	7.6	7.0	7.2	6.6	5.7	8.2	'9.4	'9.6	'9.1	5.7	6.5
Real compensation per hour	4.0	2.7	3.3	1.5	1.1	2.2	2.3	1.8	'-1.4	'1.5	'3.1	2.8	'2.3
Unit labor cost	3.7	3.3	4.1	6.6	6.4	3.2	2.7	6.2	'12.4	'7.7	'4.7	2.9	4.0
Unit nonlabor payments	2.2	2.1	3.6	1.0	1.3	6.9	5.4	5.0	'4.3	'16.1	'5.1	2.6	3.7
Implicit price deflator	3.2	2.9	3.9	4.7	4.7	4.4	3.6	5.8	'9.8	'10.3	'4.8	2.8	3.9
<b>Nonfarm business sector:</b>													
Output per hour of all persons	2.5	1.9	3.2	-2	2	2.9	3.0	1.7	'-2.8	'1.6	'4.1	2.3	'2.1
Compensation per hour	6.1	5.8	7.3	6.5	6.7	6.6	5.8	7.8	9.4	'9.6	'8.7	5.3	6.2
Real compensation per hour	3.1	2.9	3.0	1.0	7	2.2	2.4	1.4	-1.4	'1.5	'2.8	2.5	'2.0
Unit labor cost	3.4	3.8	3.9	6.6	6.5	3.5	2.7	6.0	'12.6	'7.9	'4.4	2.9	4.0
Unit nonlabor payments	2.0	2.3	4.0	4	1.7	6.8	4.0	.3	'5.9	'17.8	'6.5	'2.6	3.5
Implicit price deflator	2.9	3.3	4.0	4.5	4.9	4.5	3.1	4.1	'10.5	'10.9	'5.1	2.8	3.8
<b>Nonfinancial corporations:</b>													
Output per all-employee hour	2.3	1.4	3.4	5	1	3.4	3.0	2.4	'-3.5	'3.5	'3.7	P2.6	'2.3
Compensation per hour	5.5	5.7	6.9	6.9	6.7	6.2	5.6	8.3	'9.8	'10.5	'8.6	'5.3	P6.1
Real compensation per hour	2.5	2.8	2.6	1.4	7	1.9	2.2	2.0	'-1.1	'1.2	'2.7	'2.3	P1.9
Unit labor cost	3.2	4.2	3.4	6.3	6.8	2.7	2.5	5.7	'13.8	'6.8	'4.7	P2.6	P3.8
Unit nonlabor payments	-1	0	3.0	0	5	7.3	3.3	1.8	'6.8	'19.5	'6.0	P2.2	'2.9
Implicit price deflator	1.9	2.7	3.3	4.1	4.6	4.2	2.8	4.4	'11.5	'10.8	'5.2	'2.5	'3.5
<b>Manufacturing:</b>													
Output per hour of all persons	1.6	3	3.6	1.2	-4	5.6	'5.2	2.9	'-5.5	'3.1	'6.8	2.6	2.6
Compensation per hour	4.7	5.1	7.0	6.5	6.8	6.6	5.6	7.3	'9.8	11.2	'8.6	5.1	5.9
Real compensation per hour	1.7	2.2	2.7	1.1	8	2.2	2.2	1.0	'1.1	1.9	'2.6	2.3	1.7
Unit labor cost	3.1	4.8	3.3	5.2	7.2	1.0	4	4.3	'16.1	'7.8	'1.7	2.5	3.2
Unit nonlabor payments	-8	-2.4	3.9	-4.4	-3.2	9.0	'2.5	'-1.0	'7	'20.7	'10.9	P1.5	P1.7
Implicit price deflator	1.8	2.5	3.5	2.3	4.2	3.1	1.0	2.8	'11.5	'11.0	'4.1	P2.2	P2.7

**33. Indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted**

[1967 = 100]

Item	Annual average		Quarterly indexes										
			1974		1975				1976				1977
	1975	1976	IV	I	II	III	IV	I	II	III	IV	I	II
<b>Private business sector:</b>													
Output per hour of all persons	112.0	116.6	108.6	109.0	111.8	114.0	113.5	115.5	116.5	117.3	117.3	119.1	118.5
Compensation per hour	180.2	196.5	170.9	176.2	179.0	181.1	184.7	190.5	194.3	198.6	202.7	208.4	211.6
Real compensation per hour	111.8	115.2	110.9	112.0	112.2	111.2	111.6	113.8	114.8	115.6	116.7	117.7	117.0
Unit labor cost	160.9	168.5	157.3	161.7	160.2	158.9	162.8	164.9	166.9	169.2	172.8	175.1	178.5
Unit nonlabor payments	151.9	159.7	134.5	139.6	148.9	159.7	158.9	158.4	160.3	160.5	159.5	160.4	162.4
Implicit price deflator	157.8	165.4	149.5	154.1	156.3	159.2	161.4	162.6	164.6	166.2	168.2	170.0	173.0
<b>Nonfarm business sector:</b>													
Output per hour of all persons	110.0	114.4	106.7	106.9	109.6	112.1	111.2	113.0	114.5	115.3	114.8	116.2	116.1
Compensation per hour	177.6	193.1	168.4	173.2	176.2	179.2	182.0	186.9	191.1	195.2	198.7	204.3	208.0
Real compensation per hour	110.2	113.2	109.3	110.1	110.4	110.1	110.0	111.7	113.0	113.7	114.4	115.4	115.0
Unit labor cost	161.5	168.7	157.9	162.0	160.7	159.8	163.6	165.4	166.9	169.3	173.1	175.8	179.2
Unit nonlabor payments	147.6	157.2	129.9	136.7	159.8	154.3	153.4	155.0	156.6	159.0	158.1	157.2	159.7
Implicit price deflator	156.8	164.8	148.3	153.4	163.6	157.9	160.1	161.8	163.4	165.8	168.0	169.5	172.5
<b>Nonfinancial corporations:</b>													
Output per all-employee hour	113.0	117.2	107.7	109.0	112.7	115.4	114.8	116.2	117.4	118.0	117.2	119.0	( <sup>1</sup> )
Compensation per hour	179.4	194.9	169.3	175.0	178.0	180.8	183.9	189.1	193.0	196.8	200.7	206.8	( <sup>1</sup> )
Real compensation per hour	111.3	114.3	109.8	111.3	111.5	111.0	111.2	113.0	114.1	114.6	115.6	116.8	( <sup>1</sup> )
Total unit costs	166.1	172.1	162.2	167.0	165.5	164.4	167.6	168.8	170.3	172.5	176.8	179.0	( <sup>1</sup> )
Unit labor costs	158.8	172.1	157.2	160.6	157.9	156.6	160.2	162.7	164.5	166.8	171.2	173.9	( <sup>1</sup> )
Unit nonlabor costs	188.8	166.3	177.8	186.9	189.3	188.5	190.6	187.7	188.3	190.1	194.1	195.0	( <sup>1</sup> )
Unit profits	93.6	113.2	63.0	65.8	87.8	111.2	107.8	113.1	115.0	117.7	107.0	103.7	( <sup>1</sup> )
Implicit price deflator	155.3	163.4	147.5	152.0	154.0	156.5	158.7	160.5	162.1	164.3	166.4	167.8	( <sup>1</sup> )
<b>Manufacturing:</b>													
Output per hour of all persons	116.3	124.2	111.5	109.4	114.1	120.6	121.4	122.2	123.9	125.4	125.1	125.1	126.3
Compensation per hour	179.4	194.8	169.2	174.9	178.2	180.7	183.7	189.0	193.3	196.5	200.1	206.4	209.7
Real compensation per hour	111.3	114.2	109.8	111.2	111.7	111.0	111.0	113.0	114.3	114.4	115.2	116.5	115.9
Unit labor costs	154.3	156.9	151.8	159.9	156.1	149.8	151.3	154.7	156.0	156.7	159.9	165.0	166.0

<sup>1</sup>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					
	IV 1975 to I 1976	I 1976 to II 1976	II 1976 to III 1976	III 1976 to IV 1976	IV 1976 to I 1977	I 1977 to II 1977	I 1975 to I 1976	II 1975 to II 1976	III 1975 to III 1976	IV 1975 to IV 1976	I 1976 to I 1977	II 1976 to II 1977
<b>Private business sector:</b>												
Output per hour of all persons .....	7.6	3.2	3.0	-0.0	6.1	-1.8	6.0	4.2	3.0	3.4	3.0	1.8
Compensation per hour .....	13.1	8.3	9.0	8.6	11.7	6.3	8.1	8.5	9.6	9.8	9.4	8.9
Real compensation per hour .....	8.2	3.6	2.7	3.9	3.3	-2.3	1.6	2.4	3.9	4.6	3.4	1.9
Unit labor cost .....	5.1	5.0	5.8	8.7	5.3	8.2	2.0	4.1	6.5	6.1	6.2	7.0
Unit nonlabor payments .....	-1.1	4.9	.6	-2.6	2.3	5.1	13.5	7.7	.6	.4	1.2	1.3
Implicit price deflator .....	3.0	4.9	4.0	4.8	4.4	7.2	5.6	5.3	4.4	4.2	4.5	5.1
<b>Nonfarm business sector:</b>												
Output per hour of all persons .....	6.5	5.4	2.8	-1.8	5.0	-4	5.7	4.4	2.8	3.2	2.8	1.4
Compensation per hour .....	11.1	9.4	8.8	7.4	11.7	7.4	7.9	8.5	8.9	9.2	9.3	8.8
Real compensation per hour .....	6.3	4.6	2.5	2.7	3.2	-1.3	1.4	2.3	3.3	4.0	3.3	1.8
Unit labor cost .....	4.4	3.8	5.8	9.4	6.3	7.9	2.1	3.9	5.9	5.8	6.3	7.3
Unit nonlabor payments .....	4.1	4.4	6.1	-2.1	-2.2	6.4	13.3	7.9	3.0	3.1	1.5	2.0
Implicit price deflator .....	4.3	4.0	5.9	5.5	3.5	7.4	5.5	5.1	5.0	4.9	4.7	5.6
<b>Nonfinancial corporations:</b>												
Output per all-employee hour .....	5.0	4.0	2.1	-2.5	6.0	( <sup>1</sup> )	6.6	4.1	2.2	2.1	2.4	( <sup>1</sup> )
Compensation per hour .....	11.8	8.6	8.1	8.1	12.8	( <sup>1</sup> )	8.1	8.5	8.9	9.1	9.4	( <sup>1</sup> )
Real compensation per hour .....	7.0	3.8	1.9	3.3	4.3	( <sup>1</sup> )	1.6	2.3	3.2	4.0	3.3	( <sup>1</sup> )
Total unit costs .....	3.0	3.5	5.3	10.3	5.2	( <sup>1</sup> )	1.1	2.9	4.9	5.5	6.1	( <sup>1</sup> )
Unit labor costs .....	6.5	4.4	5.9	10.9	6.4	( <sup>1</sup> )	1.3	4.2	6.5	6.9	6.9	( <sup>1</sup> )
Unit nonlabor costs .....	-5.9	1.4	3.8	8.9	1.7	( <sup>1</sup> )	.4	-5	.8	1.9	3.9	( <sup>1</sup> )
Unit profits .....	21.3	7.0	9.5	-31.7	-11.6	( <sup>1</sup> )	71.9	30.9	5.8	-7	-8.3	( <sup>1</sup> )
Implicit price deflator .....	4.7	3.9	5.7	5.1	3.5	( <sup>1</sup> )	5.6	5.3	5.0	4.9	4.6	( <sup>1</sup> )
<b>Manufacturing:</b>												
Output per hour of all persons .....	2.6	5.8	4.7	-7	-2	4.0	11.7	8.6	3.9	3.0	2.3	1.9
Compensation per hour .....	12.1	9.5	6.7	7.5	13.2	6.5	8.1	8.5	8.7	8.9	9.2	8.4
Real compensation per hour .....	7.3	4.6	.5	2.8	4.7	-2.1	1.6	2.3	3.1	3.8	3.1	1.4
Unit labor cost .....	9.3	3.5	1.9	8.3	13.4	2.4	-3.2	-1	4.6	5.7	6.7	6.4

<sup>1</sup>Not available.

## 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, 1971 to date

[In percent]

Sector and measure	Annual average						Quarterly average						
	1971	1972	1973	1974	1975	1976	1976				1977 <sup>P</sup>		
							I	II	III	IV	I	II	
Wage and benefit settlements, all industries:													
First-year settlements .....	13.1	8.5	7.1	10.7	11.4	8.5	10.5	8.9	10.0	6.8	8.5	8.7	
Annual rate over life of contract .....	8.8	7.4	6.1	7.8	8.1	6.6	8.0	7.2	7.4	5.2	6.7	5.5	
Wage rate settlements, all industries:													
First-year settlements .....	11.6	7.3	5.8	9.8	10.2	8.4	9.7	8.2	9.6	7.1	7.6	8.2	
Annual rate over life of contract .....	8.1	6.4	5.1	7.3	7.8	6.4	7.9	6.7	7.2	4.9	6.5	5.8	
Manufacturing:													
First-year settlements .....	10.9	6.6	5.9	8.7	9.8	8.9	9.5	10.9	11.0	6.7	7.8	9.3	
Annual rate over life of contract .....	7.3	5.6	4.9	6.1	8.0	6.0	7.2	7.6	7.4	4.3	6.4	5.4	
Nonmanufacturing (excluding construction):													
First-year settlements .....	12.2	8.2	6.0	10.2	11.9	8.6	11.4	8.0	8.5	9.2	8.1	8.2	
Annual rate over life of contract .....	8.6	7.3	5.4	7.2	8.0	7.2	9.3	6.7	7.2	7.7	7.4	6.6	
Construction:													
First-year settlements .....	12.6	6.9	5.0	11.0	8.0	6.1	6.9	5.6	7.0	6.4	2.5	6.0	
Annual rate over life of contract .....	10.8	6.0	5.1	9.6	7.5	6.2	6.8	5.9	6.6	7.3	2.8	5.9	

### 36. Effective wage adjustments going into effect in major collective bargaining units, 1971 to date

[In percent]

Sector and measure	Average annual changes						Average quarterly changes							
	1971	1972	1973	1974	1975	1976	1975		1976				1977 <sup>P</sup>	
							III	IV	I	II	III	IV	I	II
Total effective wage rate adjustment, all industries . . .	9.2	6.6	7.0	9.4	8.7	8.1	3.3	1.5	1.3	2.7	2.5	1.5	1.1	2.6
Change resulting from—														
Current settlement . . . . .	4.3	1.7	3.0	4.8	2.8	3.2	.8	.6	.3	1.3	.8	.9	.3	.7
Prior settlement . . . . .	4.2	4.2	2.7	2.6	3.7	3.2	1.5	.5	.6	1.2	1.0	.4	.5	1.3
Escalator provision . . . . .	.7	.7	1.3	1.9	2.2	1.6	1.0	.4	.4	.2	.7	.3	.3	.5
Manufacturing . . . . .	8.0	5.6	7.3	10.3	8.5	8.5	2.8	1.6	1.4	2.2	2.5	2.4	1.2	2.6
Nonmanufacturing . . . . .	10.3	7.4	6.7	8.6	8.9	7.7	3.6	1.5	1.2	3.1	2.6	.8	1.1	2.6

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 . . . . .	5,600	----	2,500	----	38,000	.19
1976: May . . . . .	572	921	164	295	3,597	.22
June . . . . .	577	1,007	231	373	4,388	.24
July . . . . .	505	960	292	490	5,145	.30
August . . . . .	480	937	171	410	4,557	.26
September . . . . .	521	972	340	466	4,848	.28
October . . . . .	559	1,024	152	429	4,348	.28
November . . . . .	452	861	201	326	2,391	.14
December . . . . .	248	607	75	168	1,459	.08
1977: January . . . . .	351	518	109	176	1,160	.07
February . . . . .	314	549	158	260	1,356	.09
March . . . . .	391	600	222	340	2,094	.11
April . . . . .	615	850	202	308	3,045	.18
May <sup>P</sup> . . . . .	551	908	254	455	4,131	.24
June <sup>P</sup> . . . . .	664	968	205	362	3,292	.18



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