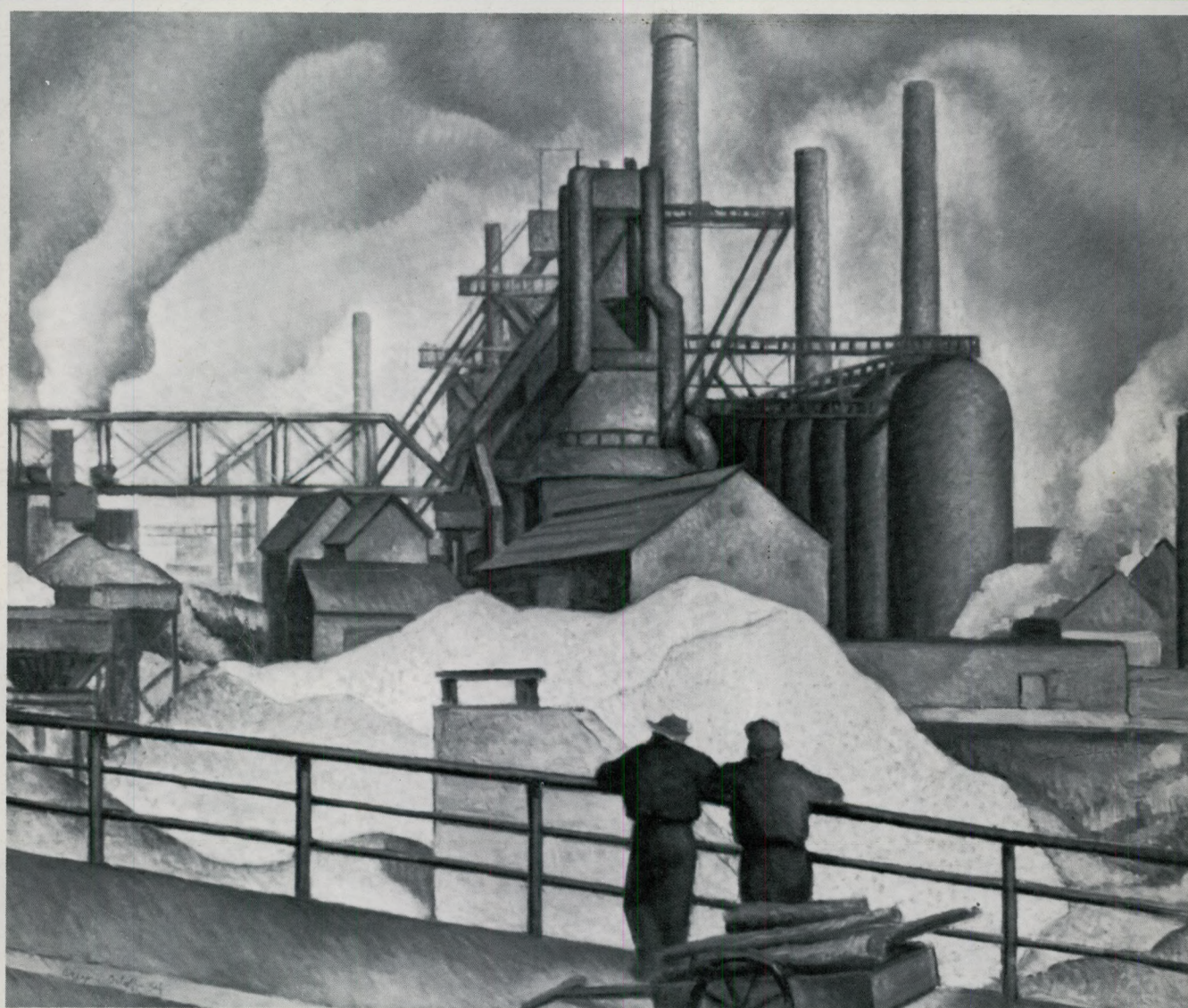




MONTHLY LABOR REVIEW

U.S. Department of Labor
Bureau of Labor Statistics
May 1982

In this issue:
Wages in 1981





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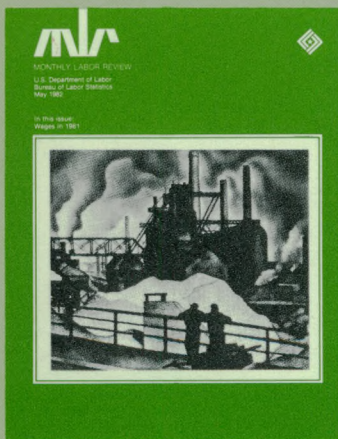
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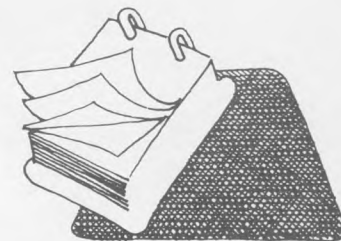
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Labor Month In Review



NEW TECHNOLOGY. The Bureau of Labor Statistics continued its studies of technological change by appraising the impact of new technology on productivity and occupations in four major industries. The studies show—

Meat products. Most of the new technology occurred in the 1960's and include rail systems for moving animal carcasses between cutting stations, eliminating the constant repositioning required in the previous method. Also, for beef processing, workers were equipped with power knives and saws for carcass splitting, mechanical hide pullers eliminated the hand cutting operations necessary for hide removal, and rendering operations were mechanized so that one worker became responsible for the entire process. In the poultry processing industry, innovations included mechanized slaughtering, feather removal, and packaging and conveyors and rail systems to move carcasses through the plant. A large proportion of meat and poultry cutting operations is still done manually. Automation is hindered by the difficulty of developing an economical and reliable cutting machine capable of adapting to the physical differences in animal carcasses.

Not much change is expected in job content and skill requirements in the 1980's. In 1978, 3 of 5 meat products workers were operatives—meatcutters, packers, or machine operators; they are expected to account for two-thirds of the industry's work force by 1990.

Foundries. The specific technologies gaining prominence include improved material handling devices, automatic equipment for molding and coremaking, more productive diecasting technology, more widespread use of electric furnaces in melting and mechanized systems in pouring operations, advances in cleaning and finishing equipment, and more extensive instrumentation and computerization. The industry also has in-

vested substantial funds for technology to reduce pollution and improve worker health and safety.

The trend to mechanization will continue to alter the structure of occupations. Foundries are employing proportionally more engineers, technicians, and maintenance workers in response to more extensive and complex production equipment. Hence, production workers have declined relative to the total foundry work force and the composition of occupations in this category is changing. A further decline is expected in occupations which involve large manual tasks. The more widespread use of improved trucks, hoists, conveyors, and related equipment will reduce the need for hand laborers, but will increase the need for truck operators. More maintenance mechanics and repairers will be needed to service the complex equipment. Robots may assume some job functions.

Metalworking machinery. Numerical control of machine tools is the most significant new technology introduced in this industry in the past 25 years. It involves the automatic control of a machine tool's movement by an electronic controller or computer which reads instructions in digital form. Numerically controlled tools reduce setup time and eliminate the need for costly tooling devices, and can produce parts with greater precision and uniformity. Despite these advantages, most machine tool shops still rely on skilled workers using conventional tools.

Operatives and craftworkers, the two largest blue-collar occupations, accounted for one-third of the industry's employment in 1978. Operatives are expected to grow by 36 percent by 1990, while craftworkers' growth will be about half that rate. Thus, operatives will account for a somewhat larger percent of total employment in 1990 than in 1978, while craftworkers' share will decline slightly.

The costliness of numerically controlled machines and the intricacy of their control systems will create a demand for preventive maintenance mechanics trained in electronics. Employment of these mechanics, repairers, and installers (a subdivision of the craftworker group) will expand five times as fast as all craft employment. The professional and technical worker group will grow by 22 percent by 1990. Engineers will remain the dominant occupation for this group, with about half of them still in the mechanical field.

Electrical and electronic equipment. New technology includes equipment to design and fabricate semiconductors and related devices, increased automation in assembly line operations, numerically controlled machine tools, and advanced production equipment.

More than one-half of the industry's work force were engaged in manufacturing communication equipment and electronic components. The structure of occupations is expected to change. All occupational groups, except salesworkers, are expected to increase in the 1980's. Operatives, the largest group, will increase by more than one-fourth, and will continue to be the largest group, at 47 percent of total employment. Assemblers make up more than one-third of the operatives; they are expected to increase at a slightly higher rate than the average for all occupations in the industry.

Technologies applicable to assembly operations will be diffused more widely, but assembly of household appliances and other products will continue to involve a high degree of manual tasks.

The four studies have been published in BLS Bulletin 2104, *Technology and Labor in Four Industries*, which is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Price: \$3.25. □

Wage increases moderate in 1981

Most wage series rose more slowly, with much of the slowdown in the fourth quarter; when adjusted for inflation, they showed declines, although the wage-price gap was narrower

ARTHUR SACKLEY

Wage gains were moderate in 1981, as the recession developed and inflation abated. Nearly all of the Bureau of Labor Statistics' measures of wage change recorded smaller advances than in the previous year.¹ When adjusted for inflation, most measures of real wages declined (continuing the trend started in 1979), but at a diminishing rate, mainly because of the slowdown in the rise in consumer prices. The impact of the recession was especially evident in the Bureau's cyclically sensitive average weekly earnings series; it showed the lowest rate of increase in more than a decade. In fact, the only measure that did not rise more slowly than in the previous year was new settlements negotiated during the year in large bargaining units.

The downturn in economic activity and the easing of inflation, a relatively light incidence of collective bargaining, and wage decisions in prior years were among the elements influencing wage changes in 1981. An examination of the role of these factors is helpful in understanding wage developments in the overall economy and in the collective bargaining sector.

The state of the economy was a major influence on wage changes in 1981. After rising vigorously at an annual rate of 8.6 percent in the first quarter, real gross national product leveled off, then fell 4.7 percent in the fourth quarter. Economic indicators relevant to wage

changes reflected this shift: from July to December employment dropped by 1.3 million, unemployment rose by 1.8 million, the unemployment rate climbed from 7.2 to 8.8 percent, and both the factory workweek and overtime hours declined markedly.

Cyclical downturns initially tend to depress workers' earnings, as employers cut back on hours of work. Then, as the recession deepens, hiring is restricted and layoffs spread, producing increasing slack in labor markets which, in turn, dampens the pressure for pay increases.

The 1981 recession contributed to some abatement in the upward pressure prices may have exerted on wages in recent years. The Consumer Price Index for All Urban Consumers (CPI-U) rose 8.9 percent in 1981—the smallest increase in 4 years.

The government sector was under some of the same pressure as private industry. Because government services are highly labor intensive, public payrolls were especially vulnerable to the fiscal restraints experienced at all levels of government in 1981. However, available data indicate that most of the labor cost containment measures have affected employment more than wages.

In the organized sector of the economy, activity was comparatively subdued, despite the substantial changes in the economic climate and wage and price movements. It was a very light year for bargaining, and the incidence of work stoppages declined to its lowest level since 1940.

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Wage and compensation changes

Nearly all measures of wage and compensation change registered smaller advances in 1981 than in the previous year, with much of the deceleration occurring in the fourth quarter. The measures also show a smaller percentage rise in wages than in the Consumer Price Index, resulting in further erosion in purchasing power for most workers, although the gap between price and wage increases was narrower than in recent years. Table 1 shows trend data in current and 1977 dollars for several key compensation series.

Hourly compensation is the measure with the broadest scope. It includes payrolls and employer contributions to social insurance and private benefit plans. Hourly compensation in the private nonfarm business sector went up 9.3 percent in 1981. Although this was the third largest increase in the series in the last decade, it was less than that of 1980, and was the first year-to-year decline in the rate of increase since 1977. Hourly compensation data not only measure trends in wages and benefits, but also the labor cost component in unit labor costs, a key indicator of inflationary trends. Typically, at the onset of a recession, output declines faster than employment and hours of work. Consequently, productivity (output per employee hour) falls, as was the case in the second half of 1981. The fourth-quarter decline in productivity was the largest since the productivity series began in 1947. The magnitude of this drop was reflected in a steep climb in unit labor costs (hourly compensation divided by output per employee hour) as the recession deepened, despite a slower rise in hourly compensation.

The average hourly and weekly earnings series are more restricted in scope than hourly compensation.

They cover only wages and salaries of production and nonsupervisory workers in the private nonfarm economy. These measures typically decline or slow their rate of increase in the initial phase of a downturn through the effects of a shift in the employment mix caused by layoffs in cyclically sensitive high-wage industries, less overtime, and, for weekly earnings, shorter workweeks. This was the pattern in 1981.

Average hourly earnings rose 7.2 percent in 1981, the smallest increase since 1977. Some of the slowdown is attributable to recession-related layoffs in construction and durable goods manufacturing, both relatively high-paying sectors. The shift away from these high-wage industries depressed average earnings. Average weekly earnings, reflecting the slower rise in hourly earnings and a reduction in the workweek during the second half of the year, went up by only 6.0 percent in 1981—the smallest gain since the 1960's.

Wage measures that are not influenced by changes in the workweek and shifts in the distribution of employment by industry are less sensitive to cyclical fluctuations in economic activity. The Hourly Earnings Index minimizes these shift effects, by excluding overtime in manufacturing industries and by applying fixed-weighted aggregate employee hours to average earnings at a detailed industry level. It provides data for broad industry groups and the private nonfarm economy. The Hourly Earnings Index went up 8.2 percent in 1981, a smaller increase than the 9.4-percent rise of the previous year, but the deceleration was not as pronounced as that for average hourly or weekly earnings.

The Employment Cost Index is broader in occupational and industrial coverage than the Hourly Earnings Index, and measures compensation as well as wages.² It more closely approximates underlying wage rate trends

Table 1. Changes in employee wages and compensation, 1971-81

[In percent]

Measure	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Average hourly compensation: ¹											
Current dollars	5.6	7.2	8.1	10.9	7.8	8.3	7.5	9.0	9.8	10.1	9.3
1977 dollars	2.1	3.7	-2	-1.1	.4	3.0	.8	.0	-2.6	-2.2	-2
Gross average hourly earnings: ²											
Current dollars	6.9	7.6	6.6	8.4	6.1	7.9	7.3	9.2	7.9	8.8	7.2
1977 dollars	3.4	4.2	-2.0	-3.4	-9	2.9	.5	.1	-4.8	-3.2	-1.5
Gross average weekly earnings: ²											
Current dollars	7.2	7.0	6.6	6.3	6.7	7.0	7.0	9.1	7.6	7.9	6.0
1977 dollars	3.8	3.5	-2.1	-5.2	-5	2.0	.3	.1	-5.4	-4.1	-2.5
Hourly Earnings Index: ²											
Current dollars	7.0	6.2	6.4	9.3	7.1	7.5	7.4	8.6	8.2	9.3	8.2
1977 dollars	3.5	2.7	-2.3	-2.7	.0	2.5	.7	-4	-4.5	-2.9	-4
Employment Cost Index: ³											
Current dollars	—	—	—	—	—	7.2	7.0	7.7	8.7	9.0	8.8
1977 dollars	—	—	—	—	—	2.2	.3	-1.1	-4.2	-3.1	.0

¹ Covers all employees in the nonfarm business sector.

² Covers production and nonsupervisory workers in the private nonfarm economy.

³ Covers only wages and salaries in the private nonfarm economy, excluding households. Data are unavailable before 1976.

NOTE: Percent changes are based on seasonally adjusted data and reflect fourth quarter to fourth quarter change for average hourly compensation and December to December change for other measures.

because it controls for both occupational and industry employment shifts, and excludes all overtime pay and hours, not only those in manufacturing firms. Furthermore, it measures changes in benefit cost resulting from changes in benefit practices rather than temporary shifts in benefit usage or other transient influences. Because of these and other features, this index is less sensitive than the other measures to short-term economic fluctuations. The 1981 Employment Cost Index shows a relatively smaller change from the previous year than the other measures. The wage and salary series went up 8.8 percent in 1981, compared with 9.0 percent in 1980. Compensation (wages and benefits), as measured by this index, went up 9.8 percent in both years.

All measures of wage change that have been discussed here showed slower gains toward the end of 1981 than during the early part of the year. The annual rates of change in the 6 months ending in December were 6.2 percent for the average hourly earnings, 4.4 percent for weekly earnings, and 7.3 percent for the Hourly Earnings Index. Average hourly compensation rose at a 6.5-percent annual rate in the fourth quarter. After a large advance in the first quarter, both the compensation and wage series of the Employment Cost Index registered smaller gains during the remainder of 1981.

Even though the rate of growth in the Consumer Price Index slowed more than the pace of most measures of wages, it still exceeded the rate of pay gains. As a result, the gap between price and wage increases narrowed, but erosion in workers' purchasing power continued. Real gross average weekly earnings, a widely used indicator of the impact of price increases on pay, fell 2.5 percent in 1981.

Government compensation

All the BLS compensation data discussed to this point cover only the private sector. The Employment Cost Index, however, has recently been expanded to include data for State and local governments, but results for a full year are not yet available for annual comparisons. Data on government workers from other sources suggest that the initial impact of fiscal restraints in 1981 was on employment rather than pay gains. For the first time since the immediate post-World War II period, aggregate employment fell, as layoffs and hiring freezes were imposed. During most of 1981, salaries of 1.4 million Federal white-collar employees under the General Schedule pay system were 9.1 percent higher than during the same period a year earlier, mostly a result of a pay raise in October 1980. Their annual pay raise in October 1981 was limited to 4.8 percent, the smallest increase since the passage of the Federal Pay Comparability Act of 1970. Under special legislation and presidential order, about 450,000 blue-collar Federal employees also were held to a 4.8-percent pay increase.

Limited data for State and local employees indicate that their pay gains were mainly the result of decisions in prior years, and that 1981 wage decisions were less generous.

Collective bargaining

The major collective bargaining wage-and-benefit change statistics are more limited in scope than the earnings-and-compensation change series because the data are restricted to bargaining units of at least 1,000 workers in the private economy, and at least 5,000 in State and local governments.³ Although such bargaining units employ less than 10 percent of the labor force, wage decisions affecting them influence wage developments in the overall economy. And negotiated wage decisions affecting them may set patterns for wage decisions in smaller bargaining situations and in non-union establishments or political jurisdictions.

The major collective bargaining series provide two basic types of information for assessing wage developments—data on negotiated wage-and-benefit settlements and data on effective wage rate adjustments. Settlement data are forward looking and relate to changes in wages and compensation provided for in contracts reached during a period. They are expressed as changes during the first year and average annual changes over the life of the contract. Effective wage rate adjustments include those changes resulting from agreements negotiated during the period, deferred wage changes resulting from settlements reached in prior periods, and increases triggered by cost-of-living adjustments (COLA) clauses. Of the two types of data, effective wage adjustments are more comparable to the earnings and compensation change measures discussed earlier.

Effective wage adjustments in major collective bargaining units in private industry average 9.5 percent in 1981, down from 9.9 percent in the previous year, paralleling the deceleration in the rate of increase of more comprehensive earnings and compensation series. (See table 2.) A light bargaining year appears to have been an important factor in the smaller increase. Deferred increases are generally lower, on average, than first-year changes under new settlements. In the light bargaining year of 1981, more workers were covered by deferred increases than by new settlements, holding down the size of the overall adjustment.

In 1981, approximately 6.3 million workers received deferred increases averaging 5.3 percent. When prorated over all workers, the increase was 3.8 percent. New settlements provided adjustments of 9.8 percent, but covered only 2.2 million workers, resulting in an adjustment of just 2.5 percent for all workers. The average COLA increase for the 4.6 million covered workers in 1981 was 6.1 percent (approximately three-fourths of the rise in the CPI over the period of COLA review), or

3.2 percent averaged over all workers.

Data on settlements negotiated during the year are useful as indicators of the size of future wage changes. In 1981, negotiated settlements provided wage adjustments averaging 9.8 percent in the first year of the contract, and 7.9 percent annually over the life of the contract. These are the largest annual increases since 1975, another recession year. Increases in wages and benefits, calculated for settlements covering 5,000 workers or more, were 11.3 percent for the first year, and 8.4 percent over the life of the contract.

The higher wage adjustments reflected in settlement data are not necessarily inconsistent with the 1981 economic environment if other factors are taken into account. The multi-year nature of most contracts tends to reduce the impact of prevailing economic conditions on the amount of wages provided for in current settlements. Current settlements may be influenced by precedent-setting agreements reached earlier in other bargaining situations under quite different economic circumstances, and may also reflect what has occurred in the interim between the previous settlement and current negotiations. For example, a steep rise in consumer prices since the previous contract, not compensated by COLA's, may create pressures for catch-up increases, even though inflation may have abated in the meantime. This may have been the situation in 1981. When the same parties to 1981 settlements last negotiated (on average, about 30 months before), the average wage adjustment was 8.6 percent in the first year, and 7.0 percent annually over the life of the contract. Over a comparable span from mid-1978 to mid-1981, the CPI rose at an annual rate of nearly 12 percent. Although some of the gap between negotiated wage increases and this price rise was offset by COLA's, most workers experienced an erosion in the purchasing power of their pay.

Expectations concerning future inflation and other related economic factors are also important considerations which may dilute the impact of current economic conditions on multi-year contracts. Concern about the rate of inflation may have influenced bargaining. In 1981, the rate of price increase did not dip below the double-digit level until most of the year's negotiations had been concluded. Contracts with COLA's provided for adjustments of 8.0 percent the first year and 5.5 percent annually over the contract life; for contracts without COLA, the comparable adjustments were 10.6 and 8.8 percent.

Wage decisions may also be less sensitive to prevailing economic conditions than to pressures to maintain existing pay relationships among groups of workers and industries. Management and labor tend to prefer employment and hours adjustments to marked changes in compensation which may upset longstanding wage relationships.

The influence of 1981 settlements was tempered by the relatively small number of workers they covered. Agreements reached during the year covered only 2.4 million workers, compared with 3.8 million in 1980. Another consideration is that settlements in the construction industry, which make up a higher proportion of total settlements in light than in heavy bargaining years, were a major factor in boosting the overall average adjustment. Settlements in this industry accounted for nearly 1 in 4 workers covered by major agreements concluded in 1981. When construction settlements are excluded from the data, first-year contract changes averaged 8.6 percent, and adjustments over the life of the contract, 6.7 percent.

Several mitigating circumstances should be taken into account in assessing the sizable wage gains of construction settlements against the general economic slowdown and depressed activity in the industry. One consider-

Table 2. Average change in major private collective bargaining agreements, 1971-81

[In percent]

Measure	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Settlements											
Wage-rate (contracts covering 1,000 workers or more):											
First-year adjustment	11.6	7.3	5.8	9.8	10.2	8.4	7.8	7.6	7.4	9.5	9.8
Average annual change over life of contract . . .	8.1	6.4	5.1	7.3	7.8	6.4	5.8	6.4	6.0	7.1	7.9
Wage and benefit (contracts covering 5,000 workers or more):											
First-year adjustment	13.1	8.5	7.1	10.7	11.4	8.5	9.6	8.3	9.0	10.4	11.3
Average annual change over life of contract . . .	8.8	7.4	6.1	7.8	8.1	6.6	6.2	6.3	6.6	7.1	9.2
Effective wage-rate changes											
Total effective adjustment ¹	9.2	6.6	7.0	9.4	8.7	8.1	8.0	8.2	9.1	9.9	9.5
Current settlement	4.3	1.7	3.0	4.8	2.8	3.2	3.0	2.0	3.0	3.6	2.5
Prior settlement	4.2	4.2	2.7	2.6	3.7	3.2	3.2	3.7	3.0	3.5	3.8
Cost-of-living adjustment provisions . . . . .	.7	.7	1.3	1.9	2.2	1.6	1.7	2.4	3.1	2.8	3.2

¹ Detail may not add to totals because of rounding.

NOTE: Data include wage-and-benefit changes in major collective bargaining agreements (those covering 1,000 workers or more) in the private nonfarm economy. Settlement data

exclude possible increases under cost-of-living adjustment provisions, except for minimum increases guaranteed in the contract.

Table 3. Wage change in major State and local collective bargaining agreements, 1980-81

[In percent]

Measure	1980	1981
Settlements		
First-year adjustment		
Wage rates	7.5	7.4
Wage and benefit	7.3	7.8
Average annual change over life of contract:		
Wage rates	7.8	7.1
Wages and benefits	7.4	7.3
Effective wage-rate changes		
Total effective adjustment	6.5	8.7
Current settlement	3.1	3.3
Prior settlement	3.0	4.5
Cost-of-living adjustment provision .....	.4	.9

ation is the concentration of construction settlements in the spring, when economic activity was considerably more robust than in subsequent months. Another is that major bargaining situations are concentrated in heavy and commercial construction, which generally has not shared in the slump experienced by the less organized residential segment of the industry.

Collective bargaining data for State and local government workers show the influence of past wage decisions. When prorated over the approximately 1 million workers in large bargaining units, the average effective wage adjustment was 8.7 percent in 1981, compared with 6.5 percent the previous year. (See table 3.) However, the major factor in the higher 1981 adjustment was the larger component of the total adjustment attributable to settlements negotiated in prior years. For settlements reached in 1981, the data are more consistent with what might be expected in light of the fiscal pressures on public officials to limit pay adjustments. On balance, 1981 settlements provided smaller adjustments than those negotiated in the previous year.

Although overall, both private industry and State and local government settlements were relatively large in 1981, there were wage-and-benefit concessions by workers in several key industries experiencing economic difficulties. Wage or benefit concession, or both, were negotiated for 95,000 workers in the automobile, airlines, and meatpacking industries. About 67,000 other workers were covered by agreements negotiated in 1981 that provided for no wage change in the first contract year. Similarly, a settlement for city workers in Detroit provided for a compensation freeze.

Outlook for 1982

Nearly all of the economic conditions affecting wage developments in 1981, such as declines in aggregate output, high levels of unemployment, and the moderating rate of inflation, persisted in the first few months of 1982. If they persist through most of the year, they may temper pressure for wage gains.

Historically, when economic declines have leveled off and economic activity has picked up, some factors influencing wage changes in recessions have operated in reverse. Additions to the workweek, more overtime, and rehiring in the durable goods and construction industries have tended to push up average earnings at a brisk pace. If the pattern of prior recoveries is repeated, output would go up faster than employment and hours, resulting in an increase in productivity, and a modest rise in unit labor cost.

Negotiations in several key industries highlight this heavy bargaining year.⁴ About 3.6 million workers are covered by major agreements expiring or reopening in 1982, compared with only 2.6 million in 1981. Agreements have already been reached in the automobile, petroleum refining, meatpacking, and trucking industries; negotiations are underway in the rubber industry; and bargaining is scheduled later for the electrical machinery and equipment industry. These six industries cover 1.2 million workers, and another 500,000 construction workers are covered by agreements which are expiring or reopening this year, mostly in the spring.

In several completed contract negotiations, the outcomes appear to have been influenced by economic problems facing individual industries. These problems included substantial excess capacity and falling oil prices for petroleum refiners; severe competitive pressures on carriers in the wake of deregulation of interstate trucking; long-term technological changes in the meatpacking industry and declining profitability which forced the closing of many less efficient, obsolete plants; and mounting losses in the automobile industry, a consequence of the severe slump in car sales and foreign competition. At the time of negotiations, workers in these industries were facing employment cutbacks. Therefore, job security was a major issue on the bargaining agenda.

The key contract in petroleum refining provided for a smaller wage increase than the union had proposed. In trucking, the major agreement included a wage freeze; in meatpacking, the pattern-setting agreement provided for a number of wage-and-benefit concessions and a moratorium on plant closings until mid-1983; the United Automobile Workers made substantial labor cost concessions to both Ford and General Motors in exchange for job security guaranties. Do these settlements portend a general moderating of pressure for wage gains in favor of greater job security, or do they merely reflect individual industry circumstances? This question awaits further developments for resolution.

In addition to wage changes resulting from settlements in 1982, about 4.3 million workers are scheduled to receive increases averaging 6.3 percent from contracts negotiated in prior years. This is the highest average deferred increase since 1971. Additionally, cost-of-living

increases are scheduled for 3.4 million workers. Although the amount depends on the inflation rate and the formula used, a continuing abatement in price increases would dampen the size of these adjustments.⁵

In the public sector, budgetary constraints at all levels can be expected to hold down wage gains. President

Reagan's 1983 budget submission projects a 5-percent pay raise for Federal white- and blue-collar workers in 1982, essentially the same amount as in 1981. One element in wage developments in 1981 will not be present in 1982: for the first time since 1973, no increase is scheduled in the Federal minimum wage. □

— FOOTNOTES —

¹ For a detailed description of the individual measures, see *BLS Measures of Compensation*, Bulletin 1941 (Bureau of Labor Statistics, 1977).

² Movements in this measure are discussed in Beth Levin, "The Employment Cost Index: recent trends and expansion," p. 9, this issue.

³ For a more detailed review of collective bargaining in 1982, see Mary Anne Andrews and David Schlein, "Bargaining Calendar will

be heavy in 1982," *Monthly Labor Review*, December 1981, pp. 21-31.

⁴ For more details, see Joan Borum, "Negotiated Changes in Wages and Benefits in Major Collective Bargaining Agreements, in 1981," *Current Wage Developments*, April 1982.

⁵ Wage increases and COLA's scheduled in 1982 are analyzed in Douglas R. LeRoy, "Scheduled wage increases and cost-of-living provisions in 1982," *Monthly Labor Review*, January 1982, pp. 16-20.

The 'mandatory' agenda

In brief, there are today many 'mandatory' subjects of bargaining with which the employer must deal in good faith. Such subjects include wages, hours of employment, health insurance, pensions, safety practices, the grievance procedure, procedures for discharge, layoff, recall and discipline, seniority, and subcontracting. Managers are not required to make concessions or agree to union proposals on any of these (or various other) subjects. They *are* obligated, however, to meet with the union at reasonable times and with the good-faith intention of reaching an agreement. On 'nonmandatory' or 'voluntary' subjects—those that are lawful but not easily related to 'wages, hours and other conditions of employment'—employers are not so obligated and are free to refuse to bargain about them.

—ARTHUR A. SLOANE AND FRED WITNEY
Labor Relations, 4th ed.
(Englewood Cliffs, N.J., Prentice-Hall,
Inc., 1981), p. 105.

The Employment Cost Index: recent trends and expansion

The 9.8-percent rise in compensation in 1981 matched the year-earlier level; coverage was extended to employees of State and local governments and index numbers for wages and compensation were published for the first time

BETH LEVIN

After nearly a decade of developmental work, the Bureau of Labor Statistics Employment Cost Index (ECI) today tracks labor cost trends for nearly 88 million workers in the civilian nonfarm economy. There were two noteworthy expansions of the series in 1981—the inclusion of State and local government workers and the introduction of index numbers.

Last year, increases in the Employment Cost Index for private nonfarm workers were nearly the same as in 1980. (See tables 1 and 2.) The compensation index was up 9.8 percent in both years, while the wage and salary index increase of 8.8 percent in 1981 was slightly below the 9.0-percent increase in 1980. In contrast, the Consumer Price Index for Urban Wage Earners and Clerical Workers rose 12.5 percent in 1980 compared with 8.7 percent in 1981. Consequently, real wages increased slightly in 1981, while they fell in 1980. The last year prior to 1981 in which real wages increased was 1977.

All of the ECI compensation series published set record high increases in the first quarter of 1981.¹ However, in the remaining quarters of the year, compensation gains were generally below the pace set in the same periods in 1980. Legislated increases in the minimum wage and in the social security tax rate and earnings

ceiling pushed up the March gains. The social security changes accounted for 0.5 percentage point of the 3.6-percent rise in compensation for all private nonfarm workers during the first quarter.

Changes in social security and other legally required benefits often cause the first quarter compensation advance to be the largest of the year. However, in 1981 both the social security tax rate and earnings ceiling increases were higher than usual:

Year	Tax rate		Earnings ceiling	
	Level (in percent)	Percent increase	Level	Percent increase
1978	6.05	3.4	\$17,700	7.3
1979	6.13	1.3	\$22,900	29.4
1980	6.13	—	\$25,900	13.1
1981	6.65	8.5	\$29,700	14.7
1982	6.70	.8	\$32,400	9.1

While the overall wage and salary changes in 1981 were similar to those in 1980, the underlying patterns were quite different. Union and blue-collar workers' advances declined in 1981 relative to 1980, while white-collar and nonunion workers' accelerated over the same period.

One factor in the moderation of gains in the union sector was the relatively light bargaining year for major collective bargaining contracts (those covering 1,000 workers or more) in 1981. In addition, economic conditions led to wage concessions by unionized workers in

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the meatpacking, rubber, and automobile industries in manufacturing, and in airlines and the railroad and trucking industries in nonmanufacturing.²

Union workers' pay increases dropped from 10.9 percent in 1980 to 9.6 percent in 1981. Within the manufacturing sector, union wage gains fell to 8.9 percent in 1981 from 11.0 percent in 1980, and in nonmanufacturing, they declined from 10.8 percent in 1980 to 10.2 percent in 1981. (See table 3.)

The rate of compensation increase for blue-collar workers, which decelerated from 10.1 percent in 1980 to 9.6 percent in 1981, reflected the highly unionized composition of these occupations. Wage gains for blue-collar workers slowed even more than compensation gains, dropping from 9.6 percent in 1980 to 8.6 percent in 1981. This decline in overall blue-collar wage advances was noted in all series.

Manufacturing workers did not post the dampened compensation gains that blue-collar workers did. Their rate of compensation change was identical in 1980 and 1981, at 9.8 percent. However, the pace of manufacturing wage increases did decline noticeably in 1981 (8.7 percent) relative to 1980 (9.4 percent). The first quarter's movement accounts for the difference between the

compensation and wage and salary gains over the year. While there was a record 3.5-percent jump in compensation, the gain in wages and salaries was a moderate 2.2 percent. During the same quarter a year earlier, the increases were both 2.8 percent.

Both the durable and nondurable goods industries showed a pattern of deceleration of pay advances over the year which was similar to that for manufacturing as a whole.

In contrast to the slowdown evident in highly unionized sectors of the economy, nonunion workers and white-collar workers posted greater gains during 1981 than in 1980. Wages for nonunion workers rose 8.5 percent in 1981 compared with 8.0 percent the prior year. White-collar workers posted 9.1-percent wage gains in 1981, up from 8.7 percent in 1980. Similarly, white-collar compensation increases were higher in 1981 (10.1 percent) than in 1980 (9.5 percent).

Many of the year-to-year differences occurred because of record increases in first-quarter 1981. In that quarter, nonunion wage gains were 3.3 percent, up from 2.5 percent in 1980. White-collar workers received increases of 3.1 percent compared with 2.4 percent in first-quarter 1980. Within the white-collar group, catch-up increases

Table 1. Employment Cost Index for compensation (wages, salaries, and employer costs for employee benefits), civilian nonfarm workers,¹ by occupation and industry group, December 1979-81

[Not seasonally adjusted]

Series	Indexes (June 1981 = 100)									Percent changes for		
	1979	1980			1981			12 months ended	3 months ended	12 months ended		
	Dec.	March	June	Sept.	Dec.	March	June	Sept.	Dec.	Dec. 1980	Dec. 1981	
Civilian nonfarm workers ¹	—	—	—	—	—	—	100.0	102.6	104.5	—	1.9	—
Workers, by occupational group:												
White-collar workers	—	—	—	—	—	—	100.0	102.7	104.9	—	2.1	—
Blue-collar workers	—	—	—	—	—	—	100.0	102.3	104.1	—	1.8	—
Service workers	—	—	—	—	—	—	100.0	102.8	104.2	—	1.4	—
Workers, by industry division:												
Manufacturing	—	—	—	—	—	—	100.0	102.1	104.0	—	1.9	—
Nonmanufacturing	—	—	—	—	—	—	100.0	102.8	104.8	—	1.9	—
Services	—	—	—	—	—	—	100.0	104.4	107.1	—	2.6	—
Public administration ²	—	—	—	—	—	—	100.0	104.3	106.0	—	1.6	—
Private nonfarm workers ³	86.3	88.6	90.7	92.8	94.7	98.1	100.0	102.0	104.0	9.8	2.0	9.8
Workers, by occupational group:												
White-collar workers	86.3	88.7	90.8	92.6	94.5	98.3	100.0	101.8	104.0	9.5	2.2	10.1
Blue-collar workers	86.2	88.3	90.5	93.0	94.9	97.8	100.0	102.2	104.0	10.1	1.8	9.6
Service workers	86.2	89.9	90.8	92.7	94.3	99.3	100.0	101.9	103.1	9.4	1.2	9.3
Workers, by industry division:												
Manufacturing	86.3	88.7	90.5	92.6	94.7	98.0	100.0	102.1	104.0	9.8	1.9	9.8
Nonmanufacturing	86.3	88.6	90.8	92.9	94.7	98.2	100.0	102.0	103.9	9.8	1.9	9.7
State and local government workers	—	—	—	—	—	—	100.0	105.3	107.4	—	2.0	—
Workers, by occupational group:												
White-collar workers	—	—	—	—	—	—	100.0	105.7	107.8	—	2.0	—
Blue-collar workers	—	—	—	—	—	—	100.0	104.2	105.9	—	1.6	—
Workers, by industry division:												
Services	—	—	—	—	—	—	100.0	105.8	107.9	—	2.0	—
Schools	—	—	—	—	—	—	100.0	106.0	107.9	—	1.8	—
Elementary and secondary	—	—	—	—	—	—	100.0	106.3	108.3	—	1.9	—
Hospitals and other services ⁴	—	—	—	—	—	—	100.0	105.0	107.8	—	2.7	—
Public administration ²	—	—	—	—	—	—	100.0	104.3	106.0	—	1.6	—

¹ Excludes private household and Federal workers.

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

³ Excludes private household workers.

⁴ Includes, for example, library, social, and health services.

NOTE: Dashes indicate data not available.

Table 2. Employment Cost Index for wages and salaries of civilian nonfarm workers,¹ by occupation and industry group, December 1979-81

[Not seasonally adjusted]

Series	Indexes (June 1981 = 100)									Percent changes for		
	1979	1980			1981					12 months ended	3 months ended	12 months ended
	Dec.	March	June	Sept.	Dec.	March	June	Sept.	Dec.	Dec. 1980	Dec. 1981	
Civilian nonfarm workers ¹	—	—	—	—	—	—	100.0	102.5	104.4	—	1.9	—
Workers, by occupational group:												
White-collar workers	—	—	—	—	—	—	100.0	102.6	104.7	—	2.0	—
Blue-collar workers	—	—	—	—	—	—	100.0	102.4	104.0	—	1.6	—
Service workers	—	—	—	—	—	—	100.0	102.5	103.6	—	1.1	—
Workers, by industry division:												
Manufacturing	—	—	—	—	—	—	100.0	102.1	104.0	—	1.9	—
Nonmanufacturing	—	—	—	—	—	—	100.0	102.7	104.5	—	1.8	—
Services	—	—	—	—	—	—	100.0	104.4	106.6	—	2.1	—
Public administration ²	—	—	—	—	—	—	100.0	103.8	105.5	—	1.6	—
Private nonfarm workers ³	87.5	89.6	91.5	93.5	95.4	98.0	100.0	102.0	103.8	9.0	1.8	8.8
Workers, by occupational group:												
White-collar workers	87.6	89.7	91.4	93.3	95.2	98.1	100.0	101.8	103.9	8.7	2.1	9.1
Professional and technical workers	86.3	89.2	90.8	93.2	95.3	98.2	100.0	103.3	105.5	10.5	2.1	10.7
Managers and administrators	88.3	90.6	92.0	93.5	94.7	98.6	100.0	101.6	102.8	7.2	1.2	8.6
Sales workers	88.9	88.5	90.7	92.2	94.8	96.2	100.0	98.0	101.9	6.7	4.0	7.5
Clerical workers	87.7	90.3	91.9	93.8	95.7	98.6	100.0	102.7	104.2	9.1	1.5	8.9
Blue-collar workers	87.4	89.3	91.6	93.8	95.7	97.7	100.0	102.3	103.9	9.6	1.6	8.6
Craft and kindred workers	87.8	89.3	91.4	94.0	96.1	97.8	100.0	102.9	104.3	9.4	1.4	8.5
Operatives, except transport	86.6	89.4	91.5	93.6	95.5	97.8	100.0	102.1	104.1	10.2	2.0	9.0
Transport equipment operatives	88.1	89.1	92.2	93.5	95.3	96.8	100.0	101.0	102.7	8.2	1.7	7.8
Nonfarm laborers	87.4	89.6	91.8	93.9	95.7	97.5	100.0	101.5	103.3	9.5	1.8	7.9
Service workers	87.7	90.8	91.9	93.4	94.8	99.2	100.0	101.8	102.7	8.1	.9	8.3
Workers, by industry division:												
Manufacturing	87.5	89.9	91.8	93.6	95.7	97.9	100.0	102.1	104.0	9.4	1.9	8.7
Durables	87.1	89.3	91.2	93.5	95.7	97.9	100.0	102.1	104.5	9.8	2.4	9.2
Nondurables	88.1	91.0	92.7	93.8	95.7	97.8	100.0	102.0	103.1	8.6	1.1	7.7
Nonmanufacturing	87.5	89.5	91.3	93.4	95.2	98.1	100.0	102.0	103.8	8.8	1.8	9.0
Construction	88.2	89.3	91.9	94.5	95.9	97.6	100.0	103.0	104.3	8.8	1.3	8.8
Transportation and public utilities	86.0	88.2	90.2	93.1	95.6	97.7	100.0	102.0	103.6	11.1	1.6	8.4
Wholesale and retail trade	88.2	90.5	92.2	93.6	95.1	98.2	100.0	101.3	102.3	7.8	1.0	7.6
Wholesale trade	87.2	89.7	92.1	93.0	95.9	98.5	100.0	102.0	103.4	10.0	1.4	7.8
Retail trade	88.6	90.8	92.2	93.8	94.8	98.1	100.0	101.0	101.9	7.0	.9	7.5
Finance, insurance, and real estate	86.7	87.1	89.4	91.2	93.1	95.7	100.0	98.3	102.3	7.4	4.1	9.9
Services	88.0	90.5	91.9	94.2	95.7	99.6	100.0	103.6	105.8	8.7	2.1	10.6
State and local government workers	—	—	—	—	—	—	100.0	105.0	107.0	—	1.9	—
Workers, by occupational group:												
White-collar workers	—	—	—	—	—	—	100.0	105.4	107.5	—	2.0	—
Blue-collar workers	—	—	—	—	—	—	100.0	103.9	105.5	—	1.5	—
Workers, by industry division:												
Services	—	—	—	—	—	—	100.0	105.5	107.6	—	2.0	—
Schools	—	—	—	—	—	—	100.0	105.7	107.7	—	1.9	—
Elementary and secondary	—	—	—	—	—	—	100.0	106.0	107.9	—	1.8	—
Hospitals and other services ⁴	—	—	—	—	—	—	100.0	104.6	107.3	—	2.6	—
Public administration ²	—	—	—	—	—	—	100.0	103.3	105.5	—	1.6	—

¹ Excludes private household and Federal workers.

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

³ Excludes private household workers.

⁴ Includes, for example, library, social, and health services.

NOTE: Dashes indicate data not available.

for managers and administrators in the first quarter, as well as the effect of an 8.1-percent rise in the minimum wage on sales and clerical workers, boosted the overall annual wage increase. While service workers also posted record gains for the first quarter, they showed little difference in gains over the entire year relative to 1980.

In nonmanufacturing, both compensation and wage advances were similar to those experienced in 1980. Compensation was up 9.7 percent in 1981 versus 9.8 percent in 1980, and the comparable wage increases were 9.0 percent and 8.8 percent, respectively. The component industries of nonmanufacturing, however, showed a variety of wage change patterns between the 2

years. Construction posted the same increase (8.8 percent) in both years, while finance, insurance, and real estate, and services—sectors with a high concentration of white-collar employees—showed a large acceleration of wage gains in 1981. Transportation and public utilities, and wholesale trade recorded sharp declines in the rate of increase from 1980 to 1981.

State and local governments

Compensation of State and local government workers rose 5.3 percent in its September introductory quarter, compared with a 2.0 percent rise for private nonfarm workers. The difference between the two series was also

The Employment Cost Index: a chronology

Development of a measure of change in total compensation (wages and benefit costs) began during the early 1970's when concerns about labor cost escalation became particularly acute. At that time, Federal policymakers indicated the need for a measure of labor cost trends which would:

- be timely and comprehensive, covering all types of workers and industries in the U.S. economy and all elements of employee compensation;
- be fixed-weighted so that it would be unaffected by employment shifts among occupations and industries with different wage and compensation levels; and
- have internally consistent subseries (for example, by occupation or industry) to provide insights into overall wage and compensation trends.

The Employment Cost Index was planned in stages to satisfy these needs, beginning with the development of its conceptual and statistical framework during 1971-74. The first publication of ECI statistics in June 1976 presented percent changes for 21

private nonfarm wage and salary series for the quarters ended December 1975 and March 1976. Series were added until trends for 35 private nonfarm wage and salary series were available for the first quarter of 1979. One year later, measures of changes in compensation (wages and salaries plus employer costs for employee benefits) were introduced for six private nonfarm series—total; white-collar, blue-collar, and service workers; and manufacturing and nonmanufacturing industries. Following the publication of the compensation series, the Office of Management and Budget designated the ECI as a "Principal Federal Economic Indicator." During the past year, the State and local government sector was added, and indexes were published for all series.

The Bureau publishes standard (fixed-base-period-employment weighted) ECI indexes (June 1981=100) of wages and salaries and of compensation for the civilian nonfarm economy and for a number of subgroups. In addition, special wage and salary indexes are calculated for broad regions, union status, and area size. The currently available ECI indexes and their inception dates are listed below.

ECI series

Indexes of compensation

Civilian nonfarm economy (8 series): total; white-collar, blue-collar, and service workers; manufacturing and nonmanufacturing industries, plus services and public administration. Beginning in *June 1981*.

Private nonfarm economy (6 series): total; white-collar, blue-collar, and service workers; manufacturing and nonmanufacturing industries. *December 1979*.

State and local government (8 series): total; white-collar and blue-collar workers; services, schools, elementary and secondary schools, hospitals and other services, and public administration. *June 1981*.

Indexes of wages and salaries

Civilian nonfarm economy (8 series): total; white-collar, blue-collar, and service workers; manufacturing and nonmanufacturing industries, plus services and public administration. *June 1981*.

Private nonfarm economy (23 series): total; white-collar (plus 4 subseries), blue-collar (plus 4 subseries),

and service workers; manufacturing, durables, nondurables, and nonmanufacturing (plus 7 subseries) industries. *September 1975*. Exceptions: Durable manufacturing, nondurable manufacturing, and retail trade are available from *September 1976*; salesworkers from *March 1977*; wholesale trade from *June 1977*; and finance, insurance, and real estate from *December 1978*.

State and local government (8 series): total; white-collar and blue-collar workers; services, schools, elementary and secondary schools, hospitals and other services, and public administration. *June 1981*.

Special indexes of private nonfarm wages

Four regions of the Nation. *September 1975*.

Union and nonunion workers. *September 1975*.

Union and nonunion workers by manufacturing and nonmanufacturing sectors. *September 1976*.

Metropolitan and nonmetropolitan areas. *September 1975*.

Table 3. Employment Cost Index for wages and salaries of private nonfarm workers,¹ by bargaining status, region, and area size, December 1979-81

[Not seasonally adjusted]

Series	Indexes (June 1981 = 100)									Percent changes for		
	1979	1980			1981					12 months ended	3 months ended	12 months ended
	Dec.	March	June	Sept.	Dec.	March	June	Sept.	Dec.	Dec. 1980	Dec. 1981	
Workers, by bargaining status:												
Union	86.4	88.4	90.8	93.5	95.8	97.4	100.0	102.7	105.0	10.9	2.2	9.6
Manufacturing	86.6	88.8	91.3	93.8	96.1	97.7	100.0	102.6	104.7	11.0	2.0	8.9
Nonmanufacturing	86.2	88.0	90.4	93.1	95.5	97.1	100.0	102.8	105.2	10.8	2.3	10.2
Nonunion	88.0	90.2	91.8	93.4	95.1	98.2	100.0	101.6	103.2	8.0	1.6	8.5
Manufacturing	88.4	91.0	92.3	93.4	95.4	97.9	100.0	101.7	103.3	7.9	1.6	8.3
Nonmanufacturing	87.9	89.9	91.5	93.4	95.0	98.3	100.0	101.6	103.2	8.1	1.6	8.6
Workers, by region:												
Northeast	88.4	90.6	92.5	94.2	96.0	98.3	100.0	101.7	104.4	8.6	2.7	8.8
South	87.3	89.7	91.4	93.2	94.9	98.0	100.0	101.9	102.8	8.8	.9	8.3
North Central	87.6	89.7	91.6	93.3	95.3	98.1	100.0	101.6	103.3	8.8	1.7	8.4
West	86.0	88.2	90.4	93.5	95.3	97.9	100.0	103.2	105.1	10.8	1.8	10.3
Workers, by area size:												
Metropolitan areas	87.6	89.4	91.4	93.5	95.4	97.9	100.0	102.1	104.0	9.0	1.9	9.0
Other areas	87.0	90.1	91.5	92.9	95.1	98.3	100.0	101.8	103.1	9.4	1.3	8.4

¹ Excludes private household workers.

NOTE: The indexes for these series are not strictly comparable to those for the aggregate, occupational, and industry series. See G. Donald Wood, Jr., "Estimation procedures for the Employment Cost Index," pp. 40, in this issue.

dramatic for wages and salaries—5.0 percent compared with 2.0 percent. These differences can be explained by a concentration of wage and compensation changes for State and local government workers in the third quarter that does not occur in the private nonfarm sector.

One group that tends to receive annual increases during the September quarter is teachers. This is demonstrated by pay and compensation changes in schools, which rose 5.7 percent and 6.0 percent, respectively. Workers in elementary and secondary schools posted even larger gains in compensation (6.3 percent) and wages (6.0 percent).

The impact that teachers have in these gains is clear from the proportion of workers they represent within these industries. At the State and local level, they account for about one-fifth of total census employment. They make up roughly half of all workers in schools and about 60 percent of all workers in elementary and secondary schools.

Another concentration of pay and compensation increases in the third quarter is due to the timing of State and local jurisdictions' fiscal years. Many governments begin their fiscal year during the third quarter, and these jurisdictions frequently link compensation changes to the start of the fiscal year.

While these types of gains were not as large or as widespread as those for teachers, they were clearly greater than those in the private sector. For example, blue-collar State and local government workers posted an average compensation change of 4.2 percent, compared with only 2.2 percent for private nonfarm blue-collar workers.

The collection of wage and benefit data from establishments in State and local government is a major improvement of the ECI program. The addition of 13.3 million State and local government workers to the 74.5 million surveyed in the private nonfarm sector brings ECI coverage to nearly 88 million workers.³ The ECI is the only source of quarterly measures of compensation change for all State and local government workers.

Initial data collection for the government units, begun in June 1980, was completed in January 1981; quarterly collection began in March 1981. The series was calculated and reviewed on a test basis for the March and June quarters. After all aspects had been assessed, the first percent changes, relating to the third quarter, were published. Statistics on civilian nonfarm workers (excluding Federal employees), which combine private nonfarm and State and local government data,⁴ were also released at that time.

The method for measuring base-period cost and calculating quarterly change for establishments in State and local government is the same as that used for establishments in the private nonfarm sector. State and local government data are taken from 750 sample establishments. Data are collected for about five narrowly defined occupations in each sampled establishment. This results in a total of about 3,700 establishment-occupation observations. The specific jobs for which data are collected in each establishment are selected by the BLS representative who visits the establishment. The selection is based upon probability sampling and uses the establishment's job titles and employment. As in the private nonfarm sector, occupations are classified

based on categories used in the 1970 census, while each government unit is designated in an industry according to a 1972 Standard Industrial Classification defined by the U.S. Office of Management and Budget.

Index numbers

The private nonfarm wage and salary index (June 1981=100) went from 64.0 in September 1975 to 103.8 in December 1981, an increase of 62.2 percent.⁵ Most industry and occupation wage gains were closely clustered around the aggregate—white-collar workers, 59.4 percent; blue-collar workers, 66.2 percent; service workers, 61.7 percent; manufacturing workers, 65.3 percent; and nonmanufacturing workers, 60.7 percent.

The ECI industry and occupation indexes are standard Laspeyres indexes, similar to the Consumer Price Index in concept and form. The CPI compares what it would cost to purchase a fixed set of consumption items at current prices to what it would cost to purchase the same set of items at prices that existed in the reference period. The ECI compares what it would cost employers at current wages (or compensation costs) to hire a fixed set of labor inputs (employment in specific occupations in specific industries) to what it would have cost to hire the same set of labor inputs at reference-period wage or compensation levels.

Special wage and salary indexes are calculated for broad regions, and by union status and area size. The formula for these indexes cannot be expressed in a standard Laspeyres index number form, but they are a form of chain index. That is, each quarter the change in wages is estimated using a fixed set of employment weights based on that quarter's sample. The index is developed by taking the product of the quarterly relatives. Further explanation of ECI index techniques is given in the technical note on page 40 of this issue.

MUCH PROGRESS HAS BEEN MADE toward making the ECI the type of labor cost trend indicator it was designed to be. It is a comprehensive, fixed-weight measure with internally consistent subseries. Benefit costs in addition to wages are included, and worker coverage has been expanded to State and local governments. The introduction of standard Laspeyres indexes in December 1981 guarantees the fixed-weight nature of the industry and occupation subseries. In addition, the special indexes by bargaining status, region, and area size, while not fixed-base-period weighted, aid in analyzing wage and salary trends.

Long range objectives include introduction of additional compensation series, publication of benefit cost changes, and coverage of the Federal civilian work force.

FOOTNOTES

¹ Data are collected for the pay period including the 12th day of the last month of each quarter—March, June, September, and December.

² For further information on collective bargaining in 1981, see George Ruben, "Organized labor in 1981: a shifting of priorities," *Monthly Labor Review*, January 1982, pp. 21–28.

³ In the base year of 1970, there were 9.8 million State and local government workers and 58.3 million private nonfarm workers.

⁴ All ECI series exclude farm and private household workers.

⁵ Percent changes for any period can be calculated by dividing the

more recent quarter's index by the earlier index, subtracting 1 from the result, and then multiplying by 100. For example, the steps in the calculation of percent change for the private nonfarm compensation series from December 1980 to December 1981 are as follows:

- 1) $\frac{\text{December 1981 index} = 104.0}{\text{December 1980 index} = 94.7} = 1.098$
- 2) $1.098 - 1 = .098$
- 3) $.098 \times 100 = 9.8 \text{ percent}$

Time rates tighten their grip on manufacturing industries

Incentive pay plans continued to drop in popularity in 37 industries comparing incidence for the 1973-80 period with that for 1961-68; but alternative methods of motivating workers drew more attention from labor and management

NORMA W. CARLSON

Despite mounting concern in recent years over limited productivity gains in the Nation's manufacturing industries, interest in incentive pay systems seems to be declining as a way to stimulate worker output. A review of wage payment plans in manufacturing industries found that time rates continue to cover the great majority of production and related workers rather than losing their grip; time-rated systems are actually strengthening their hold in U.S. factories.

Emphasis on machine-paced manufacturing operations is a major reason for the limited incidence of incentive plans. As in earlier years, incentives tend to be concentrated in the restricted group of industries where workers can exert substantial influence on the rate of output. However, the widespread application of time rates does not mean that the impact of workers on production is being ignored. Various innovative programs, many independent of compensation systems, have emerged to address the issue of worker motivation.

This article examines recent trends in incentive and time-rated payments in manufacturing. It also explores factors that have influenced the movement toward time pay. Finally, the article highlights developments in the quality-of-worklife movement that seeks, among other goals, to motivate workers to higher performance on

the job. Data were obtained from the Bureau of Labor Statistics' nationwide occupational wage surveys in selected manufacturing industries. These surveys collect information on occupational wage rates and the incidence of certain establishment practices, such as methods of wage payment, for about 50 manufacturing industries. Thirty-seven were selected for this study on the basis of available data for two 7-year periods, 1961-68 and 1973-80. The periods were defined over several years because the industries on the survey roster are studied every 3 to 5 years, not annually. The sample was also restricted to industries defined at the 4-digit level of detail in the Standard Industrial Classification Manual prepared by the U.S. Office of Management and Budget. Altogether for both periods examined, the 37-industry group represents about a quarter of the production and related workers in all manufacturing.¹ The span between observations for a single industry ranged from 10 years to 18; the average was 14 years.

Methods of wage payment

Workers are paid under a wide variety of incentive or time-rated plans.² Incentive plans, which establish a close link between output and earnings, are intended to fill a dual role, that is, to both stimulate worker efficiency and provide a system of employee compensation. In contrast, time-payment plans base earnings on a fixed hourly or weekly rate and rely heavily on supervi-

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sory skills to maintain quantity and quality of work.

Early in the Nation's industrial era, the basic methods of pay were simple piece rates and day rates. But as the manufacturing sector grew and mechanization of production increased, compensation plans became more complex. The scientific management movement dating from the early 1900's sparked wide experimentation with numerous incentive plans devised by Frederick W. Taylor and his colleagues. Some of these plans are still in use today, such as the Halsey, Rowan, and Bedaux systems, but many have been modified.³ In the 1930's, measured daywork plans were introduced in factories with time-payment systems, incorporating a measure of control of worker performance through production standards.⁴ Today, an assortment of incentive and time-

rated plans offers features which are adaptable to the varying situations found in modern industrial plants.

Incentive workers may receive either piece rates or production bonuses. Payments under incentive systems may be based on either individual or group performance. Time-rated wage plans include both formal and informal arrangements. The former provide single rates or ranges of rates for specific job categories. Pay rates under informal plans are determined primarily by the qualifications of the individual worker (table 1).

Bureau studies since World War II document both the dominance of time-based plans and the gradual drop in the proportion of factory workers paid under incentive systems. A summary prepared in 1947 indicated that for 56 manufacturing industries, 30 percent of

Table 1. Method of wage payment in manufacturing, by number of production and related workers covered and by type of plan, 1973-80¹

[In percent]

Industry and survey date	Production workers (in thousands)	Time-rated workers				Incentive workers				
		Total	Single rate	Range of rates	Individual rates	Total	Individual		Group	
							Piecework	Bonus	Piecework	Bonus
Meatpacking, 5/79	104.3	90	72	10	7	10	(3)	3	2	5
Prepared meat, 5/79	48.8	96	59	24	12	4	(4)	(4)	(4)	(4)
Flour and other grain mill, 9/77	10.6	99	85	7	8	1	(4)	(4)	(4)	(4)
Candy and other confectionery, 8/75	40.3	89	33	45	11	11	4	1	1	5
Cigarettes, 5/76	32.8	100	63	37	(5)	(5)	(5)	(5)	(5)	(5)
Cotton and manmade fiber textiles, 8/80	288.5	70	66	4	(3)	30	28	1	(3)	1
Wool yarn and broadwoven fabric, 8/80	13.1	75	63	7	5	25	14	7	2	2
Textile dyeing and finishing, 6/76	51.5	90	65	20	6	10	5	3	1	1
Women's hosiery, 7/76	23.8	37	2	18	17	63	62	(5)	(3)	(3)
Hosiery, except women's, 7/76	23.9	39	1	7	31	61	59	1	1	(3)
Men's and boys' shirts, (except work shirts) and nightwear, 5/78	85.4	22	2	5	14	78	77	1	1	(3)
Men's and boys' suits and coats, 4/79	61.4	25	3	6	16	75	74	1	(3)	(3)
Wood household furniture (except upholstered), 6/79	137.2	88	10	55	23	12	3	2	3	4
Pulp, paper, and paperboard mills, 7/77	147.9	97	90	8	(3)	3	(4)	(4)	(4)	(4)
Corrugated and solid fiber boxes, 3/76	61.9	75	61	9	5	25	3	8	3	12
Industrial chemicals, 6/76	129.9	99	62	35	2	1	(4)	(4)	(4)	(4)
Cellulosic fibers, 8/76	10.8	98	60	38	(3)	2	(4)	(4)	(4)	(4)
Noncellulosic fibers, 8/76	51.9	98	67	31	(3)	2	(4)	(4)	(4)	(4)
Paints and varnishes, 11/76	27.6	100	44	43	12	(5)	(5)	(5)	(5)	(5)
Petroleum refining, 4/76	63.3	99	88	11	(3)	1	(4)	(4)	(4)	(4)
Miscellaneous plastics, 9/74	236.4	95	19	64	12	5	(4)	(4)	(4)	(4)
Leather tanning and finishing, 3/73	16.7	55	30	15	10	44	28	7	7	1
Footwear, 4/80	76.2	27	3	9	15	73	71	2	(3)	(5)
Glass containers, 5/80	54.5	88	69	19	(5)	12	1	6	(3)	4
Other pressed or blown glass, 5/80	28.4	79	32	47	(2)	21	3	8	6	4
Brick and structural clay tile, 9/80	11.7	80	41	23	16	18	8	1	6	3
Ceramic wall and floor tile, 9/75	5.2	68	43	19	6	32	10	7	8	7
Clay refractories, 9/80	6.3	80	59	19	2	20	11	3	5	2
Clay sewer pipe, 9/75	4.3	76	62	11	3	24	9	1	4	9
Basic iron and steel, 2/78	345.0	20	(6)	(6)	(6)	80	(6)	(6)	(6)	(6)
Grey iron foundries, except pipe and fittings, 9/79	93.1	82	54	25	4	18	9	4	3	2
Grey iron foundries, pipe and fittings, 9/79	15.2	77	32	44	(3)	23	1	12	1	9
Steel foundries, 9/79	52.6	79	39	36	3	21	10	3	4	3
Nonferrous foundries, 5/75	54.4	82	36	33	13	18	6	8	1	3
Fabricated structural metal, 11/79	51.9	96	37	44	19	4	(4)	(4)	(4)	(4)
Motor vehicle parts, 4/74	242.1	73	35	35	2	27	12	7	4	5
Motor vehicles, 12/73	611.4	98	(6)	(6)	(6)	2	(6)	(6)	(6)	(6)

¹Estimates of the number of production workers within the scope of the study and percentages based upon them are intended as a general guide rather than a precise measure of the industry's work force and relative importance of wage payment plans in each industry. Nearly all incentive wage plans provide for a rate guarantee to workers if production standards are not met. For this tabulation, all production and related workers eligible to receive incentive earnings have been counted as incentive-paid workers, regardless of whether they received earnings above guarantees. Plans such as Christmas or year-end bonuses and profit-sharing were not considered as incentive wage plans.

Industry studies nearly always have a minimum establishment size cutoff which may vary between studies for the same industry; establishments under the cutoff usually account for less than one-tenth of the industry's work force. Minimum size cutoffs varied from none for

cigarettes, synthetic fibers, and motor vehicles to 250 workers for basic iron and steel; the most common minimum was 20 workers.

²Excludes, "stint workers," those receiving a fixed daily rate for a predetermined amount of work regardless of the time required to complete the task.

³Less than 0.5 percent.

⁴Information by type of plan was not tabulated for industries with less than 6 percent of the workers paid on a time or incentive basis.

⁵No data reported.

⁶Information not available by type of wage payment.

NOTE: Because of rounding, sums of individual items may not equal totals.

production and related workers were on incentive pay plans.⁵ In May 1958, a survey of factory workers' earnings found that 27 percent of all manufacturing production workers were paid on an incentive basis.⁶ Data from the Bureau's area wage surveys on incentive pay coverage of plant workers in metropolitan area factories show a drop in coverage from 26 percent in 1961-63 to 20 percent in 1968-70.⁷

This decline in the incidence of incentive pay systems has coincided with lagging productivity gains in manufacturing. A number of studies have related the lag, in part, to worker attitudes and behavior.⁸ Advocates of incentive systems have therefore argued that such arrangements are valuable managerial tools for improving efficiency and boosting productivity.⁹

During 1973-80, the median proportion of workers on time rates was 82 percent (chart 1), up from 75 percent for 1961-68.¹⁰ Thirty-one of the 37 industries studied paid a majority of their production workers on a time basis. Eight industries paid time rates to at least 98 percent of their work forces. These were cigarettes, paints and varnishes, petroleum refining, flour milling, industrial chemicals, noncellulosic fibers, motor vehicles, and cellulosic fibers.

Seven of the eight industries share certain characteristics. Their production departments, which employ the bulk of the work force, are equipped primarily with automatic and semi-automatic machinery. Although the equipment requires monitoring, the machine tenders have little or no control over the pace of output. For example, in petroleum refining, crude oil flows almost continuously in closely interrelated refining units from the time it is received until finished products are shipped to customers. Even cigarettes are produced automatically throughout the fabrication, packaging, and inspection processes. Automobile production, although it actively involves workers in the process, is primarily paced by the speed of the assembly line.

In the remaining 23 industries emphasizing time-rated pay, coverage ranged from 97 percent of workers to 55 percent. This variation partly reflected marked differences in production processes and types of machines used. The pulp, paper, and paperboard industry, with 97 percent of its work force paid time rates, uses mechanical and chemical processing equipment and machines that are among the largest in industry, which workers operate and maintain. In contrast, the leather tanning industry, with 55 percent of its production workers on time rates, requires considerable handling of hides and skins. Hand tools are used extensively by such workers as tackers, about three-fourths of whom were reported on incentives in 1973. The equipment in the plants is largely under the control of the operator. For example, machine buffers and embossing-press or plating-press operators, both largely incentive jobs, are

responsible for starting and feeding the machines.

Six industries relied chiefly, but not exclusively, on incentive wage payment plans. Incentive coverage ranged from 61 percent in the men's and children's hosiery industry to 80 percent in basic iron and steel. The other four industries stressing incentive systems were women's hosiery, leather footwear, men's and boys' suits and coats, and men's and boys' shirts. The workplaces in these factories, with the exception of basic iron and steel, are equipped with machines that are largely under the control of the operators. In men's apparel (suits and coats, and shirts), for example, sewing machine operators, who account for nearly half of the work force, can exercise considerable discretion over the pace of their work. Moreover, their output is identifiable and measurable. Individual piece rate plans are the leading pay method in the men's apparel, hosiery, and footwear industries, covering between 60 percent and 75 percent of workers. The occupations that are paid hourly rates include those in maintenance and custodial departments.

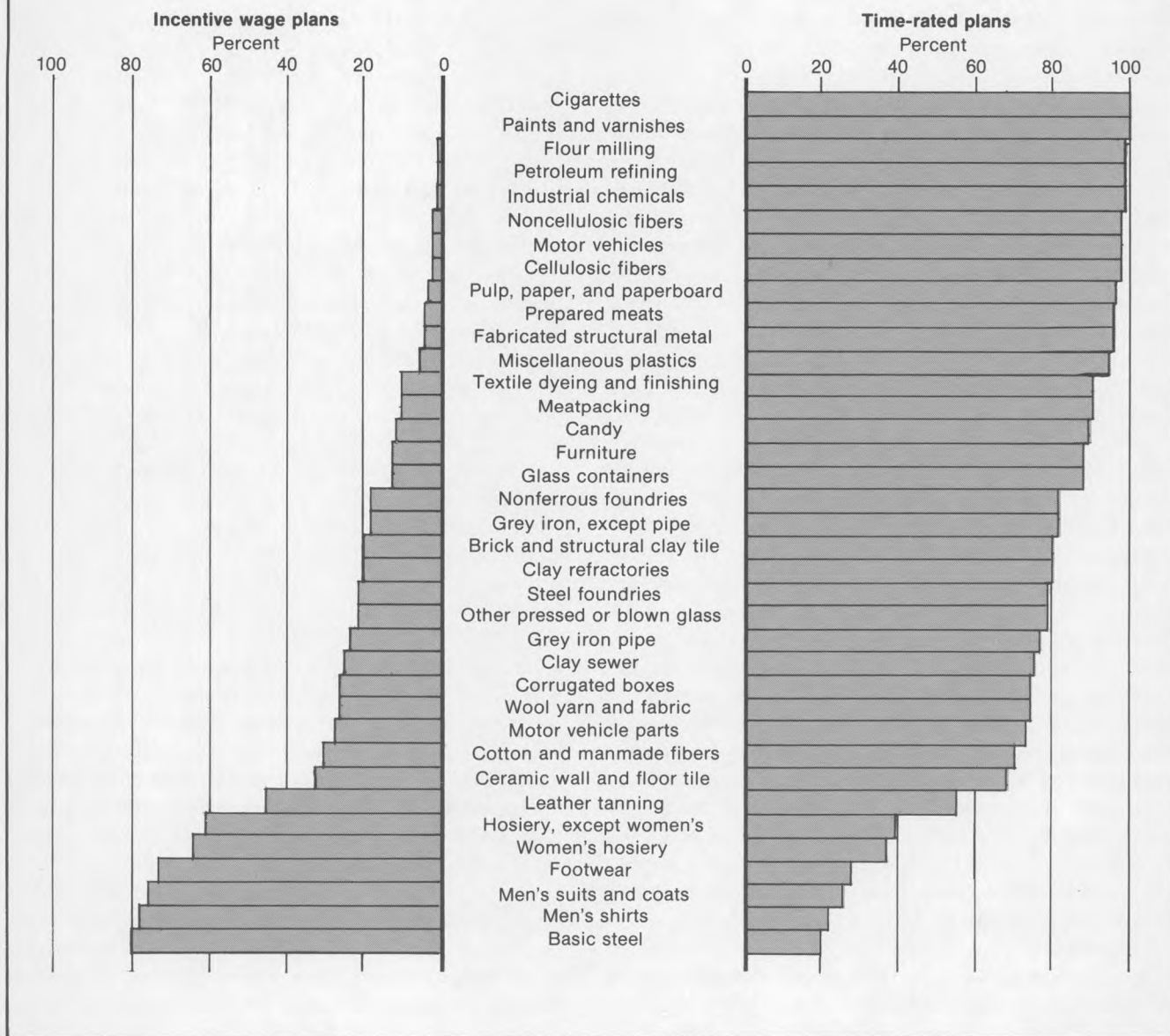
Basic iron and steel is unique in that it is highly mechanized but pays incentive rates to 80 percent of its workers. The inclusion of maintenance and service workers, who are typically paid time rates in other industries, accounts for this large proportion. To facilitate the inclusion of these workers, the industry divided the occupations into three categories, direct, indirect, and secondary indirect, depending upon whether the job is part of an actual production department or involves assignments that support the direct workers. For example, furnace operators are direct workers, and maintenance millwrights assigned to specific production departments are indirect. Other maintenance workers and general laborers who are not assigned by department are secondary indirect. Guidelines in the industry's major collective bargaining agreements provide for incentive earnings opportunities that range from 35 percent above "incentive calculation rates"¹¹ for direct incentive jobs, to 23 percent above for indirect incentive jobs, to 12 percent above for secondary indirect incentive jobs.

Recent trends

In 26 of the 37 industries studied, worker coverage under time-rated systems for 1973-80 increased over that for 1961-68. The increase ranged from as little as 1 percentage point to as much as 26 points (table 2). All but 3 of the 26 industries had already extended time pay to more than half of their production workers during 1961-68. In one of the exceptions, women's hosiery, coverage under time rates rose from 25 percent to 37. In another, men's and children's hosiery, it rose from 30 percent to 39. In the third, leather tanning, coverage increased from 48 percent to 55.

The most striking growth of time-rated pay systems

Chart 1. Percent of production and related workers covered by time-rated or incentive wage plans in selected manufacturing industries, 1973-80



occurred in the glass container industry, where the proportion of time workers rose 26 percentage points, and the meatpacking industry, where it rose by 24. In the glass container industry, 88 percent of production workers were paid time rates in 1980, up from 62 percent in 1964. The expanded coverage is mainly attributable to action taken in the late 1960's to eliminate incentive earnings for large numbers of workers. The major producers and the two leading unions, the Glass Bottle Blowers and the American Flint Glass Workers, recognized that the incentive plans had become cumbersome and costly to administer. They agreed to pay time

rates to maintenance and service workers and to some direct production workers who had been on incentives, in exchange for an across-the-board pay increase that ensured no loss in earnings.

In meatpacking, nine-tenths of the production workers were paid time rates in 1979, up from two-thirds in 1963. This increase partly reflects the implementation of time plans in new plants opened by major producers. A comparison of the occupations in multiplant establishments studied in 1963 and 1979 shows a substantial decline in incentive coverage in the cutting, processing, custodial, and material movement departments. Chang-

es in beef-cutting techniques, introduced by a few new producers, also contributed to shifts in pay plan coverage. In the new process, carcasses attached to a conveyor are divided into smaller cuts as each worker on the line performs a limited number of cutting and trimming operations. The cuts are vacuum sealed, boxed, and shipped to supermarkets and butcher shops. Workers in these "boxed beef" occupations, virtually all paid time rates, accounted for slightly more than half the beef-cutting department employment in the 1979 meat products survey.

Other industries reporting increases in coverage under time systems typically experienced a shift to automatic and semi-automatic machines. For example, the dehauling and setting processes in structural clay products manufacturing, once done manually, are now performed automatically in many plants. Many larger corrugated box plants are now almost fully automated, thus eliminating numerous hand operations, such as bundling, packing, and taping.

Only five industries reported increases in incentive plan coverage, mostly marginal. Two of the five (men's and boys' shirts and leather footwear) were predominantly incentive industries in the 1960's, with at least seven-tenths of the workers in each earning piece rates. Only one industry, basic iron and steel, reported a significant increase in incentive coverage, from 66 to 80 percent, between 1962 and 1979. This rise for the industry as a whole largely reflects the impact of developments in the 1968 bargaining round between the United Steelworkers of America and the 11 major companies in the industry. The union reportedly was seeking incentive pay for all workers. Producers hoped to limit the extent of incentive coverage. The impasse led to arbitration. The panel ruled that each of the 11 companies was to extend incentive coverage to at least 85 percent of its production and maintenance employees on a companywide basis, and not less than 65 percent in each plant.

The remaining six industries recorded no change in proportional coverage under the two basic methods of wage payment. Among them are highly automated industries, flour milling, cigarettes, petroleum refining, and the traditionally incentive suits and coats industry. Nonferrous foundries and motor vehicles also reported no change.

Method linked to multiple factors

The choice between time rates and incentive pay depends on such factors as technological and economic environments, managerial preferences, and union philosophies.

Machine-paced production. Highly automated industries virtually rule out incentive wage systems because work-

Table 2. Percentage of production and related workers covered by time-rated wage payment plans in selected manufacturing industries, 1961-68 and 1973-80

Industry	Percentage of time-rated workers		Percentage point change
	1961-68	1973-80	
Glass containers	62	88	+26
Meatpacking	66	90	+24
Other pressed or blown glass	64	79	+15
Cellulosic fibers	84	98	+14
Candy and other confectionery products	75	89	+14
Brick and structural clay tile	68	80	+12
Women's hosiery	25	37	+12
Corrugated and solid fiber boxes	64	75	+11
Ceramic wall and floor tile	58	68	+10
Hosiery, except women's	30	39	+9
Miscellaneous plastics products	87	95	+8
Wood household furniture, except upholstered	80	88	+8
Pulp, paper and paperboard mills	90	97	+7
Grey iron except pipe and fittings	75	82	+7
Leather tanning and finishing	48	55	+7
Industrial chemicals	95	99	+4
Prepared meat products	92	96	+4
Fabricated structural metal	92	96	+4
Clay refractories	76	80	+4
Steel foundries	75	79	+4
Motor vehicle parts	69	73	+4
Paints and varnishes	98	100	+2
Grey iron pipe and fittings	75	77	+2
Wool yarn and broadwoven fabric	73	75	+2
Cotton and manmade fiber textiles	68	70	+2
Textile dyeing and finishing	89	90	+1
Cigarettes	100	100	0
Flour and other grain mill products	99	99	0
Petroleum refining	99	99	0
Motor vehicles	98	98	0
Nonferrous foundries	82	82	0
Men's and boys' suits and coats	25	25	0
Noncellulosic fibers	99	98	-1
Clay sewer pipe	77	76	-1
Men's and boys' shirts	23	22	-1
Leather footwear	30	27	-3
Basic iron and steel	33	20	-13

ers have little or no control over the pace of production or the volume of output. Conversely, incentive pay is widespread in industries where workers can exercise such control.

To illustrate, the amount of fixed assets per worker was compared with the incidence of time-rated workers for 35 of the 37 industries. The assumption was that the higher levels of assets per worker reflected more machine-paced operations and, therefore, would be associated with higher worker coverage under time pay.¹²

The heavy processing industries with per-worker assets well above the \$25,000 median for the group have higher incidences of time-rated workers. The traditional incentive industries showed assets ranging between \$3,000 and \$13,000. Again, the exception among the heavy industries is basic iron and steel. Unlike the extremes in this comparison, the middle group of industries in terms of per-worker assets produced a mixed pattern of pay plans and asset levels.

Among this middle group are fabricated structural metals and nonferrous foundries, whose high proportions of time workers and low levels of assets are partly attributable to certain characteristics of these industries.

They are composed mostly of small to medium size job or order shops, producing varied product lines in short production runs. Such conditions of constant change and nonstandardized tasks make incentive systems difficult, if not infeasible, to install.

Managerial preferences. The technological and economic environment clearly determine the feasibility of a pay method in certain industries.¹³ But in others, more subjective factors may influence managers. Among these are the complexities involved in designing and implementing incentive plans. For example, rather than undertake the costs and uncertainties involved in establishing performance standards that effectively motivate the worker, some managers prefer to pay hourly rates. Difficulties in making allowances for conditions that might reduce a worker's full production potential, such as frequent interruption in the flow of materials or mechanical breakdowns, also argue against incentive plans.

The more complex the design of an incentive plan, the more care is required in administering it. Foremen can become preoccupied with recording nonstandard conditions and handling questions and grievances on rules relating to work flow and work distribution. If only part of the production work force receives incentive wages, a feeling of inequity can develop among timeworkers whose jobs rank higher in terms of education and responsibility, but not in pay. These conditions can, of course, generate inefficiencies in the workplace.¹⁴

Complications that emerge during periods of rapid innovation tend to compound these problems. Changes in production facilities, techniques, or product assortment require revision of performance standards if worker motivation and effort is to be maintained. If standards are not redefined to fit changing conditions, incentive plans may become "demoralized."¹⁵ This term implies high levels of earnings for low levels of effort. Eventually, such conditions can affect a plant's competitive position.

Union preferences. Trade unions have not maintained a consistent position on methods of wage payment.¹⁶ Union preferences have been influenced by an industry's technological and economic environment and by their goal of rewarding workers equally for the same kind of work.

In those industries where incentive plans could be reconciled with this goal, unions have adapted to incentives. The majority of these industries are characterized by labor intensive production methods and a highly competitive product market. In certain apparel industries, for example, unions historically have negotiated the schedule of piece rates, thus achieving some

control over worker pay.

Unions have been able to harmonize their goal with the use of incentives, even in highly mechanized industries such as basic iron and steel. Underlying the incentive system in basic steel is a common job and pay system designed jointly by the Steelworkers and the major producers. This system is based on a highly uniform job evaluation procedure among the companies that assigns point values to jobs on the basis of 12 factors that include such major concerns as experience, skill, responsibility, effort, and working conditions.

Other approaches to motivation

The post-World War II growth in time-rated pay systems has been accompanied by concern over rising inefficiencies in the workplace. Questions are being raised as to the effectiveness of methods of pay as motivators, and attention is focusing on other means to improve efficiency.¹⁷

Pay methods tap the self-interest of the worker, but many of the other approaches are designed to help the worker identify with the long-term interests of the enterprise. Such identification would presumably result in better interpersonal relationships, stronger job interest and satisfaction, less absenteeism and waste, and lower rates of turnover, all of which would lead to productivity improvements.¹⁸

Productivity enhancement, however, is not the sole objective of these approaches, known generally as quality-of-worklife improvement programs. This umbrella term covers a diversity of ventures, a number of which are still both experimental and controversial. In some instances, allegedly, the programs have been introduced to circumvent union representation. In other instances, they have had joint union-management sponsorship.¹⁹ Some quality-of-worklife programs explicitly link financial reward to program results. Other approaches stress such motivators as the worker's need for personal fulfillment on the job, recognition, and involvement in corporate decisionmaking.

Among the quality-of-worklife approaches that are compensation related are Scanlon plans. Initiated by the late Joseph Scanlon in the 1930's, they are designed to motivate all employees to improve production methods and to suggest ways to cut costs. One of the important elements of Scanlon plans is a system of joint shopfloor and plantwide review committees that meet regularly to discuss and evaluate worker suggestions for work improvement. Another unique feature is a plantwide incentive arrangement based on measuring productivity changes and a formula for distributing savings in the form of monthly bonuses.²⁰

Other efforts link rewards to the overall profitability of the firm, such as profit-sharing and stock plans. Profit-sharing cash plans usually distribute a part of profits

to employees annually. Under deferred versions, the employer makes payments to a trust for the benefit of the employee, who usually receives final distribution at retirement.²¹ Stock plans traditionally permitted employees to buy company stock, often at a discount, through payroll deductions over a year. The stock purchased was distributed shortly after the closing date specified. However, under current employee stock ownership plans, delivery is deferred until the employee leaves the plan or retires. Because of special tax benefits enacted in 1975, the number of such plans has grown from about 200 in 1975 to nearly 5,000 plans in 1980.²²

Not all programs that seek to promote worker support of collective goals of the firm are directly linked to compensation. Some draw upon the expertise and creativity of the work force to help redesign and reorganize production operations, thereby involving workers in decisionmaking. Although not always a primary objective, productivity improvement has been reported as a result of some of these efforts.²³ Interest in worker participation in decisionmaking has grown since the early 1970's, even though the concept was discussed much earlier. The basic framework for worker participation is the labor-management committee, which functions as an advisory body to management on a wide assortment of workplace issues. These issues range over topics such as

absenteeism, safety, waste reduction, reorganization of the shopfloor, forecasting manpower requirements, and training programs. Such committees can now be found in a wide variety of industries, including basic steel and auto manufacturing.²⁴ Generally, committees in organized plants are separate from the collective bargaining framework. In the case of the United Auto Workers-General Motors approach, the members of the local union shop committee serve on the quality-of-worklife committee.²⁵

Another type of advisory group, Quality Circles, has recently gained prominence. Unlike labor-management committees, these bodies are composed solely of employees. They meet voluntarily on company time to define workplace problems, discuss solutions, and formulate strategies to eliminate the problems.²⁶

THE TREND TOWARD PROGRAMS that enhance workers' roles in factories will probably continue as labor and management search for ways to make the workplace more efficient. The movement reflects in part, changing perceptions by workers, unions, and managers, of their roles. There is little likelihood, however, that the relative incidence of time and incentive methods of pay in U.S. plants will change greatly from present levels, given the dominance of machine-paced operations. □

— FOOTNOTES —

¹ The sample is relatively small because several manufacturing industries in the wage survey program were excluded either for lack of nationwide statistics or historical data. These include women's and misses' dresses, drug manufacturing, nonelectrical machinery, semiconductors, electrical transmission and distribution equipment, millwork, upholstered furniture, and shipbuilding and repairing. Because of the limited number of industries studied, no generalizations are drawn about methods of wage payment for all manufacturing.

² This analysis is limited to production and related workers in manufacturing. Thus, commission plans for sales workers and various piece-rate arrangements in transportation are outside the scope of this article.

³ Pinhas Shwinger, *Wage Incentive Systems* (New York, John Wiley & Sons, Inc., 1975).

⁴ Under measured daywork, employees receive time wages, yet management establishes, and in varying degrees discloses and enforces, production standards. Measured daywork can be used for mechanized operations where employees are required to work at the pace of the conveyor line or within the cycle of automatic machinery.

⁵ Joseph M. Sherman, "Incentive pay in American industry 1945-46," *Monthly Labor Review*, November 1947, pp. 535-38. The 56 industries included in the study covered about 5 million workers, or about 40 percent of all production and related workers in manufacturing.

⁶ L. Earl Lewis, "Extent of incentive pay in manufacturing," *Monthly Labor Review*, May 1960, pp. 460-63. The estimate of incentive pay coverage was based on a survey in May 1958 of 73 industries employing approximately 9 million production and related workers, or about 80 percent of all manufacturing workers.

⁷ John Howell Cox, "Wage payment plans in metropolitan areas," *Monthly Labor Review*, July 1964, pp. 794-96, and "Time and incentive pay practices in urban areas," *Monthly Labor Review*, December 1971, pp. 53-56.

⁸ Richard R. Nelson, "Research on Productivity Growth and Pro-

ductivity Differences: Dead Ends and New Departures," *Journal of Economic Literature*, September 1981, pp. 1029-64, reviews attempts to specify determinants of productivity at the level of the firm.

⁹ Vincent G. Reuter, "Wage Incentives: a Valuable Productivity Tool," *Journal of Systems Management*, October 1980, pp. 27-33, points out how work study programs and wage incentives can increase productivity and reduce costs. Also see *Forms of Wage and Salary Payment for High Productivity*, the final reports of an International Management Seminar sponsored by the Organization for Economic Cooperation and Development in 1967. The report, published in 1970, explores the advantages and disadvantages of wage incentives.

¹⁰ Integral to nearly all incentive wage plans is a rate guarantee if the production standards are not met. For purposes of this article, all production and related workers eligible for incentive earnings have been counted as incentive-paid workers, regardless of whether they received above-guaranteed earnings.

¹¹ An incentive calculation rate is specified for each of the 34 job classes that compose the common job and pay system. Straight-time pay for incentive workers is computed by applying a percentage, usually based on a group production bonus, to the incentive calculation rate before combining with an hourly additive, which includes cost-of-living adjustments. In each job class, the sum of the incentive calculation rate and hourly additive equals the basic hourly wage rate. For greater details, see Joseph C. Bush, "Incentive pay patterns in the steel industry," *Monthly Labor Review*, August 1974, pp. 75-77.

¹² Information on the gross value of fixed assets and the number of production workers was obtained from the 1977 Census of Manufactures. Thirty-five, instead of 37, industries are included because the industry definitions for motor vehicle parts and gray iron pipe foundries used by the Bureau of Labor Statistics industry wage surveys differed from those used by the Bureau of the Census.

¹³ The treatment of managerial and union preferences drew upon discussions in George L. Stelluto, "Report on incentive pay in manufacturing industries," *Monthly Labor Review*, July 1969, pp. 49-53;

Robert B. McKersie, Carroll F. Miller, Jr., and William E. Quarterman, "Some indicators of incentive plan prevalence," *Monthly Labor Review*, March 1964, pp. 271-76; and Garth L. Mangum, "A Summary of Wage Incentive Practices in American Industry (Nonrailroad)" in *Studies Relating to Collective Bargaining Agreements and Practices Outside the Railroad Industry*, Appendix Vol. IV to the Report of the Presidential Railroad Commission, February 1962, pp. 229-61.

¹⁴ The administration of incentive plans is discussed in H. K. von Kaas and A. J. Lindemann, *Making Wage Incentives Work* (New York, American Management Association, Inc., 1971).

¹⁵ For a discussion of demoralized incentive plans, see Sumner H. Slichter, James J. Healy, and E. Robert Livernash, *The Impact of Collective Bargaining on Management* (Washington, D.C., Brookings Institution, 1960), pp. 497-503.

¹⁶ See footnote 13.

¹⁷ Frederick Herzberg, "Human roots of productivity," *Industry Week*, Part 1, September 15, 1980, pp. 55-58; Part 2, September 29, 1980, pp. 69-72; Part 3, October 13, 1980, pp. 61-64; Sara Fritz, "New Breed of Workers," *U.S. News & World Report*, September 3, 1979, pp. 35-38; and Harvey Leibenstein, *Beyond Economic Man: A New Foundation for Microeconomics* (Cambridge, Harvard University Press, 1976).

¹⁸ John F. Tomer, "Worker Motivation: A Neglected Element in Micro-Micro Theory," *Journal of Economic Issues*, June 1981, pp. 351-62; Christopher Argyris, *Interpersonal Competence and Organizational Effectiveness* (Homewood, Dorsey Press, 1962); and George Homans, *The Human Group* (New York, Harcourt and Brace, 1950).

¹⁹ For a recent survey of quality-of-worklife developments, see Phyllis A. Wallace and James W. Driscoll, "Social Issues in Collective Bargaining," in Jack Stieber, Robert B. McKersie, and D. Quinn Mills, *U.S. Industrial Relations 1950-1980: A Critical Assessment* (Madison, Wis., Industrial Relations Research Association, 1981), pp. 238-54.

²⁰ J. Kenneth White, "The Scanlon Plan: Causes and Correlates of Success," *Academy of Management Journal*, June 1979, pp. 292-312.

Rucker and Improshare plans are in some respects similar to Scanlon plans. For brief descriptions, see *Productivity Sharing Programs: Can They Contribute to Productivity Improvement?* Report AFMD-81-22 (Gaithersburg, Md., U.S. General Accounting Office, 1981), pp. 7-12.

²¹ Gordon F. Bloom and Herbert R. Northrup, *Economics of Labor Relations*, 9th ed. (Homewood, Ill., Richard D. Irwin, Inc., 1981), pp. 191-92.

²² G. Christian Hill, "Employee Stock Plans: An Economic Cure-All Or a Dubious Benefit?," *The Wall Street Journal*, Dec. 8, 1980, pp. 1, 25.

²³ See, for example, Richard D. Rosenberg and Eliezer Rosenstein, "Participation and Productivity: An Empirical Study," *Industrial and Labor Relations Review*, April 1980, pp. 355-67; John L. Niles, "Diagnosing and Treating the Symptoms of Low Productivity," *Supervisory Management*, August 1979, pp. 29-34; and E. M. Dar-El and L. F. Young, "Systems Incentives: Three Ways to Better Productivity," *Industrial Engineering*, April 1977, pp. 24-29. A systems incentive plan differs from wage incentives in that it does not emphasize monetary rewards but places equal value on training, development, and participation in productivity programs.

²⁴ H.M. Douty, "Labor-Management Productivity Committees in American Industry," May 1975, prepared for the National Commission on Productivity and Work Quality, Washington, D.C. See also *The Directory of Labor-Management Committees*, National Center for Productivity and Quality of Working Life (Washington, D.C., Government Printing Office, October 1976), which lists labor-management committees by union, geographical area, and company.

²⁵ For more details, see Stephen B. Fuller, "How quality-of-worklife projects work for General Motors" and Irving Bluestone, "How quality-of-worklife projects work for the United Auto Workers" in *Monthly Labor Review*, July 1980, pp. 37-41.

²⁶ Frank M. Gryna, *Quality Control Circles* (New York, American Management Association, 1981); and Edmund J. Metz, "Caution: Quality Circles Ahead," *Training and Development Journal*, August 1981, pp. 71-76.

White-collar pay levels linked to corporate work force size

Larger-size firms generally pay high salaries for white-collar workers, although the pay advantage varies by occupation and skill level

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"It may seem paradoxical that buyers of labor with the most monopoly power generally pay the highest rates of wage and benefit compensation." With this provocative thought, Professor Richard Lester in his comprehensive 1967 study invited the next generation of researchers to explore size-of-establishment differences in employee compensation.¹ In response, researchers during the past 15 years have "rediscovered" this once-neglected field as fertile ground for debate. While most have argued that big employers pay employees more, others contend that size, *per se*, is not a determinant of wage levels but rather reflects marked differences in the quality of workers employed by large and small firms. Responding to his own paradox, Lester suggested several reasons a large employer might pay higher wages than other firms, including: public opinion, ability to pay, and as compensating differentials for the "impersonal and confining aspects of large establishments."

This article examines the relationship between work force size and pay levels of white-collar employees, using data from the Bureau of Labor Statistics national survey of professional, administrative, technical, and clerical pay (PATC). By using the narrowly defined occupational work levels of the PATC survey, this analysis limits the distorting effects of variations in worker quality on pay levels. The principal findings of the analysis are: pay levels tend to increase with employer work

force size but above-average levels are associated only with large firms; and wage premiums attributable to a firm's size are larger for entry level than for experienced professional workers—an indication of competition among small and large employers to attract and retain skilled personnel.

Past studies of the links between work force size and pay levels have reviewed several other possible explanatory variables relating to establishment or worker characteristics, or both. The variables included here were chosen on the basis of significance in previous analyses and availability in the data source selected—the 1980 national PATC survey. The variables are: two measures of work force size (number of employees in the establishment and world-wide corporate employment of the establishment's parent company); industry division (for example, manufacturing, trade, or services); and geographic location (four Census regions). Data on union status, missing from the PATC survey, were developed from the BLS area wage survey program; but these industry averages of unionization proved to be highly correlated with the industry variable and thus were excluded from the final regression analysis. Their omission probably had only minimal impact on this analysis, based on a recent study that showed relatively small union wage differentials for white-collar employees, and no discernible effect on the work force size variables when the union variable was excluded.²

Controlling for variations in worker quality continues to be an obstacle to accurate measurements of wage premiums attributable to work force size. For example, a

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BLS researcher found that half of the apparent size premium disappeared when traditional proxies for worker quality—education and work experience—were included in an analysis of data from households sampled in the Current Population Survey.³ Other researchers have also pointed to unmeasured individual worker characteristics such as dependability, tenure, and “firm-specific” training in espousing reasons for finding a positive relationship between work force size and pay levels.⁴

This study limits the direct influence of education and work experience on salary levels by grouping workers into occupational classifications that are each narrowly defined to represent comparable job content among establishments.⁵ This approach departs from previous studies where educational background and overall work experience are important determinants of the distribution of workers among occupations, and thereby influence earnings. However, education and experience are relatively uniform for workers within a specific PATC-defined occupation and, as a rule, are less influential in explaining pay variations among individuals performing the same or similar tasks.

Analytical techniques and data

Two basic approaches are followed in this analysis: (1) cross-tabulation of pay levels by corporate employment size group and (2) multiple regression techniques. The first approach measures gross pay differentials because it does not control for interplay among the various possible influences on pay levels. On the other hand, multiple regression measures the net effect of each explanatory variable, such as work force size, after allowing for the influence of other variables in the equation.

As previously mentioned, the 1980 PATC survey of about 3,500 private sector establishments is the data source for this analysis. Conducted annually by the Bureau of Labor Statistics, the survey results provide the basis for recommendations on annual pay changes for Federal white-collar employees. Selection of PATC survey occupations and other specifications as to the coverage of the study, such as minimum employment size of the establishments, industrial coverage, and geographic scope, are the responsibility of the President's Agent (Secretary of Labor and heads of the Office of Management and Budget and the Office of Personnel Management), under the Federal Pay Comparability Act of 1970.⁶ The narrowly defined occupational classifications of the survey provide the link between private and Federal Government sectors thereby permitting carrying out of the congressional directive that “Federal pay rates be comparable with private enterprise pay rates for the same levels of work.”⁷

The March 1980 PATC survey included 21 occupations, and all but one were divided into two work levels

or more. Each level describes duties and responsibilities in private industry that are comparable with those of specific Federal white-collar employees. Of the 91 occupational work level (job) categories in the survey, 25 contain enough workers for this analysis. They are distributed over 12 of the 21 surveyed occupations, and include professional/administrative, technical support, and clerical workers.⁸ Straight-time earnings of full-time workers, the measure reported in the PATC survey, forms the basis for this analysis of pay levels.

Cross-tabular results

Cross-tabulations revealed a strong tendency for pay levels to rise, as corporate employment grew. (See table 1.) Depending on the job category, pay ranged from 1 to 16 percent below the PATC survey averages in firms with fewer than 1,000 workers to 4 to 24 percent above in firms with 250,000 workers or more. Table 1 also presents clerical and technical workers in the largest corporate categories as enjoying a somewhat greater pay advantage than their professional colleagues.

For professionals, the pay advantage for working in large corporations was less at journeyman level than at entry level, indicative of competition among small and large firms alike for experienced workers.⁹ The higher

Table 1. Relative pay levels by corporate employment-size group, selected white-collar occupations in private establishments, March 1980

Occupational level and Federal equivalent	Mean salary for size groups as a percent of surveywide average ¹					
	Fewer than 1,000 employees	1,000 to 2,500	2,500 to 10,000	10,000 to 50,000	50,000 to 250,000 or more	
Professional and administrative:						
Accountants I (GS-5)	88	93	98	100	102	122
Accountants III (GS-9)	94	94	96	100	102	114
Accountants IV (GS-11)	97	96	97	100	99	109
Auditors III (GS-9)	92	92	97	101	104	121
Buyers III (GS-9)	99	94	96	98	101	113
Buyers IV (GS-11)	90	89	96	98	100	109
Chemists II (GS-7)	89	83	97	103	105	111
Chemists IV (GS-11)	93	91	94	99	104	108
Engineers I (GS-5)	88	93	99	100	102	106
Engineers III (GS-9)	95	95	97	101	99	107
Engineers VI (GS-13)	99	99	98	98	99	105
Engineers VII (GS-14)	95	98	102	97	99	104
Technical support:						
Computer operators III (GS-6)	94	97	96	100	104	117
Computer operators IV (GS-7)	88	92	95	99	104	116
Drafters II (GS-3)	93	97	97	100	107	124
Drafters IV (GS-5)	97	94	93	99	103	113
Engineering technicians III (GS-5)	93	97	93	101	100	107
Engineering technicians V (GS-9)	92	93	96	98	98	105
Clerical:						
Accounting clerks II (GS-3)	95	93	97	101	104	116
Accounting clerks III (GS-4)	91	93	95	103	106	115
Key entry operators I (GS-2)	91	98	94	102	111	124
Key entry operators II (GS-3)	90	95	94	103	104	124
Secretaries II (GS-5)	88	91	94	100	103	118
Secretaries IV (GS-7)	84	93	94	100	104	123
Typists I (GS-2)	95	91	96	100	108	116

¹ Published averages, the base for these pay relatives, have been adjusted to exclude observations in establishments not reporting corporate employment.

Table 2. Relative pay levels by industry division, selected white-collar occupations, March 1980

[Average salary for each occupation in all industries = 100]

Occupation	Industry division					
	Manufacturing	Public utilities ¹	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services ²
Accountants	100	104	96	96	94	96
Engineers	100	102	96	(³)	(³)	98
Computer operators ..	105	114	101	(³)	91	90
Accounting clerks ..	101	118	99	93	88	96
Typists	105	120	107	100	87	101

¹Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

²Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relation services; noncommercial educational, scientific, and research organizations; and accounting, auditing, and bookkeeping services.

³Insufficient employment in one work level or more to warrant separate presentation of data.

average pay for entry-level professionals in large firms may partly reflect payment for a "higher quality" of worker, that is, the academic reputation of the college from which he or she graduated or higher standing within the graduating class. In contrast, past work experience and job performance are less important in setting salaries for beginning professionals whose job tenure is brief.

These overall comparisons mask the degree to which pay in individual firms deviated from group averages. As a rule, less than half of the firms with 50,000 workers or more paid their nonclerical employees at least 5 percent above PATC survey averages; by individual job category, the proportion of employers ranged from 25 to 58 percent. For clerical jobs, the proportions ranged from 54 to 63 percent. Similarly, not all firms in smaller-size groups paid less than the average. For each job, at least 7 percent of the employers with fewer than 1,000 workers paid 5 percent or more above the survey average.

Variations in industry pay levels (table 2) and employment distributions (table 3) appear to account for part of the differences in pay levels between large and small firms. To illustrate, the five occupational work levels shown in table 3 have a disproportionately high number of manufacturing industry workers in large firms. Conversely, finance, insurance, and real estate workers in these job categories (service industry for engineers) tend to concentrate in small firms. As in the blue-collar sector, white-collar pay levels are higher in manufacturing¹⁰ than in either finance, insurance, and real estate or service industries. Pay levels of medium-size firms (2,500 to 10,000 workers) are bolstered by the presence of public utilities—traditionally one of the highest-paying industry sectors.

Unlike the aforementioned association between size of

firm and industry, corporate size appears to be largely independent of regional location. Accordingly, regional pay differences do not seem to account for much of the wage premium associated with work force size. Moreover, pay differences between the highest- and lowest-paying regions were relatively small—typically less than 10 percent. As noted in a previous BLS study,¹¹ a regional pay advantage may reflect more the industry orientation of a particular job, such as the Southern pay premium traditionally reported for chemists who are extensively employed by high-paying petrochemical firms in that region.

Regression results

Multiple regression analysis disclosed a statistically significant relationship between large corporate size, *per se*, and higher pay, when other measured characteristics are held constant. This was true for all but one (engineering technician V) of the 25 job levels studied. In some cases, as illustrated in table 4, pay in firms with 250,000 employees or more averaged 9 to 20 percent above firms with fewer than 1,000 employees.¹² A smaller size premium, found less often, was reported for

Table 3. Relative industry employment levels by corporate employment size groups, selected white-collar occupations, March 1980

Occupation and industry division ¹	Percent of workers in:			
	All size groups	50,000 or more ²	2,500 to 10,000	Fewer than 1,000
Accountants III:				
Manufacturing	65	78	55	41
Public utilities	9	4	21	7
Trade	7	9	6	15
Finance, insurance, and real estate	11	(³)	12	30
Engineers III:				
Manufacturing	77	92	61	53
Public utilities	7	(³)	23	(³)
Services	10	4	14	42
Computer operators III:				
Manufacturing	41	60	34	23
Public utilities	7	10	8	(³)
Trade	14	12	14	19
Finance, insurance, and real estate	23	4	32	41
Services	11	5	11	16
Accounting clerks III:				
Manufacturing	43	50	38	35
Public utilities	18	29	23	4
Trade	14	13	11	18
Finance, insurance, and real estate	18	5	25	36
Typists I:				
Manufacturing	36	45	35	20
Public utilities	7	11	12	(³)
Trade	8	18	5	12
Finance, insurance, and real estate	42	22	40	61
Services	5	4	6	5

¹ See table 2, footnotes 1 and 2 for coverage of nonmanufacturing industry divisions. Industry divisions with less than 5 percent of the workers in an occupational work level are not shown.

² The two largest-size groups shown in table 1 were combined to provide sufficient observations for a meaningful profile of industry employment distribution of relatively large corporations. To simplify this analysis, the medium-size firm is represented by the 2,500 to 10,000 employee group, omitting corporations with 1,000 to 2,500 and 10,000 to 50,000 employees.

³ Less than 4 percent.

the second and third largest corporate-size groups. Below the 10,000 worker cutoff, significant size premiums were usually absent—not surprising given the relatively small differences in actual pay levels among the three smallest size groups. (See table 1.)

Substituting establishment size for corporate size in the regressions did not alter the basic findings that large employers provide higher pay levels for white-collar workers. For a large majority of the 25 job levels, significant pay premiums attributable to establishment size began with the 1,000 to 2,499 employees group; for the largest establishments (10,000 employees or more), the size premium over the smallest group (fewer than 500 employees) was typically 10 to 15 percent for professional/administrative categories and 20 percent or more for the clerical/technical job levels.

The simultaneous effect of establishment and corporate size on pay levels also was tested in separate sets of regressions. The work force variable was defined as four combinations: (1) small establishment (fewer than 2,500 employees)/small corporation (fewer than 50,000 employees); (2) small establishment/large corporation; (3) large establishment/small corporation; and (4) large establishment/large corporation. Compared with the small establishment, small corporate-size category, the other three groups had statistically significant salary differentials for a large majority of the 25 job categories

studied. However, of the three, only the large establishment/large corporation group stood out with significant salary premiums for all jobs.

Of the two work force size measures used, corporate size generally provided a better explanation of the salary variation for professional job categories, that is, higher adjusted coefficients of multiple determination (\hat{R}^2), while establishment size produced somewhat better regression results for clerical positions. This is consistent with and may partly reflect the differing pay-setting practices of the two occupational groups: a national or regional market for professionals and a local wage area for clerical workers. Regardless of the work force size measure used—corporate or establishment—regression results explained more of the salary variation for entry-level than for higher-level professional job categories. This is in line with the more uniform work experience and job tenure noted for entry-level professionals than for journeymen.

Salary differences found by simple cross-tabulation (table 1) can be labeled *gross* differentials, and those isolated by multiple regression techniques, *net* differentials. Table 5 compares gross and net percentage pay differentials associated with corporate work force size. The table shows that gross differentials are generally larger than net differentials. This expected pattern reflects the tendency for characteristics associated with higher pay

Table 4. Regression analysis of average monthly salaries for selected white-collar occupations, March 1980

Variable	Percent of 25 occupations studied with significant coefficients ¹	Accountants III	Engineers III	Computer operators III	Accounting clerks III	Typists I
		(Coefficients shown in percent)				
Constant	N.A.	\$1,725	\$1,913	\$1,080	\$919	\$772
Corporate size (number of employees):						
1,000 to 2,499	20	...	...	...	...	...
2,500 to 9,999	20	...	...	...	...	...
10,000 to 49,999	60	4.7	5.4	4.8	10.3	9.6
50,000 to 249,999	76	7.2	4.7	8.6	14.9	9.0
250,000 or more	96	19.6	12.5	17.5	17.7	...
Industry division:						
Mining/construction	64	8.3	3.3	-18.3	10.4	13.4
Public utilities ²	80	8.1	5.3	7.9	13.5	-13.9
Finance, insurance, and real estate	71	...	...	-8.7	-7.2	-14.5
Wholesale trade	26	...	...	...	...	-15.4
Retail trade	68	4.3	...	6.2	-7.3	...
Selected services ²	24	...	...	-12.7	...	...
Region:						
Northeast	60	-7.7	-3.7	-4.1	3.8	5.4
North Central	36	-3.0	...	...	5.4	6.2
West	52	-2.5	...	6.4	4.2	...
Statistical information:						
Adjusted coefficient of determination (\hat{R}^2)	N.A.	.23	.12	.21	.20	.21
Mean (Y)	N.A.	\$1,776	\$2,013	\$1,079	\$1,028	\$759
Number of observations (S)	N.A.	1,476	1,154	1,174	1,534	854

¹ Because the regression coefficients are based on a sample, they may differ from the figures that would have been obtained from a complete census. Chances are about 2 in 3 that an estimate from the sample would differ from those in a total census-derived value by less than the standard error, and about 19 in 20 that the difference would be less than twice the standard error. It is the latter 5 percent significance level that is used here; the percent of the 25 occupations studied that had a significant coefficient is shown for each variable, for example, only 20 percent for the 2,500 to 9,999 corporate size-group.

² See table 2, footnotes 1 and 2 for coverage of nonmanufacturing industry divisions.

NOTE: Y is the mean of the earnings (dependent) variable weighted by occupational employment. S is the number of establishments in the sample with employees in the occupations studied. Dashes indicate that the coefficient was not significant at a 5 percent level. N.A.=Not applicable.

Table 5. Percentage earnings differences between large and small firms, selected white-collar occupations, March 1980

Occupational work level	Percent difference	
	Gross	Net
Accountants I	38.6	33.9
Accountants III	21.3	19.6
Accountants IV	12.4	13.3
Auditors III	31.5	20.0
Buyers III	14.1	15.6
Buyers IV	21.1	20.8
Chemists II	24.7	19.7
Chemists IV	16.1	13.1
Engineers I	20.5	19.0
Engineers III	12.6	12.5
Engineers VI	6.1	9.0
Engineers VII	9.5	11.3
Computer operators III	24.5	17.5
Computer operators IV	31.8	21.5
Drafters II	33.3	37.4
Drafters IV	16.5	19.1
Engineering technicians III	15.1	13.8
Engineering technicians V	14.1	12.4
Accounting clerks II	22.1	17.3
Accounting clerks III	26.4	17.7
Key entry operators I	36.3	27.4
Key entry operators II	37.8	31.4
Secretaries II	34.1	29.2
Secretaries IV	46.4	41.3
Typists I	22.1	9.0

¹ The net difference for engineering technicians V is statistically significant at a 10-percent level; all other work levels shown are significant at 5 percent.

NOTE: Large size equals 250,000 employees or more; small size, fewer than 1,000 employees. "Gross" and "net" differentials are defined in the text.

levels, such as high-paying manufacturing and large corporate size, to be found together. This compounds the impact attributable to any single characteristic by simple cross-tabulation. Regression techniques separate such combinations and measure the impact of individual components.

Implications for future research

This study illustrates the usefulness of surveys that provide detailed information on narrowly defined occupations, which control for differences in worker quality. It makes clear that questions relating to work force size and occupational pay seem more appropriate for an establishment survey than a household one. Yet, as noted earlier, the inclusion of information on the educational background and work experience of employees (easier to get in household interviews) enhances the usefulness of most size/pay estimates. Two BLS studies have utilized the best features of both approaches: in 1972 a study of the clothing industry obtained for the first time demographic characteristics from employee interviews

and occupational wages from their employers¹³ and a subsequent study matched observations on individuals and their employers from two establishment surveys—Employer Expenditures for Employee Compensation and Area Wage Surveys—and the Current Population Survey of households.¹⁴ Either approach, although expensive and time consuming, is necessary to adequately control for productivity differences among workers.

The corporate work force variable could be redefined in future surveys to report the work force size for a parent company only if it has a direct input to the wage and salary administration of its affiliated establishments. This study included corporate work force obtained for both *divisions* of companies whose pay decisions are usually reviewed by the parent firm and for *wholly-owned subsidiaries* that operate independently of that type of review. This proposal would reduce the number of affiliates reported in the largest corporate-size classes and probably would tend to increase the pay differential between large and small employers.

Finally, if resources were made available, two other establishment characteristics could be added to the PATC survey to help improve explanations of white-collar pay levels—union status of white-collar and of blue-collar workers and location by area population size. The latter may be especially important for clerical and technical job categories. A metropolitan/nonmetropolitan area variable was not included in this analysis because more than 90 percent of white-collar workers covered by the PATC survey were employed in metropolitan areas.

IN SUMMARY, this analysis found white-collar pay levels generally increasing with employer size. This was observed both before and after allowing for the impact of other measured variables, such as industry and region. However, the amount of the salary premium attributable to work force size varied by occupation and skill level—similar to the way education and other worker quality traits have affected results in previous studies. Narrowly defined occupational classifications broaden opportunities for BLS establishment surveys to be used in research usually reserved for household-type surveys. Further improvements in both kinds of surveys, and combining their best features, are needed to better measure and control for differences in productivity-related characteristics among workers. □

FOOTNOTES

¹ Richard Lester, "Pay Differentials by Size of Establishment," *Industrial Relations*, October 1967, pp. 57–67.

² Joseph R. Antos, "Union Impacts on White Collar Compensation," *Industrial and Labor Relations Review*, forthcoming.

³ Wesley Mellow, "Employer size, unionism, and wages," paper presented at Conference on New Approaches to Labor Unions, Octo-

ber 1981, at Virginia Polytechnic Institute and State University.

⁴ See, for example, Stanley H. Masters, "Wages and Plant Size: An Inter-industry Analysis," *Review of Economics and Statistics*, August 1969, pp. 341–45 and Walter Y. Oi, "The Fixed Employment Costs of Specialized Labor," paper presented at Conference on The Measurement of Labor Cost, December 1981, at Williamsburg, Virginia.

In Vladimir Stoikov, "Size of Firm, Worker Earnings, and Human Capital: The Case of Japan," *Industrial and Labor Relations Review*, July 1973, the author argues that size of enterprise is of minor importance and that interfirm wage differentials are explained almost exclusively by differences in worker skills and knowledge.

⁵ Occupational definitions are presented in *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1980*, Bulletin 2081 (Bureau of Labor Statistics, 1980), pp. 38-68. Several occupations used in this analysis have exclusions that help to narrow their definition. For example, the accountant definition does not cover workers whose principal or sole duties consist of designing or improving accounting systems or other nonoperating staff work, such as budget or financial analysis; the computer operator definition includes workers operating the control console of a digital computer and not those operating computer terminals; and the typist definition does not include word processors and publication typists. In addition, workers without college degrees are almost always excluded from the professional jobs studied.

⁶ The industrial coverage and minimum-size establishment is as follows: manufacturing (100 or 250 employees); transportation, communication, electric, gas, and sanitary services (100 or 250 employees); mining and construction (250 employees); wholesale trade (100 employees); retail trade (250 employees); finance, insurance, and real estate (100 employees); and selected services (50 or 100 employees).

⁷ 5 U.S.C. Sec. 5301 (a) (3) (1970). The pay-setting role of the PATC survey is described in George L. Stelluto, "Federal pay comparability: facts to temper the debate," *Monthly Labor Review*, June 1979, pp. 18-28.

⁸ Table 1 lists the 25 job categories. Work levels are identified by Roman numerals, the higher the numeral the greater the duties and responsibilities. Numbers of work levels in the PATC survey vary by occupation, ranging from one for messengers to eight for chemists and engineers. For professional occupations, the first two levels are considered entry and developmental; the next two levels, journeymen; and higher levels, generally supervisory or managerial in nature.

⁹ Microdata from the PATC survey have shown over the years that pay levels within an establishment are typically higher relative to the survey-wide averages for experienced levels of professional positions than for entry levels. This is especially true for small, relatively low-paying establishments.

¹⁰ Previous BLS research on area pay differences found that wage variation reflects not only the relative presence or absence of manufacturing activity but also the kind of manufacturing industries. We found that this also applies to occupational pay differences by size of firm. That is, high-paying manufacturing industries were relatively more important employers in the largest firm-size groups. For example, in the large-size groups (50,000 employees or more), two-thirds of the accountants III employed by manufacturing firms were in high-paying industries; in the small-size group, the corresponding proportion was two-fifths. An industrial profile of large, low-paying firms, that is, with pay levels 5 percent or more below the PATC survey averages, showed that their mix of manufacturing industries, like that of small firms, was less favorable than for the large firm-size groups as a whole. The data to support these findings for other jobs studied are available upon request.

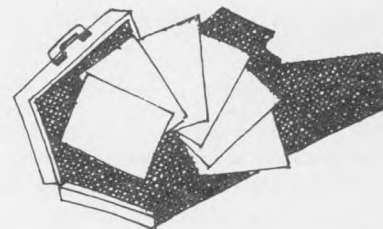
¹¹ Harry F. Zeman, "Regional pay differentials in white-collar occupations," *Monthly Labor Review*, January 1971, pp. 53-56. Because the PATC survey was designed to yield nationwide data, regional estimates are not regularly published; small differences in these estimates should be cautiously interpreted.

¹² Several categories were defined for each characteristic studied, for example, six corporate employment-size groups or four geographic regions. (Actual employment rather than employment groups was not available.) The coefficients presented in table 4 are the percent differences between the category of each characteristic that is shown and the one that is not shown, but is embodied in the "constant" term: that is fewer than 1,000 workers, manufacturing, and the South.

¹³ See *Wages and Demographic Characteristics in the Work Clothing Industry*, March 1972, Bulletin 1858 (Bureau of Labor Statistics, 1975).

¹⁴ Antos, "Union Impacts."

Conference Papers



The following excerpts are adapted from papers presented at the Thirty-Fourth Annual Meeting of the Industrial Relations Research Association, December 1981, in Washington, D.C.

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Can the NLRB caseload detect changes in labor relations climate?

MARK D. KARPER

The past 30 years have been marked by a steady increase in the number of unfair labor practices cases processed by the National Labor Relations Board (NLRB). This raises questions concerning possible changes in the distribution of this increase over the 1950-78 period. An assessment of what, if any, changes have occurred can provide indicators of changes in the labor relations climate over time. The assessment of changes in the distribution of cases can be broken down into five specific categories (a) changes in regional distribution, (b) changes in the type of employer, (c) changes in the size of an employer, (d) changes in the type of cases, and (e) changes in election behavior relative to cases.

The NLRB provides information on the total number of unfair labor practices cases for the 10 census regions of the United States.¹ It categorizes changes in managerial violations for each region. The results for such violations show four regions declined since 1950: the Middle Atlantic, Outlying areas (Virgin Islands and Puerto Rico), New England, and West South Central; and six regions increased their share: East North Cen-

tral, Pacific, South Atlantic, Mountain, West North Central, and East South Central. The most dramatic changes occurred in Ohio, Indiana, Illinois, Michigan and Wisconsin, where the share increased by 4 percent and in New York, New Jersey and Pennsylvania, where it declined by 6 percent. All the changes for the other regions were less than 2 percent, making it impossible to assess whether any consistent trends have developed.

An examination of violations by management according to the type of employer reflects the demographic shift of employment from the manufacturing to the services sector. In addition, it reflects increased NLRB jurisdiction in the services sector with the addition of health care institutions, private, higher education institutions, and the U.S. Postal Service. The services sector's share of unfair labor practices cases by management increased from 4.1 percent in 1950 to 17.7 percent (includes Postal Service) in 1978, while the manufacturing sector declined from 61.7 percent to 45.8 percent. Transportation, finance, retail trade, construction, and mining increased slightly (less than 2 percent), while wholesale trade declined 1.4 percent.²

Data on unfair labor practices cases by the size of the employer are available going back to 1966. The data show little variation over the entire time period with an average of 65 percent of all cases being filed against employers with less than 100 employees, 12 percent in the range of 100-499, 5 percent in the range of 500-999, and 9 percent with employees of 1,000 or more. The data vary by less than 2 percent over the entire time period in any one category. These results reveal that over the recent time period for which the data are available, the size of the employer is not an important factor in the change in the distribution of cases.

One measure of the mix of unfair labor practices cases is the ratio of union to management violations. This mix has changed over time with unions' violations rising faster than managements', with the ratio becoming stable from 1966-78. The relative stability of the union and management mix in recent years means that they have shared equally in the growth of cases indicating the increased use of litigation by both sides.

Election petitions by unions could be related to the incidence of unfair labor practices cases if violations arise in substantial numbers from elections. During 1964-78, the number of these elections remained almost constant while cases almost tripled. This fact negates any simplistic relationship between the two. The data

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concerning election activity by type of industry do follow the pattern set by managements' violations. Specifically, there was a decline in the number of elections in the manufacturing sector (22 percent), with a corresponding increase in the services sector (20 percent). The other sectors remained almost constant. The most startling statistic is that election patterns by region remained stable for the entire 1950-78 period, with only one category, the Southern Atlantic Region, (2.9 percent) showing any variation over 2 percent. This pattern runs contrary to demographic shifts in both population and employment.

In summary, increased incidence of unfair labor practices cases is not due to the movement of employment to the South and West, for example. Second, the increase in cases is not due to increased lawlessness on the part of employers or unions, since the mix of union and management violations has remained constant in recent years. Third, there is evidence to indicate that the increase in cases may be related in part to the increased jurisdiction by the NLRB in the services sector. And, finally, it is not possible to determine whether this increase reflects a trend towards lawlessness without adequate measures of the number of employees and the scope of bargaining units under NLRB coverage. □

— FOOTNOTES —

¹ The definitions of each region are: New England—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; Middle Atlantic—New York, New Jersey, Pennsylvania; East North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin; West North Central—Iowa, Minnesota, Missouri, North Dakota, South Dakota, Nebraska, Kansas; South Atlantic—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida; East South Central—Kentucky, Tennessee, Alabama, Mississippi; West North Central—Arkansas, Louisiana, Oklahoma, Texas; Mountain—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada; Pacific—Washington, Oregon, California, Alaska, Hawaii, Guam; Outlying—Puerto Rico, Virgin Islands.

² The definitions of labor sectors correspond to Standard Industrial Classifications.

Determinants of health insurance and pension coverage

WESLEY S. MELLOW

Fringe benefits have increased markedly in recent years and now account for roughly one-third of total compen-

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sation.¹ Despite this magnitude, relatively little is known about the distributional pattern of fringes across workers; most studies of the determinants of fringe benefits use establishment or industry data.² While these studies provide much interesting and useful information, they have the same inherent limitation as those which use establishment or industry data to study wages. That is, only very limited controls for labor quality and other interworker differences are available. Consequently, to the extent that observed determinants of fringes (unions, employer size, and so forth) are correlated with worker characteristics influencing total compensation, the estimated effects of these factors will be biased.

The following discussion describes a very rough attempt to address this limitation using new data on individual workers from the Current Population Survey. Specific attention is given to the impact of personal characteristics, union membership, and employer size on health and pension coverage.

The data base

The Current Population Survey is the monthly survey of 56,000 households used by the Bureau of Labor Statistics to estimate the official unemployment rate. In addition to data on labor force status and personal characteristics, information is obtained each month on hourly earnings (for workers paid by the hour), usual weekly earnings, and usual hours worked at the primary job from approximately one-fourth of employed survey participants. A special supplement to the May 1979 survey requested information on a wide range of additional worker and job characteristics, including current job tenure, union membership status, employer size, and participation in health and pension plans. For this analysis, the sample is limited to the 18,551 wage-and-salary workers providing responses to the supplemental questions in the May survey and the earnings questions in either the May or June surveys.³

Health insurance coverage is determined by response to the question: "Are you included in a group health insurance plan on your present job? Do not report insurance that pays only for accident or disability." Pension plan coverage is determined by the question: "Does your employer or union have a pension or other type of retirement plan for any of its employees?" If the answer is yes, respondents are then asked: "Are you included in such a plan?" (Respondents are told not to include social security, railroad retirement, or veterans' pensions in determining their answers to the pension questions.) Under these definitions, 66 percent of the workers in our sample received health insurance as part of their compensation package and 50 percent received pension coverage.

These percentages are much lower than those typically found in studies based on firm or establishment data.

For instance, a 1977 Chamber of Commerce study found that only 9 percent of the firms it surveyed reported no pension payments, and fewer than 1 percent reported no health insurance payments.⁴ Similarly, a recent Bureau of Labor Statistics study found that in 1979 only 13 percent of workers in the establishments surveyed received no pension coverage and only 3 percent received no health insurance.⁵ The discrepancy is probably attributable to some combination of the following factors. Not all workers in a firm receive health and pension benefits, relatively new and part-time employees being particularly excluded. In addition, surveys of firms typically exclude "small" employers (in most cases, those with fewer than 100 employees). These small employers have much lower levels of benefit provision. Finally, employer surveys frequently exclude specific occupations or industries which may have low fringes.

It should be noted that a number of sharp differences in the means of the incidence of benefit receipt are readily apparent among the subgroups of the CPS sample. Women, low tenured, and part-time workers have much lower receipt levels, while the converse is true of union workers and those working for large employers. High wages are associated with higher benefit coverage, and wide variations are observed among industries.

Probabilities of coverage

Logit analysis was used to estimate the impact of worker and employer characteristics on the likelihood of health or pension coverage.⁶ The coefficients estimated using this procedure indicate the percentage change in the odds of receiving the specified benefit for a unit change in an explanatory variable. Also calculated are the derivatives, which reveal the marginal effect of change in an independent variable on the absolute probability of receiving the benefit, in the vicinity of sample means.

The estimates indicate that several major factors are associated with dramatic shifts in the probability of receiving benefits. Union members and those working in large firms have sharply higher receipt levels. Based on the derivative calculations, the absolute probability of receiving health insurance (pension benefits) is .144 (.321) higher for union members. Regarding employer size, there is an increase of .200 in the absolute probability of health benefits and a .299 rise in the probabilities of pension coverage associated with firms having 25 to 99 workers. Being employed in establishments with 1,000 workers or more increases the absolute probabilities of health and pension coverage by .316 and .557, respectively. Because the mean of the pension variable is smaller than that of the health variable (.50 versus .66), these estimates imply that the relative effects of union membership and firm size are greater on the probability

of receiving pension benefits than on the probability of coverage by health insurance plans.

Current job tenure and wage are both associated with an increased likelihood of health and pension coverage. An increase in job tenure from 5 to 15 years, for instance, is associated with an increase of .135 (.297) in the absolute probability of health (pension) benefits. A \$5 increase in the hourly wage is associated with an absolute increase of .120 in the probabilities of both health and pension benefits.

Sharp drops in the probability of receiving benefits are encountered by part-time workers. The estimated decline in the absolute likelihood of health (pension) benefits is .311 (.274). Given the large differences noted earlier in the comparisons of means, being female has a surprisingly modest negative impact, -.064 for health insurance and -.069 for pensions. Evidently, controlling for job tenure, part-time status, wage, industry, and occupation accounts for much of the difference between men and women in the probability of receiving benefits.⁷

The absolute change in the likelihood of health and pension coverage is markedly higher in manufacturing (.206 and .259 in durable goods and .144 and .220 in nondurable goods) and transportation and public utilities (.117 and .118). In three industry groups—finance, insurance, and real estate; services (except private household); and public administration—there are modest increases in the probability of health benefits (.088, .031, and .077), but substantial increases in the probability of pension benefits (.172, .219, and .551). (The reference industry is private household workers and agriculture).

The estimated impacts of the occupational status and location variables can be briefly summarized. Occupational status has a much smaller estimated impact than industrial status. The largest change in the absolute probability of benefits is an increase of .123 in health insurance for clerical workers and a .137 increase in pension coverage for clerical workers. (The reference occupation is service workers.) The location variables (regional and Standard Metropolitan Statistical Area dummies) have no systematic influence on the receipt of benefits. □

FOOTNOTES

¹ See Chamber of Commerce of the United States, *Employee Benefits, 1977* (Washington, 1978).

² See, for instance, Robert G. Rice, "Skill, Earnings and the Growth of Wage Supplements," *American Economic Review*, May 1966, pp. 583-93; and Richard B. Freeman, "The Effect of Unionism on Fringe Benefits," *Industrial and Labor Relations Review*, July 1981, pp. 489-509.

³ The CPS sample is composed of a rotating group of addresses. A particular address is in the sample 4 consecutive months, out 8, and then in 4 more months. Each month, only those persons in rotation groups four and eight are asked the earnings questions. In the data file used in this analysis, responses to the earnings questions in the June CPS (for those in rotation groups three and seven in May) have

been added to the individual data records. This matching process roughly doubles the number of participants in the May supplement for whom earnings data are available.

⁴Chamber of Commerce of the United States, *Employee Benefits, 1977*, p. 16.

⁵*Employee Benefits in Industry: A Pilot Survey*, Report 615 (Bureau of Labor Statistics, 1980).

⁶For a discussion of the logit framework, see Marc Nerlove and S. J. Press, *Univariate and Multivariate Log-Linear Logistic Models*, Report R-1306-EDA/NTH (Santa Monica, Calif., The Rand Corporation, 1973).

⁷If the wage variable is excluded from the set of explanatory variables, the estimated impact of being female on the probability of receiving benefits increases by roughly 50 percent. Changes in the estimated effects of other factors are much more modest; typically the increase (in absolute value terms) is about 10 percent.

Labor market rights of foreign-born workers

DAVID S. NORTH

The 1970 Census counted 9.6 million foreign-born persons in the United States, divided almost equally between naturalized citizens and aliens. That was surely an undercount, as the Census has the same troubles enumerating the foreign-born as it does native-born disadvantaged populations. The total number of foreign-born in the United States in 1980 was in the 16 to 18 million range. In addition to some 4 million or so newly arrived legal immigrants, we have also taken on hundreds of thousands of refugees, and perhaps as many as 4 million illegal immigrants in the last decade. A disproportionately large segment of the illegal immigrants are in the work force (which is not the case with the other foreign-born subpopulations), so the number of foreign-born in the labor market is significant.

For our purposes, we divide the foreign-born into six groups, each of which has its own mix of labor market rights:

Naturalized citizens have all of the labor market rights of citizens, with two statistically minor exceptions: they are barred from the Presidency and the Vice Presidency, and they must serve a waiting period after naturalization prior to election to the Congress.

Permanent resident aliens arrived here legally and may become naturalized citizens after the passage of time.

Class A refugees are those recognized as such by the Refugee Act of 1980, as amended. Most refugees cur-

rently in the United States are from Indochina, but there are others from Afghanistan, Ethiopia, Eastern Europe, Cuba, and Haiti.

Class B refugees may look like refugees to an observer, but in the eyes of the Immigration and Naturalization Service, they are here illegally, and are ultimately subject to deportation.

Nonimmigrants are aliens admitted to the United States legally and temporarily to perform a particular function (to be a diplomat, a tourist, or a foreign student).

Illegal immigrants have either arrived surreptitiously or have come into the country bearing legitimate documents which they subsequently abused (either by staying too long, or by working when they were not supposed to do so).

Permanent resident aliens, and Class A and Class B refugees may work anywhere they can find a job. Some classes of nonimmigrants may work only in designated segments of the labor market, but most are not allowed to work at all. Illegal immigrants are not, *per se*, barred from employment, but they are barred from physical presence in the United States. If they are apprehended, they are subject to deportation.

While permanent resident aliens and Class A and Class B refugees are free to seek any job they can find, they are generally not protected from employment discrimination. The Federal Government, all private sector employers, and sometimes State and local governments may legally refuse to hire, for example, an Ethiopian permanent resident alien on the grounds that they will hire no permanent resident aliens—but they would be violating Title VII of the Civil Rights Act of 1964 if the decision was based on nation of origin or skin color. As a matter of fact, it is very difficult for most Federal agencies to employ permanent resident aliens, and virtually impossible for them to hire either class of refugees. Even the refugee-serving units of the government, such as the Office of Refugee Resettlement, may hire refugees only after they have secured permanent resident alien status, and those appointments require special dispensation from Federal personnel authorities.¹ Private sector employers may refuse to hire permanent resident aliens if the action is not designed to hide a bias against would-be employees of a certain nation of origin. State governments are generally not allowed to discriminate against permanent resident aliens, but the State of New York carried a case to the Supreme Court, successfully arguing that only citizens should be members of the State police force.²

Nonimmigrants who work legally in the United States may do so only along the lines permitted by the visa they carry. For example, a Jamaican, who secured a visa to cut sugar cane in Florida may not legally

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pump gas in the service station across the street from the cane field and a diplomat who leaves the service of his nation may not stay in the United States and work as a lawyer.³

While it is against the law for illegal aliens to work in the United States, their employers are required to provide them with all the protections demanded of other workers. Thus, an employer of illegal immigrants must meet the provisions of the Occupational Safety and Health Act and the Fair Labor Standards Act and, in every State but Vermont, employers are required by State legislation to provide workers' compensation protection (for injured workers). Similarly, an employer must pay social security taxes for all workers, legal or illegal.⁴ These provisions tend, in a small way, to reduce the incentive for employers to hire illegal immigrants. □

—FOOTNOTES—

¹ For more on aliens and equal employment opportunity, see David Carliner, *The Rights of Aliens: The Basic ACLU Guide to an Aliens' Rights* (New York, Avon Books, 1977), and David S. North and Allen LeBel, *Manpower and Immigration Policies in the United States*, Special Report No. 20 (Washington, National Commission for Manpower Policy, 1978), pp. 77-83.

² *Foley v. Connelie*, 435 U.S. 291 (1978).

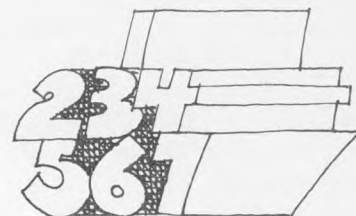
³ The precise labor market rights of all the classes of nonimmigrants cannot be covered here; for more on this see Sam Bernsen, "Employment Rights of Aliens Under the Immigration Laws," *Interpreter Releases* 56: 240-55 (May 16, 1979); and David S. North, *Nonimmigrant Workers in the U.S.: Current Trends and Future Implications* (Washington, New TransCentury Foundation, 1980).

⁴ Some legal, nonimmigrant workers are excluded by law from social security coverage, giving their employers, in a sense, a 6.7-percent discount on their wages. Temporary farm workers, foreign students and exchange visitors fall into this category.

A note on communications

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

The Anatomy of Price Change



Reconciling the CPI and the PCE Deflator: 4th quarter 1981

JULIE A. BUNN AND JACK E. TRIPPLETT

The September 1981 issue of the *Monthly Labor Review*¹ presented a reconciliation of the Federal Government's two major inflation measures—the Consumer Price Index (CPI), published by the Bureau of Labor Statistics, and the Implicit Price Deflator for Personal Consumption Expenditures (PCE Deflator), produced by the Bureau of Economic Analysis. By comparing alternative versions of the indexes published by the Bureau of Labor Statistics and the Bureau of Economic Analysis, the difference between the CPI and PCE measures can be decomposed into three factors: owner-occupied housing, different index weights, and “all other” factors. The technical basis for the analysis is contained in the September 1981 article.²

This second quarterly update of the reconciliation, which extends the data through the end of calendar year 1981, shows a general narrowing of the difference between the two measures.

Reconciling period-to-period changes

Table 1 shows the reconciliation of percent changes in the Consumer Price Index for All Urban Consumers (CPI-U) and “PCE: Chain-Weight” index for the most recent years and quarters. These two indexes present alternative measures of period-to-period price change.³

The difference between CPI and PCE price measures, which widened with the upsurge of inflation in 1979, seems to be diminishing as inflation winds down. At 1.4 percentage points, the 1981 difference between the annual CPI and the PCE was half its value for 1980, and lower as well than the comparable number for 1979. The quarterly figures show a generally declining trend, although there is considerable variability. The difference for the fourth quarter of 1981 (0.3 percentage points) is the smallest quarterly difference in these alternative price measures in several years.

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As demonstrated in the September article, the treatment of owner-occupied housing has historically been the largest source of PCE-CPI differences. The effect of alternative measures of owner-occupied housing can be estimated by comparing two BLS price indexes (CPI-U and CPI-X1) that are published monthly and measure housing in different ways.

In recent quarters, the “housing effect” has been smaller than it was in the first half of 1980. The negative entry for the fourth quarter of 1981 (–0.5 percentage points) occurred because the CPI-U, which follows the traditional BLS treatment of housing, advanced less than the CPI-X1 index, which approximates a “rental equivalence” measure of housing. (The BLS has announced plans to change the treatment of housing in the CPI-U index to incorporate a rental equivalence treatment, beginning in January 1983.)⁴

Weighting differences are a second source of PCE-CPI differences. The CPI-U weights are drawn from an expenditure survey taken in 1972-73; weights for the PCE: Chain-Weight index are always taken from the period just preceding the date of publication (for example, weights for the 1981-IV index come from 1981-III), and so are more nearly current than are the CPI weights.

Table 1. 'Reconciliation' of annual, 1979-81, and quarterly, 1980-81, percent changes in the CPI-U and the Personal Consumption Expenditure price measures

Difference	1979	1980	1981	1980 ^{1,2}				1981 ²			
				I	II	III	IV	I	II	III	IV
CPI-U ³	11.3	13.5	10.4	16.5	13.5	7.7	12.8	11.0	7.8	11.8	7.7
PCE: Chain-Weight ⁴	9.3	10.6	9.0	12.5	9.7	9.5	10.1	10.3	6.5	8.7	7.4
Total difference ⁵ (CPI-U minus PCE:											
Chain-Weight)	2.0	2.9	1.4	4.0	3.8	-1.8	2.7	.7	1.3	3.1	.3
Housing treatment ⁶	1.7	2.3	.9	3.6	3.4	-1.9	1.9	.4	.5	2.7	-.5
Weighting effect ⁷ . . . . .	.3	.4	.1	.7	.2	.0	.0	.6	.0	-.5	-.2
"All other" effect ⁸ . . . . .	.0	.2	.4	-.3	.2	.1	.8	-.3	.8	.9	1.0

¹ Owing to changes in seasonal adjustment factors, the quarterly figures may differ slightly from those which appeared in *Monthly Labor Review* Table 3, p. 9, September 1981 and Table 1, p. 43, January 1982.

² Seasonally adjusted annual rates.

³ Annual and quarterly changes in the CPI-U are taken from tables provided by the Office of Prices and Living Conditions, Bureau of Labor Statistics. The changes are compiled from 1967 based indexes.

⁴ Data for the “PCE: Chain-Weight” were obtained from the Bureau of Economic Analysis, U.S. Department of Commerce.

⁵ CPI-U minus “PCE: Chain-Weight” equals the sum of “housing treatment”, “weighting” and “all other” effects.

⁶ Change in CPI-U minus change in CPI-X1. See September 1981 *Monthly Labor Review*, p. 21, for fuller explanation. Source of CPI-X1 data is same as source in footnote 3.

⁷ Change in “PCE: 1972-Weight” minus change in “PCE: Chain-Weight”. See September 1981 *Monthly Labor Review*, pp. 8-9, for fuller explanation. Data source for “PCE: 1972-Weight” changes is same as for footnote 4.

⁸ Change in CPI-X1 minus change in “PCE: 1972-Weight”. See September 1981 *Monthly Labor Review*, p. 6, for fuller explanation.

Table 2. 'Reconciliation' of the CPI-U and the Personal Consumption Expenditure price measures: cumulative percent change from 1972 to the date shown

Difference	1979	1980	1981	1980 ¹				1981			
				I	II	III	IV	I	II	III	IV
CPI-U (1972=100) ²	173.6	197.0	217.4	189.1	195.2	198.9	204.9	210.3	214.3	220.4	224.6
PCE: Deflator (1972=100) ³ (Current-Weight)	166.6	178.9	193.8	172.9	177.0	180.7	184.9	188.5	191.5	195.7	199.4
Total difference ⁴ (CPI-U minus PCE Deflator)	11.6	18.1	23.6	16.2	18.2	18.2	20.0	21.8	22.8	24.7	25.2
Housing treatment ⁵	7.0	11.7	14.5	10.5	12.2	11.6	12.7	13.3	13.7	15.4	15.5
Weighting effect ⁶	3.7	5.4	7.2	4.9	5.1	5.6	5.9	7.3	7.4	7.2	7.0
"All other" effect ⁷ .....	.6	1.0	1.9	.8	.9	1.0	1.4	1.2	1.7	2.1	2.7

¹ Owing to changes in seasonal adjustment factors, quarterly figures may differ slightly from those which appeared in *Monthly Labor Review* Table 4, p. 10, September 1981 and Table 2, p. 44, January 1982.

² Annual data for the CPI-U were computed by the Office of Research and Evaluation from unadjusted monthly data provided by the Office of Prices and Living Conditions, Bureau of Labor Statistics. The quarterly data for 1980 and 1981 were computed by the Office of Research and Evaluation employing seasonally adjusted monthly data provided by the Office of Prices and Living Conditions.

³ Data for the implicit PCE Deflator, or "PCE: Current-Weight" index, were provided by the Bureau of Economic Analysis, U.S. Department of Commerce. The data incorporate revisions released in April 1981.

revisions released in April 1981.

⁴ CPI-U minus PCE Deflator equals the sum of "housing treatment", "weighting" and "all other" effects.

⁵ CPI-U minus CPI-XI. See September 1981 *Monthly Labor Review*, p. 5, for fuller explanation. Data source for the CPI-XI is the same as footnote 2.

⁶ "PCE: 1972-Weight" minus "PCE: Current-Weight". See September 1981 *Monthly Labor Review*, p. 6, for fuller explanation. Data source for the "PCE: 1972-Weight" is same as footnote 3.

⁷ CPI-XI minus "PCE: 1972-Weight". See September 1981 *Monthly Labor Review*, p. 6, for fuller explanation.

As pointed out in the September 1981 article, the effect of utilizing different weights on disparities between the measures is far smaller than has often been supposed. Since mid-1980, weighting effects have essentially been zero, although there was more impact from this source in 1979 and early 1980. Negative values for weighting effects in the two most recent quarters reflect the fact that the index with the most recent weights (the PCE: Chain-Weight) has been rising somewhat more rapidly than an index based on the same price data but using 1972 weights.⁵ It is usually expected that use of more recent weights will result in an index that rises less rapidly; as table 1 shows, this expectation is not always borne out.

The "all other" effect measures the influence of computational and compilation factors on the difference between the CPI and PCE measures (everything other than the period for which the weights were drawn, and the treatment of owner-occupied housing). The precise sources of the "all other" effect have not been quantified, but seasonal adjustment methods undoubtedly are important. PCE seasonal adjustment factors for 1981 and 1980 have not yet been re-estimated, while the CPI seasonals are revised annually; this has probably contributed to the increased magnitude of the "all other" effect in the quarterly numbers, an explanation that is consistent with the annual figure for 1981 (0.4) being so much lower than the quarterly figures.

Reconciling cumulative changes

For technical reasons, two reconciliations are necessary.⁶ The first reconciliation, covered in the previous section, addresses the question: "What are the reasons the CPI and PCE price measures show different rates of change from one period to the next?" The reconciliation of the differences between the measures in this section

answers the question: "What accounts for the cumulative divergence in the CPI and PCE since 1972?"

Table 2 reconciles the CPI-U and the Implicit Price Deflator for Personal Consumption Expenditures (PCE: Current-Weight) with 1972 as the base year. By the fourth quarter of 1981, the PCE: Current-Weight index indicated that consumption prices had almost doubled since 1972 (a 99-percent increase); by the CPI-U measure, the increase was nearly 125 percent. Of the approximately 25-percentage-point difference between the two, housing treatment accounted for three-fifths (15.5 percentage points). The table also shows that choosing current period weights instead of 1972 weights creates a difference of 7 percentage points, over a period when prices have doubled, by either alternative measure. The weighting effect has declined slightly in the most recent two quarters from its high reached early last year.

BOTH RECONCILIATIONS SUGGEST that the inflation rates recorded by CPI and PCE price measures may be converging. Quarterly and annual percentage increases in the two price measures differ less in 1981 than in the previous 2 years, and the cumulative reconciliation shows a similar picture. □

FOOTNOTES

¹ Jack E. Triplett, "Reconciling the CPI and PCE Deflator," *Monthly Labor Review*, September 1981, pp. 3-15.

² *Ibid.*

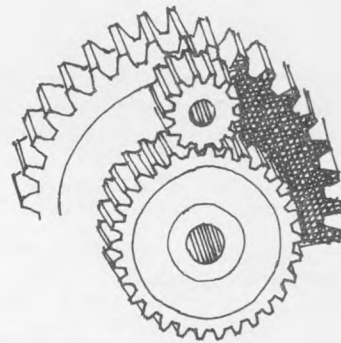
³ As discussed in Triplett, pp. 7, 13-14, the Implicit PCE Deflator, a Paasche-formula index, cannot be used for this reconciliation because Paasche-formulas lend themselves to statistical interpretation only when referring back to the base year (in this case, 1972).

⁴ See "Labor Month in Review: CPI changes," *Monthly Labor Review*, November 1981, p. 2.

⁵ See footnote 7 to table 1 and the September 1981 MLR article for information on the computation of the weighting effect.

⁶ See Triplett, pp. 7, 13-14.

Productivity Reports



Productivity declined in 1980 in most industries measured

ARTHUR S. HERMAN

Productivity, as measured by output per employee hour, declined in 1980 in more than half of the industries for which the Bureau of Labor Statistics regularly publishes data. Although a number of important industries, such as coal mining, petroleum refining, and major household appliances registered significant gains, the productivity falloff in most industries was consistent with the situation in the nonfarm business sector as a whole, which had a 0.3-percent decline in 1980.

Table 1 shows productivity trends for the industries currently measured by the Bureau and includes new measures for the transformer, machine tools (including separate measures for metal cutting and metal forming machine tools), and nonwool yarn mill industries.¹ Data for 1980 are preliminary. The table also includes, for the first time, a series for the hardwood veneer and plywood industry, and the softwood veneer and plywood industry. These measures were developed by disaggregating the existing measure for veneer and plywood. Many of the measures have been revised back to 1972, due to the introduction of more current data. The labor input series for the mining industries have been revised to include nonproduction worker hours. Therefore, the mining productivity series now refer to output per employee hour rather than output per production worker hour, as previously published.

Changes by industry

Manufacturing. The motor vehicles industry, one of the more economically significant industries covered, had a large productivity decline of 4.4 percent in 1980. Output plummeted 28.2 percent as demand was off sharply for passenger cars, trucks, truck trailers, and buses. Employee hours were reduced drastically, down 24.9 percent. Productivity also declined in 1979, dropping 1.2

percent as both output and hours fell, but less sharply than in 1980. In steel manufacturing, another important industry, productivity declined 3.7 percent in 1980, after falling 1.3 percent in 1979. Output in this industry declined significantly, down 17.0 percent, because of a decrease in demand from such key markets as motor vehicles, construction, and appliances, while hours were reduced 13.8 percent.

Among other large manufacturing industries, a major productivity decline of 13.2 percent occurred in the construction machinery industry as output dropped 19.7 percent due to poor conditions throughout the construction industry. Productivity in the gray iron foundry industry declined 6.0 percent as output dropped a steep 21.7 percent. Productivity declines associated with large output reductions occurred in the measures for motors and generators (-4.1 percent), household furniture (-2.2 percent), and sawmills (-1.9 percent). Output fell more than 10 percent in 1980 in these three industries.

However, a number of manufacturing industries experienced productivity gains in 1980. But for many, the productivity increases reflected declines in output associated with even greater reductions in hours. In the fluid milk industry, for example, productivity grew 5.7 percent as output fell 0.1 percent and hours dropped 5.5 percent. Productivity increased 4.9 percent in the household appliance industry as output declined 6.8 percent and hours fell 11.1 percent. The petroleum refining industry had a productivity gain of 4.4 percent with output down 6.4 percent and hours dropping 10.3 percent.

Mining. Productivity in coal mining increased 12.6 percent in 1980, after falling in almost every year in the past decade. Coal output grew 6.4 percent owing to increased demand as a petroleum substitute, growing exports and stockpiling in anticipation of a strike in 1981, while hours fell 5.5 percent. However, productivity declines occurred in the other mining industries covered, with copper mining (recoverable metal) dropping 7.4 percent, nonmetallic minerals down 5.8 percent, and iron mining (usable ore) declining 0.2 percent.

Transportation and utilities. Productivity changes were mixed in transportation and utility industries. A

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Table 1. Indexes of output per employee hour in selected industries 1975-80 and percent changes 1979-80 and 1975-80

[1977 = 100]

SIC code ¹	Industry	1975	1976	1977	1978	1979	1980 ²	Percent Change 1979-80	Average Annual Percent Change 1975-80
Mining									
1011	Iron mining, crude ore	112.7	113.5	100.0	116.7	125.3	126.6	1.0	3.0
1011	Iron mining, usable ore	117.8	115.9	100.0	119.1	125.5	125.3	-0.2	2.1
1021	Copper mining, crude ore	87.2	99.2	100.0	109.6	103.8	98.1	-5.5	2.4
1021	Copper mining, recoverable metal	77.2	94.7	100.0	107.6	97.8	90.6	-7.4	2.8
111,121	Coal mining	105.3	103.1	100.0	106.4	99.4	111.9	12.6	0.7
121	Bituminous coal and lignite mining	105.2	103.0	100.0	106.7	99.6	111.8	12.2	0.8
14	Nonmetallic minerals, except fuels	90.6	96.2	100.0	104.7	102.6	96.6	-5.8	1.6
142	Crushed and broken stone	91.4	93.7	100.0	108.9	108.5	104.4	-3.8	3.5
Manufacturing									
2026	Fluid milk	95.5	99.5	100.0	107.9	116.2	122.8	5.7	5.3
203	Preserved fruits and vegetables	93.7	100.1	100.0	104.4	99.3	(³)	(³)	1.6 ⁴
2033	Canned fruits and vegetables	92.2	102.3	100.0	103.7	101.4	(³)	(³)	2.1 ⁴
204	Grain mill products	87.1	91.1	100.0	100.4	101.9	(³)	(³)	4.2 ⁴
2041	Flour and other grain mill products	85.8	85.1	100.0	101.7	98.6	92.6	-6.1	2.4
2043	Cereal breakfast foods	94.8	100.0	100.0	101.7	107.6	(³)	(³)	2.7 ⁴
2044	Rice milling	90.4	88.7	100.0	92.7	92.9	(³)	(³)	1.0 ⁴
2045	Blended and prepared flour	106.2	110.9	100.0	92.5	90.1	(³)	(³)	-5.0 ⁴
2046	Wet corn milling	74.1	83.2	100.0	102.0	110.7	(³)	(³)	10.6 ⁴
2047,48	Prepared feeds for animals and fowls	85.9	90.1	100.0	100.9	102.1	(³)	(³)	4.7 ⁴
205	Bakery products	93.4	93.9	100.0	97.2	94.1	97.6	3.7	0.6
2061,62,63	Sugar	94.0	95.8	100.0	100.7	108.6	113.2	4.2	3.8
2061,62	Raw and refined cane sugar	90.8	92.5	100.0	100.0	106.4	(³)	(³)	4.0 ⁴
2063	Beet sugar	98.1	101.7	100.0	101.1	111.0	(³)	(³)	2.4 ⁴
2065	Candy and confectionary products	90.8	84.9	100.0	107.9	(³)	(³)	(³)	(³)
2082	Malt beverages	86.1	95.5	100.0	100.3	107.6	109.9	2.1	4.6
2086	Bottled and canned soft drinks	87.2	94.2	100.0	104.5	105.6	108.8	3.0	4.4
2111,21,31	All tobacco products	93.9	97.8	100.0	102.8	102.2	103.2	1.0	1.8
2111,31	Cigarettes, chewing and smoking tobacco	93.3	96.7	100.0	103.8	102.1	102.2	0.1	1.9
2121	Cigars	93.7	99.9	100.0	98.0	103.8	110.8	6.7	2.7
2251,52	Hosiery	94.3	106.4	100.0	101.8	106.5	108.0	1.4	2.0
2281	Nonwool yarn mills	101.2	93.5	100.0	104.2	103.9	106.1	2.1	1.7
2421	Sawmills and planing mills, general	98.8	103.2	100.0	101.4	104.8	102.8	-1.9	0.7
2435,36	Veneer and plywood	97.8	97.9	100.0	101.7	95.8	96.7	0.9	-0.3
2435	Hardwood veneer and plywood	92.5	89.1	100.0	100.7	101.2	98.2	-3.0	2.0
2436	Softwood veneer and plywood	100.5	102.1	100.0	102.1	93.4	96.6	3.4	-1.3
251	Household furniture	97.5	99.7	100.0	104.6	101.3	99.1	-2.2	0.5
2511,17	Wood household furniture	98.0	101.3	100.0	104.9	101.6	(³)	(³)	1.1 ⁴
2512	Upholstered household furniture	97.2	98.1	100.0	108.8	104.9	(³)	(³)	2.6 ⁴
2514	Metal household furniture	94.1	96.3	100.0	97.4	89.9	(³)	(³)	-0.8 ⁴
2515	Mattresses and bedsprings	96.9	99.2	100.0	101.5	102.7	(³)	(³)	1.4 ⁴
2611,21,31,61	Paper, paperboard and pulp mills	86.7	95.0	100.0	103.2	105.4	106.6	1.1	4.0
2643	Paper and plastic bags	99.8	100.5	100.0	99.8	97.5	(³)	(³)	-0.5 ⁴
2651	Folding paperboard boxes	98.5	102.8	100.0	102.9	101.4	103.5	2.1	0.7
2653	Corrugated and solid fiber board boxes	96.2	101.5	100.0	103.5	107.1	107.5	0.4	2.2
2823,24	Synthetic fibers	84.5	89.5	100.0	105.2	115.0	108.6	-5.6	6.1
2834	Pharmaceutical preparations	92.5	98.4	100.0	98.9	106.4	106.6	0.2	2.7
2841	Soaps and detergents	97.3	100.1	100.0	105.3	104.2	(³)	(³)	1.9 ⁴
2851	Paints and allied products	94.2	97.3	100.0	104.7	105.7	106.2	0.5	2.6
2911	Petroleum refining	88.7	93.0	100.0	101.3	98.6	102.9	4.4	2.7
301	Tires and inner tubes	91.8	99.8	100.0	108.8	109.5	(³)	(³)	4.5 ⁴
314	Footwear	101.3	102.1	100.0	102.5	100.2	102.0	1.8	(⁵)
3221	Glass containers	98.5	98.2	100.0	101.4	105.9	112.7	6.4	2.6
3241	Hydraulic cement	84.7	92.4	100.0	101.3	96.0	92.0	-4.2	1.6
325	Structural clay products	91.0	94.9	100.0	102.6	96.4	92.0	-4.6	0.4
3251,3,9	Clay construction products	89.1	94.2	100.0	102.6	92.5	90.2	-2.5	0.1
3251	Brick and structural clay	93.1	102.2	100.0	96.5	85.8	79.9	-6.9	-3.7
3253	Ceramic wall and floor tile	89.0	89.0	100.0	115.5	112.0	(³)	(³)	7.5 ⁴
3255	Clay refractories	95.5	97.1	100.0	102.9	109.1	97.2	-10.9	1.3
3271,72	Concrete products	91.9	95.0	100.0	98.6	94.5	(³)	(³)	0.9 ⁴
3273	Ready-mixed concrete	97.5	98.8	100.0	103.1	99.8	(³)	(³)	0.9 ⁴
331	Steel	93.3	99.0	100.0	108.3	106.9	102.9	-3.7	2.3
3321	Gray iron foundries	97.0	96.4	100.0	102.1	96.9	91.1	-6.0	-0.8
3324,25	Steel foundries	107.5	105.7	100.0	98.1	99.3	96.6	-2.7	-2.1
3331,32,33	Primary copper, lead, and zinc	85.3	96.0	100.0	96.5	96.2	91.9	-4.5	1.0
3331	Primary copper	83.0	95.2	100.0	99.4	98.3	88.3	-10.2	1.1
3334	Primary aluminum	96.2	101.4	100.0	99.6	99.7	97.4	-2.3	(⁵)
3351	Copper rolling and drawing	76.8	86.1	100.0	96.2	98.8	94.0	-4.9	4.0
3353,54,55	Aluminum rolling and drawing	87.5	101.7	100.0	104.6	101.7	104.5	2.8	2.7
3411	Metal cans	87.0	93.4	100.0	102.3	103.5	106.9	3.3	4.0
3441	Fabricated structural metal	97.4	98.9	100.0	100.4	102.0	100.2	-1.8	0.7
3531	Construction machinery and equipment	93.9	96.3	100.0	105.8	100.3	87.1	-13.2	-0.6

Table 1. Continued—Indexes of output per employee hour

[1977 = 100]

SIC code ¹	Industry	1975	1976	1977	1978	1979	1980 ²	Percent Change 1979-80	Average Annual Percent Change 1975-80
3541,42	Machine tools	103.0	98.4	100.0	102.5	101.9	101.7	-0.2	0.2
3541	Metal cutting machine tools	102.9	97.3	100.0	103.6	103.1	104.7	1.6	0.8
3542	Metal forming machine tools	104.0	101.7	100.0	99.9	98.4	93.2	-5.3	-1.8
3562	Ball and roller bearings	97.5	99.0	100.0	105.6	105.4	93.9	-10.9	0.2
3612	Transformers	89.3	90.1	100.0	103.5	108.5	103.3	0.7	4.7
3621	Motors and generators	93.0	95.9	100.0	98.5	97.9	93.9	-4.1	0.3
3631,2,3,9	Major household appliances	93.6	96.6	100.0	100.5	108.7	114.0	4.9	3.9
3631	Household cooking equipment	97.8	100.7	100.0	100.3	108.5	119.8	10.4	3.6
3632	Household refrigerators and freezers	94.5	94.0	100.0	98.4	112.2	115.9	3.3	4.5
3633	Household laundry equipment	93.6	99.0	100.0	102.3	108.2	113.1	4.5	3.6
3639	Household appliances, N.E.C.	88.8	93.0	100.0	104.0	104.3	101.0	-3.2	3.0
3641	Electric lamps	96.4	102.9	100.0	103.0	106.2	103.8	-2.3	1.4
3645,46,47,48	Lighting fixtures	89.2	95.1	100.0	100.5	95.0	97.1	2.2	1.2
3651	Radio and television receiving sets	90.1	100.8	100.0	113.1	118.1	111.4	-5.7	4.9
371	Motor vehicles and equipment	87.7	93.9	100.0	99.7	98.5	94.2	-4.4	1.4
Other									
401	Railroad transportation-revenue traffic	89.5	95.4	100.0	104.5	104.7	107.3	2.5	3.6
401	Railroad transportation-car miles	98.3	100.1	100.0	102.8	102.9	106.4	3.4	1.5
4111,31,414 PT	Class I bus carriers	97.0	93.8	100.0	99.7	101.5	104.8	3.3	1.8
4213 PT	Intercity trucking ⁵	89.2	100.3	100.0	99.8	98.6	94.2	-4.5	0.6
4213 PT	Intercity trucking—general freight ⁶	88.4	96.1	100.0	98.6	96.6	87.9	-9.0	-0.1
4511,4521 PT	Air transportation ⁶	87.6	95.5	100.0	109.3	113.1	106.2	-6.1	4.6
4612,13	Petroleum pipelines	95.7	95.2	100.0	101.6	101.6	90.8	-10.6	-0.1
4811	Telephone communications	85.9	93.3	100.0	105.8	111.2	118.5	6.6	6.5
491,492,493	Gas and electric utilities	95.7	98.2	100.0	98.2	97.8	95.6	-2.2	-0.1
491,493 PT	Electric utilities	92.9	95.6	100.0	96.9	95.5	94.2	-1.4	0.1
492,493 PT	Gas utilities	101.4	103.5	100.0	101.4	104.4	99.0	-5.2	-0.2
54	Retail food stores ⁷	100.7	102.0	100.0	95.4	96.6	96.8	0.2	-1.2
5511	Franchised new car dealers	95.0	98.6	100.0	98.6	94.6	98.8	4.4	0.2
5541	Gasoline service stations ⁷	85.6	94.3	100.0	102.8	104.4	100.7	-3.5	3.3
58	Eating and drinking places ⁷	101.0	101.4	100.0	97.6	96.7	94.8	-2.0	-1.4
5912	Drug and proprietary stores ⁷	94.2	97.1	100.0	102.1	104.4	111.6	6.9	3.2
7011	Hotels, motels, and tourist courts ⁷	89.7	95.7	100.0	105.0	99.6	91.9	-7.7	0.8
721	Laundry and cleaning services ⁷	96.9	97.4	100.0	100.6	94.0	87.6	-6.8	1.7

¹As defined in the 1972 *Standard Industrial Classification Manual* published by the Office of Management and Budget.

²Preliminary.

³Not available.

⁴Percent change 1975-79.

⁵Rate of change is less than 0.05 percent.

⁶Output per employee.

⁷Output per hour of all persons.

NOTE: Although the output per employee hour measures relate output to the hours

of all employees engaged in each industry, they do not measure the specific contribution of labor, capital, or any other single factor of production. Rather, they reflect the joint effects of many influences, including new technology, capital investment, the level of output, capacity utilization, energy use, and managerial skills, as well as the skills and efforts of the work force. Some of these measures use a labor input series that is based on hours paid and some use a labor input series that is based on plant hours. Because of revisions in source data and rebasing to 1977 = 100, a number of the measures published in this table differ from those previously published.

10.1-percent decline occurred in the petroleum pipeline industry as output decreased because of reduced demand for petroleum products. Productivity dropped 6.1 percent in air transportation, the first productivity decline since the measure began in 1947, as output fell. Productivity in intercity trucking fell 4.5 percent, the fourth consecutive decline, as output dropped 9.7 percent due to decreased shipments of consumer products, construction materials, and petroleum. Conversely, the two transportation industries that posted gains were bus carriers (3.3 percent) and railroads (revenue traffic, 2.5 percent). Electric and gas utilities had a productivity decline of 2.2 percent, based on a small increase in output and a larger gain in hours. Telephone communications, however, had a productivity gain of 6.6 percent, associated with a large gain in output.

Trade and services. Productivity changes also varied among trade and service industries. Productivity de-

clined in hotels and motels (-7.7 percent), laundries and dry cleaning (-6.8 percent), gasoline stations (-3.5 percent), and eating and drinking places (-2.0 percent). Output fell in all of these industries. Conversely, productivity in drugstores rose 6.9 percent as output was up. New car dealers had a productivity gain of 4.4 percent, based on a sharp drop in output and an even steeper drop in hours. Retail food stores posted a small productivity gain of 0.2 percent, as output was up 2.6 percent.

Trends, 1975-80

While all of the measured industries registered gains over the long term (generally 1947-80 or 1958-80),² a significant number of industries had declining productivity over the more recent 5-year period, 1975-80. More than three-quarters of the industries recorded lower productivity during this period than in the preceding long term period (1947-75 or 1958-75.) This

slowdown was consistent with the trends in the non-farm business sector of the economy where productivity grew 0.6 [percent from 1975-80, compared with 2.4 percent from 1947-75.

Gains. In recent years, the wet corn milling industry showed the highest rate of gain among the measured industries. Productivity grew 10.6 percent during 1975-79 (1980 data were not yet available). The productivity advance in this industry was aided by a high rate of output growth (9.2 percent) as strong demand for high fructose syrup, one of the industry's key products, continued. During this period, a number of new plants were opened and a significant amount of highly automatic manufacturing equipment came on line. The second highest rate of productivity growth was for ceramic wall and floor tile (1975-79 rate of 7.5 percent). A new technique for firing tile which became widespread in the industry, coupled with changes in materials handling, resulted in significant labor savings.

Other industries with current, high rates of growth were telephone communications (6.5 percent), synthetic fibers (6.1 percent), and fluid milk (5.3 percent). In the telephone industry, high output growth was sustained over 1975-80 (9.8 percent a year) and productivity was aided by expanded use of electronic switching equipment. In synthetic fibers, a highly capital intensive in-

dustry, output averaged 4.8 percent while hours were down 1.1 percent, resulting in the productivity gain. In the fluid milk industry, output was up at a low rate of 0.5 percent, while hours dropped at a rate of 4.5 percent. New, larger plants utilizing highly automatic computerized processing came on line during this period, while a number of smaller, less efficient milk plants were closed.

Declines. The flour industry had the largest average falloff in productivity, dropping 5.0 percent from 1975 to 1979. Output declined at an average rate of 2.2 percent while hours grew at a rate of 2.9 percent. Other industries with significant declines over 1975-80 were brick and structural clay tile (-3.7 percent), steel foundries (-2.1 percent), metal forming machine tools (-1.8 percent), and laundries (-1.7 percent). Twelve other industries recorded declining rates over the 1975-80 period, including such large industries as eating and drinking places (-1.4 percent), retail food stores (-1.2 percent), gray iron foundries (-0.8 percent), as well as gas and electric utilities and intercity trucking (both -0.1 percent).

A full report, *Productivity Measures for Selected Industries, 1954-80*, BLS Bulletin 2128, is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. □

— FOOTNOTES —

¹ For a detailed report on these industries, see the following *Monthly Labor Review* articles: John Duke and Horst Brand, "Cyclical behavior of productivity in the machine tool industry," November 1981, pp. 27-34; Phyllis Flohr Otto, "Transformer industry productivity slows," November 1981, pp. 35-39; and James D. York, "Nonwool

yarn mills experience slow gains in productivity," March 1982, pp. 30-33.

² About half of the data were collected beginning in 1947 and the remainder was collected from 1958 to present.

Technical Note



Estimation procedures for the Employment Cost Index

G. DONALD WOOD, JR.

The quarterly Employment Cost Index (ECI),¹ which includes measures of change in wages and salaries and in compensation (wages and salaries plus the employer cost of employee benefits), is estimated using the standard Laspeyres index formula. The general survey sample was specially designed to permit the construction of these standard indexes.

Indexes of wages and salaries are also available for union status and location categories. It is not possible to estimate standard Laspeyres indexes for these categories, because union status and location were not included in the basic sample design. However, information on these characteristics is collected from the sample establishments, and may be combined with data on wages and salaries to estimate quarter-to-quarter changes. The quarterly changes can then be used to derive special indexes by union status and location.

These special indexes have many of the properties of Laspeyres chain indexes. For example, each quarter the fixed-base-period-employment weight for each occupation by industry defined in the ECI sample design is apportioned between union and nonunion sectors. The current distribution of the work force in that occupation and industry, as reflected in the current sample, is the basis for the appropriation. The weights are used to compute quarterly changes in wages and salaries for the union and nonunion series. These changes are then multiplied together (chained) to estimate an index. Indexes derived in this fashion—special indexes—will be discussed in more detail after derivation of the standard indexes is described.

The ECI index of wages

The standard formula for the wage index is:

$$(1) \quad I_t = \frac{\sum_i W_{it} E_{ib}}{\sum_i W_{i0} E_{ib}} \times 100$$

W_{i0} is the wage rate for the i th type labor in the reference period 0—June 1981. (Labor of type i is defined in terms of an occupation within an industry.) W_{it} is the wage rate for the i th type labor in the current period t , and E_{ib} is employment of the i th type labor in the base period b , 1970.

In actual practice, the formula becomes:

$$(2) \quad I_t = \frac{\sum_i CW_{it}}{\sum_i CW_{i0}} \times 100$$

where:

- $CW_{i0} = \bar{W}_{i0} E_{ib}$ = The cost weight of the i th type labor at time 0;
- $CW_{it} = \bar{W}_{it} E_{ib}$ = The cost weight of the i th type labor at time t ;
- \bar{W}_{i0} = The average wage at time 0, estimated from the sample observations;
- $\bar{W}_{it} = r_{it} (W_{i(t-1)})$ = The average wage at time t ;
- r_{it} = The estimated relative change in wages between time $t-1$ and time t . It is the estimate of the ratio of the wage rate at time t to the wage rate at time $t-1$. The estimate is based on matched wages—that is, wages for specific occupations and establishments that provide data for both periods.

The compensation index

The calculation of the ECI index of compensation is similar to that described above for wages. For the reference period 0, a cost weight for wages (CW_{i0}) is calculated as described above. In addition, a cost weight for benefits (CB_{i0}) is calculated by multiplying the average cost of benefits per hour worked times employment in 1970:

$$CB_{i0} = \bar{B}_{i0} (E_{ib}) = \text{The cost weight for benefits in the reference period 0.}$$

where \bar{B}_{i0} is the average cost of benefits per hour worked for the i th type labor in period 0.

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The benefit cost weight in period $t-1$ is multiplied by the estimated change in benefit cost ($r_{i(t)}^B$) between times $t-1$ and t to get the next quarter's cost weight (CB_{it}):

$$(3) \quad CB_{it} = r_{i(t)}^B CB_{i(t-1)}$$

The compensation index at time t is formed by summing the wage and the benefit cost weights at time t , dividing by the sum of the wage and benefit cost weights for the reference period 0 , and multiplying by 100.

Calculation of component indexes

As noted, the ECI is a system of indexes. In addition to the indexes of wages and compensation for the private civilian economy, there are indexes for State and local governments, and for the private nonfarm economy. For each of the chief economic sectors, there are subindexes for both wages and compensation by industry and occupation. At this time, more industry and occupation indexes of wages than of compensation meet publication standards.

The standard subindexes of the ECI are estimated using the formulas given above. All that is necessary is to limit the summation to the groups of labor included in the component series. This is possible because a Laspeyres index can always be expressed as a weighted sum of any set of component indexes. Thus, the overall index I at time t may be expressed as:

$$(4) \quad I_t = \sum_k I_t^k (RI)_0^k$$

where its subindexes (I^k) are defined by:

$$(5) \quad I_t^k = \frac{\sum_{iek} \bar{W}_{it} E_{ib}}{\sum_{iek} \bar{W}_{i0} E_{ib}}$$

and the weights used to aggregate them to the total are called relative importances $(RI)_0^k$, defined by:

$$(6) \quad (RI)_0^k = \frac{\sum_{iek} W_{i0} E_{ib}}{\sum_k \sum_{iek} W_{i0} E_{ib}}, \text{ and } \sum_k (RI)_0^k = 1$$

Special wage indexes

The indexes by union, metropolitan area, and region use a different estimation formula. The reason for the difference deserves attention.

The national ECI measures the change in the cost of fixed labor inputs where units of labor input are defined by an occupation in an industry, for example, operatives except transport in the textile mill products industry. For the aggregate index, no distinction is made between union and nonunion labor. For instance, if weavers performing a specific job in a textile mill were selected to

represent operatives in the textile industry, the change in their wage rate between quarters would be used in calculating the quarterly relative for all series that included this type of labor. No change in the computation procedure would be made if the workers in the mill became union members. Both before and after the workers were organized, the change in the wage rate would represent operatives in the textile industry.

But for the union and nonunion series, it is desirable to take account of changes in the union status of workers. Using the example above, before the weavers are organized, they are included as nonunion textile operatives in the wage index for nonunion workers. After they are organized, they should be included in the union index for textile operatives.

Because such categorical shifts cannot be accommodated with a fixed-weight index, the union-status and other special indexes are derived in such a way that they are like chain indexes. The relative importance of the union and nonunion components of the i th type of labor (that is, an occupation within an industry) is allowed to vary over time as the sample changes. The union and other special indexes are derived by compounding successive quarter-to-quarter relatives (that is, percentage changes expressed as ratios) and multiplying by 100, rather than by comparing a current-quarter cost weight to some base-period cost weight. This procedure is followed because any base-period cost weight might, for example, reflect a different employment distribution between union and nonunion than prevails currently. These special indexes differ from the usual chain index, however, in that total employment, union plus nonunion, for each type of labor is held fixed at the 1970 level. The union relative, R^u , has the form:

$$(7) \quad R_t^u = \frac{\sum_i \bar{W}_{it}^u \frac{E_{i(t-1)}^u}{E_{i(t-1)}} E_{ib}}{\sum_i \bar{W}_{i(t-1)}^u \frac{E_{i(t-1)}^u}{E_{i(t-1)}} E_{ib}}$$

where:

- \bar{W}_{it}^u = Wage of union labor of type i in time t ;
- $E_{i(t-1)}^u$ = Employment of union labor of type i in time $t-1$;
- $E_{i(t-1)}$ = Employment of union and nonunion labor of type i in time $t-1$.

The index, I^u , is the product of the relatives times 100:

$$I_t^u = R_t^u \times R_{(t-1)}^u \dots R_1^u \times 100$$

The proportion of total employment represented by union labor at time t for the comparison between times

$t-1$ and t is based on the sample of matched quotes used in the estimation of the aggregate index. But note that the union wage in time $t-1$ is not estimated directly from the sample observations. Rather, the matched sample is used to estimate the union wage rate for the i th type of labor relative to the wage of all labor of the i th type. This estimated relative is multiplied by the estimated average wage for all types of labor used in the aggregate index, as indicated by:²

$$(8) \quad \bar{W}_{i(t-1)}^u = \bar{W}_{i(t-1)} \left(\frac{W_{i(t-1)}^u}{W_{i(t-1)}} \right)_{av}$$

The union wage rate at time t is estimated as:

$$(9) \quad \bar{W}_{it}^u = r_{it}^u \bar{W}_{i(t-1)}^u$$

where r_{it}^u is the wage relative of union labor of type i based on matched quotes between time $t-1$ and t .

Indexes before June 1981

All standard and special index values since June 1981 have been estimated using the equations described above. But before June 1981, only quarterly relatives for each series were calculated. Because index numbers were not being constructed at that time, there was no need to compare the current quarter cost weights to the reference period cost weights. Instead, the wages or compensation based on matched quotes were directly multiplied by 1970 employment.

For this reason, the indexes for periods before June 1981 have been estimated by dividing the index (I) for June 1981 by the product of previously derived quarterly change relatives (R). That is:

$$(10a) \quad I_{\text{March 1981}} = I_{\text{June 1981}} / R_{\text{June 1981}}$$

$$(10b) \quad I_{\text{December 1980}} = I_{\text{June 1981}} / (R_{\text{June 1981}})(R_{\text{March 1981}})$$

and so forth. □

— FOOTNOTES —

¹ See Beth Levin, "The Employment Cost Index: recent trends and expansion," elsewhere in this issue for additional information on the ECI program.

² In fact, the system does not explicitly compute all of the estimates described, but uses a simplified computational procedure which yields the same final estimates.

Foreign Labor Developments



Solidarity's proposals for reforming Poland's economy

HORST BRAND

Worker opposition in Eastern Europe is not a new phenomenon. Recall East Germany in 1953, Hungary in 1956, Poland in 1956 and subsequent years, and Czechoslovakia in 1968. Industrial unrest of more limited scope has occurred in Rumania and, according to Roy Medvedev,¹ in the Soviet Union. But in all of these countries, the revolts were short-lived, being quickly suppressed by the armed forces; thus, the political tendencies they might have spawned given time could not bear fruit. In Poland, by contrast, the broad-based workers' movement had the opportunity to mature to a much more advanced stage, characterized by Solidarity, an autonomous movement which superseded the established state-sponsored trade unions.

With the emergence of Solidarity, the workers left behind the more limited strike and protest actions of the early and mid-1970's which had had some favorable effects on the government's price, wage, and production policies, but made little lasting impact. Solidarity emerged from the inter-enterprise strike committee formed in August 1980 at Gdansk and Szczecin. Some of the committee's demands were unprecedented and audacious. It wanted free unions, in accordance with the 87th convention of the International Labour Organization, which had been ratified by Poland; the right to strike, and safety for strike participants and their helpers; freedom of speech, as guaranteed by the Polish constitution; restoration of jobs to employees dismissed for participating in earlier strike actions; liberation of all political prisoners; full publicity for Solidarity; the appointment of managers on the basis of competence; the abolition of privileges for the party apparatus, the police, and the internal security police; and a number of improvements in economic and social services.²

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Solidarity lent form, structure, and articulateness to worker protest. By force of circumstance, it evolved into an opposition party, breaking the monopoly of the Polish United Workers Party.³ (Solidarity explicitly recognized that party's "leading role," although this recognition came increasingly under attack from groups within the organization.) Among the tasks Solidarity faced was to formulate alternatives to the government policies and institutions that had led Poland to the brink of economic ruin. Here, another development which had gathered momentum since the mid-1970's became pertinent: some dissident Polish intellectuals, among them noted scholars and experts in economics, history, and other social sciences, either supported Solidarity or generated a climate in which ideas for reforming the Polish polity could flourish. Examples of this support included KOR (Committee for Worker Defense), established in 1976 to free workers from jail; the Experience and Future group, more inclined than KOR to reform the system "from within"; and the Flying University. Some members of these groups became key advisers to Solidarity during the crucial Gdansk negotiations in 1980.

Following is a discussion of some of Solidarity's goals and policies formulated and issued at its October 1981 convention. The discussion is based essentially on two documents which contain the basic thinking of Solidarity: *Position on Social and Economic Reform of the Country*, issued by the Network of Solidarity Organizations in Leading Factories, and *Programs of the Independent Self-Governing Trade Union Solidarity Adopted by the First National Congress of Delegations*, the Solidarity Congress' program resolution.⁴ Solidarity's proposals can be divided into those involving (1) civil liberties and the rule of law; (2) the self-managed enterprise and its relation to the economy; and (3) the improvement of current economic conditions. Only the proposals dealing with self-managed enterprises are discussed in detail in this report.

Autonomous enterprise favored

Solidarity favors the creation of several types of enterprise—"social," state, cooperative, private, and mixed. The social enterprise was to be "the basic element of the national economy [with] full independence,

autonomy of its workforce, and . . . self-financing." In contrast, state enterprises were to be created "only in exceptional cases, inspired by national interest . . . verified by Parliament." Like the social enterprise, the state enterprise was to be controlled by means of "economic instruments" and had to be self-financing.⁵

Self-financing was conceived to be a condition *sine qua non* of the self-managed enterprise. Self-financing would free enterprises from control of the government; it would be an incentive for efficiency, penalizing the inefficient enterprise. To encourage long-term investment, certain modifications to monetary policy would be necessary, for instance, low-interest loans and compulsory reserve funds. But, the principle of self-finance should be "unconditionally observed," and accordingly, the granting of bank credit should no longer be automatic.

The self-managed enterprise, as conceived by Solidarity, does not resemble in either form or structure the entrepreneurial firm in Western countries. There are fundamental differences in legal status. The self-managed enterprise would be run by its employees and their elected representatives, or an employees' council. The enterprise managers would be appointed by the employees' council, be "subservient" to it, and would be obliged to carry out the council's resolutions. Such subservience was intended not merely to ensure the democratic control of the enterprise, but also to sever the link between enterprise management, on the one hand, and the central administration and party hierarchy, on the other.

The function of an employees' council is not comparable to that of a board of directors in Western countries. The directors' authority is usually nominal and they often have interests in firms other than the one on whose board they sit. The employees' council would determine the direction of the enterprises' development and operation, labor and training policies, the division of profits, and the extent of cooperation with other enterprises and of foreign trade, for example. Profits would indeed "become the main stimulus of economic activity of an enterprise," and the amount of wages above a certain fixed floor would be determined by profits. However, profits could not be derived from monopoly practices, and enterprises would be monitored by a state agency to prevent such practices—to be specified by law—and sanctions would be imposed on violators. Solidarity did not define "profits," and it is not clear whether profits can be generated under the proposed conditions, which include the regulation of prices by the market, bolstered by competitive imports. The advocacy of the market as price regulator (with a few exceptions) was not a matter of ideology. It emerged from experience with Poland's system of rigid prices, which had stymied increases in supplies and, more important, had contributed to fostering bureaucracy.

Decentralization—a major concern

If there is one notion that pervades Solidarity's thinking as reflected in its program, it is decentralization: "The basic principle underlying economic reform is to provide safeguards for independence, self-management, and self-financing of enterprises, which implies the abolishment of the directive-allocative system and the structures associated with it."⁶ The dismantling of the "directive-allocative system" would mean the demise of a vast state bureaucracy, as well as of the patronage base of the ruling party. There would still be a Council of Ministers, whose responsibilities would include formulating economic policies, and to which a staff of economic planners would report. But the state would no longer have ultimate authority; that authority would be transferred to the Sejm—the Polish parliament—which would have its own economic planning staff to avoid a "central planning monopoly." Furthermore, the planning authority of the Council of Ministers would not be inherent but delegated by the Sejm, for according to Solidarity's thinking, "socialized planning should be operated on the principle that the final decision belongs to representative, not executive bodies."⁷

The importance of central planning would be drastically reduced under Solidarity's proposals. Its scope would be restricted to the "indispensable, leaving the remainder to the self-controlling mechanisms" because experience has taught "that planning covering all spheres of social and economic life becomes the way and method for developing a totalitarian system that attempts to predict and control everything."⁸ The central plan "is merely a plan for the government"⁹ and it must not impose decisions on enterprises and regional entities, whose planning is to be "autonomous." Underlying the conception of autonomous planning is the assumption that the enterprise, being subject to various market and social forces, will always plan so as to improve its operations. Yet, such efforts must surely give rise to imbalances, and it is the task of central planning to deal with these imbalances, that is, "to determine basic dynamics and structural proportions," including the allocation of new capital investment.

Solidarity viewed the central administrative system that dominates the Polish economy as shackling the natural energies and competence of the Polish work force. It declared that the "essential matter" is to eliminate "the dictative and distributional mechanism of management, consisting, on the one hand, in establishing tasks and, on the other, establishing means or limits of expenditures . . . [This] mechanism is responsible for decrease in economic effectiveness, lack of balance, negative social effects (falsification of information, bureaucratization, disappearance of self-management)."¹⁰

But what would replace the central administrative

system? Some of Solidarity's pertinent proposals include: direct, legally protected contract relations between suppliers and customers to replace directed distribution; self-financing of enterprises, regulated by taxation and credit, to supersede centrally controlled funding (the supervision of enterprise finances would be confined to ensuring conformance to law); and job assignments, plant layout, establishment of work norms and wage rates, and similar matters set by the self-managed enterprise, not the Ministry of Labor and Wages which no longer would oversee the enterprise staff (this task would fall to specialized institutions, themselves self-managed, which would render purely advisory and training services).

How, in Solidarity's conception, would central planning be implemented? Recall that Solidarity demanded that all administrative bodies charged with resource allocation be eliminated; that economic enterprises plan autonomously; that no administrative links exist between the planning authorities (at the top there would be at least two of them) and enterprises; and that the state budget be the only financial plan of the state.

The key to the answer is Solidarity's proposal that "instruments incoherent with the logic of economic market relations should be replaced by instruments operating via income and demand basis."¹¹ One infers from this viewpoint that the instruments consist largely of taxation and credit. Taxation is a policy instrument, in addition to financing the state budget, ". . . [The] taxes included in the liabilities of an enterprise would regulate the total financial balance in the economy, and also regulate the amount and distribution of income into production and consumption funds."¹² Taxes on enterprise income, furthermore, would be graduated to regulate increases in profits. Taxes on the enterprise's wage expenditures would be assessed so as to eliminate excessive differences in personal incomes between groups of employees.

Credit policy would function as it is designed to function in Western countries, that is, to protect the purchasing power of money and help stabilize the economy. The question of credit policy is much more complex than Solidarity's proposals suggest. Controls over foreign capital investments, for example, are not mentioned in its discussion of credit policy. Also the problem of rampant inflation in the current administered-price system is not satisfactorily discussed. Institutional reforms evidently take precedence over current policy problems. The banking system would be autonomous (although accountable to parliament, as it is not, or to only a tenuous degree, in the United States or in Great Britain). The banking system would cease to be accountable to the Ministry of Finance and, thus, could no longer be used to control enterprise funds. Enterprises would be free to avail themselves of credit, sub-

ject only to criteria of solvency and interest rates.

Abolishment of privileges

Decentralization and the self-managed enterprise directed by a workers' council is one of the axes of Solidarity's program. The abolition of privilege and social inequality is the other. The term "axes" is used deliberately here, for it refers to a coordinate system in which efficiency and equality are not tradeoffs, but are indispensable to each other. That is the sense of Solidarity's program.

The extent of privilege and inequality in Poland has been summarized in the Experience and Future group's *Report on the State of the Republic*:¹³

The seventies were a decade when incomes rose rapidly, albeit most rapidly in the highest income bracket, the end result being a widening of the income differential to a ratio of 1 : 20 Part of society continues to live with lower than the social minimum income, while another segment, consisting of the privileged, has incomes several or even dozens of times the average There exists in Poland a very large group of people who live in poverty, quite often near the subsistence level.

The mere fact of belonging to the Polish United Workers' Party does not automatically yield benefits. Only members of the active political core of the Party, its allied political groupings, and the administrative apparatus enjoy a privileged position in society. Their privileges extend to almost all spheres of life: access to status positions, real incomes, easier shopping, health, education, and foreign travel During the 1970's, these privileges were extended to relatively large groups in society; the decade also witnessed the inheritance of privilege. These groups, which do not share the concerns of the majority, are more interested in supplementing existing privileges and acquiring new ones than they are in improving any aspect of public life."

This situation lay at the root of the rise of Solidarity as a social movement; its program manifests the urge to deal with it.

The abolition of privilege is implicit in the proposed economic reforms. Employees' councils could readily control the pay and other compensation of appointed managers. They could institute personnel policies based on competence and experience rather than party membership. The accountability of government executives to the Sejm could serve to control their emoluments. And the proposed abandonment of the system of allocation and directed distribution would likewise eliminate many jobs to which privileges attach. The abolition of privilege is inseparable from the creation of a more produc-

tive economy. "The union calls for reform. Its purpose is to abolish the privileges of the bureaucracy and to rule out the possibility of their restoration. The reform must bring about the general liberation of industriousness and enterprise."¹⁴

Cost to workers not defined

The reform implies "public costs," but does not define what these costs would include. There is a possibility that jobs and income would be lost and inefficient enterprises would close. No central authority would be established to cope with these problems. The idea of the state as a service state is not considered; it is left implicit at best and usually ignored. For example, Solidarity's program declares that "the Union will resist the growing differences among enterprises and regions." Appropriate tax measures can help do this, but it has been the experience in Western countries that central authority must actively intervene (for example, federally sponsored area redevelopment or some kind of urban aid), however ineffectual such intervention may be. Solidarity would assign this task mainly to territorial bodies, and it would be implemented chiefly by taking over the social welfare activities currently operated by enterprises. A national social fund would shift aid to needy regions. It is not clear (but appears doubtful) whether

the central planning or banking authorities would have sufficient power to influence the flow of investment funds so as to compensate regional imbalances. The ambivalence on this and related points reflect Solidarity's profound distrust of the state as it has experienced it.

Such distrust is apparent in the area of employment as well. Solidarity advocated "the universal right to work," and opposed unemployment.¹⁵ It opposed staff reduction unless "there are social guarantees [such as allowances and retraining,] for people who are temporarily jobless." It did not, however, explicitly obligate the state to ensure full employment, although it foresaw "public costs" for the reforms it demanded. Other than to propose that regional boards form special employment commissions, Solidarity did not assign specific job-creating responsibilities to the state. It may be that it feared the state would create "unproductive" jobs.

THE SUPPRESSION OF SOLIDARITY does not impair the significance of its program. On the contrary, the program articulated the threat Solidarity ultimately posed to the "New Class"¹⁶ and to its monopolistic control over social property. The program corresponded to profound social needs which, of course, will persist and which, if postwar history is any guide, will reassert itself in political action. □

FOOTNOTES

¹ See Roy A. Medvedev, *On Socialist Democracy* (New York, Alfred A. Knopf, 1975).

² The list of Solidarity's demands is reproduced in Jadwiga Staniszkis, "The Evolution of Forms of Working Class Protest in Poland: Sociological Reflections on the Gdansk-Szczecin Case, August 1980," *Soviet Studies*, April 1981, pp. 222-23.

³ The Polish United Workers Party represents an amalgamation, compelled in the late-1940's, of the communist Polish Workers Party and the Polish Socialist Party. For a brief survey of the history of this amalgamation, see, Jaime Reynolds, "Communists, Socialists and Workers: Poland, 1944-48," *Soviet Studies*, October 1978, pp. 516-30.

⁴ The writer uses the English translations of these documents. The translation for the *Program* is from the *Daily Report*, Eastern Europe, Nov. 4, 1981, of the U.S. Foreign Broadcast Information Service. The translator of the *Position* paper is unknown.

⁵ Network of Solidarity Organizations in Leading Factories, *Position*

on *Social and Economic Reform of the Country*, p. 7 ff.

⁶ *Position* . . . , p. 2.

⁷ *Ibid.*, p. 4.

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ *Ibid.*, p. 5.

¹¹ *Ibid.*

¹² *Ibid.*, p. 11.

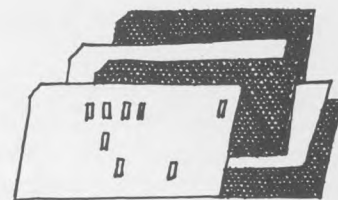
¹³ The Experience and Future Group, *Poland Today: The State of the Republic* (Armonk, N.Y., M.E. Sharpe, 1981), pp. 55 and 65.

¹⁴ *Solidarity Congress Program*, p. G-33.

¹⁵ *Program*, p. G-38.

¹⁶ The term originated with Milovan Djilas, the Yugoslav dissident who wrote a prophetic book titled, *The New Class* (New York, Praeger Publishers, 1957).

Research Summaries



Workers on long schedules, single and multiple jobholders

DANIEL E. TAYLOR AND EDWARD S. SEKSCENSKI

Although the "standard workweek" in the United States has been 40 hours for several decades, about 1 in every 4 workers labored 41 hours or more per week in May 1980. Workers on long schedules holding a single job totaled 21.3 million and those with two jobs or more, 3.2 million.

This report is concerned with that segment of the work force that works more than 40 hours per week, whether at one job or more. Data on multiple jobholders who worked less than 41 hours are also examined. The analysis consolidates data that previously appeared in two separate Bureau of Labor Statistics' reports. One report focused on extended workweeks of single jobs and the other on multiple jobholding. The information is from the May supplement to the Current Population Survey (CPS).¹

The 40-hour workweek is widely accepted as the standard in labor law and collective bargaining agreements. In 1980, more than 56 million wage and salary workers, three-fifths of the total, were covered by provisions of the Fair Labor Standards Act (FLSA) that required premium wages for work in excess of 40 hours a week. Other laws covering workers in the Federal Government or in firms having Federal contracts contain premium pay provisions to discourage work in excess of 40 hours a week.² Forty hours is also the usual cutoff in major collective bargaining agreements that provide premium pay after a minimum number of weekly hours.³

A third of all employed men and more than 1 in 7 women in the work force exceeded the standard workweek in May 1980. (See table 1.) Full-time workers put in an average of 43.1 hours a week. One-third of both

single and multiple jobholders who exceeded the 40-hour standard worked from 49 to 59 hours. However, a far higher proportion of single jobholders worked 41 to 48 hours than worked 60 hours or more, while the reverse was true for multiple jobholders, as shown in the following tabulation (numbers in thousands):

	Number at work	Percent at work—		
		41 hours or more	49 to 59 hours	60 hours or more
Single jobholders .	21,300	40	33	26
Men	16,600	37	34	29
Women	4,800	53	29	18
Multiple jobholders	3,200	27	34	39
Men	2,400	23	33	44
Women	800	37	36	27

For many workers, longer workweeks, whether on overtime or on second jobs, represent a tradeoff between income and leisure. It is not always the workers' choice, however, as evidenced by collective bargaining agreements that include provisions on the right to refuse overtime alongside provisions on the right to equal opportunity for overtime. Reasons for multiple jobholding include a variety of motivations in addition to increasing income such as gaining work experience, enjoyment of work, and helping a friend.⁴

Firms use overtime to overcome "disequilibrium conditions," such as a sudden increase in product demand, higher than usual worker absences, or other unanticipated events. Where premium wages cost less than recruiting, hiring, training, and fringe benefits for additional workers, overtime may be regularly scheduled.⁵ A firm's demand for moonlighters, in contrast, usually represents a demand for part-time workers. Part-time employees are often relatively low-cost labor. Their wage rates tend to be below those of full-time workers and their fringe benefits fewer.

Single jobholders

About 16.6 million wage and salary workers were on extended schedules on their sole or primary job in May 1980; two-fifths of them received premium pay. Work-

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Table 1. Employed persons with single and multiple jobs working 41 hours or more, by sex, age, and marital status, May 1980

[Numbers in thousands]

Characteristics	Total employed	Worked 41 hours or more					
		Total		Single jobholders		Multiple jobholders	
		Number of workers	Percent of total employed	Number of workers	Percent of total employed	Number of workers	Percent of total employed
Age							
Total, both sexes, 16 and over	96,809	24,530	25.3	21,346	22.0	3,184	3.3
Total, men	55,782	18,935	33.9	16,570	29.7	2,365	4.2
16 to 19 years	3,929	471	12.0	419	10.7	52	1.3
20 to 24 years	7,236	2,035	28.1	1,785	24.7	250	3.5
25 to 34 years	15,129	5,621	37.2	4,911	32.5	710	4.7
35 to 44 years	11,075	4,622	41.7	3,974	35.9	648	5.9
45 to 54 years	9,606	3,524	36.7	3,073	32.0	451	4.7
55 to 64 years	6,992	2,319	33.2	2,083	29.8	236	3.4
65 years and over	1,815	343	18.9	325	17.9	18	1.0
Total, women	41,027	5,595	13.6	4,776	11.6	819	2.0
16 to 19 years	3,405	160	4.7	125	3.7	35	1.0
20 to 24 years	6,273	827	13.2	686	10.9	141	2.2
25 to 34 years	10,930	1,665	15.2	1,383	12.7	281	2.6
35 to 44 years	8,243	1,276	15.5	1,098	13.3	178	2.2
45 to 54 years	6,614	985	14.9	853	12.9	132	2.0
55 to 64 years	4,424	579	13.1	530	12.0	49	1.1
65 years and over	1,139	103	9.0	101	8.9	2	.2
Marital status							
Men:							
Never married	13,031	2,882	22.1	2,529	19.4	353	2.7
Married, spouse present	38,080	14,508	38.1	12,664	33.3	1,844	4.8
Separated	1,308	429	32.8	384	29.4	45	3.4
Widowed or divorced	3,363	1,116	33.2	993	29.5	123	3.7
Women:							
Never married	10,092	1,232	12.2	1,023	10.1	209	2.1
Married, spouse present	23,041	2,955	12.8	2,601	11.3	354	1.5
Separated	1,546	293	19.0	233	15.1	60	3.9
Widowed or divorced	6,348	1,114	17.5	919	14.5	195	3.1

weeks of 41 hours or more were the usual routine for many workers—two-thirds of the workers on long hours in May 1980. Such workers are less likely to receive premium pay than those who worked more than 40 hours in the survey week but usually do not. This is probably because the latter group works more often on jobs that are not covered by the Fair Labor Standards Act or by collective bargaining provisions on overtime pay.

Between May 1973 and May 1980, the proportion of full-time wage and salary workers who reported long workweeks on a single job turned down slightly (table 2). Amendments to the Fair Labor Standards Act during the 1970's, which brought additional workers under its overtime provisions, primarily in the service and retail trade industries, played an important role in the trend.⁶

Extended workweeks and premium pay are sensitive to changes in economic conditions. During the recessions of 1974-75 and 1980, both the proportion of workers on long schedules and the prevalence of premium pay for those who exceeded the standard workweek showed significant declines. Manufacturing plays an important role in such cyclical patterns. For example, in May 1980, manufacturing industries accounted for

about 40 percent of the decline in the number of workers on extended workweeks although they employed 22 percent of all workers.

Sex and age. Men are far more likely than women to put in long workweeks. In May 1980, men made up 77 percent of the employees who exceeded 40 hours on a single job and accounted for 62 percent of all full-time employees. Further underscoring the differences, the majority of men reported working more than 49 hours, while the majority of women worked 41 to 48 hours.

Married men are particularly prone to work extended weeks. In May 1980, 30 percent of married men but only 21 percent of single men exceeded the standard. Marital status had the reverse effect on women—those who were separated, divorced, or widowed were most likely to exceed the standard (table 3). Race had the same relationship to extended workweeks for men and women. White men and women were more likely than blacks to work 41 hours or more on a single job.

Overall, a higher proportion of women than men received a premium rate of pay for hours in excess of 40 per week (43 versus 40 percent). This relationship was reversed for blacks, with men far more likely to receive premium pay for extended workweeks.

Workers, aged 25 to 44 years, were slightly over-represented among employees who exceeded the standard workweek on a single job in May 1980. Teenagers, as might be expected, had relatively small proportions on long workweeks. In each of the four age groups that span the working-age population, men were two-and-a-half times as likely as women to work extended hours.

Union status. Workers covered by union contracts are less apt to work long schedules and more likely to receive premium pay for weeks in excess of the standard. In May 1980, 16 percent of the union workers and 26 percent of nonunion workers had such schedules. Among workers on long workweeks, 68 percent of those covered by union contracts received premium pay, compared to 33 percent of other workers. These differences are explained, in part, by organized labor's ability to gain overtime premium provisions in collective bargaining agreements and the greater likelihood that union members will be covered by the Fair Labor Standards Act. As a result, employers generally incur higher costs for employing union members beyond the standard workweek.

Occupation and industry. Professional and technical workers, managers and administrators, and craftworkers accounted for over 9 million of the employees who exceeded the standard workweek in May 1980, 55 percent of the total. Of these three groups, however, only managers were heavily overrepresented. Employees in this group made up 21 percent of all employees who exceeded the standard workweek, but only 12 percent of all full-time employees.

Other occupations that were overrepresented on extended workweeks included farmers, transport equipment operatives, and salesworkers. In contrast, clerical and service workers and factory operatives were under-represented (table 4).

Table 2. Full-time wage and salary workers who worked 41 hours or more on a single job and those who received premium pay, May 1973 to May 1980

[Numbers in thousands]

Year	All full-time wage and salary workers	Worked 41 hours or more		Received premium pay	
		Number	Percent of full-time workers	Number	Percent of those who worked 41 hours or more
1973 ..	62,202	18,105	29.1	7,697	42.5
1974 ..	63,714	17,564	27.6	7,302	41.6
1975 ..	61,765	15,450	25.0	5,597	36.2
1976 ..	64,546	16,679	25.8	6,621	39.7
1977 ..	66,441	18,174	27.4	7,697	42.4
1978 ..	69,428	18,977	27.3	8,138	42.9
1979 ¹ ..	71,677	18,765	26.2	7,999	42.6
1980 ¹ ..	71,728	16,600	23.1	6,708	40.4

¹ Data are not strictly comparable to those of earlier years.

Table 3. Full-time wage and salary workers who worked 41 hours or more on a single job and those who received premium pay, by sex, age, race, and marital status, May 1980

[Numbers in thousands]

Characteristic	Worked 41 hours or more		Received premium pay	
	Number	Percent of full-time workers	Number	Percent who worked 41 hours or more
Men	12,746	28.8	5,069	39.8
Age:				
16 to 19 years	362	23.2	210	58.0
20 to 24	1,558	26.4	912	58.5
25 to 54	9,243	30.2	3,397	36.8
55 and over	1,582	25.5	549	34.7
Race:				
White	11,962	30.2	4,623	38.6
Black and other	783	16.8	446	57.0
Marital status:				
Never married	2,075	23.7	998	48.1
Married, spouse present	9,600	30.3	3,630	37.8
Other	1,071	27.8	441	41.2
Women	3,854	14.1	1,639	42.5
Age:				
16 to 19 years	109	9.2	53	48.6
20 to 24	637	13.3	353	55.4
25 to 54	2,673	14.7	1,062	39.7
55 and over	435	13.2	172	39.5
Race:				
White	3,477	14.8	1,451	41.7
Black and other	378	9.5	188	49.7
Marital status:				
Never married	924	14.1	393	42.5
Married, spouse present	1,967	13.3	809	41.1
Other	963	16.0	437	45.4

The inverse relationship that generally exists between the prevalence of extended hours and premium pay may be observed among occupations. To illustrate, nearly half of all full-time farmworkers had extended workweeks, but only one-tenth of these received premium pay. However, 18 percent of factory operatives reported working more than 40 hours, with 84 percent of them receiving premium pay.

Similar proportions of employees were on long workweeks in the goods-producing and service-producing sectors in May 1980—about 23 percent (table 5). Within the goods-producing sector, agriculture had the highest proportion (46 percent), followed by mining (38 percent). Within the service-producing sector, the proportion of full-time workers on extended schedules ranged from 31 percent in trade to 10 percent in State public administration.

Nearly twice as many workers in the goods-producing sector as in the service-producing sector received a premium rate of pay for work in excess of the standard in May 1980 (56 versus 31 percent). Again, coverage by the Fair Labor Standards Act and collective bargaining agreements is an important factor in this difference. In September 1980, FLSA provisions covered 81 percent of the employees in the goods-producing sector compared with 51 percent in the service-producing sector. In terms of union coverage, 34 percent of the full-time workers in the goods-producing sector, and 26 percent

Table 4. Full-time wage and salary workers who worked 41 hours or more a week on a single job and those who received premium pay, by occupational group, May 1980

[Numbers in thousands]

Occupation	1980		
	Worked 41 hours or more		
	Number	Percent of full-time workers	Percent who received premium pay
All occupations	16,600	23.1	40.4
Professional, technical and kindred workers	3,018	24.0	21.4
Managers and administrators, except farm	3,513	41.4	12.7
Salesworkers	1,106	31.6	13.5
Clerical and kindred workers	1,620	11.8	58.5
Craft and kindred workers	2,655	25.1	65.8
Operatives, except transport	1,646	18.0	84.4
Transport equipment operatives	938	33.0	52.9
Laborers, except farm	528	17.3	69.3
Service workers	1,172	16.8	40.7
Farm workers ¹	404	47.8	10.9

¹ Includes farmers and farm managers.

NOTE: Because of rounding, sums of individual items may not equal totals.

in the service-producing sector were under collective bargaining agreements.

Multiple jobholders

In all, about 4.8 million persons, including both wage and salary workers and the self-employed, worked two jobs or more in May 1980. Their percentage distribution by hours on their primary job was similar to that of other jobholders, as shown below:

	Single jobholders	Multiple jobholders	
		Primary job	All jobs
Total	100	100	100
1-34 hours	25	30	15
35-40 hours	51	48	9
41 hours or more	24	22	76

Median weekly hours 40 40 51

As the tabulation shows, when hours on all jobs are cumulated, more than three-quarters of all dual jobholders worked beyond the standard workweek in May 1980. This represents 4 of every 5 men, and more than 2 of every 5 women, who held more than one job.

For all dual jobholders, combined median hours worked were slightly lower in 1980 than in 1979. The decrease resulted primarily from a drop of 2 hours (from 54 to 52) in the average workweeks of dual jobholding men. In addition, women—whose workweeks generally are shorter than those of men—increased their share of total dual jobholding from 30 to 33 percent, continuing a trend of at least a decade (table 6).

While total hours by dual jobholding women have been rising for several years, half of all women working two jobs continue to hold two part-time jobs. In contrast, more than three-fourths of the men who hold two jobs work one part-time and one full-time job. Another 6 percent of the men work two full-time jobs.

Table 5. Full-time wage and salary workers who worked 41 hours or more on a single job and those who received premium pay, by industry, May 1973 to 1980

Industry group	Worked 41 hours or more								Received premium pay							
	1973	1974	1975	1976	1977	1978	1979 ¹	1980 ¹	1973	1974	1975	1976	1977	1978	1979 ¹	1980 ¹
All industries	29.1	27.6	25.0	25.8	27.4	27.3	26.5	23.1	42.5	41.6	36.2	39.7	42.4	42.9	42.6	40.4
Goods producing	30.0	27.7	23.4	26.6	28.6	28.0	27.5	23.5	63.9	60.5	53.7	60.4	62.0	61.1	61.4	56.2
Agriculture	54.6	54.7	55.9	56.8	53.1	47.4	53.2	46.4	7.9	10.4	11.6	13.4	10.9	14.0	12.2	13.9
Mining	38.4	41.7	36.6	34.1	34.5	40.9	34.8	37.5	65.8	64.8	57.5	57.4	64.5	65.6	65.0	63.0
Construction	23.0	21.8	20.9	21.4	23.9	22.3	21.4	20.6	56.6	53.1	52.2	52.6	55.9	55.1	54.5	51.0
Manufacturing	30.1	27.3	21.5	25.7	28.0	27.7	27.1	22.3	69.9	66.7	59.9	67.3	68.4	66.7	67.9	61.9
Durable goods	31.3	28.7	20.6	25.3	28.7	28.6	28.2	22.5	73.7	70.3	62.6	69.5	70.4	70.0	70.9	64.2
Nondurable goods	28.3	25.1	22.8	26.4	27.1	26.2	25.5	21.8	63.4	60.4	56.1	64.1	65.2	60.9	62.5	58.3
Service producing	28.5	27.4	26.0	25.4	26.6	26.9	25.8	22.9	27.3	28.9	26.9	26.6	29.6	31.3	30.4	30.9
Transportation and public utilities	27.1	26.2	23.3	24.1	26.2	28.7	29.1	23.6	53.6	53.2	48.4	44.1	51.1	49.8	49.7	52.5
Wholesale and retail trade	39.3	37.1	35.9	35.7	36.6	35.8	34.6	31.4	27.5	30.0	28.3	28.5	31.0	32.0	32.0	31.3
Finance, insurance, and real estate	21.7	20.4	21.6	20.5	22.2	21.8	20.9	18.2	16.2	21.2	19.8	18.4	19.3	21.3	20.4	20.2
Miscellaneous services	26.2	25.9	24.0	22.7	23.7	24.3	22.9	20.5	18.8	19.9	18.8	19.0	22.0	24.0	21.6	23.4
Professional ²	23.4	23.5	22.0	20.6	21.6	22.5	21.0	19.1	15.3	16.4	16.5	16.4	18.5	20.4	18.2	20.7
Other ³	34.4	33.1	30.6	29.2	30.6	29.9	28.9	25.1	25.8	27.7	24.4	24.6	29.8	32.0	29.2	30.0
Public administration	17.1	17.0	15.5	15.5	16.6	16.7	15.7	15.5	36.9	34.8	35.9	37.5	36.2	43.4	40.7	40.7
Federal	15.0	13.5	11.4	13.4	14.8	15.2	14.6	15.2	58.1	57.3	53.1	58.8	53.0	58.7	52.3	51.7
Postal	20.4	12.9	9.0	16.7	18.1	21.3	18.1	20.9	68.2	59.1	(⁴)	76.4	78.3	80.8	78.4	73.9
Other Federal	12.1	13.8	12.4	11.9	13.4	12.6	13.1	13.0	49.1	56.6	46.6	48.0	38.4	43.3	37.7	38.2
State	15.8	14.7	14.3	11.4	11.1	12.1	9.7	10.3	24.0	16.5	11.2	17.9	18.9	31.0	41.5	30.1
Local	21.4	23.9	21.7	20.3	21.6	21.1	20.3	18.5	18.1	19.5	30.3	23.2	25.5	32.7	29.8	31.7

¹ Data are not strictly comparable to those of earlier years.

² Includes health, education, and welfare services.

³ Includes forestry and fisheries, business and repair services, entertainment, personal services, and private household workers.

⁴ Percent not shown where base is less than 75,000.

Table 6. Multiple jobholders and multiple jobholding rates, May 1970 to May 1980

[Numbers in thousands]

Year	Total employed	All multiple jobholders	At least one job in agriculture	Two jobs in nonagricultural industries			Multiple jobholding rate ¹				
				Total	Two wage and salary jobs	Wage and salary and self employed	Both sexes	Men	Women	White	Black ²
1970	78,358	4,048	943	3,105	2,356	749	5.2	7.0	2.2	5.3	4.4
1971	78,708	4,035	851	3,184	2,288	896	5.1	6.7	2.6	5.3	3.8
1972	81,224	3,770	831	2,939	2,066	873	4.6	6.0	2.4	4.8	3.7
1973	83,758	4,262	987	3,275	2,410	865	5.1	6.6	2.7	5.1	4.7
1974	85,786	3,889	848	3,041	2,169	872	4.5	5.8	2.6	4.6	3.8
1975	84,146	3,918	890	3,028	2,131	897	4.7	5.8	2.9	4.8	3.7
1976	87,278	3,948	819	3,129	2,191	938	4.5	5.8	2.6	4.7	2.8
1977	90,482	4,558	922	3,637	2,515	1,122	5.0	6.2	3.4	5.3	2.6
1978	93,904	4,493	905	3,587	2,513	1,074	4.8	5.8	3.3	5.0	3.1
1979	96,327	4,724	871	3,852	2,650	1,203	4.9	5.9	3.5	5.1	3.0
1980	96,809	4,759	835	3,923	2,674	1,235	4.9	5.8	3.8	5.1	3.2

¹ Multiple jobholders as a percent of all employed persons.

² Starting with 1977, data are for black workers only. Data for prior years are for persons of black and other races except white, about 90 percent of whom are black.

Married men continued to be the most likely workers to extend their workweeks on second jobs (table 7), although their dual jobholding rates declined from 7.8 to 6.2 percent between 1970 and 1980. In contrast, the rates for married women rose from 1.8 to 3.4 percent over the same period. Dual jobholding rates also increased for women who were divorced, separated, or widowed, from 3.0 to 4.6 percent.

Occupations of dual jobholders. Wage and salary workers whose primary jobs were in professional or technical occupations were most likely to hold more than one job. Workers in these occupations tend to have both highly marketable skills and relatively flexible work schedules. Nearly 1 in 12 professional or technical workers held a second job in May 1980. For half of them, the second job was in the same occupation as their first job.

Teachers below the college level were particularly likely to hold a second job. About 11 percent of all teachers, and nearly 1 in 5 men in this profession, were moonlighters. Workers in the protective services (police, guards, and firefighters) and farmworkers also had higher than average rates of dual jobholding in 1980 (9.6 and 6.4 percent).

Factory operatives and clerical workers were the least likely to hold second jobs. For factory operatives, the greater availability of premium pay for extended workweeks undoubtedly is a factor in their lower incidence of multiple jobholding. In the case of clerical workers, the relatively high proportion of women in the occupation tends to lower the proportion of those holding two jobs. The dual jobholding rate for clerical workers was 3.8 percent, the same as for all women.

Self-employment and multiple jobholding. Two-fifths of all dual jobholders were self-employed on one of their

jobs.⁷ About 7 percent held primary self-employed positions; 34 percent were self-employed, on a second job.

The proportion of dual jobholders who were self-employed on a second job in agriculture was much higher than that in the nonagricultural sector (table 8). One half of all dual jobholders whose primary jobs were in agriculture were self-employed compared to 1 in 20 whose self-employment was in a nonagricultural industry.

Median hours worked at a self-employed second job were 13 per week in 1980, the same as for wage and salary second jobs. The average of those self-employed in agricultural second jobs, however, was 16 hours per week, compared to 11 hours per week for those in nonagricultural self-employed jobs. About one dual jobholder in eight who was self-employed on a second job in agriculture worked full time on both jobs. This compares to only 1 in 20 second jobholders in the nonagricultural sector who held two full-time jobs.

Reasons for working a second job. About 2 of every 5 persons working two jobs reported they did so to meet regular expenses or pay off debts. Another fifth said they wanted to save for the future or buy something special with their extra earnings. There is evidence that some multiple jobholders work a second job in preparation for a career change. More than 8 percent of the men and 6 percent of the women reported working two jobs in order to gain the necessary experience to meet the skill requirements of the second job. Another 17 percent stated that enjoyment of their second job was the main reason for dual jobholding.

Black workers, especially women, were more likely than white workers to report economic reasons as their prime motivation for working more than one job. Almost one-half of the black men and three-fifths of black women reported meeting regular expenses or paying off

Table 7. Multiple jobholders by sex, age, marital status, race, and Hispanic origin, May 1980

[Numbers in thousands]

Characteristic	Both sexes			Men			Women		
	Total employed	Multiple jobholders		Total employed	Multiple jobholders		Total employed	Multiple jobholders	
		Number	Percent		Number	Percent		Number	Percent
Age									
Total, 16 years and over	96,809	4,759	4.9	55,782	3,210	5.8	41,027	1,549	3.8
16 and 17 years	2,900	92	3.2	1,609	53	3.3	1,291	39	3.0
18 and 19 years	4,434	169	3.8	2,321	95	4.1	2,113	73	3.5
20 to 24 years	13,509	640	4.7	7,236	382	5.3	6,273	258	4.1
25 to 34 years	26,058	1,450	5.6	15,129	943	6.2	10,930	507	4.6
35 to 44 years	19,318	1,132	5.9	11,075	813	7.3	8,243	320	3.9
45 to 54 years	16,220	797	4.9	9,606	564	5.9	6,614	233	3.5
55 to 64 years	11,417	414	3.6	6,992	307	4.4	4,424	107	2.4
65 years and over	2,954	65	2.2	1,815	52	2.9	1,139	13	1.1
Marital status									
Single	23,123	1,015	4.4	13,031	616	4.7	10,092	398	3.9
Married, spouse present	61,121	3,142	5.1	38,080	2,356	6.2	23,041	786	3.4
Other marital status	12,565	602	4.8	4,671	237	5.1	7,894	364	4.6
Race and Hispanic origin									
White	85,955	4,401	5.1	50,172	2,990	6.0	35,783	1,410	3.9
Black	9,116	290	3.2	4,706	176	3.7	4,409	114	2.6
Hispanic origin ¹	4,985	147	3.0	3,043	104	3.4	1,942	43	2.2

¹ Persons of Hispanic origin may be of any race; hence, their numbers are included in the data for whites and blacks.

debts as their main reason for dual jobholding. White men and women reported these reasons about 40 percent of the time.

Age has a different effect on the motivations of men and women for multiple jobholding. For men, economic incentives to work a second job increase with age through the 25- to 34-year-old group, then decrease. For women, there is no similar pattern. More than two-fifths of women multiple jobholders reported that they worked two jobs to meet regular expenses or pay off debts. In general, more older than younger workers, both men and women, reported that enjoyment of their second job was the reason for dual jobholding.

Marital status also has different effects on the motivations of men and women for working second jobs. Married men were more likely to report economic reasons

than married women (41 versus 34 percent). Single, divorced, separated, and widowed women, however, were much more likely than men of similar status to work two jobs out of economic need (49 versus 30 percent).

Underground economy—hidden employment

It is not known to what extent the estimates of moonlighting understate the true level of multiple jobholding in the United States. Some underestimating may result from nonreporting of work in the "underground" or "hidden" economy in an effort to avoid the payment of taxes or to draw unemployment compensation while employed. However, a large part of the hidden economy may simply represent the production of goods and services in an informal manner. Louis A. Ferman and others provide some information on the

Table 8. Multiple jobholders by type of industry and class of worker, May 1980

[Numbers in thousands]

Primary job	Total employed	Multiple jobholders		Second job in agriculture			Second job in nonagriculture		
		Number	Percent of employed	Total	Wage and salary	Self employed	Total	Wage and salary	Self employed
Total	96,809	4,759	4.9	722	173	549	4,036	3,024	1,012
Agriculture	3,458	180	5.2	67	42	25	113	107	6
Wage and salary	1,455	67	4.6	44	19	25	23	17	6
Self-employed	1,677	94	5.6	23	23	(¹)	71	71	(¹)
Unpaid family	326	20	6.1	0	0	(²)	20	20	(²)
Nonagriculture	93,351	4,578	4.9	655	131	524	3,923	2,917	1,006
Wage and salary	86,024	4,328	5.0	649	124	524	3,680	2,674	1,006
Self-employed	6,847	236	3.4	6	6	(¹)	229	229	(¹)
Unpaid family	479	14	3.0	0	0	(²)	14	14	(²)

¹ Self-employed persons with secondary businesses or farms, but no wage or salary jobs, were not counted as multiple jobholders.

² Persons whose primary jobs were as unpaid family workers were counted as multiple jobholders only if they also held wage or salary jobs.

types of jobs and motivations of persons who work in the regular economy but moonlight in the hidden economy. They state that most of these moonlighters were "concerned primarily with meeting actual or perceived needs."⁸ As to the extent of the hidden economy, estimates have ranged from 10 to 33 percent of the gross national product.⁹

Summary

Among all employed persons, men are far more likely than women to exceed the standard workweek. Women who work extended hours are slightly more likely than men to do so through multiple jobholding than on one job alone. Multiple jobs for women often consist of two part-time jobs, whereas men usually combine a full-time and a part-time job.

The occupational distribution of wage and salary workers on extended workweeks differs markedly between single and multiple jobholders. Managers and administrators who exceeded the standard workweek in May 1980 made up a far larger proportion of single than multiple jobholders (21 versus 11 percent). Salesworkers and operatives also were more heavily represented among single jobholders. In contrast, professional, technical, and service workers were more heavily represented among multiple than among single jobholders working 41 hours or more per week in May 1980. □

FOOTNOTES

¹ The Current Population Survey (CPS) is conducted for the Bureau of Labor Statistics by the Bureau of the Census. Information on the number of hours worked is collected monthly. A May supplement to the survey provided data on the receipt of premium pay for hours in excess of 40 per week and on multiple jobholding.

² Estimates of coverage under the Fair Labor Standards Act are from *Minimum Wages and Maximum Hours, Standards Under the Fair Labor Standards Act: An Economic Effects Study*, submitted to Congress in 1981 (U.S. Department of Labor, Employment Standards Administration, 1981), p. 42. For a history of the act, see Peyton K. Elder and Heidi D. Miller, "The Fair Labor Standards Act: changes of four decades," *Monthly Labor Review*, July 1979, pp. 10-16. The Federal Pay Act (U.S. Code, Title 5, ch. 61) covers Federal employees, while the Walsh-Healey Contracts Act (Public Law 74-846, June 30, 1936) and the Contract Work Hours and Safety Standards Act (Public Law 87-581, Aug. 13, 1961) apply to workers in firms holding Federal Government contracts.

³ *Characteristics of Major Collective Bargaining Agreements, Jan. 1, 1980*, Bulletin 2095 (Bureau of Labor Statistics, May 1981), p. 60.

⁴ See H. G. Lewis, "Hours of Work and Hours of Leisure," *Proceedings of the Ninth Annual Meeting of the Industrial Relations Research Association*, 1956, pp. 196-206; Robert Shisko and Bernard Rosther, "The Economics of Multiple Job Holding," *The American Economic Review*, June 1976, pp. 298-308; and Nand K. Tanden, *Workers with Long Hours*, Special Labor Force Studies, Series A, No. 9 (Ottawa, Ontario, Canada, Ministry of Industry, Trade and Commerce, 1972), pp. 33-37. Information on the overtime provisions in collective bargaining agreements are from *Characteristics of Major Collective Bargaining Agreements*, pp. 60-61.

⁵ Joyce M. Nussbaum and Donald E. Wise, "The Overtime Pay Premium and Employment," *Work Time and Employment*, Special Report No. 28 (National Commission for Manpower Policy, October

1978), p. 322. For a discussion of the fixed costs of labor, see Walter Oi, "Labor as a Quasi-Fixed Factor," *Journal of Political Economy*, December 1962, pp. 538-55 and John D. Owen, "Why part-time workers tend to be in low-wage jobs," *Monthly Labor Review*, June 1978, pp. 11-14.

⁶ See *Minimum Wage and Maximum Hours, An Economic Effects Study Submitted to Congress, 1979* (U.S. Department of Labor, Employment Standards Administration, 1979).

⁷ By definition, dual jobholders must hold at least one wage and salary job; they cannot be self-employed at two jobs.

⁸ Louis A. Ferman, Louise Berndt, Elaine Selo, *Analysis of the Irregular Economy: Cash Flow in the Informal Sector*, a report to the Bureau of Employment and Training, Michigan Department of Labor, March 1978, p. 3-13.

⁹ Norman N. Bowshner, "The Demand for Currency: Is the Underground Economy Undermining Monetary Policy?" *Review*, Federal Reserve Bank of St. Louis, January 1981, p. 13.

Marital and family patterns of workers: an update

HOWARD HAYGHE

A record 18.4 million women with children under age 18 were in the labor force in March 1981, including nearly half of all mothers with preschool children. The high level indicates the continuing impact that women of the "baby boom" generation are having on the job market. Now in their 20's and early 30's, many of these women are returning to work while their children are still infants. This is also one reason why today every other married-couple family is in the dual-earner category.¹

Over-the-year changes

Wives. Labor force changes during the 12 months ending with March 1981 were typical of those that have been observed in recent years in connection with the entry or re-entry into the job market of women born after World War II. About 25.5 million wives, or 51 percent, were working or looking for work in March, 560,000 above the previous year's level. More than 2 of 3 of these net additions were mothers, and most of them had children under 6 years old. (See table 1 and 2.)

The rise in the number and proportion of working mothers, especially those with preschool children, is partly related to a small rebound in births among women 20 to 34 years old.² During the 1970's, women in this age group tended to delay marriage and postpone childbearing, often acquiring lengthy job experience and strong ties to the labor force. Now most are married

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Table 1. Employment status of persons 16 years and over by marital status and sex, March 1980, and March 1981

[Numbers in thousands]

Marital status and sex	Civilian labor force			Labor force participation rate (in percent)		
	March 1980		March 1981	March 1980		March 1981
	Original	Revised		Original	Revised	
Both sexes	103,339	105,449	107,721	63.2	63.2	63.6
Men ¹	59,376	60,514	61,306	76.8	76.6	76.4
Never married	15,134	15,590	15,799	70.7	70.6	70.6
Married, wife present	38,962	39,647	39,674	81.0	80.9	80.5
Married, wife absent	1,628	1,629	1,777	79.2	79.0	78.9
Widowed	565	552	544	28.7	27.9	27.9
Divorced	3,087	3,097	3,532	80.3	79.4	80.9
Women	43,963	44,934	46,414	51.1	51.1	52.0
Never married	10,911	11,242	11,628	61.2	61.5	62.3
Married, husband present	24,466	24,900	25,460	50.2	50.1	51.0
Married, husband absent	1,881	1,928	2,076	59.4	59.4	60.8
Widowed	2,359	2,421	2,416	22.5	22.5	22.3
Divorced	4,347	4,443	4,835	74.5	74.5	75.0

¹Population includes male members of the Armed Forces living off post or with their families on post.

NOTE: Estimates of the civilian noninstitutional population have been recalculated using updated weights based on the 1980 Census of the Population; therefore, the 1980 revised data differ from 1980 data previously published.

Because of rounding, sums of individual items may not equal totals.

and many are having children. But, unlike the preceding generation of mothers whose early marriage and childbearing was followed by prolonged withdrawal from the labor force,³ women are now either remaining in the work force or returning to it shortly after childbirth.

Reflecting these events, the labor force participation rate of wives with preschool children increased from 45 percent in March 1980 to nearly 48 percent a year later. Even though there was no change in their participation rate, divorced mothers (regardless of their youngest child's age) remained considerably more likely than mothers in any other marital status category to be in the labor force. About 78 percent of all divorced mothers were working or looking for work in March 1981, compared with around 60 percent of widowed, separated, or never-married mothers and 56 percent of married mothers. Even when they were childless, divorced women were more apt to be in the labor force than other women with no children under age 18.

Single, divorced, and separated persons. Like wives, single persons also accounted for 25 percent of the labor force growth over the year ending with March 1981. The number of single men in the labor force reached 15.8 million while that of single women grew to 11.6 million. These increases were largely because of a rise in the number of persons in their early 20's and the continuing tendency among them to delay marriage. The labor force participation rates of single men (71 percent) and of women (62 percent) remained relatively stable.

As was the case for singles, the number of divorced and separated persons in the labor force rose, primarily because the divorce rate remained high. The labor force participation rates of separated and divorced men were about the same as for husbands (80 percent) while the rates for divorced (75 percent) and separated (61 percent) women continued to be higher than for wives.

In contrast to the other marital groups, the number of husbands who were working or looking for jobs remained steady over the year ending in March 1981. The participation rate of husbands continued its long-term downward drift.

Race and Hispanic origin. Although white wives are still less likely to be in the labor force than black ones, their participation rate has been rising faster in recent years, narrowing the difference between the two groups. By March 1981, more than 50 percent of white wives and nearly 60 percent of black wives were in the work force. Ten years earlier, the proportions were about 40 and 53 percent. In contrast, the participation rate, for white husbands and black husbands were nearly identical; both rates have declined by roughly 6 percentage points since March 1971.

Hispanic men were more apt than whites or blacks to be in the labor force regardless of their marital category. This is partly because Hispanic men are, on average, younger; in March 1981, their median age (for those 16 years and over) was 32.1 years, compared with 34 years for blacks and 38 years for whites. In contrast to the men, Hispanic women traditionally have had lower participation rates than whites or blacks.⁴ (See table 3.)

Table 2. Labor force status of women 16 years and over, by marital status and presence and age of youngest child, March 1980 and March 1981

[Numbers in thousands]

Marital status and presence and age of children	Labor force			Labor force participation rate (in percent)		
	March 1980		March 1981	March 1980		March 1981
	Original	Revised		Original	Revised	
Women, 16 years and over	43,963	44,934	46,414	51.1	51.1	52.0
No children under 18	26,470	27,144	27,992	48.0	48.1	48.7
With children under 18	17,493	17,790	18,422	56.6	56.6	58.1
Children 6 to 17, none younger	11,168	11,252	11,490	64.4	64.3	65.5
Children under 6 years	6,325	6,538	6,933	46.6	46.8	48.9
Married, husband present	24,466	24,900	25,460	50.2	50.1	51.0
No children under 18	11,019	11,246	11,426	46.1	46.0	46.3
With children under 18	13,447	13,654	14,035	54.2	54.1	55.7
Children 6 to 17, none younger	8,381	8,428	8,432	61.8	61.7	62.5
Children under 6 years	5,067	5,227	5,603	45.0	45.1	47.8

NOTE: Estimates of the civilian noninstitutional population have been recalculated using updated weights based on the 1980 Census of the Population; therefore, the 1980 revised data differ from 1980 data previously published.

Children are defined as "own" children. Included are never-married daughters or sons, stepchildren, and adopted children. Excluded are other related children such as grandchildren, nieces, nephews, and cousins and unrelated children.

Because of rounding, sums of individual items may not equal totals.

Table 3. Labor force participation rates by marital status, sex, race, and Hispanic origin, March 1980 revised and March 1981

[In percent]

Sex and marital status	White		Black		Hispanic	
	Revised 1980	1981	Revised 1980	1981	Revised 1980	1981
Men						
Total	77.6	77.4	68.0	68.8	80.6	80.6
Never married	72.6	72.7	60.4	60.5	70.0	71.6
Married, wife present	81.1	80.6	78.1	78.8	87.5	86.3
Married, wife absent	83.6	82.3	67.4	71.9	85.3	83.7
Divorced	80.7	82.4	69.9	72.8	78.3	84.5
Widowed	27.3	27.3	31.6	29.6	(')	(')
Women						
Total	50.9	51.8	52.1	53.2	48.0	47.5
Never married	64.2	65.0	49.4	50.3	53.9	51.4
Married, husband present	49.3	50.3	59.0	59.5	46.1	47.0
Married, husband absent	60.4	61.8	58.0	59.9	45.3	39.9
Divorced	75.6	76.0	68.8	68.8	64.7	65.8
Widowed	22.3	21.7	24.3	26.6	26.3	22.3

¹Percent not shown where base is less than 75,000.

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Earners, income, and poverty

During the past decade, the dramatic increase in the proportion of working wives has led to substantial gains in the number of married-couple families where both spouses were earners during the same year. In 1980, there were approximately 25.6 million such dual-earner families, 25 percent more than in 1970.⁵ Over the same period, the traditional-earner family (married-couple families where the husband, but not the wife, was an earner) declined in importance—falling from 44 percent of all married couples in 1970 to less than 31 percent in 1980.⁶

However, despite the ongoing rise in the number of wives in the labor force, there was no change in either the number or proportion of dual-earner families from 1979 to 1980. Several factors interacted to produce this result. One was the sluggish economic climate that prevailed during 1980 which led to greater levels of unemployment than in 1979. Another was the continuing high level of divorces and the consequent breakup of many married-couple families. Also, the number of married couples without earners continued its long-term climb. From 1970 to 1980, the number of married persons 65 years and over rose by about a third, and the number of families with no earners reached 5.9 million. (See table 4.)

Income. Overall, median income in 1980 was \$23,300 for married-couple families, compared with \$10,230 for families maintained by women and \$17,740 for those maintained by men (no spouse present). A major reason for the differences is that almost 60 percent of all mar-

ried-couple families contained at least two earners, compared with 28 percent of the families maintained by women and 42 percent of those maintained by men. (This is not the entire explanation; even when there were two earners or more, families maintained by men or women had lower median annual incomes.)⁷ Who the earners are—husband, wife, children, and so forth—is also an important determinant of family income. To illustrate, median income of married-couple families in 1980 was \$20,500 where the husband was the only earner, but only \$13,600 where the wife was the sole earner. For families with two earners or more, the median was more than \$31,000 where the husband (but not the wife) was among the earners, but only \$22,700 when the husband had no earned income.

Poverty. The presence of earners does not guarantee a family freedom from poverty. In 1980, about 6.4 million, or 10.5 percent, of the Nation's families had incomes below the poverty level.⁸ These families were approximately equally divided between married couples (47 percent) and those maintained by women (49 percent), with relatively few maintained by men. (See table 5.)

The majority of married-couple families in poverty had income from the earnings of one member or more during 1980. In most of these families, the husband was an earner, but for an unusually large proportion—21 percent compared with 6 percent for families not in poverty—the earner was the wife or some other member, such as a son or daughter, whose wages were typi-

Table 4. Number of earners in families, relationship, and median family income in 1979 and 1980, by type of family, March 1980 and March 1981

Number of earners, relationship, and type of family	Number (in thousands)			Median family income		
	March 1980		March 1981	1979		1980
	Original	Revised		Original	Revised	
Married-couple families	48,199	49,132	49,316	\$21,621	\$21,545	\$23,263
No earners	5,420	5,559	5,903	8,833	8,855	10,187
One earner	13,598	13,912	13,900	18,092	18,073	19,368
Husband only	11,667	11,934	11,621	18,874	18,850	20,472
Wife only	1,463	1,499	1,707	12,504	12,527	13,612
Other relative only	468	480	573	17,061	17,072	16,148
Two earners or more	29,180	29,660	29,513	25,594	25,501	28,025
Husband and wife	25,148	25,595	25,557	25,263	25,167	27,745
Husband and others, not wife	3,448	3,476	3,380	29,146	29,121	31,031
Husband non-earner	585	591	576	20,343	20,361	22,684
Maintained by women ¹	8,834	9,009	9,416	9,773	9,719	10,233
No earners	2,041	2,084	2,216	4,267	4,245	4,494
One earner	4,290	4,391	4,612	9,567	9,513	10,350
Two earners or more	2,503	2,534	2,589	16,973	16,937	18,673
Maintained by men ¹	1,742	1,769	1,969	16,600	16,533	17,743
No earners	219	225	244	7,217	7,241	7,790
One earner	778	788	891	14,388	14,347	15,577
Two earners or more	745	755	835	23,040	22,936	23,785

¹Divorced, separated, widowed, or never-married persons.

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Table 5. Families in poverty in 1980 by family type and number of earners, March 1981

Type of family, number and relationship of earners	Number in poverty (in thousands)	Percent distribution	As percent of all families
Total families	6,402	—	10.5
Married-couple families	3,036	100.0	6.2
No earners	996	32.8	16.9
One earner	1,294	42.6	9.3
Husband	945	31.1	8.1
Wife	237	7.8	13.9
Other member	113	3.7	19.7
Two earners or more	745	24.5	2.6
Husband and wife	540	17.8	2.1
Husband and other(s), not wife	137	4.5	4.1
Husband nonearner	68	2.2	11.8
Families maintained by women ¹	3,142	100.0	33.4
No earners	1,617	51.5	73.0
One earner	1,267	40.3	27.5
Householder	1,034	32.9	28.6
Other	233	7.4	23.5
Two earners or more	258	8.2	10.0
Families maintained by men ¹	224	100.0	11.4
No earners	76	33.9	31.1
One earner	115	51.3	12.9
Two earners or more	32	14.3	3.8

¹Includes only divorced, separated, widowed, or never-married persons.
NOTE: Because of rounding, sums of individual items may not equal totals.

cally lower than those of the husband.

A third of all families maintained by women had incomes below the poverty level in 1980, with children in more than four-fifths of them. Less than half of these families had earnings and only 8 percent contained more than one earner.

As expected, large families face a greater likelihood of poverty than small ones with the same number of earners. For instance, among one-earner families in 1980, about 10 percent with only two members were in poverty, compared with 20 percent of five-member families. The proportions in poverty were less for families with more than one earner.

THIS REPORT HAS PRESENTED some recent data on the marital-family characteristics of workers. However, the situation may change under the pressure of demographic and other trends that are already underway. For example, recent increases in the birth rate indicate that the number of dual-earner families with young children will continue to increase. Thus, the need for adequate child care in the working parents' absence will probably expand rather than diminish. In addition, if marital breakups—currently at record levels—rise, the demand

for child care will grow even further as the number of one-parent families increases. □

FOOTNOTES

¹ Unless otherwise indicated, data are based on tabulations from the March 1981 Current Population Survey (CPS), conducted for the Bureau of Labor Statistics by the Bureau of the Census. The data have been inflated using population weights based on results from the 1980 Census of the Population. The March 1980 data discussed in this report also have been revised to bring them in line with the new population weights and to make them comparable with the March 1981 data. Previously published 1980 data (as they appear in Beverly L. Johnson and Elizabeth Waldman, "Marital and family patterns," *Monthly Labor Review*, October 1981, pp. 36–38) reflected population weights projected forward from the 1970 Census of the Population.

As shown in table 1, the number of married women in the labor force in March 1980 was revised upward by 434,000. Despite this, and similarly significant changes in other data for 1980, the various relationships and percentages based on new estimates are nearly the same as those based on previously published estimates.

For a more complete description of changes in labor force data stemming from the use of 1980 census population weights in the CPS, see Kenneth D. Buckley, Jennifer Marks, and Ronald J. Statt, "Revisions in the Current Population Survey Beginning in January 1982," *Employment and Earnings*, February 1982, pp. 7–15.

Estimates based on a sample, such as those shown in the tables, may vary considerably from results obtained by a complete count in those cases where the numbers are small. Therefore, differences based on them may not be significant. For more detail on the interpretation of such differences, see *Marital and Family Characteristics of Workers, March 1979*, Special Labor Force Report 237 (Bureau of Labor Statistics, 1981).

² Final Natality Statistics, National Center for Health Statistics, Division of Vital Statistics, Natality Statistics. Also see Allyson Sherman Grossman, "More than half of all children have working mothers," *Monthly Labor Review*, February 1982, pp. 41–43, for information on trends in numbers of children whose mothers work.

³ See Howard Hayghe, "Families and the rise of working wives—an overview," *Monthly Labor Review*, May 1976, pp. 12–19; Janet L. Norwood and Elizabeth Waldman, *Women in the Labor Force: Some New Data Series*, U.S. Department of Labor, Report 575; and George Masnich and Mary Jo Bane, *The Nation's Families, 1960–1990* (Cambridge, Mass., Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, 1980), pp. 52–85.

⁴ For a discussion of some of the factors underlying the labor force patterns of Hispanic women, see Morris J. Newman, "A profile of Hispanics in the U.S. work force," *Monthly Labor Review*, December 1978, pp. 3–14.

⁵ Only about two-fifths of the gain in the number of dual-earner families was because of the increase in the number of married-couple families.

⁶ See Howard Hayghe, "Husbands and wives as earners: an analysis of family data," *Monthly Labor Review*, February 1981, pp. 46–53.

⁷ A forthcoming *Monthly Labor Review* article will focus on women who maintain families.

⁸ The average poverty threshold for a nonfarm family of four was \$8,414 in 1980. The level varied depending on family size, sex and age of householders, family composition, and farm-nonfarm residence. For further details, see *Current Population Reports*, Series P-60, No. 124.

Major Agreements Expiring Next Month



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

Employer and location	Industry	Union ¹	Number of workers
AGRIPAC, Inc. (Oregon)	Food products	Teamsters (Ind.)	3,000
Air Conditioning Contractors of Arizona	Construction	Sheet Metal Workers	1,200
Allied Chemical Corp., Industrial Chemical Division (New York)	Chemicals	Steelworkers	1,200
Almacs, Inc. (Rhode Island, Massachusetts, and Connecticut)	Retail trade	Food and Commercial Workers	2,300
American Motors Corp., AM General Corp. (Indiana)	Transportation equipment	Auto Workers (Ind.)	1,500
Associated Building Contractors of Northwestern Ohio, Inc., 2 agreements	Construction	Laborers; Carpenters	3,000
Association of Contracting Plumbers of the City of New York	Construction	Plumbers	3,550
Associated Garment Industry of St. Louis (Interstate)	Apparel	Garment Workers	3,000
Associated Manufacturers Tubular Piping & Trimming, Inc. (New York)	Apparel	Ladies Garment Workers	1,200
Automobile Dealers Industrial Relations Association of New York	Retail trade	Auto Workers (Ind.)	1,000
Associated General Contractors, Nevada Chapter and 2 others	Construction	Carpenters	2,100
Bath Iron Works Corp. (Maine)	Transportation equipment	Marine and Shipbuilding Workers	4,500
Belt Association, Inc. (New York, N.Y.)	Apparel	Ladies Garment Workers	3,800
California Processors, Inc.	Food products	Teamsters (Ind.)	55,000
Chicago Area Grocery Stores (Illinois) ²	Retail trade	Food and Commercial Workers	7,000
Chicago Pneumatic Tool Co. (Utica, N.Y.)	Machinery	Machinists	1,150
Copeland Corp. (Ohio)	Machinery	Electrical Workers (IUE)	2,800
Detroit Mason Contractors Association (Michigan)	Construction	Bricklayers	3,300
East Ohio Gas Co.	Utilities	Service Employees	2,050
Eastern New York Construction Employers, Inc., 3 agreements	Construction	Operating Engineers; Laborers; Bricklayers	
Executive Council of the California Conference of Mason Contractors Association, Inc. (California)	Construction	Laborers	4,150
Freightliner Corp. (Portland, Oreg.)	Transportation equipment	Machinists	6,000
General Electric Co. (Auburn, N.Y.)	Electrical products	Machinists	1,700
General Contractors Association of New York City	Construction	Operating Engineers	1,000
General Dynamics Corp., Pomona Division (California)	Fabricated metal products	Machinists	4,300
General Electric Co., 3 agreements (Interstate)	Electrical products	Machinists; Sheet Metal Workers; Electrical Workers (UE) (Ind.)	1,650 19,500
General Telephone Co. of Kentucky	Communication	Communication Workers	1,300
Great Atlantic & Pacific Tea Co., Inc. (Connecticut and Massachusetts)	Retail trade	Food and Commercial Workers	2,000
Greater Milwaukee Hotel-Motel Association, 2 agreements (Wisconsin)	Hotels	Hotel and Restaurant Employees	2,200
Grocery Agreement, Quad-Cities (Iowa and Illinois) ²	Retail trade	Food and Commercial Workers	2,000
Hammermill Paper Co., Erie Plant (Pennsylvania)	Paper	Paperworkers	1,300
Independent Shops, Cloth Hats & Caps (New York, N.Y.) ²	Apparel	Hatters	1,300
Kansas City Power & Light Co., Production Department (Missouri) ²	Utilities	Electrical Workers (IBEW)	1,000
Kelly-Springfield Tire Co. (Cumberland, Md.)	Rubber	Rubber Workers	1,800
Keystone Building Contractors Association and 1 other (Pennsylvania)	Construction	Laborers	1,400
Lathing & Metal Furring Contractors Association of California, Inc.	Construction	Lathers	1,250
Long Island Lighting Co., 2 agreements (New York)	Utilities	Electrical Workers (IBEW)	4,000
Major Food Chains (Illinois)	Retail trade	Food and Commercial Workers	1,450
Manufacturing Woodworkers Association of Greater New York, Inc.	Furniture	Carpenters	1,200
Master Cement & All Dry Bulk Commodities (Interstate) ²	Trucking	Teamsters (Ind.)	5,000
National Hand Embroidery & Novelty Manufacturers Association, Inc. (New York)	Apparel	Ladies Garment Workers	4,650
New England Sportswear Manufacturers' Association (Massachusetts)	Apparel	Ladies Garment Workers	2,500
Northwest Airlines, Clerical Employees ³	Air transportation	Railway Clerks	3,200
Ohio Edison Co. (Akron, Ohio)	Utilities	Utility Workers	2,000

See footnotes at end of table.

Continued—Major Agreements Expiring Next Month

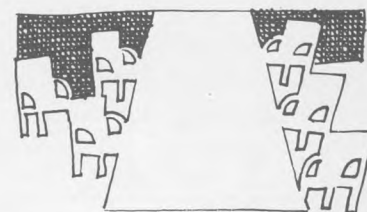
Employer and location	Industry	Union ¹	Number of workers
Pleaters, Stitches & Embroiderers Association, Inc. (New York)	Apparel	Ladies Garment Workers	2,200
Plumbing Contractors of Metropolitan St. Louis	Construction	Plumbers	1,200
Sheet Metal and Air Conditioning Contractors National Association, Los Angeles Chapter	Construction	Sheet Metal Workers	2,050
Star Market Co. Division, Jewel Companies, Inc. (Rhode Island and Massachusetts)	Retail trade	Food and Commercial Workers	1,200
Strayton Canning Co. Cooperative (Oregon)	Food products	Teamsters (Ind.)	1,800
Stockham Valves & Fittings, Inc. (Birmingham, Ala.)	Primary metals	Steelworkers	1,850
Trico Products Corp. (Buffalo, N.Y.)	Transportation equipment	Auto Workers (Ind.)	2,500
Union Painting Contractors Association and 1 other (Interstate)	Construction	Painters	1,000
Varsity Transit, Inc., New York Division	Transit	Amalgamated Transit	1,000
Watsonville Employers Frozen Food Employers Association (California)	Food products	Teamsters (Ind.)	4,000
	Government	Union or employee association	
Arizona: Municipal Employees	Multidepartments	American Federation of State, County and Municipal Employees	1,800
California: Orange County General Unit	Multidepartments	Orange County Employees Association (Ind.)	10,000
San Francisco Bay Area Rapid Transit District, 2 agreements	Transportation	Amalgamated Transit	3,200
Connecticut: Maintenance and Service Unit	Public works	Connecticut Employees Union "Independent", Inc.	8,000
Maryland: Anne Arundel County Board of Education, Administrators	Education	National Education Association (Ind.)	4,000
Baltimore Board of School Commissioners, Professional Employees	Education	American Federation of State, County and Municipal Employees	8,500
Michigan: Detroit Board of Education, Teachers	Education	American Federation of Teachers	11,000
New Jersey: Newark Board of Education, Teachers	Education	American Federation of Teachers	4,700
New York: New York City Board of Education, Lunchroom Employees	Education	American Federation of State, County and Municipal Employees	6,900
New York City Board of Education, School Aides	Education	American Federation of State, County and Municipal Employees	8,900
New York City Sanitation Department	Sanitation services	Teamsters (Ind.)	7,750
New York State Albany University, Professional Employees	Education	United University Professors, Inc. (Ind.)	15,000
Pennsylvania: Philadelphia Police Department	Law enforcement	Fraternal Order of Police	7,500

¹ Affiliated with AFL-CIO except where noted as independent (Ind.)

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

³ Information is from newspaper reports.

Developments in Industrial Relations



GM-UAW agreement

General Motors Corp. and the Auto Workers agreed to a 30-month accord that paralleled the terms of the union's February agreement with Ford Motor Co. (See *Monthly Labor Review*, April 1982, p. 62.) GM and UAW officials said they were optimistic that the new contract will help alleviate the severe sales and employment downturn that has afflicted the domestic automobile industry for several years. The day after the settlement, domestic car makers reported that they built 325,000 units in February, a decline of more than 32 percent from February of 1981, and the lowest total for that month since 1948.

UAW President Douglas A. Fraser emphasized that the job security aspects of the agreement would "stop the hemorrhaging of GM workers' jobs." Currently, 320,000 UAW members are on the job at GM and 140,000 are on layoff. Alfred S. Warren Jr., the company's vice president for industrial relations, called the accord "historic" because it recognizes the unexpected changes taking place in world competition.

The GM contract was effective immediately, superseding the current contract which would have expired in September. The new contract did not provide for any specified wage increases. The cost-of-living pay adjustment provision differed slightly at the two companies, but the goal was the same—to equalize labor cost increases. At GM, the June and September 1982 cost-of-living adjustments will each be deferred 18 months, as will 10 cents of any adjustment that occurs in December 1982. The 10-cent December deferral was intended to offset the 10-cent cost-of-living adjustment effective in March 1982 under provisions of the 1979 contract. The Ford settlement provided for 18 month deferrals of the 10 cents adjustment normally effective in March 1982, as well as the June and September 1982 quarterly adjustments.

There also were other differences between the GM and Ford contracts:

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

- The GM contract called for the company to reopen four of the six plants it had closed after the parties had temporarily broken off negotiations in January. The four plants employed about 5,000 UAW members. In addition, GM agreed to aid some of the 5,000 workers affected by the closing of the other two plants, located in California, by permitting laid-off employees with 10 years of service to participate in the Guaranteed Income Stream program. GM also agreed to reopen one other plant and to transfer 1,500 employees affected by the closing of a stamping plant in Cleveland. At Ford, eligibility for the Guaranteed Income Stream was limited to laid off employees with 15 years of service. The Ford accord did not provide for the reopening of any plants. However, Ford announced the reopening of a valve plant, a result of the contract provision limiting the purchase of parts from other companies.
- At GM, a legal services plan was established, financed by company funding of 3 cents an hour per worker. Legal representation will be provided by the plan's staff attorneys. Ford workers did not win a legal services plan (but the parties will study such plans), opting instead for an increase in the company's financing of Supplemental Unemployment Benefits.
- The new profit-sharing plan at GM calls for employees to receive 10 percent of that portion of the company's U.S. pretax profit in excess of the sum of 10 percent of net worth and 5 percent of other assets. Any resulting distribution to GM workers will be reduced by 0.1 percent of the value of the "other asset" to help defray the cost of extending the Guaranteed Income Stream to cover laid-off workers with 10 years of service. The union admitted that this formula was not as liberal as the Ford formula, but asserted that GM workers still would fare better because of GM's better operating results. According to union officials, over the preceding 6 years, GM workers would each have received \$2,231 under their new formula, and Ford workers would have received \$826 under their formula.
- At GM, the pilot "lifetime job guarantee" program will be tested at four plants, compared with two plants at Ford. Percentagewise, these numbers are equivalent because GM has more plants than Ford.

- GM adopted a program to reduce unwarranted time off by reducing the nonwage benefits available for chronic absentees, and agreed to establish and finance an internal occupational safety and health advisory board.

The ratification vote tally, announced by the UAW in mid-April was 114,510 to 105,297 in favor of the agreement.

The International Union of Electrical Workers also negotiated similar terms for the 22,000 workers it represents at GM plants.

Elsewhere, at General Motors, the company confirmed that it was laying off some salaried employees with low performance ratings and reducing the severance pay and other monetary benefits of the others. A GM official said that the actions will involve "a very limited number" of the company's 137,000 salaried employees in the United States and Canada.

Wage-and-benefit concessions

Workers at Gulf and Western automobile parts plants in Mancelona and East Jordan, Mich., voted to accept a \$1.54-an-hour pay cut to avert closing of some plants. The company said it needed the pay cut and a 2-year freeze on future wage-and-benefit improvements to compete effectively for production contracts. At the time of the settlement, layoffs had reduced the combined work force in these plants to 200, from 600.

Members of Allied Industrial Workers Local 78 in Kent, Ohio, agreed to labor concessions to avert the closing of a Russell Burdsall and Ward Corp. plant. The 260 workers at the auto parts plant accepted a \$2.40-an-hour reduction in their cost-of-living allowance, reductions in paid holidays and vacations, and establishment of an incentive pay plan. Union officials said the concessions resulted from pressure by the major automobile manufacturers for lower prices from their suppliers.

In Louisville, Ky., members of four unions at Standard Gravure Co. agreed to a 5-year moratorium on wage increases and suspension of certain restrictive work practices. In exchange, the company agreed to invest \$13.5 million in new printing equipment to improve its competitive ability, and to institute a profit-sharing plan.

Plans to return the bankrupt Milwaukee Railroad to profitability by 1985 moved forward, as a Federal district court approved a 7-percent wage reduction that will apply to 7,000 persons, including management and members of about 13 unions. In addition to negotiating a paycut for their members, the unions also agreed to reductions in train crew sizes which may result in the layoff of more than 500 workers within 6 months. The paycut, scheduled to extend to the end of 1984, was

expected to save the railroad \$44 million and the reduction in crew size was expected to save \$56 million over a 5-year period. In his recovery plan, bankruptcy trustee Richard Oglvie projected that in 1985, the railroad would be a 2,900 mile system with about 6,000 employees. In 1977, when the bankruptcy proceedings began, the railroad had 10,000 miles of track and 11,000 employees.

Volkswagen of America moved to reduce labor costs by limiting payment of its cost-of-living allowance for salaried employees to straight time hours worked. Previously, the 4,000 workers had also received the allowance for overtime hours and for vacations, holidays, and sick days. Earlier, the company had postponed plans to build a second plant in the United States. The 4,600 UAW-represented production workers at the Volkswagen plant in Westmoreland County, Pa., negotiated a 16-month agreement in late 1981 that provided for an immediate 50-cent-an-hour wage increase, for a 10-cent-an-hour increase in June 1982, and for a 1982 specified wage increase that matched the specified increase resulting from the GM-UAW negotiations. There were no indications whether Volkswagen was planning to ask for revisions in its agreement because of the labor cost concessions included in the 1982 GM settlement.

The 550 employees of the McCreary Tire & Rubber Co. of Indiana, Pa., were expected to attain 70 percent ownership of the plant within 7 years under an Employee Stock Ownership Plan announced in late 1981. The purchase will be financed by withholding scheduled pay increases. The 400 production employees, who are represented by the United Rubber Workers, will forgo 50 cent increases in both 1982 and 1983. Similarly, the 175 salaried employees, who are not represented by a union, will forgo 5 percent pay increases in both years. McCreary specializes in truck tires, but also makes tires for farm and construction equipment and racing cars.

In the Detroit area, members of Teamsters' Local 337 and the Kroger Co. and A&P supermarket chains agreed on a wage freeze that will extend 18 months beyond the scheduled March 31, 1984, expiration date of current agreements. Bargaining on wage-and-benefit concessions was continuing between various unions and Kroger and other chains in the area. The stores contended that labor cost relief was needed to enable them to compete effectively with nonunion chains, which they claimed had a \$5-an-hour edge in labor costs.

At Acme-Cleveland Corp.'s plant in Cleveland, Ohio, workers agreed to eliminate ceilings on the output of pieceworkers. In return for the change—which a union official said would result in higher earnings for some of the employees—the maker of machine tools guaranteed the 647 remaining jobs until the September 1982 expiration of its contract with the Mechanics Educational Society. Company officials indicated that the termination

of the piecework ceiling and the elimination of 500 jobs in the past 2 years had been necessitated by a "noncompetitive" labor cost structure.

In Jefferson, Wisc., employees of Borg Textiles Corp. agreed to a number of contract changes in an effort to keep the plant in operation. The changes include a 1-year extension of their contract (to May 1984); a \$1.38-an-hour pay cut, (pay had ranged from \$7.93 to \$9.74 an hour); a 40-percent reduction in paid vacation days (the workers will receive the lost money after January 1, 1983); postponement of payments to workers for gains in productivity; and postponement of a 6-percent wage increase and a cost-of-living adjustment of up to 26 cents an hour that had been scheduled for May 1982. The company and the Ladies Garment Workers will meet in January 1983 to discuss possible restoration of the wage-and-benefit cuts. Union official Donald Kret attributed the plants' problems to a decline in demand for artificial fur and paint brush roller fabric. He said that other apparel manufacturers in the region were pressing for labor cost cuts. At the time of settlement, two-thirds of the firm's 140 employees were on layoff.

The round of bargaining at major meat processing companies closed when employees at several Oscar Mayer & Co. plants accepted a wage freeze extending to August 31, 1985. Actually, the employees accepted a pay cut because they gave up the 30-cent-an-hour cost-of-living adjustment they received in January under the superseded contract, which had been scheduled to expire in August. Workers at the other meat processing companies (Armour, Wilson, Swift, and Hormel) did not get a pay cut because their wage freezes were negotiated in December 1981. (See *Monthly Labor Review*, February 1982, p. 48.) Other contract terms at Oscar Mayer were similar to those at the other companies.

Plant closings

The Potter and Brunfield Division of AMF Inc. closed its electromagnetic relay switch plant in San Juan Capistrano, Calif., to "consolidate excess capacity" in six other AMF plants. About 300 workers were involved. Some of the employees charged that the closing resulted from a company decision to shift some production to its plant in Mexico, which has lower labor costs. The plant manager acknowledged that this may have been a factor in the decision, but pointed out that the California plant was the smallest in the chain and the most distant from corporate headquarters in Princeton, Ind. According to the Bank of Mexico, U.S. companies now operate 225 plants across the border, employing 133,000 work-

ers who earn about one-fourth as much as their American counterparts.

Scottdale Mills Ltd., which survived the Great Depression without reducing production or employment, announced that it was closing. The Decatur, Ga., company attributed its demise to foreign competition. About 500 employees were affected. Elsewhere in the textile industry, J. P. Stevens & Co. began phasing out its denim plant in Rock Hill, S.C. About 540 employees were affected.

The Singer Co. announced that it was closing its industrial sewing machine plant in Elizabeth, N.J., because worldwide recessions and high interest rates had accelerated a slump in demand for its machines. The decision affected 560 employees. Most of Singer's machines are produced in Brazil and Japan.

The Allis-Chalmers Corp. announced plans to close its foundry in West Allis, Wisc., after members of Auto Workers Local 248 rejected a request for an \$8-an-hour cut in wages and benefits. Officials of the foundry, which produces castings for farm machinery, said the cut was necessary because its workers averaged \$23 an hour in wages and benefits, nearly twice as much as some competitors. However, union officials attributed the foundry's problems to the company's failure to modernize the facility.

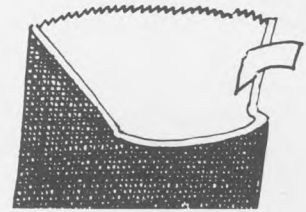
Hospital workers get new contracts

In Northern California, Service Employees Local 250 negotiated a 2-year contract for employees of 18 hospitals and medical centers of the Kaiser Permanente Medical Care Program. According to the union, the accord makes the 7,500 workers the Nation's highest paid service employees in hospitals and clinics.

Provisions included an 11-percent pay raise on November 1, 1981, a 9-percent raise on October 31, 1983, and upgrading of several job classifications. The highest paid employees in the bargaining unit are pharmacists, who will receive \$17.30 an hour after the 1983 pay increase.

What may have been the longest nurses strike in American history ended when registered nurses employed by Ashtabula (Ohio) General Hospital ratified a contract calling for a 9-percent salary increase. They also received an 11.9-percent increase that the hospital put into effect in May 1981. The strike lasted for more than 18 months and involved 170 nurses when it began in July 1980. In subsequent months, 50 nurses returned to work and 20 quit their jobs. The nurses are represented by the American Nurses Association. □

Book Reviews



The unspeakable

Fellow Workers and Friends: IWW Free-Speech Fights as Told by Participants. Edited by Philip Foner. Westport, Conn., Greenwood Press, 1981. 242 pp. \$29.95.

There is a plethora of current interest in the much celebrated labor union of the early 20th century, the Industrial Workers of the World (IWW). Popularly called the "Wobblies," they have an unparalleled place in labor history and are a fascinating subject for motion pictures, books, and museum exhibits. One example is the movie, "Reds," a chronicle of the life of IWW member John Reed. The Botto House, headquarters for the Wobblies during the famous Paterson (N.J.) Silk Workers Strike of 1913, has been designated a historic landmark. Even the Smithsonian Institution, in a recent labor history exhibit, displayed some Wobbly memorabilia. *Fellow Workers and Friends* keeps faith with such current interest.

This book is an anthology of the so-called "Free-Speech Fights," occurring between 1909 and 1916, and pitting IWW organizers against local municipal authorities. Ten such "fights" ensued, most of them in the western half of the United States: Missoula, Mont.; Spokane and Everett, Wash.; Fresno and San Diego, Calif.; Aberdeen, S. Dak.; Minot, N. Dak.; Denver, Colo.; and Kansas City, Mo. The Wobblies attempted to organize the mass of itinerant, and often illiterate, migratory workers who labored in the mining camps, timberlands, and agricultural valleys of the West. Fearful of the radical labor union, established interests, especially Chambers of Commerce, tried to restrict IWW activities by prohibiting open-air speeches in public areas.

The "gag rules" against public speaking hit the Wobblies in the jugular. If prevented from spreading their creed, the union would have little chance of recruiting members. To retaliate, they called transient Wobblies from the four corners of the Nation to descend on the site of an impending free-speech battle. A telegram sent to all IWW offices from national Secretary-Treasurer Vincent St. John vividly illustrated their sincerity: "If you are footloose, make for Kansas City at once, . . . wire the local you are coming."

With a high concentration of sympathetic Wobblies in one area, the local union leadership implemented battle plans. They paraded, en masse, to a public area where a man or woman stood on a "soap box" and cried out, "Fellow Workers and Friends," to the gathering crowds. That brief oration usually resulted in the

speaker's arrest. But another IWW member immediately ascended the podium and repeated the same four words. Soon, the jails were overflowing with the speakers, taxing the municipal resources of the locality to the breaking point, and forcing, in most cases, the rescission of anti-free speech laws.

The personal stories of the free-speech participants are a fine mixture of pathos and humor. For example, one IWW member recalled the woeful tale of Michael Hoey, a 65-year-old member of the union, who was arrested and jailed by San Diego police for speaking in public. The jailers beat him mercilessly, kicked him repeatedly in the groin, and left him in a semiconscious state. He died 40 days later, allegedly from the injuries received in jail.

Even more heinous violations of civil liberties were recorded and experienced by union member Agnes Thecla Fair. After her arrest in Spokane, Wash., the civil authorities attempted to remove her clothing while she was in custody, threatening her with rape. The young Wobbly described her plight further, stating:

I was hardly over the first (episode) when they brought in a man disguised as a woman and put him in a cot next to me. I thought it was a drunken woman until the officers went out. Then I felt a large hand creeping over me. It's too horrible (to continue) . . . !

Yet, the free-speech fights had lighter moments. Elizabeth Gurley Flynn, the notorious "Rebel Girl," told of one comrade who found himself released from custody when the police officer escorting him to jail stumbled across two brawling drunkards and arrested them. The constable noticed the big, strapping Wobbly tagging along behind them and asked, "What are you doing here?" The free-speech fighter retorted, "What do you want me to do, go back there and make another speech?"

In addition to the personal vignettes, the book also contains entertaining chapter introductions, including a broad overview on the origins and development of the IWW. Few labor historians are better qualified to evaluate this aspect of the labor movement than Philip Foner. His expertise is widely recognized and his anecdotal style adds spice to an already lively topic. For example, he briefly explains that Elizabeth Gurley Flynn, one of the earliest feminists, had her family's support, and, in fact, was delivered by a woman doctor at birth. Foner also explains that the derivation of the term "Wobbly" originated from the inability of a Chinese waiter in California to say IWW. It is quite obvious that, for Foner, this book was a labor of love.

Foner is one of our most brilliant, yet controversial historians. Often criticized for letting his Marxist ideology distort the historical picture he paints, in this book, he apparently tempers his political inclinations. However, there is an overglorification of the radical Wobblies, and this is the one flaw in the monograph. Foner fails to show, as does Paul Bressenden—the dean of IWW scholars—in his monograph on the subject, that the seditious and unpatriotic language utilized by the Wobblies very often sent ripples of fear through even moderate members of local communities, let alone the labor baiters. But this book is for the students of the labor movement and they should, by now, be aware of Foner's proclivities.

On a positive reflection, Foner has once again championed the participation of blacks, women, immigrants, and other minorities in the labor movement. He vividly illustrates that the IWW targeted their energies toward organizing the largely unskilled work force of the Nation, the "Dagoes, Hunks, and Bohunks," often shunned by the rival American Federation of Labor. As Foner states in one chapter introduction, the Wobblies elevated the transient unskilled working class, giving them their own anthem in the song "Hallelujah, I'm a Bum."

Fellow Workers and Friends is an outstanding companion to similar anthologies such as Joyce Kornbluh's *Rebel Voices*, and Foner's *The Letters of Joe Hill*. It complements several narratives on the IWW including Patrick Renshaw's *The Wobblies* and, again, Foner's *The Industrial Workers of the World, 1905-1917*.

In light of recent political and social trends, this study is timely and important. The constitutional questions on what constitutes "free speech" and the first amendment are, even now, causing debate in Congress. *Fellow Workers and Friends* should interest both rightist and leftist sides of the U.S. political spectrum and should cause neither to see red.

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More recent arrivals

Immigration: New Americans, Old Questions. Edited by Melinda Maidens. New York, Facts on File, 1981. 190 pp. \$17.50.

Instead of the 450,000 legal immigrants and refugees anticipated by U.S. law, over 1 million legal immigrants, refugees, and illegal aliens entered the United States in 1981. Like his predecessors, President Reagan

appointed a study group to examine immigration and refugee problems and suggest reforms that will enable America to reassert control over its borders.

The Select Commission on Immigration and Refugee Policy issued its final report in March 1981. A series of congressional hearings was held on immigration problems and reform proposals in 1981 and 1982. Three comprehensive reform packages are now awaiting congressional action. President Reagan has proposed a limited amnesty for aliens now in the United States illegally, Federal sanctions on employers who knowingly hire illegal aliens, and a streamlining of Immigration and Naturalization Service procedures. Senator Walter D. Huddleston (D-Ky.) has proposed more sweeping enforcement measures designed to reduce the influx of aliens and a fixed cap on total legal immigration to the United States. Senator Alan K. Simpson (R-Wyo.) modified the Reagan administration proposals by deleting the temporary guestworker idea and its strengthening enforcement provisions. Public opinion and this spectrum of reform options promise to make 1982 a year of further debate and possible action on immigration reform.

This book is a collection of newspaper articles and editorials that helps explain why the immigration issue arouses so much debate and so little action. The articles, published between 1978 and 1981, discuss immigration, refugees, and policy. Many of the editorials are from lesser known newspapers, for example, *The Tulsa World*, *The Arkansas Democrat*, and *The Sacramento Bee*.

The theme running through most of the articles and editorials is the need to continue American compassion for the world's "huddled masses," but to temper our compassion in this age of limits. For example, most newspapers endorsed the initial Cuban offer of 1,000 political prisoners in the fall of 1978, arguing that American acceptance of these Cubans would demonstrate to the world the economic and moral failures of Cuban socialism. However, when Cubans began streaming across the Florida straits in small boats one and one-half years later, these same newspapers demanded that the government reassert control over who enters America. Most newspapers demanded a similar tough line when Cubans, impatient to be resettled, rioted at Fort Chaffee, Ark.

This book does not contain interpretive articles that help explain the evolution or future direction of U.S. immigration policies. It is rather a chronicle of America's response to immigration issues that were salient between 1978 and 1980. It is a valuable mirror of our diversity in a time when we seek consensus.

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Publications received

Agriculture and natural resources

U.S. Department of Energy, *Energy Manpower Factbook, 1981*. Washington, U.S. Department of Energy, Office of Energy Research, Office of Field Operations Management, 1981, 296 pp. \$24, National Technical Information Service, Springfield, Va. 22161.

— *Geothermal Energy Employment and Requirements, 1977-1990*. Washington, U.S. Department of Energy, Office of Energy Research, Office of Field Operations Management, 1981, 156 pp. \$14, National Technical Information Service, Springfield, Va. 22161.

Economic and social statistics

Frisch, Ragnar, "From Utopian Theory to Practical Applications: The Case of Econometrics," *The American Economic Review*, December 1981, pp. 1-16.

Green, Jerry R. and Nancy L. Stokey, *A Comparison of Tournaments and Contracts*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1982, 23 pp. (NBER Working Paper Series, 840.) \$1.50.

Lee, Joon Koo, *Distributional Implications of Imperfect Capital Markets*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 41 pp. (NBER Working Paper Series, 663.) \$1.50.

Tinbergen, Jan, "The Use of Models: Experience and Prospects," *The American Economic Review*, December 1981, pp. 17-22.

U.S. Congress, Joint Economic Committee, *Maintaining the Quality of Economic Data*. A study prepared for the [Congressional] Joint Economic Committee. Washington, 1981. 34 pp. (97th Cong., 1st sess.). For sale by the Superintendent of Documents, Washington 20402.

Education

Braddock, Jomills Henry, II, "The Issue Is Still Equality of Educational Opportunity," *Harvard Educational Review*, November 1981, pp. 490-96.

Freeman, Richard B., *The Changing Economic Value of Higher Education in Developed Economies: A Report to the O.E.C.D.* Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 55 pp. (NBER Working Paper Series, 820.) \$1.50.

Economic growth and development

Economic Report of the President, Transmitted to the Congress February 1982, Together with the Annual Report of the Council of Economic Advisers. Washington, 1982, 357 pp. Stock No. 040-000-00453-0. \$7, Superintendent of Documents, Washington 20402.

Friedman, Milton, *Market Mechanisms and Central Economic Planning*. Washington, American Enterprise Institute for Public Policy Research, 1981, 32 pp. (The G. Warren Nutter Lectures in Political Economy.)

Greenwald, Douglas, ed., *Encyclopedia of Economics*. New York, McGraw-Hill Book Co., 1982, 1,068 pp. \$49.95.

Hicks, John, "The Mainspring of Economic Growth," *The American Economic Review*, December 1981, pp. 23-29.

Mincer, Jacob, *Human Capital and Economic Growth*. Cambridge, Mass., National Bureau of Economic Research,

Inc., 1981, 28 pp. (NBER Working Paper Series, 803.) \$1.50.

Industrial relations

Barkin, Solomon, *Productivity Measures in Collective Bargaining*. Reprinted from *Relations Industrielles*, Vol. 36, No. 2, 1981, pp. 361-70. Amherst, University of Massachusetts, Labor Relations and Research Center, 1981. (Reprint Series, 63.)

Castle, Robert C. and Richard Peggnetter, "Secondary Picketing: The Supreme Court Limits the *Tree Fruit* Exception," *Labor Law Journal*, January 1982, pp. 3-16.

Dertouzos, James N. and John H. Pencavel, *Wage and Employment Determination Under Trade Unionism: The International Typographical Union*. Reprinted from the *Journal of Political Economy*, December 1981, pp. 1162-81. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981. (NBER Reprint Series, 235.) \$1.50.

Fogel, Walter, ed., *Job Equity and Other Studies in Industrial Relations: Essays in Honor of Frederic Meyers*. Los Angeles, University of California, Institute of Industrial Relations, 1982, 274 pp. (Monograph and Research Series, 30.)

Freeman, Richard B. and James L. Medoff, *The Impact of Collective Bargaining: Can the New Facts Be Explained by Monopoly Unionism?* Cambridge, Mass., National Bureau of Economic Research, Inc., 1982, 60 pp. (NBER Working Paper Series, 837.) \$1.50.

Gaal, John, "The NLRB's Misuse of Witnesses' Statements in Election Objection Proceedings," *Labor Law Journal*, January 1982, pp. 17-25.

Hill, Stephen, *Competition and Control at Work*. Cambridge, Mass., The MIT Press, 1981, 280 pp., bibliography. \$25, cloth; \$9.95, paper.

Klay, William E., "Combating Inflation Through Wage Negotiations: A Strategy for Public Administration," *Public Administration Review*, September-October 1981, pp. 520-26.

Lazear, Edward P., *A Competitive Theory of Monopoly Unionism*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 62 pp. (NBER Working Paper Series, 672.) \$1.50.

McCullum, James K., *Decertification of the Northern Virginia Public Sector Local Unions: A Study of Its Effect*. Reprinted from the *Journal of Collective Negotiations in the Public Sector*, Vol. 10, No. 4, 1981, pp. 345-53.

McLennan, Barbara N., "Sex Discrimination in Employment and Possible Liabilities of Labor Unions: Implications of County of *Washington v. Gunther*," *Labor Law Journal*, January 1982, pp. 26-35.

Nalbandian, John and Donald Klingner, "The Politics of Public Personnel Administration Towards Theoretical Understanding," *Public Administration Review*, September-October 1981, pp. 541-49.

Weinstein, Paul A., "The United States Construction Industry: The Economic Demographic and Industrial Relations Environment," *Labour and Society*, July-September 1981, pp. 243-61.

Wilson, Marilyn, "Big Labor Faces Reality," *Dun's Business Month*, February 1982, pp. 36-43.

Industry and government organization

- Barkin, Solomon, *Management and Ownership in the New England Cotton Textile Industry*. Reprinted from the *Journal of Economic Issues*, June 1981, pp. 463-75. Amherst, University of Massachusetts, Labor Relations and Research Center, 1981. (Reprint Series, 64.)
- Mitchell, Olivia S., *The Labor Market Impact of Federal Regulation: OSHA, ERISA, EEO and Minimum Wage*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1982, 51 pp. (NBER Working Paper Series, 844.) \$1.50.
- Paik, Soon and William R. Schriver, "The Effect of Increased Regulation on Capital Costs and Manual Labor Requirements of Nuclear Power Plants," *The Engineering Economist*, Spring 1981, pp. 223-44.

International economics

- Destler, I. M. and Hideo Sato, eds., *Coping with U.S. Japanese Economic Conflicts*. Lexington, Mass., D.C. Heath and Co., Lexington Books, 1982, 293 pp. \$24.95.
- Fairlamb, David, "Strains on the Common Market," *Dun's Business Month*, February 1982, pp. 70-72.
- Miller, Mark J. and Philip L. Martin, *Administering Foreign-Worker Programs: Lessons from Europe*. Lexington, Mass., D.C. Heath and Co., Lexington Books, 1982, 194 pp. \$21.95.
- "The Middle East, 1982," *Current History*, January 1982, pp. 1-42.

Labor force

- Brown, Charles, Curtis Gilroy, Andrew Kohen, *The Effect of the Minimum Wage on Employment and Unemployment: A Survey*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1982, 106 pp. (NBER Working Paper Series, 846.) \$1.50.
- Reubens, Beatrice G., John A. C. Harrison, Kalman Rupp, *The Youth Labor Force, 1945-1995: A Cross-National Analysis*. Totowa, N.J., Allanheld, Osmun & Co., Publishers, Inc., 1981, 387 pp., bibliography. \$48.50.

Management and organization theory

- Andrew, Charles G. and George A. Johnson, "The Crucial Importance of Production and Operations Management," *Academy of Management Review*, January 1982, pp. 143-47.
- Beard, Donald W. and Gregory G. Dess, "Corporate-Level Strategy, Business-Level Strategy, and Firm Performance," *Academy of Management Journal*, December 1981, pp. 663-88.
- Braun, Irwin, *Building a Successful Professional Practice with Advertising*. New York, AMACOM, A division of American Management Associations, 1981, 289 pp. \$24.95.
- Denhardt, Robert B., "Toward a Critical Theory of Public Organization," *Public Administration Review*, November-December 1981, pp. 628-35.
- Dossett, Dennis L. and Carl I. Greenberg, "Goal Setting and Performance Evaluation: An Attributional Analysis," *Academy of Management Journal*, December 1981, pp. 767-79.
- Duncan, W. Jack, "Humor in Management: Prospects for Administrative Practice and Research," *Academy of Management Review*, January 1982, pp. 136-42.

- Ford, Jeffrey D. and Deborah A. Schellenberg, "Conceptual Issues of Linkage in the Assessment of Organizational Performance," *Academy of Management Review*, January 1982, pp. 49-58.
- Hendrick, Gregory, "Organizational Structure: The Source of Low Productivity," *S.A.M. Advanced Management Journal*, Winter 1982, pp. 20-30.
- Howell, Jon P. and Peter W. Dorfman, "Substitutes for Leadership: Test of a Construct," *Academy of Management Journal*, December 1981, pp. 714-28.
- Kim, Jay S. and Anthony F. Campagna, "Effects of Flexitime on Employee Attendance and Performance: A Field Experiment," *Academy of Management Journal*, December 1981, pp. 729-41.
- Korshak, Stuart R., "Arbitrating the Termination of a Union Activist," *Personnel Journal*, January 1982, pp. 54-57.
- Korten, David C., "The Management of Social Transformation," *Public Administration Review*, November-December 1981, pp. 609-18.
- Locke, Edwin A., "The Ideas of Frederick W. Taylor: An Evaluation," *Academy of Management Review*, January 1982, pp. 14-24.
- McCroskey, Jacquelyn, "Work and Families: What Is the Employer's Responsibility?" *Personnel Journal*, January 1982, pp. 30-38.
- Mitchel, James O., "The Effect of Intentions, Tenure, Personal, and Organizational Variables on Managerial Turnover," *Academy of Management Journal*, December 1981, pp. 742-51.
- Muhs, William F., "Worker Participation in the Progressive Era: An Assessment by Harrington Emerson," *Academy of Management Review*, January 1982, pp. 99-102.
- Sims, Henry P., Jr. and Charles C. Manz, "Modeling Influences on Employee Behavior," *Personnel Journal*, January 1982, pp. 58-65.
- Stewart, Rosemary, "A Model for Understanding Managerial Jobs and Behavior," *Academy of Management Review*, January 1982, pp. 7-13.
- Storey, John, *The Challenge to Management Control*. London, England, Business Books, Ltd., 1981, 192 pp., bibliography. \$13, Renouf USA, Brookfield, Vt.
- Truskie, Stanley D., "Getting the Most from Management Development Programs," *Personnel Journal*, January 1982, pp. 66-68.
- Tucker, Harvey J., "Budgeting Strategy: Cross-Sectional Versus Longitudinal Models," *Public Administration Review*, November-December 1981, pp. 644-49.
- Van Raalte, Susan D., "Preparing the Task Force to Get Good Results," *S.A.M. Advanced Management Journal*, Winter 1982, pp. 11-19.

Monetary and fiscal policy

- Carron, Andrew S., *The Plight of the Thrift Institutions*. Washington, The Brookings Institution, 1982, 96 pp. \$10.95, cloth; \$4.95, paper.
- Higgins, Byron, "Should the Federal Reserve Fine Tune Monetary Growth?" *Economic Review*, Federal Reserve Bank of Kansas City, January 1982, pp. 3-16.

Productivity and technological change

Chilton, W. L., *Labor Costs and International Competitiveness in Manufacturing Industry*. New York, Citibank, N.A., Economics Department, 1981, 19 pp.

Howard, Niles, "Piezoelectricity's New Promise," *Dun's Business Month*, February 1982, pp. 91-92.

International Labor Organization, *New Technologies: Their Impact on Employment and the Working Environment*. Washington, International Labor Office, 1982, 174 pp.

Long, Franklin A. and Alexandra Oleson, eds., *Appropriate Technology and Social Values—A Critical Appraisal*. Cambridge, Mass., Ballinger Publishing Co., 1980, 215 pp. \$22.50.

Macarov, David, *Worker Productivity: Myths and Reality*. Beverly Hills, Calif., Sage Publications, Inc., 1982, 223 pp. (Sage Library of Social Research, Vol. 137.) \$20, cloth; \$9.95, paper.

Wages and compensation

Eaton, Jonathan and Harvey S. Rosen, *Agency, Delayed Compensation and the Structure of Executive Remuneration*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 30 pp. (NBER Working Paper Series, 777.) \$1.50.

Ehrenberg, Ronald G. and Paul L. Schumann, *Compensating Wage Differentials for Mandatory Overtime*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 35 pp. (NBER Working Paper Series, 805.) \$1.50.

— *Long Hours or More Jobs? An Investigation of Amending Hours Legislation to Create Employment*. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1982, 177 pp. \$22.50, cloth; \$12.95, paper.

Lazear, Edward P. and Sherwin Rosen, *Rank-Order Tournaments as Optimum Labor Contracts*. Reprinted from the *Journal of Political Economy*, October 1981, pp. 841-64. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981. (NBER Reprint Series, 230.)

Mincer, Jacob, *The Economics of Wage Floors*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 19 pp. (NBER Working Paper Series, 804.) \$1.50.

Rutgers, The State University of New Jersey, *Workers' Compensation Law of 1980: One Year's Experience. (Proceedings of an Institute of Management and Labor Relations Conference Held on May 13, 1981.)* New Brunswick, N.J., Rutgers—The State University of New Jersey, Institute of Management and Labor Relations, 1982, 28 pp. \$3, paper.

U.S. Bureau of Labor Statistics, *Area Wage Surveys: Los Angeles-Long Beach, California, Metropolitan Area, October 1981* (Bulletin 3010-66, 55 pp., Stock No. 029-001-90113-5, \$4.25); *Denver-Boulder, Colorado, Metropolitan Area, December 1981* (Bulletin 3010-67, 41 pp., Stock No. 029-001-90114-3, \$3). Available from the Superintendent of Documents, Washington 20402, GPO Bookstores, or BLS regional offices.

Weiner, Nan, "The Japanese Wage System," *Compensation Review*, First Quarter 1982, pp. 46-56.

Welfare programs and social insurance

Bartlett, Dwight K. III and Joseph A. Applebaum, "Economic Forecasting: Effect of Errors on OASDI Fund Ratios," *Social Security Bulletin*, January 1982, pp. 9-14.

Myers, Robert J., "Investment Policies and Procedures of the Social Security Trust Funds," *Social Security Bulletin*, January 1982, pp. 3-8.

Snipp, C. Matthew and Gene F. Summers, "The Welfare State in the Community: A General Model and Empirical Assessment," *Rural Sociology*, Winter 1981, pp. 582-607.

U.S. Bureau of the Census, *Characteristics of the Population Below the Poverty Level: 1979*. Washington, U.S. Department of Commerce, Bureau of the Census, 1981, 247 pp. (Current Population Reports, Consumer Income Series P-60, No. 130.) \$7.50, Superintendent of Documents, Washington 20402.

Worker training

Bullock, Paul, *CETA at the Crossroads: Employment Policy and Politics*. Los Angeles, University of California, Institute of Industrial Relations, 1981, 270 pp. (Monograph and Research Series, 29.)

Freeman, Richard B., *Career Patterns of College Graduates in a Declining Job Market*. Cambridge, Mass., National Bureau of Economic Research, Inc., 1981, 29 pp. (NBER Working Paper Series, 750.) \$1.50.

Great Britain, Department of Employment, *Early Careers of 1970 Graduates*. By Peter Williamson. London, Department of Employment, Unit for Manpower Studies, 1981, 151 pp. (Research Paper 26.)

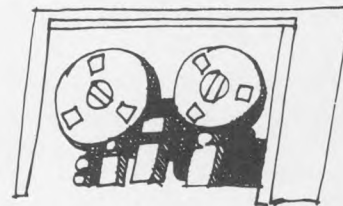
Haveman, Robert H. and John L. Palmer, eds., *Jobs for Disadvantaged Workers: The Economics of Employment Subsidies*. Washington, The Brookings Institution, 1982, 336 pp. \$28.95, cloth, \$11.95, paper.

Sawhney, Pawan K., Robert H. Jantzen, Irwin L. Herrstadt, "The Differential Impact of CETA Training," *Industrial and Labor Relations Review*, January 1982, pp. 243-51.

Schreiber, Carol Tropp, *Men and Women in Transitional Occupations*. Cambridge, Mass., MIT Press, 1981, 244 pp., bibliography. \$6.95, paper.

Taggart, Robert, *A Fisherman's Guide: An Assessment of Training and Remediation Strategies*. Kalamazoo, Mich., The W. E. Upjohn Institute for Employment Research, 1981, 373 pp. □

Current Labor Statistics



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NOTE

Because of the deletion of former tables 12, 13, and 20, the succeeding tables have been renumbered.

NOTES ON CURRENT LABOR STATISTICS

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

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

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "seasonally adjusted." Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted labor force data in tables 2-7 were revised in the March 1982 issue of the *Review* to reflect experience through 1981. The original estimates also were revised to 1970 to reflect 1980 census population controls.

Beginning in January 1980, the BLS introduced two major modifications in the seasonal adjustment methodology for labor force data. First, the data are being seasonally adjusted with a new procedure called X-11/ARIMA, which was developed at Statistics Canada as an extension of the standard X-11 method. A detailed description of the procedure appears in *The X-11 ARIMA Seasonal Adjustment Method* by Estela Bee Dagum (Statistics Canada Catalogue No. 12-564E, February 1980). The second change is that seasonal factors are now being calculated for use during the first 6 months of the year, rather than for the entire year, and then are calculated at mid-year for the July-December period. Revisions of historical data continue to be made only at the end of each calendar year.

Annual revision of the seasonally adjusted payroll data in tables 11, 14, and 16 begins with the August 1980 issue using the X-11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 30 and 31 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are

published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of \$3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is \$2 ($\$3/150 \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 *BLS Handbook of Labor Statistics*, Bulletin 2070, provides more detailed data and greater historical coverage for most of the statistical series presented in the *Monthly Labor Review*. More information from the household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau. Historically, comparable information from the establishment survey is published in two comprehensive data books—*Employment and Earnings, United States* and *Employment and Earnings, States and Areas, and their annual supplements*. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*.

Symbols

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

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

n.e.c. = not elsewhere classified.

Schedule of release dates for major BLS statistical series

Series	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	May 7	April	June 4	May	1-11
Producer Price Index	May 14	April	June 11	May	23-27
Consumer Price Index	May 21	April	June 22	May	19-22
Real earnings	May 21	April	June 22	May	12-17
Productivity and costs:					
Nonfinancial corporations	May 26	1st quarter	.....	.....	28-31

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 60,000 households beginning in May 1981, selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons are (1) those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population; the **total labor force** includes military personnel. Persons **not in the labor force** are

those not classified as employed or unemployed; this group includes persons retired, those engaged in their own housework, those not working while attending school, those unable to work because of 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. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings*.

Data in tables 2-7 are seasonally adjusted, based on the seasonal experience through December 1981.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950-81

[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	58,918	7,160	51,758	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,170	6,450	55,722	2,852	4.4	44,660
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,240	61.1	80,734	77,902	3,606	74,296	2,832	3.5	53,602
1970	140,272	85,959	61.3	82,771	78,678	3,463	75,215	4,093	4.9	54,315
1971	143,033	87,198	61.0	84,382	79,367	3,394	75,972	5,016	5.9	55,834
1972	146,574	89,484	61.1	87,034	82,153	3,484	78,669	4,882	5.6	57,091
1973	149,423	91,756	61.4	89,429	85,064	3,470	81,594	4,365	4.9	57,667
1974	152,349	94,179	61.8	91,949	86,794	3,515	83,279	5,156	5.6	58,171
1975	155,333	95,955	61.8	93,775	85,846	3,408	82,438	7,929	8.5	59,377
1976	158,294	98,302	62.1	96,158	88,752	3,331	85,421	7,406	7.7	59,991
1977	161,166	101,142	62.8	99,009	92,017	3,283	88,734	6,991	7.1	60,025
1978	164,027	104,368	63.6	102,251	96,048	3,387	92,661	6,202	6.1	58,659
1979	166,951	107,050	64.1	104,962	98,824	3,347	95,477	6,137	5.8	59,900
1980	169,848	109,042	64.2	106,940	99,303	3,364	95,938	7,637	7.1	60,806
1981	172,272	110,812	64.3	108,670	100,397	3,368	97,030	8,273	7.6	61,460

Note: Data for 1970-81 have been revised to reflect 1980 census population controls.

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

[Numbers in thousands]

Employment status	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
TOTAL															
Total noninstitutional population ¹	169,848	172,272	171,581	171,770	171,956	172,172	172,385	172,559	172,758	172,966	173,155	173,330	173,495	173,657	173,843
Total labor force	109,042	110,812	110,492	110,906	111,420	110,565	110,827	110,978	110,659	111,170	111,430	111,348	111,038	111,333	111,521
Civilian noninstitutional population ¹	167,745	170,130	169,453	169,641	169,829	170,042	170,246	170,399	170,593	170,809	170,996	171,166	171,335	171,489	171,667
Civilian labor force	106,940	108,670	108,364	108,777	109,293	108,434	108,688	108,818	108,494	109,012	109,272	109,184	108,879	109,165	109,346
Employed	99,303	100,397	100,406	100,878	101,045	100,430	100,864	100,840	100,258	100,343	100,172	99,613	99,581	99,590	99,492
Agriculture	3,364	3,368	3,343	3,470	3,405	3,348	3,342	3,404	3,358	3,378	3,372	3,209	3,411	3,373	3,349
Nonagricultural industries	95,938	97,030	97,063	97,408	97,640	97,082	97,522	97,436	96,900	96,965	96,800	96,404	96,170	96,217	96,144
Unemployed	7,637	8,273	7,958	7,899	8,248	8,004	7,824	7,978	8,236	8,669	9,100	9,571	9,298	9,575	9,854
Unemployment rate	7.1	7.6	7.3	7.3	7.5	7.4	7.2	7.3	7.6	8.0	8.3	8.8	8.5	8.8	9.0
Not in labor force	60,806	61,460	61,089	60,864	60,536	61,608	61,558	61,581	62,099	61,797	61,724	61,982	62,456	62,324	62,321
Men, 20 years and over															
Civilian noninstitutional population ¹	71,138	72,419	72,037	72,142	72,251	72,359	72,472	72,559	72,670	72,795	72,921	73,020	73,120	73,209	73,287
Civilian labor force	56,455	57,197	57,028	57,157	57,479	57,094	57,172	57,250	57,262	57,355	57,459	57,665	57,368	57,448	57,554
Employed	53,101	53,582	53,618	53,820	53,884	53,597	53,874	53,791	53,693	53,504	53,354	53,122	53,047	53,097	53,006
Agriculture	2,396	2,384	2,352	2,419	2,390	2,379	2,383	2,422	2,383	2,413	2,382	2,311	2,390	2,386	2,377
Nonagricultural industries	50,706	51,199	51,266	51,401	51,494	51,218	51,491	51,369	51,310	51,091	50,972	50,811	50,657	50,711	50,629
Unemployed	3,353	3,615	3,410	3,337	3,595	3,497	3,298	3,459	3,569	3,851	4,105	4,543	4,322	4,351	4,548
Unemployment rate	5.9	6.3	6.0	5.8	6.3	6.1	5.8	6.0	6.2	6.7	7.1	7.9	7.5	7.6	7.9
Not in labor force	14,683	15,222	15,009	14,985	14,772	15,265	15,300	15,309	15,408	15,440	15,462	15,355	15,752	15,761	15,733
Women, 20 years and over															
Civilian noninstitutional population ¹	80,065	81,497	81,076	81,193	81,308	81,434	81,561	81,671	81,792	81,920	82,038	82,151	82,260	82,367	82,478
Civilian labor force	41,106	42,485	42,152	42,332	42,608	42,581	42,682	42,666	42,344	42,831	42,987	42,888	42,868	43,031	43,243
Employed	38,492	39,590	39,365	39,536	39,737	39,757	39,810	39,841	39,426	39,814	39,878	39,713	39,764	39,744	39,807
Agriculture	584	604	610	609	605	585	590	609	608	596	635	572	649	628	636
Nonagricultural industries	37,907	38,986	38,755	38,927	39,132	39,172	39,220	39,232	38,818	39,218	39,243	39,141	39,115	39,116	39,172
Unemployed	2,615	2,895	2,787	2,796	2,871	2,824	2,872	2,825	2,918	3,017	3,109	3,175	3,104	3,286	3,435
Unemployment rate	6.4	6.8	6.6	6.6	6.7	6.6	6.7	6.6	6.9	7.0	7.2	7.4	7.2	7.6	7.9
Not in labor force	38,959	39,012	38,924	38,861	38,700	38,853	38,879	39,005	39,448	39,089	39,051	39,263	39,392	39,336	39,235
Both sexes, 16 to 19 years															
Civilian noninstitutional population ¹	16,543	16,214	16,341	16,305	16,270	16,249	16,213	16,169	16,131	16,093	16,037	15,995	15,955	15,913	15,902
Civilian labor force	9,378	9,898	9,184	9,288	9,206	8,759	8,834	8,902	8,888	8,826	8,826	8,631	8,643	8,686	8,549
Employed	7,710	7,225	7,423	7,522	7,424	7,076	7,180	7,208	7,139	7,025	6,940	6,778	6,771	6,748	6,679
Agriculture	385	380	381	442	410	384	369	373	367	369	355	326	373	359	336
Nonagricultural industries	7,325	6,845	7,042	7,080	7,014	6,692	6,811	6,835	6,772	6,656	6,585	6,452	6,398	6,389	6,343
Unemployed	1,669	1,763	1,761	1,766	1,782	1,683	1,654	1,694	1,749	1,801	1,886	1,853	1,872	1,938	1,870
Unemployment rate	17.8	19.6	19.2	19.0	19.4	19.2	18.7	19.0	19.7	20.4	21.4	21.5	21.7	22.3	21.9
Not in labor force	7,165	7,226	7,157	7,017	7,064	7,490	7,379	7,267	7,243	7,267	7,211	7,364	7,312	7,227	7,353
White															
Civilian noninstitutional population ¹	146,122	147,908	147,335	147,539	147,670	147,804	147,976	148,144	148,370	148,562	148,631	148,755	148,842	148,855	149,132
Civilian labor force	93,600	95,052	94,756	95,199	95,666	94,887	95,126	95,163	94,884	95,365	95,535	95,329	95,120	95,333	95,508
Employed	87,715	88,709	88,653	89,080	89,237	88,799	89,170	89,221	88,628	88,734	88,498	88,010	87,955	87,990	87,956
Unemployed	5,884	6,343	6,103	6,119	6,429	6,088	5,956	5,942	6,256	6,631	7,037	7,319	7,165	7,344	7,552
Unemployment rate	6.3	6.7	6.4	6.4	6.7	6.4	6.3	6.2	6.6	7.0	7.4	7.7	7.5	7.7	7.9
Not in labor force	52,522	52,856	52,579	52,340	52,004	52,917	52,850	52,981	53,486	53,197	53,096	53,426	53,722	53,522	53,624
Black															
Civilian noninstitutional population ¹	17,824	18,219	18,105	18,137	18,170	18,206	18,239	18,266	18,297	18,333	18,362	18,392	18,423	18,450	18,480
Civilian labor force	10,865	11,086	11,036	11,126	11,126	11,033	10,971	11,069	11,134	11,188	11,207	11,226	11,188	11,205	11,217
Employed	9,313	9,355	9,383	9,488	9,460	9,310	9,338	9,267	9,319	9,313	9,321	9,279	9,314	9,265	9,197
Unemployed	1,553	1,731	1,653	1,638	1,666	1,723	1,633	1,802	1,815	1,875	1,886	1,947	1,874	1,939	2,020
Unemployment rate	14.3	15.6	15.0	14.7	15.0	15.6	14.9	16.3	16.3	16.8	16.8	17.3	16.8	17.3	18.0
Not in labor force	6,959	7,133	7,069	7,011	7,044	7,173	7,268	7,197	7,163	7,145	7,155	7,166	7,235	7,245	7,263

¹As in table 1, population figures are not seasonally adjusted.

1970-81 have been revised. Also, seasonally adjusted data have been revised based on the seasonal experience through December 1981.

NOTE: Effective with January 1982 data, population counts derived from the 1980 census are incorporated into the estimation procedures used in the Current Population Survey. Data for

3. Selected employment indicators, seasonally adjusted

[Numbers in thousands]

Selected categories	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
CHARACTERISTIC															
Total employed, 16 years and over	99,303	100,397	100,406	100,878	101,045	100,430	100,864	100,840	100,258	100,343	100,172	99,613	99,581	99,590	99,492
Men	57,186	57,397	57,531	57,792	57,793	57,279	57,640	57,551	57,471	57,266	57,051	56,725	56,629	56,658	56,472
Women	42,117	43,000	42,875	43,086	43,252	43,151	43,224	43,289	42,787	43,077	43,121	42,888	42,952	42,932	43,020
Married men, spouse present	39,004	38,882	39,036	39,186	39,120	38,930	38,961	38,961	38,855	38,746	38,553	38,342	38,234	38,255	38,181
Married women, spouse present	23,532	23,915	23,920	23,979	24,192	24,106	24,159	24,043	23,626	23,874	23,820	23,691	23,744	23,727	23,900
OCCUPATION															
White-collar workers	51,882	52,949	52,860	52,855	53,016	52,957	52,907	53,141	52,908	53,199	53,086	53,084	52,836	52,841	52,763
Professional and technical	15,968	16,420	16,219	16,178	16,093	16,410	16,364	16,621	16,598	16,681	16,657	16,774	16,803	16,612	16,659
Managers and administrators, except farm	11,138	11,540	11,725	11,616	11,488	11,411	11,578	11,460	11,533	11,616	11,461	11,424	11,091	11,253	11,311
Salesworkers	6,303	6,425	6,372	6,290	6,562	6,513	6,373	6,490	6,441	6,400	6,418	6,450	6,520	6,544	6,637
Clerical workers	18,473	18,564	18,544	18,771	18,873	18,623	18,592	18,570	18,336	18,502	18,550	18,436	18,423	18,432	18,155
Blue-collar workers	31,452	31,261	31,288	31,685	31,796	31,538	31,580	31,611	31,266	30,953	30,683	30,344	30,203	30,309	30,416
Craft and kindred workers	12,787	12,662	12,826	12,825	12,911	12,749	12,787	12,724	12,514	12,446	12,411	12,446	12,370	12,454	12,511
Operatives, except transport	10,565	10,540	10,464	10,691	10,716	10,703	10,719	10,658	10,524	10,410	10,220	10,169	9,966	9,955	9,860
Transport equipment operatives	3,531	3,476	3,447	3,483	3,466	3,493	3,526	3,530	3,506	3,580	3,438	3,368	3,415	3,503	3,397
Nonfarm laborers	4,567	4,583	4,551	4,686	4,703	4,593	4,548	4,699	4,722	4,517	4,614	4,361	4,451	4,397	4,648
Service workers	13,228	13,438	13,478	13,468	13,470	13,214	13,526	13,282	13,391	13,525	13,670	13,639	13,709	13,612	13,526
Farmworkers	2,741	2,749	2,730	2,826	2,748	2,710	2,727	2,753	2,743	2,770	2,802	2,660	2,817	2,787	2,710
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,425	1,464	1,391	1,560	1,499	1,437	1,495	1,501	1,461	1,502	1,436	1,352	1,377	1,426	1,416
Self-employed workers	1,642	1,638	1,638	1,661	1,654	1,664	1,593	1,638	1,643	1,631	1,641	1,602	1,674	1,596	1,644
Unpaid family workers	297	266	299	286	235	263	244	256	256	261	321	228	380	359	277
Nonagricultural industries:															
Wage and salary workers	88,525	89,543	89,592	89,913	90,402	89,508	89,971	89,995	89,376	89,460	89,238	88,991	88,759	88,586	88,526
Government	15,912	15,689	15,930	15,885	15,776	15,707	15,637	15,526	15,475	15,491	15,397	15,585	15,578	15,527	15,492
Private industries	72,612	73,853	73,662	74,028	74,626	73,801	74,334	74,469	73,901	73,969	73,841	73,406	73,181	73,059	73,034
Private households	1,192	1,208	1,242	1,249	1,192	1,177	1,216	1,259	1,102	1,162	1,204	1,291	1,248	1,161	1,225
Other industries	71,420	72,645	72,420	72,779	73,434	72,624	73,118	73,210	72,799	72,807	72,637	72,115	71,932	71,898	71,809
Self-employed workers	7,000	7,097	7,065	7,150	6,966	7,128	7,071	7,103	7,217	7,152	7,141	7,057	6,971	7,055	7,126
Unpaid family workers	413	390	374	325	356	376	389	387	399	451	425	410	410	408	434
PERSONS AT WORK¹															
Nonagricultural industries	90,209	91,377	91,405	91,094	91,745	91,500	92,532	91,569	90,878	91,384	91,323	90,922	90,125	90,892	90,548
Full-time schedules	73,590	74,339	74,453	74,259	74,871	74,693	75,620	74,467	73,794	73,886	73,915	73,360	72,803	73,028	72,649
Part time for economic reasons	4,064	4,499	4,290	4,200	4,264	4,033	4,374	4,350	4,656	5,009	5,026	5,288	5,071	5,563	5,717
Usually work full time	1,714	1,738	1,660	1,593	1,657	1,465	1,680	1,729	1,759	2,006	1,945	2,121	1,783	2,193	2,237
Usually work part time	2,350	2,761	2,630	2,607	2,607	2,568	2,694	2,621	2,897	3,003	3,081	3,167	3,287	3,370	3,480
Part time for noneconomic reasons	12,555	12,539	12,662	12,635	12,610	12,774	12,538	12,752	12,428	12,489	12,382	12,274	12,251	12,300	12,183

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

NOTE: Effective with January 1982 data, population counts derived from the 1980

census are incorporated into the estimation procedures used in the Current Population Survey. Data for 1970-81 have been revised. Also, seasonally adjusted data have been revised based on the seasonal experience through December 1981.
c=corrected.

4. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
CHARACTERISTIC															
Total, 16 years and over	7.1	7.6	7.3	7.3	7.5	7.4	7.2	7.3	7.6	8.0	8.3	8.8	8.5	8.8	9.0
Men, 20 years and over	5.9	6.3	6.0	5.8	6.3	6.1	5.8	6.0	6.2	6.7	7.1	7.9	7.5	7.6	7.9
Women, 20 years and over	6.4	6.8	6.6	6.6	6.7	6.6	6.7	6.6	6.9	7.0	7.2	7.4	7.2	7.6	7.9
Both sexes, 16 to 19 years	17.8	19.6	19.2	19.0	19.4	19.2	18.7	19.0	19.7	20.4	21.4	21.5	21.7	22.3	21.9
White, total	6.3	6.7	6.4	6.4	6.7	6.4	6.3	6.2	6.6	7.0	7.4	7.7	7.5	7.7	7.9
Men, 20 years and over	5.3	5.6	5.3	5.2	5.6	5.3	5.0	5.2	5.5	5.9	6.4	6.9	6.6	6.7	7.0
Women, 20 years and over	5.6	5.9	5.7	5.7	5.9	5.7	5.8	5.5	5.9	6.1	6.3	6.4	6.3	6.6	6.9
Both sexes, 16 to 19 years	15.5	17.3	16.8	17.0	17.5	16.8	16.4	16.1	17.2	17.7	19.0	19.0	19.6	20.0	19.0
Black, total	14.3	15.6	15.0	14.7	15.0	15.6	14.9	16.3	16.3	16.8	16.8	17.3	16.8	17.3	18.0
Men, 20 years and over	12.4	13.5	12.1	12.1	13.0	13.7	12.7	13.6	14.5	14.7	15.5	16.5	16.3	16.0	16.0
Women, 20 years and over	11.9	13.4	13.6	12.9	13.1	13.3	13.1	13.8	14.0	13.9	13.6	14.1	13.3	14.5	15.4
Both sexes, 16 to 19 years	38.5	41.4	39.7	40.2	36.9	40.9	40.0	49.0	40.8	45.6	44.1	42.2	41.2	42.3	46.0
Married men, spouse present	4.2	4.3	4.1	3.8	4.0	4.2	3.9	4.0	4.4	4.8	5.2	5.7	5.3	5.3	5.5
Married women, spouse present	5.8	6.0	5.9	5.9	5.8	5.7	5.7	5.5	6.0	6.1	6.5	6.6	6.2	7.0	7.1
Women who maintain families	9.2	10.4	9.6	9.9	10.4	10.7	11.2	10.1	10.7	10.6	10.8	10.5	10.4	10.2	10.6
Full-time workers	6.9	7.3	7.1	6.9	7.1	7.1	6.8	6.9	7.3	7.7	8.1	8.7	8.4	8.5	8.9
Part-time workers	8.8	9.4	9.1	9.2	9.6	9.2	9.3	9.6	9.6	9.5	10.2	9.2	9.6	10.8	10.0
Unemployed 15 weeks and over	1.7	2.1	2.1	2.0	2.0	2.2	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.5	2.7
Labor force time lost ¹	7.9	8.5	8.2	8.2	8.6	7.9	7.9	7.9	8.5	9.1	9.5	10.1	10.0	9.8	10.4
OCCUPATION															
White-collar workers	3.7	4.0	3.9	4.0	4.0	3.9	4.0	3.9	4.1	4.1	4.2	4.5	4.2	4.6	4.8
Professional and technical	2.5	2.8	2.7	3.1	2.8	2.8	2.8	2.5	2.8	2.6	2.7	3.4	2.9	3.1	3.2
Managers and administrators, except farm	2.4	2.7	2.5	2.4	2.6	2.7	2.6	2.7	2.7	2.8	3.0	3.1	2.7	3.1	3.0
Salesworkers	4.4	4.6	4.1	4.2	4.6	4.3	4.9	4.7	5.0	4.9	5.0	4.9	4.5	4.8	5.8
Clerical workers	5.3	5.7	5.7	5.6	5.6	5.4	5.7	5.7	5.8	6.0	6.0	6.2	6.3	6.7	6.9
Blue-collar workers	10.0	10.3	10.0	9.7	9.9	9.8	9.5	9.5	10.2	10.9	11.8	12.7	12.5	12.5	12.9
Craft and kindred workers	6.6	7.5	7.1	6.8	7.2	7.1	6.9	7.0	7.7	8.3	8.5	9.3	9.0	8.4	9.1
Operatives, except transport	12.2	12.2	11.7	11.6	11.8	11.1	11.1	11.1	11.6	12.8	14.1	15.5	15.4	15.4	15.9
Transport equipment operatives	8.8	8.7	9.1	8.1	8.2	8.1	7.3	8.0	8.7	8.0	10.4	10.5	10.2	10.3	10.4
Nonfarm laborers	14.6	14.7	14.2	14.0	13.5	14.7	14.4	13.2	14.6	15.6	16.0	16.9	16.9	17.9	17.9
Service workers	7.9	8.9	8.3	8.5	9.4	8.9	8.0	8.9	9.0	9.3	9.7	9.6	9.2	9.8	10.2
Farmworkers	4.6	5.3	5.2	3.9	5.2	6.2	4.8	5.4	4.0	6.2	6.2	6.4	6.9	4.9	5.4
INDUSTRY															
Nonagricultural private wage and salary workers ²	7.4	7.7	7.5	7.3	7.7	7.4	7.2	7.3	7.7	8.1	8.4	9.1	8.8	9.0	9.5
Construction	14.1	15.6	14.7	14.5	15.7	16.1	15.2	16.2	16.3	17.6	17.8	18.1	18.7	18.1	17.9
Manufacturing	8.5	8.3	8.1	7.6	7.8	7.4	7.3	7.0	7.9	8.6	9.4	11.0	10.4	10.6	10.8
Durable goods	8.9	8.2	8.0	7.5	7.4	7.1	7.1	6.5	7.7	8.6	9.5	11.8	11.0	11.3	10.8
Nondurable goods	7.9	8.4	8.3	7.8	8.6	7.9	7.6	7.9	8.3	8.6	9.3	9.6	9.5	9.5	10.8
Transportation and public utilities	4.9	5.2	6.1	5.5	5.7	4.9	4.1	4.8	4.2	4.8	5.5	6.0	6.4	5.9	5.6
Wholesale and retail trade	7.4	8.1	7.6	7.5	8.3	7.7	7.9	7.9	8.5	8.4	8.6	8.9	8.7	9.0	10.3
Finance and service industries	5.3	5.9	5.6	5.8	5.8	5.8	5.7	5.7	6.0	6.2	6.1	6.4	5.9	6.5	6.9
Government workers	4.1	4.7	4.6	4.7	4.7	4.6	4.6	4.5	4.7	4.7	5.2	5.0	4.8	5.2	4.9
Agricultural wage and salary workers	11.0	12.1	12.1	9.4	11.0	13.3	10.7	12.0	11.0	13.4	14.1	14.8	16.2	12.8	14.0

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

² Includes mining, not shown separately.

NOTE: Effective with January 1982 data, population counts derived from the 1980 census are incorporated into the estimation procedures used in the Current Population Survey. Data for 1970-81 have been revised. Also, seasonally adjusted data have been revised based on the seasonal experience through December 1981.

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

Sex and age	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Total, 16 years and over	7.1	7.6	7.3	7.3	7.5	7.4	7.2	7.3	7.6	8.0	8.3	8.8	8.5	8.8	9.0
16 to 19 years	17.8	19.6	19.2	19.0	19.4	19.2	18.7	19.0	19.7	20.4	21.4	21.5	21.7	22.3	21.9
16 to 17 years	20.0	21.4	21.4	21.6	21.3	22.6	19.8	20.8	21.4	21.5	22.6	21.9	21.9	22.7	22.7
18 to 19 years	16.2	18.4	17.6	17.2	17.7	17.5	17.8	17.6	18.5	20.0	20.5	21.2	21.3	22.0	21.3
20 to 24 years	11.5	12.3	11.8	12.0	12.6	12.1	11.5	12.1	12.3	12.7	13.0	13.5	13.5	14.1	14.2
25 years and over	5.1	5.4	5.2	5.1	5.2	5.3	5.2	5.2	5.4	5.7	6.0	6.5	6.3	6.4	6.8
25 to 54 years	5.5	5.8	5.6	5.4	5.6	5.6	5.5	5.5	5.8	6.2	6.5	6.9	6.7	6.8	7.3
55 years and over	3.3	3.6	3.6	3.4	3.4	3.5	3.5	3.5	3.8	3.8	3.8	4.1	4.2	4.3	4.6
Men, 16 years and over	6.9	7.4	7.1	6.9	7.3	7.2	6.7	7.1	7.3	7.7	8.3	9.0	8.6	8.7	9.0
16 to 19 years	18.3	20.1	19.8	19.5	20.0	20.0	18.8	19.8	19.9	20.1	21.8	22.3	22.1	22.5	23.5
16 to 17 years	20.4	22.0	21.7	22.5	22.3	24.0	19.9	21.5	21.5	21.1	22.7	22.6	23.0	23.0	24.3
18 to 19 years	16.7	18.8	18.5	17.4	18.0	18.2	17.9	18.3	18.7	19.3	21.0	22.2	21.4	22.1	22.9
20 to 24 years	12.5	13.2	13.0	13.0	13.8	12.9	11.6	12.9	13.1	13.8	14.4	14.8	14.9	15.4	15.7
25 years and over	4.8	5.1	4.8	4.6	4.7	5.0	4.7	4.9	5.0	5.5	5.8	6.5	6.3	6.3	6.6
25 to 54 years	5.1	5.5	5.1	4.9	5.1	5.2	5.0	5.2	5.5	5.9	6.3	6.9	6.7	6.7	7.1
55 years and over	3.3	3.5	3.3	3.2	3.4	3.4	3.4	3.4	3.5	3.7	3.7	4.4	4.3	4.2	4.8
Women, 16 years and over	7.4	7.9	7.7	7.7	7.8	7.7	7.8	7.7	8.0	8.2	8.4	8.5	8.4	8.9	9.0
16 to 19 years	17.2	19.0	18.5	18.4	18.7	18.4	18.6	18.2	19.5	20.7	20.9	20.5	21.2	22.1	20.1
16 to 17 years	19.6	20.7	21.2	20.5	20.2	21.1	19.7	20.0	21.2	21.9	22.5	21.1	20.6	22.5	20.8
18 to 19 years	15.6	17.9	16.6	17.1	17.4	16.8	17.7	16.9	18.3	20.6	19.9	20.0	21.1	21.9	19.6
20 to 24 years	10.4	11.2	10.5	10.9	11.2	11.2	11.3	11.1	11.4	11.5	11.3	12.0	11.9	12.7	12.6
25 years and over	5.5	5.9	5.8	5.7	5.8	5.7	5.8	5.6	6.0	6.1	6.4	6.4	6.3	6.5	7.0
25 to 54 years	6.0	6.3	6.2	6.1	6.4	6.1	6.1	6.0	6.3	6.5	6.8	6.9	6.7	7.0	7.6
55 years and over	3.2	3.8	4.2	3.7	3.4	3.5	3.7	3.7	4.3	4.0	3.8	3.7	4.1	4.3	4.3

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

[Numbers in thousands]

Reason for unemployment	1981											1982		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
NUMBER OF UNEMPLOYED														
Lost last job	3,989	3,958	4,032	4,173	3,867	4,106	4,426	4,573	4,905	5,343	5,205	5,153	5,622	
On layoff	1,323	1,303	1,357	1,302	1,225	1,276	1,452	1,631	1,826	2,042	1,860	1,740	1,828	
Other job losers	2,666	2,655	2,675	2,871	2,642	2,830	2,974	2,942	3,079	3,301	3,345	3,413	3,794	
Left last job	901	903	1,004	896	926	879	921	976	916	923	835	964	885	
Reentered labor force	2,069	2,044	2,106	2,039	2,078	2,034	2,058	2,178	2,339	2,244	2,079	2,277	2,249	
Seeking first job	988	988	956	973	940	971	977	1,002	996	1,021	1,055	1,100	1,044	
PERCENT DISTRIBUTION														
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Job losers	50.2	50.1	49.8	51.6	49.5	51.4	52.8	52.4	53.6	56.1	56.7	54.3	57.4	
On layoff	16.6	16.5	16.8	16.1	15.7	16.0	17.3	18.7	19.9	21.4	20.3	18.3	18.7	
Other job losers	33.5	33.6	33.0	35.5	33.8	35.4	35.5	33.7	33.6	34.6	36.5	35.9	38.7	
Job leavers	11.3	11.4	12.4	11.1	11.9	11.0	11.2	11.0	10.9	9.7	9.1	10.2	9.0	
Reentrants	26.0	25.9	26.0	25.2	26.6	25.5	24.6	25.0	25.5	23.5	22.7	24.0	22.9	
New entrants	12.4	12.5	11.8	12.0	12.0	12.2	11.7	11.5	10.9	10.7	11.5	11.6	10.7	
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE														
Job losers	3.7	3.7	3.7	3.8	3.6	3.8	4.1	4.2	4.5	4.9	4.8	4.7	5.1	
Job leavers	.8	.8	.9	.8	.9	.8	.8	.9	.8	.8	.8	.9	.8	
Reentrants	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	1.9	2.1	2.1	
New entrants	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	1.0	1.0	1.0	

7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Less than 5 weeks	3,295	3,449	3,277	3,189	3,378	3,303	3,323	3,326	3,529	3,707	3,852	4,037	3,852	3,789	3,825
5 to 14 weeks	2,470	2,539	2,408	2,472	2,606	2,423	2,312	2,469	2,585	2,686	2,882	3,016	3,068	3,052	3,078
15 weeks and over	1,871	2,285	2,269	2,187	2,231	2,363	2,170	2,248	2,292	2,364	2,372	2,399	2,724	2,954	
15 to 26 weeks	1,052	1,122	1,057	1,048	1,061	1,227	1,096	1,078	1,146	1,166	1,229	1,189	1,210	1,445	1,605
27 weeks and over	820	1,162	1,212	1,139	1,170	1,136	1,074	1,139	1,102	1,126	1,135	1,183	1,190	1,278	1,349
Average (mean) duration, in weeks	11.9	13.7	13.9	13.7	13.3	14.3	14.1	14.3	13.7	13.6	13.1	12.8	13.5	14.1	13.9

NOTE: Effective with January 1982 data, population counts derived from the 1980 census are incorporated into the estimation procedures used in the Current Population Survey. Data for 1970-81 have been revised. Also, seasonally adjusted data have been revised based on the seasonal experience through December 1981.

EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by 166,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

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

Production workers in manufacturing include blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 12-17 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities; in wholesale and retail trade; in finance, insurance, and real estate; and in services industries. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special

payments. **Real earnings** are earnings adjusted to eliminate the effects of price change, using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries.

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

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of June 1981 data, published in the August 1981 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Complete comparable historical unadjusted and seasonally adjusted data are published in a Supplement to Employment and Earnings (unadjusted data from April 1977 through March 1981 and seasonally adjusted data from January 1974 through March 1981) and in *Employment and Earnings, United States, 1909-78*, BLS Bulletin 1312-11 (for prior periods).

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9-20. See also *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976).

8. Employment by industry, selected years, 1950-81

[Nonagricultural payroll data, in thousands]

Year	Total	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
											Total	Federal	State and local
1950	45,197	901	2,364	15,241	4,034	9,386	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1955	50,641	792	2,839	16,882	4,141	10,535	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1960 ¹	54,189	712	2,926	16,796	4,004	11,391	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1964	58,283	634	3,097	17,274	3,951	12,160	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	60,765	632	3,232	18,062	4,036	12,716	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	63,901	627	3,317	19,214	4,158	13,245	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	65,803	613	3,248	19,447	4,268	13,606	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	67,897	606	3,350	19,781	4,318	14,099	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	70,384	619	3,575	20,167	4,442	14,705	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	70,880	623	3,588	19,367	4,515	15,040	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	71,214	609	3,704	18,623	4,476	15,352	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	73,675	628	3,889	19,151	4,541	15,949	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	76,790	642	4,097	20,154	4,656	16,607	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	78,265	697	4,020	20,077	4,725	16,987	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	76,945	752	3,525	18,323	4,542	17,060	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	79,382	779	3,576	18,997	4,582	17,755	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	82,471	813	3,851	19,682	4,713	18,516	4,708	13,808	4,467	15,303	15,127	2,727	12,399
1978	86,697	851	4,229	20,505	4,923	19,542	4,969	14,573	4,724	16,252	15,672	2,753	12,919
1979	89,823	958	4,463	21,040	5,136	20,192	5,204	14,989	4,975	17,112	15,947	2,773	13,147
1980	90,564	1,020	4,399	20,300	5,143	20,386	5,281	15,104	5,168	17,901	16,249	2,866	13,383
1981	91,543	1,104	4,307	20,261	5,151	20,738	5,343	15,395	5,331	18,598	16,054	2,772	13,282

¹Data include Alaska and Hawaii beginning in 1959.

9. Employment by State

[Nonagricultural payroll data, in thousands]

State	Feb. 1981	Jan. 1982	Feb. 1982 ^P	State	Feb. 1981	Jan. 1982	Feb. 1982 ^P
Alabama	1,341.9	1,333.3	1,337.8	Montana	273.1	289.8	290.5
Alaska	162.8	172.1	173.5	Nebraska	611.7	609.4	609.3
Arizona	1,038.0	1,038.9	1,049.5	Nevada	401.3	410.2	412.5
Arkansas	732.7	712.4	717.6	New Hampshire	381.6	388.6	386.5
California	9,891.5	10,005.1	10,004.4	New Jersey	3,015.1	3,028.4	3,027.9
Colorado	1,263.0	1,277.8	1,276.6	New Mexico	467.1	470.9	471.7
Connecticut	1,414.7	1,417.7	1,409.6	New York	7,142.6	7,183.0	7,200.9
Delaware	248.8	244.5	247.9	North Carolina	2,369.6	2,337.7	2,343.2
District of Columbia	610.6	600.3	600.0	North Dakota	238.7	244.6	245.5
Florida	3,703.5	3,805.3	3,812.9	Ohio	4,251.3	4,190.3	4,176.0
Georgia	2,163.4	2,155.9	2,159.9	Oklahoma	1,161.7	1,203.6	1,201.6
Hawaii	404.9	397.9	402.2	Oregon	1,007.0	970.8	972.3
Idaho	323.4	313.7	314.5	Pennsylvania	4,662.2	4,577.2	4,572.9
Illinois	4,691.2	4,623.3	4,605.4	Rhode Island	392.7	388.1	387.2
Indiana	2,100.2	2,024.3	2,022.6	South Carolina	1,186.9	1,172.9	1,176.0
Iowa	1,074.7	1,046.7	1,050.1	South Dakota	230.1	227.9	228.7
Kansas	937.7	936.7	933.8	Tennessee	1,723.9	1,701.4	1,699.3
Kentucky	1,186.4	1,174.7	1,164.1	Texas	6,000.7	6,243.9	6,280.3
Louisiana	1,592.1	1,621.6	1,628.2	Utah	546.3	556.5	556.7
Maine	405.4	400.5	399.7	Vermont	200.5	200.1	200.4
Maryland	1,691.0	1,651.7	1,654.4	Virginia	2,122.4	2,139.9	2,140.6
Massachusetts	2,616.1	(¹)	(¹)	Washington	1,582.0	1,539.9	1,536.7
Michigan	3,351.9	3,214.5	3,218.2	West Virginia	624.7	609.3	608.6
Minnesota	1,728.7	1,710.1	1,709.8	Wisconsin	1,910.1	1,859.4	1,854.6
Mississippi	813.7	806.9	808.6	Wyoming	208.6	209.6	208.2
Missouri	1,925.5	1,922.3	1,919.7	Virgin Islands	36.6	36.1	(¹)

¹ Not available.

10. Employment by industry division and major manufacturing group

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. P	Mar. P
TOTAL	90,564	91,543	90,720	91,337	91,848	92,481	91,600	91,598	92,159	92,424	92,293	91,932	89,799	89,964	90,255
MINING	1,020	1,104	1,084	941	957	1,132	1,155	1,169	1,169	1,164	1,170	1,166	1,149	1,146	1,148
CONSTRUCTION	4,399	4,307	4,048	4,246	4,356	4,477	4,554	4,579	4,516	4,493	4,369	4,155	3,721	3,705	3,780
MANUFACTURING	20,300	20,261	20,160	20,253	20,342	20,531	20,337	20,473	20,600	20,368	20,122	19,804	19,462	19,410	19,352
Production workers	14,223	14,083	14,049	14,127	14,195	14,325	14,108	14,230	14,376	14,147	13,904	13,583	13,276	13,250	13,215
Durable goods	12,181	12,136	12,120	12,197	12,235	12,334	12,198	12,188	12,292	12,163	11,999	11,786	11,589	11,539	11,511
Production workers	8,438	8,316	8,345	8,412	8,438	8,500	8,347	8,323	8,440	8,313	8,153	7,941	7,763	7,734	7,714
Lumber and wood products	690.3	679.3	678.3	686.9	703.4	711.0	708.6	701.5	691.0	664.5	638.7	618.8	602.4	610.6	608.0
Furniture and fixtures	468.8	476.6	472.1	478.0	479.0	480.5	472.0	480.6	484.7	483.5	476.5	471.1	463.2	459.8	456.1
Stone, clay, and glass products	665.6	650.2	639.5	652.6	659.7	671.0	666.7	669.1	664.5	652.8	641.2	619.6	589.1	584.6	588.1
Primary metal industries	1,144.1	1,128.2	1,141.3	1,149.9	1,147.5	1,155.5	1,135.5	1,140.3	1,138.8	1,109.3	1,087.8	1,058.0	1,041.7	1,024.1	1,018.3
Fabricated metal products	1,609.0	1,583.6	1,585.4	1,593.7	1,596.1	1,606.8	1,584.5	1,590.9	1,607.5	1,584.2	1,563.5	1,532.8	1,502.3	1,494.4	1,485.7
Machinery, except electrical	2,497.0	2,512.6	2,504.3	2,506.1	2,508.6	2,531.3	2,517.4	2,511.4	2,540.7	2,528.4	2,512.3	2,495.4	2,465.0	2,458.3	2,442.1
Electric and electronic equipment	2,103.2	2,133.9	2,119.5	2,129.7	2,134.7	2,152.7	2,138.9	2,146.1	2,164.8	2,158.3	2,131.3	2,104.1	2,099.3	2,089.2	2,077.5
Transportation equipment	1,875.3	1,837.8	1,860.4	1,874.3	1,877.4	1,882.7	1,840.3	1,799.6	1,848.3	1,832.3	1,803.0	1,755.7	1,719.4	1,713.8	1,734.5
Instruments and related products	708.5	718.0	712.1	714.4	715.2	723.2	722.1	726.2	723.1	720.0	718.6	718.0	710.8	708.1	704.5
Miscellaneous manufacturing	419.3	415.3	406.7	411.3	413.4	419.5	412.3	421.8	428.7	429.9	426.2	412.2	395.3	396.2	396.5
Nondurable goods	8,118	8,125	8,040	8,056	8,107	8,197	8,139	8,285	8,308	8,205	8,123	8,018	7,873	7,871	7,841
Production workers	5,786	5,766	5,704	5,715	5,757	5,825	5,761	5,907	5,936	5,834	5,751	5,642	5,513	5,516	5,501
Food and kindred products	1,710.8	1,684.1	1,632.5	1,631.0	1,648.1	1,673.4	1,714.8	1,773.2	1,776.1	1,729.0	1,689.2	1,657.3	1,613.3	1,614.5	1,610.1
Tobacco manufactures	69.2	71.1	68.3	66.2	65.2	66.4	66.3	75.6	77.7	77.0	74.9	73.3	72.2	68.7	64.6
Textile mill products	852.7	839.3	840.9	841.6	844.3	851.0	836.5	847.3	850.2	834.3	826.8	816.5	795.5	794.7	782.1
Apparel and other textile products	1,265.8	1,255.8	1,250.2	1,255.2	1,265.9	1,283.9	1,231.1	1,276.8	1,287.3	1,274.1	1,259.5	1,224.4	1,189.8	1,207.3	1,199.3
Paper and allied products	694.0	692.3	688.6	690.9	693.1	701.0	696.4	700.3	702.0	691.4	686.4	681.7	674.9	670.8	667.4
Printing and publishing	1,258.3	1,288.0	1,278.2	1,280.4	1,281.8	1,286.2	1,286.5	1,289.4	1,294.1	1,299.7	1,305.1	1,312.5	1,300.9	1,304.1	1,304.9
Chemicals and allied products	1,107.4	1,107.3	1,106.8	1,106.2	1,110.3	1,121.1	1,116.6	1,112.0	1,110.5	1,104.4	1,100.2	1,096.3	1,088.0	1,087.3	1,089.2
Petroleum and coal products	196.6	210.8	207.0	209.5	212.9	215.4	216.1	215.4	212.7	211.4	210.4	206.8	199.0	197.5	198.6
Rubber and miscellaneous plastics products	730.7	744.4	737.2	743.5	749.2	759.0	747.0	756.8	760.8	748.2	738.6	726.4	720.4	715.5	715.6
Leather and leather products	232.6	232.3	230.4	231.7	235.9	239.1	227.5	238.6	237.0	235.7	232.1	223.1	218.5	210.7	209.6
TRANSPORTATION AND PUBLIC UTILITIES	5,143	5,151	5,095	5,120	5,148	5,195	5,177	5,175	5,222	5,204	5,183	5,153	5,063	5,045	5,047
WHOLESALE AND RETAIL TRADE	20,386	20,738	20,290	20,513	20,672	20,795	20,735	20,811	20,919	20,999	21,148	21,413	20,682	20,529	20,602
WHOLESALE TRADE	5,281	5,343	5,293	5,317	5,335	5,381	5,376	5,386	5,370	5,381	5,379	5,352	5,294	5,283	5,288
RETAIL TRADE	15,104	15,395	14,997	15,196	15,337	15,414	15,359	15,425	15,549	15,618	15,769	16,061	15,388	15,246	15,314
FINANCE, INSURANCE, AND REAL ESTATE	5,168	5,331	5,263	5,295	5,326	5,384	5,408	5,408	5,361	5,349	5,344	5,350	5,329	5,326	5,341
SERVICES	17,901	18,598	18,287	18,512	18,633	18,764	18,847	18,835	18,812	18,826	18,800	18,762	18,506	18,691	18,804
GOVERNMENT	16,249	16,054	16,493	16,457	16,414	16,203	15,387	15,148	15,560	16,021	16,157	16,129	15,887	16,112	16,181
Federal	2,866	2,772	2,769	2,773	2,782	2,825	2,833	2,803	2,735	2,737	2,729	2,729	2,717	2,721	2,724
State and local	13,383	13,282	13,724	13,684	13,632	13,378	12,554	12,345	12,825	13,284	13,428	13,400	13,170	13,391	13,457

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

[Nonagricultural payroll data, in thousands]

Industry division and group	1981											1982		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^P	Mar. ^P	
TOTAL	91,347	91,458	91,564	91,615	91,880	91,901	92,033	91,832	91,522	91,113	90,879	91,040	90,822	
MINING	1,098	950	957	1,110	1,132	1,151	1,162	1,162	1,172	1,175	1,166	1,166	1,163	
CONSTRUCTION	4,416	4,418	4,334	4,284	4,272	4,275	4,272	4,259	4,229	4,193	4,085	4,168	4,122	
MANUFACTURING	20,191	20,332	20,414	20,424	20,535	20,505	20,496	20,241	20,017	19,736	19,550	19,507	19,375	
Production workers	14,074	14,187	14,247	14,245	14,327	14,294	14,281	14,030	13,797	13,514	13,342	13,321	13,237	
Durable goods	12,099	12,207	12,254	12,278	12,333	12,332	12,311	12,115	11,932	11,714	11,596	11,562	11,485	
Production workers	8,325	8,412	8,442	8,455	8,491	8,485	8,465	8,267	8,083	7,868	7,758	7,745	7,691	
Lumber and wood products	692	702	710	699	702	686	677	652	634	619	615	625	620	
Furniture and fixtures	467	478	484	486	488	487	485	480	470	464	458	454	451	
Stone, clay, and glass products	651	656	658	658	658	660	665	644	634	622	607	605	599	
Primary metal industries	1,141	1,145	1,142	1,144	1,140	1,148	1,139	1,114	1,090	1,058	1,042	1,026	1,017	
Fabricated metal products	1,581	1,595	1,604	1,604	1,614	1,610	1,606	1,575	1,546	1,516	1,501	1,493	1,481	
Machinery, except electrical	2,480	2,491	2,511	2,521	2,533	2,542	2,551	2,549	2,522	2,488	2,455	2,441	2,418	
Electric and electronic equipment	2,117	2,134	2,143	2,148	2,163	2,166	2,163	2,150	2,119	2,089	2,093	2,085	2,075	
Transportation equipment	1,849	1,878	1,872	1,886	1,886	1,889	1,889	1,811	1,783	1,725	1,706	1,721	1,722	
Instruments and related products	712	714	716	717	723	727	727	723	719	717	711	709	704	
Miscellaneous manufacturing	409	414	414	415	426	417	419	417	415	416	408	403	398	
Nondurable goods	8,092	8,125	8,160	8,146	8,202	8,173	8,185	8,126	8,085	8,022	7,954	7,945	7,890	
Production workers	5,749	5,775	5,805	5,790	5,836	5,809	5,816	5,763	5,714	5,646	5,584	5,576	5,546	
Food and kindred products	1,691	1,697	1,703	1,673	1,691	1,668	1,669	1,675	1,676	1,669	1,663	1,678	1,667	
Tobacco manufactures	72	72	71	71	71	73	71	70	70	70	71	70	68	
Textile mill products	838	842	843	846	856	849	849	833	823	812	795	792	780	
Apparel and other textile products	1,243	1,250	1,258	1,264	1,278	1,272	1,273	1,259	1,251	1,233	1,210	1,211	1,192	
Paper and allied products	689	691	694	695	696	698	703	691	686	682	678	673	667	
Printing and publishing	1,276	1,280	1,283	1,284	1,290	1,295	1,301	1,302	1,302	1,302	1,301	1,303	1,302	
Chemicals and allied products	1,108	1,107	1,109	1,111	1,110	1,106	1,112	1,108	1,104	1,100	1,093	1,093	1,090	
Petroleum and coal products	210	211	213	212	212	211	210	210	208	203	201	201	201	
Rubber and miscellaneous plastics products	734	744	753	757	760	764	760	744	733	722	718	712	713	
Leather and leather products	231	231	233	232	238	236	236	234	230	224	222	212	210	
TRANSPORTATION AND PUBLIC UTILITIES	5,139	5,161	5,148	5,149	5,167	5,170	5,186	5,168	5,147	5,122	5,124	5,101	5,088	
WHOLESALE AND RETAIL TRADE	20,635	20,636	20,714	20,717	20,796	20,862	20,872	20,916	20,838	20,735	20,849	20,925	20,904	
WHOLESALE TRADE	5,316	5,333	5,346	5,349	5,360	5,375	5,370	5,360	5,363	5,336	5,321	5,320	5,309	
RETAIL TRADE	15,319	15,303	15,368	15,368	15,436	15,487	15,502	15,556	15,475	15,399	15,528	15,605	15,595	
FINANCE, INSURANCE, AND REAL ESTATE	5,293	5,316	5,326	5,331	5,344	5,354	5,366	5,360	5,355	5,366	5,361	5,364	5,373	
SERVICES	18,371	18,475	18,540	18,560	18,642	18,667	18,774	18,788	18,838	18,856	18,845	18,918	18,898	
GOVERNMENT	16,204	16,170	16,131	16,040	15,992	15,917	15,905	15,938	15,926	15,930	15,899	15,891	15,899	
Federal	2,781	2,767	2,779	2,781	2,777	2,770	2,765	2,759	2,748	2,741	2,742	2,737	2,732	
State and local	13,423	13,403	13,352	13,259	13,215	13,147	13,140	13,179	13,178	13,189	13,157	13,154	13,167	

12. Hours and earnings, by industry division, selected years, 1950-81

[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			Construction			Manufacturing		
1950	\$53.13	39.8	\$1.335	\$67.16	37.9	\$1.772	\$69.68	37.4	\$1.863	\$58.32	40.5	\$1.440
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.30	40.7	1.85
1960 ¹	80.67	38.6	2.09	105.04	40.4	2.60	112.67	36.7	3.07	89.72	39.7	2.26
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.45	38.8	2.46	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.19	41.4	2.71
1967	101.84	38.0	2.58	135.89	42.6	3.19	154.95	37.7	4.11	114.49	40.6	2.82
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.83	37.1	3.23	164.40	42.7	3.85	195.45	37.3	5.24	133.33	39.8	3.35
1971	127.31	36.9	3.45	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.90	37.0	3.70	189.14	42.6	4.44	221.19	36.5	6.06	154.71	40.5	3.82
1973	145.39	36.9	3.94	201.40	42.4	4.75	235.89	36.8	6.41	166.46	40.7	4.09
1974	154.76	36.5	4.24	219.14	41.9	5.23	249.25	36.6	6.81	176.80	40.0	4.42
1975	163.53	36.1	4.53	249.31	41.9	5.95	266.08	36.4	7.31	190.79	39.5	4.83
1976	175.45	36.1	4.86	273.90	42.4	6.46	283.73	36.8	7.71	209.32	40.1	5.22
1977	189.00	36.0	5.25	301.20	43.4	6.94	295.65	36.5	8.10	228.90	40.3	5.68
1978	203.70	35.8	5.69	332.88	43.4	7.67	318.69	36.8	8.66	249.27	40.4	6.17
1979	219.91	35.7	6.16	365.07	43.0	8.49	342.99	37.0	9.27	269.34	40.2	6.70
1980	235.10	35.3	6.66	396.14	43.2	9.17	367.04	37.0	9.92	288.62	39.7	7.27
1981	255.20	35.2	7.25	438.62	43.6	10.06	395.60	36.8	10.75	317.60	39.8	7.98
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1950				\$44.55	40.5	\$1.100	\$50.52	37.7	\$1.340			
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 ¹				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	\$118.78	41.1	\$2.89	74.66	37.9	1.97	85.79	37.3	2.30	\$70.03	36.1	\$1.94
1965	125.14	41.3	3.03	76.91	37.7	2.04	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.39	37.1	2.14	92.13	37.3	2.47	77.04	35.5	2.17
1967	130.82	40.5	3.23	82.35	36.6	2.25	95.72	37.1	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	87.00	36.1	2.41	101.75	37.0	2.75	83.97	34.7	2.42
1969	147.74	40.7	3.63	91.39	35.7	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	96.02	35.3	2.72	112.67	36.7	3.07	96.66	34.4	2.81
1971	168.82	40.1	4.21	101.09	35.1	2.88	117.85	36.6	3.22	103.06	33.9	3.04
1972	187.86	40.4	4.65	106.45	34.9	3.05	122.98	36.6	3.36	110.85	33.9	3.27
1973	203.31	40.5	5.02	111.76	34.6	3.23	129.20	36.6	3.53	117.29	33.8	3.47
1974	217.48	40.2	5.41	119.02	34.2	3.48	137.61	36.5	3.77	126.00	33.6	3.75
1975	233.44	39.7	5.88	126.45	33.9	3.73	148.19	36.5	4.06	134.67	33.5	4.02
1976	256.71	39.8	6.45	133.79	33.7	3.97	155.43	36.4	4.27	143.52	33.3	4.31
1977	278.90	39.9	6.99	142.52	33.3	4.28	165.26	36.4	4.54	153.45	33.0	4.65
1978	302.80	40.0	7.57	153.64	32.9	4.67	178.00	36.4	4.89	163.67	32.8	4.99
1979	325.58	39.9	8.16	164.96	32.6	5.06	190.77	36.2	5.27	175.27	32.7	5.36
1980	351.25	39.6	8.87	176.46	32.2	5.48	209.24	36.2	5.78	190.71	32.6	5.85
1981	382.97	39.4	9.72	190.35	32.1	5.93	228.69	36.3	6.30	208.97	32.6	6.41

¹ Data include Alaska and Hawaii beginning in 1959.

13. 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		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^P	Mar. ^P
TOTAL PRIVATE	35.3	35.2	35.2	35.2	35.2	35.4	35.6	35.6	35.0	35.1	35.2	33.9	34.7	34.7	
MINING	43.2	43.6	42.3	43.6	43.8	42.1	43.5	44.1	43.8	44.5	44.3	44.7	42.8	43.6	43.9
CONSTRUCTION	37.0	36.8	37.2	36.9	36.9	37.2	37.7	37.3	35.7	37.5	37.0	37.0	33.2	35.6	36.7
MANUFACTURING	39.7	39.8	39.9	39.7	40.1	40.2	39.6	39.8	39.5	39.7	39.6	39.9	37.1	39.2	39.1
Overtime hours	2.8	2.8	2.8	2.6	2.9	3.0	2.8	3.0	2.9	2.8	2.6	2.6	2.2	2.3	2.3
Durable goods	40.1	40.2	40.5	40.3	40.6	40.6	39.9	40.2	39.8	40.1	40.0	40.4	37.7	39.6	39.5
Overtime hours	2.8	2.8	2.9	2.7	3.0	3.0	2.8	2.9	2.8	2.7	2.5	2.6	2.1	2.2	2.2
Lumber and wood products	38.6	38.7	39.0	39.1	39.6	39.5	38.7	39.0	37.9	38.2	37.6	38.1	33.7	37.3	37.2
Furniture and fixtures	38.1	38.4	38.8	38.2	38.5	38.9	37.8	38.6	37.7	38.6	38.1	38.9	32.3	37.4	37.2
Stone, clay, and glass products	40.8	40.6	40.6	40.9	41.1	41.2	40.8	41.0	40.6	40.5	40.1	37.4	39.1	39.4	
Primary metal industries	40.1	40.5	41.1	41.2	40.9	40.9	40.3	40.3	40.8	39.6	39.7	39.6	38.4	39.5	39.1
Fabricated metal products	40.4	40.3	40.6	40.2	40.7	40.8	39.9	40.3	39.6	40.1	40.0	40.4	37.8	39.5	39.5
Machinery except electrical	41.0	40.9	41.2	40.8	41.2	41.1	40.4	40.7	40.4	40.6	40.9	41.5	39.1	40.6	40.3
Electric and electronic equipment	39.8	39.9	40.2	39.8	40.1	40.2	39.7	40.0	39.7	39.9	39.8	40.3	38.1	39.8	39.7
Transportation equipment	40.6	40.9	41.1	41.0	41.6	41.3	40.7	40.5	39.9	40.9	40.8	41.4	38.4	40.4	40.4
Instruments and related products	40.5	40.4	40.6	39.9	40.3	40.4	39.9	40.4	40.4	40.8	40.7	38.6	40.0	40.4	
Miscellaneous manufacturing	38.7	38.9	38.9	38.6	38.9	39.0	38.5	39.0	38.7	39.3	39.5	39.1	36.7	38.5	38.7
Nondurable goods	39.0	39.2	39.1	38.9	39.4	39.5	39.1	39.4	39.1	39.1	39.1	39.2	36.2	38.6	38.4
Overtime hours	2.8	2.8	2.7	2.6	2.9	2.9	2.8	3.0	3.1	2.9	2.8	2.6	2.4	2.5	2.4
Food and kindred products	39.7	39.7	39.2	39.3	39.8	39.8	39.6	40.0	39.8	39.6	39.9	40.4	38.8	39.7	39.3
Tobacco manufactures	38.1	38.8	37.2	37.2	38.6	38.5	38.6	40.7	40.2	39.4	38.8	38.1	36.1	38.3	37.1
Textile mill products	40.1	39.7	40.1	39.4	40.3	40.4	39.7	40.0	38.9	39.4	39.2	38.6	31.2	38.0	37.7
Apparel and other textile products	35.4	35.7	35.8	35.2	36.0	36.4	36.0	36.3	35.2	35.8	35.8	35.5	30.0	35.3	35.0
Paper and allied products	42.3	42.5	42.4	42.3	42.5	42.7	42.4	42.5	43.2	42.4	42.3	42.7	41.3	42.1	41.7
Printing and publishing	37.1	37.3	37.1	37.0	37.3	37.2	37.2	37.5	37.4	37.2	37.3	37.9	36.2	37.1	37.2
Chemicals and allied products	41.5	41.6	41.6	41.6	41.6	41.6	41.5	41.4	42.2	41.5	41.7	41.8	40.8	41.2	40.9
Petroleum and coal products	41.8	43.2	42.6	43.9	43.6	43.5	43.7	43.0	44.4	43.1	43.0	42.6	43.1	42.5	42.1
Rubber and miscellaneous plastics products	40.1	40.4	40.7	40.4	40.9	40.9	40.0	40.4	39.8	40.2	39.9	40.1	37.9	40.0	40.0
Leather and leather products	36.7	36.8	36.8	36.3	37.4	38.1	36.6	36.9	36.0	36.7	36.6	36.4	33.3	35.4	35.5
TRANSPORTATION AND PUBLIC UTILITIES	39.6	39.4	39.4	39.3	39.3	39.8	39.8	39.5	39.2	39.1	39.3	39.3	38.4	39.1	38.9
WHOLESALE AND RETAIL TRADE	32.2	32.1	31.9	32.1	32.0	32.3	32.8	32.8	32.2	31.9	31.9	32.2	31.1	31.5	31.5
WHOLESALE TRADE	38.5	38.6	38.5	38.5	38.5	38.6	38.8	38.7	38.5	38.7	38.6	38.7	37.8	38.2	38.1
RETAIL TRADE	30.2	30.1	29.8	30.0	29.9	30.4	30.9	30.9	30.2	29.8	29.8	30.3	29.0	29.5	29.4
FINANCE, INSURANCE, AND REAL ESTATE	36.2	36.3	36.4	36.3	36.1	36.1	36.3	36.3	36.0	36.2	36.2	36.2	36.2	36.3	36.2
SERVICES	32.6	32.6	32.6	32.6	32.5	32.7	33.0	32.9	32.4	32.5	32.5	32.6	32.3	32.5	32.4

14. 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	1981										1982		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^P	Mar. ^P
TOTAL PRIVATE	35.3	35.4	35.3	35.2	35.3	35.2	34.9	35.0	35.0	34.9	34.2	35.0	34.8
MANUFACTURING	39.9	40.2	40.3	40.1	40.0	40.0	39.3	39.5	39.3	39.0	37.3	39.5	39.0
Overtime hours	2.8	2.9	3.2	3.0	3.0	3.0	2.7	2.7	2.5	2.4	2.3	2.4	2.3
Durable goods	40.4	40.8	40.8	40.5	40.5	40.5	39.7	39.9	39.7	39.3	37.9	39.8	39.4
Overtime hours	2.8	3.0	3.2	3.0	3.0	3.0	2.6	2.6	2.4	2.4	2.2	2.2	2.1
Lumber and wood products	39.1	39.6	39.8	39.0	38.8	38.6	37.3	37.6	37.5	37.6	34.6	37.9	37.3
Furniture and fixtures	38.6	38.8	39.0	38.9	38.5	38.6	37.5	38.1	37.7	37.7	32.6	37.6	37.0
Stone, clay, and glass products	40.7	41.2	41.0	40.8	40.9	40.8	40.3	40.0	40.0	39.5	38.3	40.1	39.5
Primary metal industries	41.0	41.2	41.0	40.8	40.5	40.7	40.6	39.8	39.7	39.2	38.4	39.5	39.0
Fabricated metal products	40.4	40.9	40.9	40.7	40.5	40.5	39.5	40.0	39.6	39.2	37.9	39.7	39.3
Machinery, except electrical	40.9	41.3	41.4	41.1	41.1	41.2	40.3	40.7	40.6	40.3	39.0	40.6	40.0
Electric and electronic equipment	40.0	40.2	40.4	40.2	40.5	40.4	39.6	39.9	39.3	39.2	38.1	39.8	39.5
Transportation equipment	40.9	42.0	41.8	41.4	41.2	41.3	39.9	40.5	40.3	39.4	38.7	40.8	40.3
Instruments and related products	40.5	40.1	40.4	40.4	40.5	40.8	40.5	40.4	40.3	39.9	38.6	40.0	40.3
Miscellaneous manufacturing	38.7	38.9	39.2	39.1	39.2	39.1	38.4	39.0	39.0	38.4	36.9	38.7	38.5
Nondurable goods	39.2	39.3	39.6	39.4	39.3	39.3	38.9	39.0	38.8	38.6	36.4	39.0	38.5
Overtime hours	2.8	2.9	3.1	3.0	2.9	2.9	2.8	2.8	2.7	2.4	2.4	2.6	2.5
Food and kindred products	39.7	40.1	40.0	39.8	39.4	39.4	39.2	39.5	39.6	39.8	39.1	40.3	39.9
Textile mill products	39.9	39.8	40.5	40.2	40.4	40.3	38.9	39.3	38.8	37.8	31.3	38.0	37.5
Apparel and other textile products	35.7	35.5	36.0	36.1	35.9	36.1	35.2	35.7	35.6	35.1	30.7	35.5	34.9
Paper and allied products	42.4	42.6	42.8	42.7	42.7	42.7	43.1	42.4	41.9	41.8	41.2	42.3	41.7
Printing and publishing	37.1	37.3	37.6	37.4	37.3	37.3	37.1	37.1	36.9	37.2	36.5	37.5	37.2
Chemicals and allied products	41.5	41.5	41.7	41.7	41.8	41.7	42.3	41.5	41.3	41.3	40.8	41.3	40.8
Petroleum and coal products	43.5	44.1	43.8	43.4	43.1	42.8	43.3	42.1	42.3	42.6	44.3	43.8	43.0
Rubber and miscellaneous plastics products	40.5	40.7	41.3	41.0	40.5	40.6	39.6	40.0	39.6	39.4	37.8	40.1	39.8
Leather and leather products	37.1	36.6	37.1	37.1	36.5	36.9	36.1	36.8	36.7	36.1	33.6	35.6	35.8
WHOLESALE AND RETAIL TRADE	32.2	32.3	32.1	32.1	32.2	32.1	32.1	31.9	32.0	31.9	31.6	32.0	31.8
WHOLESALE TRADE	38.6	38.6	38.5	38.5	38.7	38.6	38.5	38.5	38.6	38.4	38.0	38.5	38.2
RETAIL TRADE	30.2	30.3	30.1	30.1	30.1	30.1	30.1	29.9	29.9	29.9	29.6	30.0	29.8
SERVICES	32.8	32.8	32.7	32.5	32.5	32.4	32.4	32.5	32.6	32.7	32.5	32.7	32.6

NOTE: The industry divisions of mining; construction; tobacco manufactures (a major manufacturing group, nondurable goods); transportation and public utilities; and finance, insurance, and real estate are no longer shown. This is because the seasonal component in these is

small relative to the trend-cycle, or irregular components, or both, and consequently cannot be precisely separated.

15. 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		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. P	Mar. P
TOTAL PRIVATE	\$6.66	\$7.25	\$7.10	\$7.13	\$7.17	\$7.20	\$7.24	\$7.30	\$7.40	\$7.42	\$7.46	\$7.45	\$7.55	\$7.54	\$7.55
MINING	9.17	10.06	9.85	9.70	9.68	9.94	10.11	10.15	10.29	10.28	10.42	10.43	10.68	10.63	10.61
CONSTRUCTION	9.92	10.75	10.44	10.43	10.53	10.60	10.74	10.87	11.02	11.10	11.12	11.19	11.56	11.27	11.27
MANUFACTURING	7.27	7.98	7.80	7.88	7.92	7.97	8.02	8.02	8.15	8.15	8.20	8.26	8.41	8.33	8.37
Durable goods	7.75	8.52	8.32	8.40	8.45	8.52	8.55	8.57	8.68	8.71	8.75	8.81	8.91	8.88	8.93
Lumber and wood products	6.53	7.00	6.79	6.83	6.92	7.10	7.16	7.13	7.15	7.09	7.15	7.17	7.40	7.27	7.27
Furniture and fixtures	5.49	5.90	5.76	5.78	5.83	5.89	5.91	5.98	6.00	6.05	6.04	6.11	6.27	6.17	6.21
Stone, clay, and glass products	7.50	8.27	7.94	8.11	8.20	8.31	8.39	8.41	8.53	8.50	8.54	8.56	8.73	8.65	8.69
Primary metal industries	9.77	10.81	10.52	10.76	10.68	10.76	10.79	10.99	11.22	10.97	11.10	11.09	11.23	11.20	11.28
Fabricated metal products	7.45	8.20	8.01	8.05	8.17	8.23	8.22	8.27	8.34	8.39	8.43	8.53	8.55	8.57	8.63
Machinery, except electrical	8.00	8.83	8.62	8.67	8.75	8.81	8.85	8.86	8.98	9.05	9.10	9.20	9.21	9.22	9.24
Electric and electronic equipment	6.95	7.65	7.47	7.51	7.55	7.60	7.69	7.76	7.79	7.84	7.86	7.93	8.02	8.00	8.05
Transportation equipment	9.32	10.31	10.08	10.14	10.25	10.36	10.35	10.30	10.41	10.65	10.66	10.69	10.72	10.76	10.83
Instruments and related products	6.80	7.44	7.23	7.25	7.31	7.34	7.44	7.56	7.60	7.61	7.70	7.83	7.94	7.96	7.96
Miscellaneous manufacturing	5.47	5.98	5.85	5.91	5.93	5.93	5.98	5.97	6.07	6.06	6.12	6.20	6.31	6.34	6.36
Nondurable goods	6.56	7.19	7.01	7.08	7.11	7.14	7.23	7.24	7.37	7.34	7.39	7.45	7.68	7.55	7.57
Food and kindred products	6.86	7.45	7.29	7.37	7.43	7.43	7.47	7.50	7.58	7.53	7.63	7.69	7.83	7.76	7.79
Tobacco manufactures	7.73	8.82	8.61	8.90	9.03	9.33	9.43	8.61	8.66	8.58	8.96	8.90	9.15	9.52	9.69
Textile mill products	5.08	5.52	5.36	5.36	5.40	5.42	5.51	5.66	5.69	5.72	5.74	5.72	5.76	5.77	5.77
Apparel and other textile products	4.57	4.98	4.94	4.96	4.98	5.00	4.94	4.98	5.06	5.07	5.06	5.05	5.20	5.14	5.15
Paper and allied products	7.84	8.60	8.30	8.37	8.42	8.55	8.73	8.67	8.95	8.82	8.89	8.96	9.07	9.00	9.04
Printing and publishing	7.53	8.20	8.02	8.04	8.10	8.13	8.22	8.27	8.40	8.42	8.44	8.50	8.61	8.60	8.62
Chemicals and allied products	8.30	9.12	8.84	8.94	8.99	9.07	9.16	9.19	9.38	9.37	9.42	9.52	9.68	9.65	9.64
Petroleum and coal products	10.09	11.37	11.23	11.40	11.28	11.29	11.41	11.31	11.53	11.46	11.57	11.58	11.90	12.06	11.93
Rubber and miscellaneous plastics products	6.56	7.25	7.07	7.15	7.22	7.23	7.28	7.32	7.38	7.39	7.41	7.48	7.62	7.59	7.60
Leather and leather products	4.58	4.99	4.90	4.93	4.95	4.98	4.96	4.97	5.08	5.09	5.10	5.14	5.18	5.21	5.22
TRANSPORTATION AND PUBLIC UTILITIES	8.87	9.72	9.42	9.54	9.59	9.63	9.69	9.89	9.97	9.96	10.07	10.08	10.15	10.16	10.14
WHOLESALE AND RETAIL TRADE	5.48	5.93	5.85	5.87	5.89	5.89	5.91	5.94	6.04	6.00	6.03	6.01	6.17	6.15	6.15
WHOLESALE TRADE	6.96	7.58	7.42	7.47	7.51	7.51	7.59	7.67	7.71	7.74	7.81	7.83	7.95	7.93	7.96
RETAIL TRADE	4.88	5.26	5.20	5.22	5.23	5.23	5.24	5.26	5.37	5.29	5.32	5.32	5.44	5.42	5.42
FINANCE, INSURANCE, AND REAL ESTATE	5.78	6.30	6.19	6.20	6.24	6.24	6.27	6.37	6.38	6.42	6.51	6.46	6.57	6.62	6.64
SERVICES	5.85	6.41	6.29	6.30	6.33	6.33	6.34	6.41	6.51	6.57	6.67	6.66	6.79	6.80	6.80

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

[Seasonally adjusted data: 1977=100]

Industry	1981											1982			Feb. 1982 to Mar. 1982	Mar. 1981 to Mar. 1982 ¹
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. P	Mar. P			
TOTAL PRIVATE (in current dollars)	135.8	136.7	137.7	138.4	139.0	140.7	141.5	141.9	143.2	143.5	145.1	145.2	145.8	.5	7.4	
Mining ²	144.0	145.7	145.6	147.2	148.9	149.4	151.5	151.3	153.3	153.2	156.0	155.8	156.2	.2	8.4	
Construction	128.6	129.0	129.4	131.8	132.5	132.9	134.3	135.4	136.2	140.8	138.0	138.0	138.0	(³)	7.3	
Manufacturing	138.5	139.9	140.7	141.6	142.5	143.6	144.8	145.5	146.4	147.0	149.0	149.1	150.0	.6	8.3	
Transportation and public utilities	136.1	137.3	138.9	139.8	139.3	141.8	141.7	142.0	144.0	144.4	145.8	146.3	147.2	.6	8.1	
Wholesale and retail trade	135.8	136.4	137.4	137.8	138.4	140.0	141.2	140.5	141.5	141.9	142.3	142.7	143.1	.3	5.4	
Finance, insurance, and real estate	136.0	135.4	136.8	137.1	137.4	140.4	140.3	140.9	143.2	141.8	143.4	143.8	145.7	1.3	7.1	
Services	134.0	134.8	136.0	136.6	136.9	139.4	139.8	140.7	142.6	142.7	143.6	144.1	144.6	.4	7.9	
TOTAL PRIVATE (in constant dollars)	92.8	93.1	93.1	92.0	92.2	92.6	92.1	92.0	92.5	92.3	93.1	92.9	(⁴)	(⁴)	(⁴)	

¹ Over-the-year percent change before seasonal adjustment.

² This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle, irregular components, or both, and consequently cannot be separated with sufficient precision.

³ Less than 0.05 percent.

⁴ Not available.

r = revised.

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17. 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		1981										1982		
	1980	1981	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^P	Mar. ^P
TOTAL PRIVATE:															
Current dollars	\$235.10	\$255.20	\$249.92	\$250.98	\$252.38	\$254.88	\$257.74	\$259.88	\$259.00	\$260.44	\$261.85	\$262.24	\$255.95	\$261.64	\$261.99
Constant (1977) dollars	172.74	170.13	171.06	170.73	170.18	170.49	170.35	170.64	168.40	169.01	169.48	169.30	164.70	167.83	(¹)
MINING	396.14	438.62	416.66	422.92	423.98	418.47	439.79	447.62	450.70	457.46	461.61	466.22	457.10	463.47	465.78
CONSTRUCTION	367.04	395.60	388.37	384.87	388.56	394.32	404.90	405.45	393.41	416.25	411.44	414.03	383.79	401.21	413.61
MANUFACTURING															
Current dollars	288.62	317.60	311.22	312.84	317.59	320.39	317.59	319.20	321.93	323.56	324.72	329.57	312.01	326.54	327.27
Constant (1977) dollars	212.06	211.73	213.02	212.82	214.15	214.31	209.91	209.59	209.32	209.97	210.17	212.76	200.78	209.45	(¹)
Durable goods	310.78	342.50	336.96	338.52	343.07	345.91	341.15	344.51	345.46	349.27	350.00	355.92	335.91	351.65	352.74
Lumber and wood products	252.06	270.90	264.81	267.05	274.03	280.45	277.09	278.07	270.99	270.84	268.84	273.18	249.38	271.17	270.44
Furniture and fixtures	209.17	226.56	223.49	220.80	224.46	229.12	223.40	230.83	226.20	233.53	230.12	237.68	202.52	230.76	231.01
Stone, clay, and glass products	306.00	335.76	322.36	331.70	337.02	342.37	342.31	344.81	346.32	344.25	345.87	343.26	326.50	338.22	342.39
Primary metal industries	391.78	437.81	432.37	443.31	436.81	440.08	434.84	442.90	457.78	434.41	440.87	439.16	431.23	442.40	441.05
Fabricated metal products	300.98	330.46	325.21	323.61	332.52	335.78	327.98	333.28	330.26	336.44	337.20	344.61	323.19	338.52	340.89
Machinery except electrical	328.00	361.15	355.14	353.74	360.50	362.09	357.54	360.60	362.79	367.43	372.19	381.80	360.11	374.33	372.37
Electric and electronic equipment	276.61	305.24	300.29	298.90	302.76	305.52	305.29	310.40	309.26	312.82	312.83	319.58	305.56	318.40	319.59
Transportation equipment	378.39	421.68	414.29	415.74	426.40	427.87	421.25	417.15	415.36	435.59	434.93	442.57	411.65	434.70	437.53
Instruments and related products	275.40	300.58	293.54	289.28	294.59	296.54	296.86	305.42	307.04	307.44	314.16	318.68	306.48	318.40	321.58
Miscellaneous manufacturing	211.69	232.62	227.57	228.13	230.68	231.27	230.23	232.83	234.91	238.16	241.74	242.42	231.58	244.09	246.13
Nondurable goods	255.84	281.85	274.09	275.41	280.13	282.03	282.69	285.26	288.17	286.99	288.95	292.04	278.02	291.43	290.69
Food and kindred products	272.34	295.77	285.77	289.64	295.71	295.71	295.81	300.00	301.68	298.19	304.44	310.68	303.80	308.07	306.15
Tobacco manufactures	294.51	342.22	320.29	331.08	348.56	359.21	364.00	350.43	348.13	338.05	347.65	339.09	330.32	364.62	359.50
Textile mill products	203.71	219.14	214.94	211.18	217.62	218.97	218.75	226.40	221.34	225.37	225.01	220.79	179.71	219.26	217.53
Apparel and other textile products	161.78	177.79	176.85	174.59	179.28	182.00	177.84	180.77	178.11	181.51	181.15	179.28	156.00	181.44	180.25
Paper and allied products	331.63	365.50	351.92	354.05	357.85	365.09	370.15	368.48	386.64	373.97	376.05	382.59	374.59	378.90	376.97
Printing and publishing	279.36	305.86	297.54	297.48	302.13	302.44	305.78	310.13	314.16	313.22	314.81	322.15	311.68	319.06	320.66
Chemicals and allied products	344.45	379.39	367.74	371.90	373.98	377.31	380.14	380.47	395.84	388.86	392.81	397.94	394.94	397.58	394.28
Petroleum and coal products	421.76	491.18	478.40	500.46	491.81	491.12	498.62	486.33	511.93	493.93	497.51	493.31	512.89	512.55	502.25
Rubber and miscellaneous plastics products	263.06	292.90	287.75	288.86	295.30	295.71	291.20	295.73	293.72	297.08	295.66	299.95	288.80	303.60	304.00
Leather and leather products	168.09	183.63	180.32	178.96	185.13	189.74	181.54	183.39	182.88	186.80	186.66	187.10	172.49	184.43	185.31
TRANSPORTATION AND PUBLIC UTILITIES	351.25	382.97	371.15	374.92	376.89	383.27	385.66	390.66	390.82	389.44	395.75	396.14	389.76	397.26	394.45
WHOLESALE AND RETAIL TRADE	176.46	190.35	186.62	188.43	188.48	190.25	193.85	194.83	194.49	191.40	192.36	193.52	191.89	193.73	193.73
WHOLESALE TRADE	267.96	292.59	285.67	287.60	289.14	289.89	294.49	296.83	296.84	299.54	301.47	303.02	300.51	302.93	303.28
RETAIL TRADE	147.38	158.33	154.96	156.60	156.38	158.99	161.92	162.53	162.17	157.64	158.54	161.20	157.76	159.89	159.35
FINANCE, INSURANCE, AND REAL ESTATE	209.24	228.69	225.32	225.06	225.26	225.26	227.60	231.23	229.68	232.40	235.66	233.85	237.83	240.31	240.37
SERVICES	190.71	208.97	205.05	205.38	206.73	206.99	209.22	210.89	210.92	213.53	216.78	217.12	219.32	221.00	220.32

¹ Not available.

NOTE: In the April issue, the 1981 annual average and data for November 1981 through February 1982 from "Durable goods" forward were erroneously aligned.

UNEMPLOYMENT INSURANCE DATA

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

Definitions

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

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

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

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

Item	1981												1982	
	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^P	
18. Unemployment insurance and employment service operations	[All items except average benefits amounts are in thousands]													
All programs:														
Insured unemployment	4,264	3,948	3,453	3,111	2,949	3,012	2,874	2,680	2,753	3,228	3,935	4,681	4,723	
State unemployment insurance program: ¹														
Initial claims ²	1,806	1,684	1,647	1,417	1,741	2,114	1,610	1,681	1,996	2,286	3,272	3,328	2,328	
Insured unemployment (average weekly volume)	3,669	3,382	2,988	2,691	2,596	2,743	2,656	2,488	2,592	3,061	3,778	4,470	4,376	
Rate of insured unemployment	4.2	3.9	3.4	3.1	3.0	3.1	3.0	2.9	3.0	3.5	4.3	5.1	5.0	
Weeks of unemployment compensated	12,882	13,504	11,871	9,790	9,928	10,486	9,594	9,565	9,424	10,052	14,592	15,962	15,618	
Average weekly benefit amount for total unemployment	\$101.89	\$105.63	\$105.96	\$105.49	\$99.02	\$103.47	\$105.94	\$107.39	\$108.92	\$110.52	\$112.83	\$114.83	\$116.31	
Total benefits paid	\$1,313,507	\$1,393,612	\$1,226,815	\$1,006,341	\$1,012,764	\$1,061,899	\$1,004,864	\$1,001,020	\$997,757	\$1,080,810	\$1,592,546	\$1,764,206	\$1,771,937	
Unemployment compensation for ex-servicemen: ³														
Initial claims ¹	17	18	16	15	19	22	19	15	11	9	11	8	8	
Insured unemployment (average weekly volume)	54	51	46	43	42	44	44	34	26	22	19	16	13	
Weeks of unemployment compensated	221	234	214	183	192	203	190	153	116	91	93	65	50	
Total benefits paid	\$22,517	\$24,668	\$23,048	\$19,965	\$21,145	\$22,785	\$21,425	\$17,144	\$12,952	\$10,043	\$10,155	\$7,098	\$5,362	
Unemployment compensation for Federal civilian employees: ⁴														
Initial claims	13	12	12	11	13	15	17	18	20	16	17	17	12	
Insured unemployment (average weekly volume)	40	36	31	27	25	25	25	29	32	36	39	40	40	
Weeks of unemployment compensated	148	156	135	107	105	105	102	100	112	127	174	162	154	
Total benefits paid	\$14,573	\$15,561	\$13,701	\$11,023	\$10,705	\$10,805	\$9,543	\$10,495	\$11,719	\$13,491	\$18,891	\$18,040	\$17,510	
Railroad unemployment insurance:														
Applications	5	5	6	6	26	41	13	15	21	13	19	22	11	
Insured unemployment (average weekly volume)	50	44	41	35	30	28	29	34	40	44	54	75	68	
Number of payments	104	115	94	79	86	32	63	74	86	83	117	153	140	
Average amount of benefit payment	\$214.56	\$214.93	\$201.12	\$199.43	\$201.06	\$199.63	\$202.53	\$207.98	\$197.26	\$207.08	\$212.33	\$213.39	\$214.07	
Total benefits paid	\$22,049	\$23,233	\$19,239	\$15,428	\$16,206	\$11,541	\$7,071	15,046	15,994	\$16,377	\$25,292	\$30,544	\$28,011	
Employment service: ⁵														
New applications and renewals	.....	8,778	.....	.....	12,868	.....	.....	16,502	.....	.....	P3,363	.....	.....
Nonfarm placements	.....	1,595	.....	.....	2,446	.....	.....	3,509	.....	.....	P602	.....	.....

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

² Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

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

⁴ Excludes data on claims and payments made jointly with State programs.

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

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

PRICE DATA

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

Definitions

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

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctor's and dentist's fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Prices are collected from over 18,000 tenants, 24,000 retail establishments, and 18,000 housing units for property taxes in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972-73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

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

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

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

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States, from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire.

Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

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

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

Notes on the data

Beginning with the May 1978 issue of the *Review*, regional CPI's cross classified by population size, were introduced. These indexes will enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes will be published bimonthly. (See table 21.)

For further details about the new and the revised indexes and a comparison of various aspects of these indexes with the old unrevised CPI, see *Facts About the Revised Consumer Price Index*, a pamphlet in the Consumer Price Index Revision 1978 series. See also *The Consumer Price Index: Concepts and Content Over the Years*, Report 517, revised edition (Bureau of Labor Statistics, May 1978).

For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics, 1977*, Bulletin 1966 (Bureau of Labor Statistics, 1977), tables 122-133. Additional data and analysis on price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes*, both monthly publications of the Bureau.

As of January 1976, the Wholesale Price Index (as it was then called) incorporated a revised weighting structure reflecting 1972 values of shipments. From January 1967 through December 1975, 1963 values of shipments were used as weights.

For a discussion of the general method of computing consumer, producer, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13-15. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review*, April 1978, pp. 7-15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review*, August 1965, pp. 974-82.

19. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967-81

[1967=100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4.1	112.7	5.1	120.6	6.3	116.7	5.1	116.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.2	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128.1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	6.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4
1979	217.7	11.5	228.7	10.9	227.5	12.3	166.4	4.3	212.8	14.5	240.1	9.4	187.6	6.5	196.3	7.2
1980	247.0	13.5	248.7	8.7	263.2	15.7	177.4	6.6	250.5	17.7	267.2	11.3	203.7	8.5	213.6	8.8
1981	272.3	10.2	267.8	7.7	293.2	11.4	186.6	5.2	281.3	12.3	295.1	10.4	219.0	7.5	233.3	9.2

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

[1967=100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982		1981					1982	
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
All items	263.2	297.3	279.9	280.7	281.5	282.5	283.4	263.5	279.1	279.7	280.4	281.1	282.1	282.9
Food and beverages	263.7	270.7	270.3	269.9	270.5	273.6	275.8	264.3	271.0	270.7	270.3	270.8	273.9	276.0
Housing	280.9	303.7	303.5	304.2	305.2	306.1	307.3	280.7	303.6	303.3	303.8	304.7	305.6	306.7
Apparel and upkeep	182.0	190.7	191.5	191.3	190.5	187.3	188.0	181.8	190.5	190.6	190.5	189.4	186.5	187.3
Transportation	270.9	285.2	287.2	289.1	289.8	289.9	288.0	272.1	286.6	288.9	290.8	291.5	291.6	289.6
Medical care	282.6	301.7	304.8	308.2	310.2	313.4	316.2	284.4	300.9	304.0	307.1	309.1	312.0	314.9
Entertainment	216.7	224.0	225.5	226.8	227.3	229.2	231.2	215.0	221.5	223.4	224.3	224.4	226.1	228.1
Other goods and services	227.4	243.0	245.2	245.9	246.7	248.4	250.3	225.6	239.3	241.4	242.5	243.5	245.0	247.1
Commodities	248.3	257.7	257.9	258.0	258.4	258.8	259.5	248.8	258.2	258.4	258.5	258.8	259.3	259.9
Commodities less food and beverages	237.4	247.6	248.0	248.3	248.7	248.0	248.1	237.9	248.4	248.7	249.1	249.3	248.7	248.6
Nondurables less food and beverages	258.6	265.8	266.4	266.7	266.7	265.6	265.3	261.4	268.5	268.6	269.0	268.9	267.8	267.5
Durables	220.3	232.6	232.9	233.2	233.7	233.4	233.7	218.6	231.5	232.0	232.3	232.7	232.4	232.5
Services	290.1	317.3	318.6	320.6	321.8	323.9	325.3	290.8	317.7	319.2	321.1	322.4	324.3	325.5
Rent, residential	201.9	211.9	213.6	215.0	216.5	217.8	218.6	201.6	211.5	213.2	214.5	216.0	217.4	218.1
Household services less rent	345.4	387.4	387.2	389.2	390.4	392.4	393.7	348.5	392.2	391.8	393.6	394.8	396.5	397.7
Transportation services	260.5	277.7	281.0	283.2	284.2	286.6	287.6	259.7	276.3	279.9	282.3	283.6	285.9	286.7
Medical care services	305.2	326.1	329.7	333.7	335.7	339.4	342.4	307.4	324.7	328.3	332.0	334.0	337.5	340.6
Other services	232.3	245.8	247.8	248.7	249.5	251.7	253.0	232.1	243.6	246.6	247.2	248.0	250.0	251.3
Special indexes:														
All items less food	260.4	278.2	279.0	280.1	280.8	281.4	282.1	260.8	278.2	279.1	280.1	280.7	281.3	281.7
All items less mortgage interest costs	250.6	262.9	263.6	264.2	264.9	266.1	267.1	251.4	263.3	264.0	264.6	265.2	266.4	267.2
Commodities less food	235.4	245.5	245.9	246.2	246.5	245.9	246.0	236.0	246.3	246.6	247.0	247.2	246.6	246.6
Nondurables less food	253.2	260.3	260.7	261.1	261.1	260.2	260.1	255.9	262.9	263.0	263.4	263.3	262.4	262.2
Nondurables less food and apparel	292.4	299.1	299.5	300.1	300.7	301.0	300.5	294.7	301.3	301.5	302.0	302.5	302.6	302.0
Nondurables	262.3	269.5	269.5	269.5	269.8	270.8	271.7	263.8	270.7	270.7	270.9	271.9	272.8	272.8
Services less rent	306.9	337.5	338.7	340.8	342.0	344.2	345.7	307.9	338.3	339.7	341.6	342.9	345.0	346.3
Services less medical care	286.5	314.1	315.1	316.9	318.1	320.0	321.1	287.0	314.6	315.8	317.5	318.7	320.5	321.6
Domestically produced farm foods	254.0	260.8	259.5	258.3	259.1	262.4	265.1	253.9	259.9	258.6	257.8	258.2	261.4	264.0
Selected beef cuts	273.0	277.9	275.5	271.9	270.7	269.6	271.7	275.1	279.7	276.5	273.2	271.9	271.1	273.1
Energy	401.1	417.1	414.9	414.1	414.6	416.4	413.0	405.4	420.1	417.9	417.3	417.6	419.0	415.4
All items less energy	252.5	268.6	269.4	270.4	271.1	272.1	273.4	251.8	267.5	268.3	269.2	269.9	270.9	272.1
All items less food and energy	246.8	264.8	265.9	267.2	267.9	268.5	269.5	245.8	263.6	264.8	265.9	266.6	267.1	268.0
Commodities less food and energy	211.7	222.9	223.4	223.8	224.2	223.7	224.5	210.5	222.1	222.6	223.0	223.3	222.8	223.6
Energy commodities	449.0	449.3	448.2	448.2	448.0	446.4	440.1	450.1	450.0	448.9	449.0	448.7	447.0	440.7
Services less energy	287.6	313.6	315.3	317.7	318.9	320.5	321.9	288.4	314.0	316.0	318.2	319.5	321.0	322.2
Purchasing power of the consumer dollar, 1967 = \$1	\$0.380	\$0.358	\$0.357	\$0.356	\$0.355	\$0.354	\$0.353	\$0.380	\$0.358	\$0.358	\$0.357	\$0.356	\$0.354	\$0.353

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

[1967=100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982	1981					1982		
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
FOOD AND BEVERAGES	263.7	270.7	270.3	269.9	270.5	273.6	275.8	264.3	271.0	270.7	270.3	270.8	273.9	276.0
Food	270.8	278.0	277.6	277.1	277.8	281.0	283.3	271.4	278.1	277.8	277.4	277.9	281.1	283.4
Food at home	267.3	273.2	272.1	271.0	271.7	275.3	278.0	267.0	272.3	271.3	270.4	270.8	274.4	277.0
Cereals and bakery products	265.3	274.3	275.0	276.3	277.7	279.8	280.9	265.0	273.2	274.0	275.5	276.6	278.6	279.8
Cereals and cereal products (12/77 = 100)	144.5	150.1	150.0	149.9	151.5	153.0	154.0	145.5	151.2	151.5	152.1	152.5	153.9	155.0
Flour and prepared flour mixes (12/77 = 100)	137.5	139.5	139.3	138.4	137.8	139.1	139.1	137.9	141.1	140.9	140.2	138.4	139.6	139.6
Cereal (12/77 = 100)	146.5	155.7	156.1	157.4	160.2	163.1	164.8	148.0	157.2	157.9	158.9	162.1	165.1	166.8
Rice, pasta, and cornmeal (12/77 = 100)	147.9	151.6	151.1	149.6	151.7	151.1	152.4	149.3	152.6	152.7	153.9	152.9	152.4	153.6
Bakery products (12/77 = 100)	139.0	143.5	144.0	144.9	145.4	146.4	146.8	138.5	142.4	142.8	143.7	144.3	145.3	145.7
White bread	231.4	238.2	238.4	241.3	241.5	243.3	243.8	230.9	235.9	235.5	237.6	237.4	239.4	240.0
Other breads (12/77 = 100)	137.3	141.5	141.6	142.8	143.4	143.9	143.7	140.1	143.4	143.6	144.9	145.3	145.7	145.5
Fresh biscuits, rolls, and muffins (12/77 = 100)	138.9	143.3	144.8	145.2	145.9	146.5	146.4	136.9	140.1	141.7	141.9	141.9	142.5	142.8
Fresh cakes and cupcakes (12/77 = 100)	139.5	144.4	143.9	145.0	144.9	147.2	147.0	138.1	142.3	141.7	143.2	143.7	145.8	145.8
Cookies (12/77 = 100)	139.0	143.9	145.7	146.3	147.6	148.1	149.2	139.8	144.6	146.4	146.8	148.4	148.9	150.1
Crackers, bread, and cracker products (12/77 = 100)	128.6	132.0	133.2	133.1	134.2	133.4	135.4	128.6	132.2	134.0	134.3	136.5	134.7	136.8
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	140.4	144.3	144.4	144.8	145.4	146.2	147.0	140.0	144.8	144.9	145.8	147.8	148.9	149.3
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	141.4	148.0	148.9	149.2	149.3	151.2	151.5	136.3	142.1	142.8	143.1	143.0	144.7	144.8
Meats, poultry, fish, and eggs	252.5	257.7	256.4	254.2	253.7	253.7	256.8	251.6	257.5	256.0	254.0	253.1	253.3	256.4
Meats, poultry, and fish	257.9	263.4	262.2	259.2	258.4	259.1	261.2	257.0	263.2	261.7	258.8	257.7	258.6	260.7
Meats	256.4	263.4	262.5	259.6	258.7	257.8	260.2	256.0	263.2	262.1	259.3	257.9	257.3	259.7
Beef and veal	272.3	277.1	274.9	271.5	270.5	269.4	271.5	273.8	278.3	275.3	272.2	270.9	270.1	272.2
Ground beef other than canned	272.8	270.3	267.4	266.1	264.5	262.2	265.0	275.7	273.8	268.6	268.0	265.8	263.7	266.3
Chuck roast	288.1	289.4	287.8	282.6	282.2	279.6	285.8	298.6	299.9	297.2	292.6	291.5	288.5	295.0
Round roast	248.0	244.1	245.1	245.0	242.6	241.6	245.3	247.5	249.1	250.1	248.2	245.9	244.7	248.9
Round steak	259.0	255.9	259.0	256.7	254.6	257.5	256.1	254.7	252.5	254.9	254.8	252.2	256.1	254.4
Sirloin steak	262.0	281.9	273.3	262.0	260.1	258.2	257.1	263.5	281.9	275.1	260.7	260.7	258.9	257.8
Other beef and veal (12/77 = 100)	157.7	164.9	163.4	161.1	161.0	160.9	161.4	156.9	162.8	161.3	159.2	159.1	159.3	159.7
Pork	223.6	238.1	238.6	235.6	234.3	234.7	238.9	223.2	239.4	239.3	235.9	233.8	234.4	238.5
Bacon	221.7	237.1	240.1	238.1	237.2	235.5	245.6	225.7	241.1	245.1	242.9	240.5	239.3	249.3
Chops	210.3	225.1	223.1	217.0	212.4	219.2	222.1	207.6	224.7	221.3	216.2	211.0	217.6	220.2
Ham other than canned (12/77 = 100)	100.0	106.8	109.4	108.9	109.1	107.3	107.0	98.2	105.6	107.5	106.6	106.3	104.8	104.7
Sausage	282.3	300.7	298.7	298.1	299.1	297.6	300.0	282.0	302.3	302.1	299.2	300.0	298.8	301.0
Canned ham	238.0	239.5	241.9	243.1	244.3	245.4	246.1	240.6	242.9	244.7	247.0	247.7	249.0	249.9
Other pork (12/77 = 100)	125.4	135.4	134.1	131.1	130.0	129.5	133.8	125.0	136.7	134.5	130.9	129.2	128.8	133.1
Other meats	260.8	260.7	261.6	260.5	260.6	258.1	258.1	259.1	258.7	260.5	259.9	259.7	257.3	257.4
Frankfurters	259.4	256.4	261.2	259.9	261.0	256.7	258.0	261.0	259.1	262.4	260.9	260.0	256.1	257.1
Bologna, liverwurst, and salami (12/77 = 100)	149.4	147.5	147.6	146.7	146.4	145.4	146.1	146.0	144.8	146.9	145.9	146.3	145.1	146.2
Other luncheon meats (12/77 = 100)	129.8	131.8	131.8	132.1	132.6	132.2	131.7	128.6	129.5	130.2	130.6	130.6	130.2	129.7
Lamb and organ meats (12/77 = 100)	144.1	144.4	143.4	141.7	140.7	138.6	137.7	146.5	146.0	145.0	144.6	143.9	141.4	141.0
Poultry	203.7	199.7	196.6	192.3	191.7	194.2	195.7	201.3	198.1	194.7	190.6	189.5	192.4	193.8
Fresh whole chicken	207.0	197.3	194.0	190.9	190.1	193.1	196.3	201.7	194.0	189.9	188.5	187.8	190.9	194.4
Fresh and frozen chicken parts (12/77 = 100)	131.9	130.5	129.2	127.3	128.1	128.5	128.9	131.9	130.1	129.7	126.5	126.3	126.9	127.1
Other poultry (12/77 = 100)	128.5	129.9	127.2	122.2	120.7	123.2	123.2	127.8	129.6	126.1	125.1	119.8	123.0	122.6
Fish and seafood	355.0	362.6	360.8	358.9	359.6	373.3	373.8	349.5	358.6	358.2	356.6	358.6	372.4	373.2
Canned fish and seafood (12/77 = 100)	138.0	140.9	140.5	141.5	140.7	140.6	140.9	135.9	139.4	140.3	141.0	140.2	140.0	140.4
Fresh and frozen fish and seafood (12/77 = 100)	133.5	135.6	135.6	133.9	134.7	143.2	143.2	131.4	134.9	134.0	132.7	134.4	143.0	143.2
Eggs	188.2	188.8	185.9	189.9	198.0	189.4	205.1	187.0	189.5	187.2	196.7	198.8	190.6	206.1
Dairy products	242.1	244.3	244.6	245.0	245.5	245.8	246.5	242.5	244.1	244.2	244.7	244.9	245.2	245.8
Fresh milk and cream (12/77 = 100)	134.0	134.7	134.7	134.9	135.2	135.1	135.5	134.1	134.3	134.4	134.6	134.6	134.6	134.9
Fresh whole milk	219.3	220.0	220.2	220.8	221.2	221.2	221.5	219.3	219.4	219.5	220.1	220.2	220.2	220.5
Other fresh milk and cream (12/77 = 100)	134.2	135.4	135.2	134.9	135.3	135.1	135.8	134.4	135.3	135.2	134.9	134.9	134.7	135.5
Processed dairy products (12/77 = 100)	140.8	143.0	143.3	143.5	143.9	144.4	144.8	141.6	143.4	143.6	144.0	144.2	144.7	145.1
Butter	242.2	247.1	247.2	248.0	248.7	249.3	248.9	246.0	249.9	249.7	250.2	251.3	252.0	251.4
Cheese (12/77 = 100)	139.2	140.8	140.9	141.1	141.0	142.0	142.8	139.6	140.9	140.7	141.1	141.3	142.3	143.1
Ice cream and related products (12/77 = 100)	145.9	148.7	149.9	149.3	150.3	150.8	150.0	146.8	149.1	149.9	149.4	149.4	149.9	149.1
Other dairy products (12/77 = 100)	134.5	137.3	137.0	138.7	139.7	138.4	140.0	135.0	137.6	138.1	140.2	140.5	139.1	140.8
Fruits and vegetables	267.3	281.6	275.2	272.0	276.4	294.7	301.5	266.5	276.3	270.8	268.1	272.6	291.3	297.4
Fresh fruits and vegetables	278.1	286.9	273.5	267.8	274.9	308.0	319.6	277.6	278.2	267.2	261.9	269.4	303.1	313.4
Fresh fruits	256.8	306.4	291.4	276.1	269.6	276.7	291.2	254.4	293.7	279.5	266.0	260.5	267.0	280.1
Apples	217.1	262.9	237.0	248.7	261.2	273.0	279.5	218.2	261.8	236.5	249.1	261.2	272.6	279.9
Bananas	256.9	250.7	254.9	249.4	254.9	253.5	251.0	249.4	251.3	253.3	248.3	252.8	251.1	247.9
Oranges	284.9	346.2	326.5	314.0	280.6	283.1	313.1	269.4	314.6	299.9	286.0	252.8	255.1	281.1
Other fresh fruits (12/77 = 100)	135.9	168.4	160.9	144.7	141.0	145.9	154.5	137.9	161.5	154.7	139.7	136.7	141.0	149.0
Fresh vegetables	298.0	268.6	256.8	260.1	279.8	337.3	346.2	298.7	264.4	256.1	258.2	277.6	336.8	343.5
Potatoes	350.2	329.1	290.4	286.3	286.8	288.8	297.4	347.1	316.8	287.7	281.5	280.0	282.7	291.5
Lettuce	220.4	293.5	258.3	257.1	343.1	514.4	408.9	225.6	292.9	257.2	247.4	342.7	515.8	408.0
Tomatoes	312.8	193.9	207.3	206.9	204.6	245.6	288.5	308.6	191.3	206.4	209.7	207.8	248.8	293.2
Other fresh vegetables (12/77 = 10														

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

[1967=100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981			1982			1981			1982				
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
FOOD AND BEVERAGES—Continued														
Food—Continued														
Food at home—Continued														
Fruits and vegetables—Continued														
Cut corn and canned beans except lima (12/77=100)	128.2	136.8	137.7	138.3	138.9	139.9	140.7	126.5	135.1	135.5	136.0	136.5	137.5	138.3
Other canned and dried vegetables (12/77=100)	124.7	135.6	134.6	133.1	134.8	135.0	134.1	123.5	133.8	133.3	131.8	133.2	133.5	132.6
Other foods at home	323.0	325.7	326.4	326.0	325.6	328.7	330.7	323.6	326.2	327.1	327.0	326.4	329.6	331.5
Sugar and sweets	385.4	361.4	359.9	359.1	359.3	361.6	364.2	387.7	363.1	360.2	359.0	359.3	361.6	364.1
Candy and chewing gum (12/77=100)	141.1	146.8	148.8	149.3	149.9	150.1	150.0	142.0	147.6	148.7	148.9	149.9	150.0	149.8
Sugar and artificial sweeteners (12/77=100)	217.7	163.0	157.1	155.2	153.4	155.6	160.0	217.9	164.9	158.4	157.0	154.6	157.0	161.3
Other sweets (12/77=100)	137.7	145.3	145.2	144.9	146.1	147.1	146.9	137.3	143.8	144.0	143.1	144.2	145.2	145.1
Fats and oils (12/77=100)	267.3	268.5	268.5	262.2	261.1	261.6	260.5	268.9	267.4	268.1	263.1	261.0	261.5	260.6
Margarine	256.8	256.7	256.6	255.2	255.7	257.8	256.7	258.3	254.5	255.9	254.9	254.9	257.2	256.1
Nondairy substitutes and peanut butter (12/77=100)	171.8	178.5	176.5	163.0	160.1	157.7	157.8	172.7	177.2	175.2	163.0	158.5	156.0	156.3
Other fats, oils, and salad dressings (12/77=100)	131.0	129.6	130.5	129.8	129.7	130.5	129.8	131.4	129.2	130.3	130.4	130.1	131.0	130.2
Nonalcoholic beverages	411.9	413.7	414.8	413.4	412.5	418.7	423.4	413.6	414.7	416.0	415.2	414.2	420.5	425.0
Cola drinks, excluding diet cola	295.3	298.9	301.1	298.8	298.1	302.4	304.6	293.4	295.6	297.7	296.1	295.7	300.0	302.0
Carbonated drinks, including diet cola (12/77=100)	140.1	142.4	142.3	141.4	139.3	141.9	143.8	137.8	140.3	139.6	139.3	137.2	139.7	141.7
Roasted coffee	364.9	345.1	343.1	341.0	344.4	353.3	364.4	360.3	340.5	338.9	337.3	340.1	348.8	359.9
Freeze dried and instant coffee	345.3	330.8	329.9	330.8	332.0	336.9	342.8	347.0	331.4	332.7	333.2	331.6	336.5	342.5
Other noncarbonated drinks (12/77=100)	130.8	134.9	135.6	136.4	137.0	138.0	138.4	130.9	134.6	135.5	136.4	137.1	138.2	138.6
Other prepared foods	246.9	259.0	260.5	262.7	262.8	264.6	265.3	247.1	260.5	262.3	264.5	264.4	266.3	266.9
Canned and packaged soup (12/77=100)	128.7	134.9	133.1	133.4	133.7	134.3	135.9	129.3	136.4	135.6	136.1	135.7	136.4	137.9
Frozen prepared foods (12/77=100)	140.0	144.8	144.1	146.5	145.9	147.8	146.2	137.8	142.7	142.8	145.1	145.3	147.4	145.6
Snacks (12/77=100)	142.3	149.6	152.0	152.5	152.2	152.6	153.4	143.5	152.6	155.3	155.6	154.2	154.6	155.2
Seasonings, olives, pickles, and relish (12/77=100)	137.2	144.4	146.2	148.9	148.8	149.7	151.3	136.3	142.7	144.8	147.4	147.7	148.6	150.3
Other condiments (12/77=100)	135.8	143.3	143.5	145.0	144.6	146.4	146.9	137.3	145.3	145.5	146.5	146.2	148.0	148.4
Miscellaneous prepared foods (12/77=100)	135.8	142.3	144.5	144.8	145.8	146.9	147.0	136.0	142.8	143.9	145.2	145.8	147.0	147.1
Other canned and packaged prepared foods (12/77=100)	132.4	139.9	140.5	141.8	142.5	142.5	143.0	132.4	141.1	141.1	143.0	143.9	143.9	144.5
Food away from home	284.7	294.8	296.2	297.2	297.7	299.8	301.2	287.3	297.6	299.0	299.6	300.7	302.8	304.2
Lunch (12/77=100)	138.6	143.6	143.9	144.4	144.6	146.1	146.6	139.8	144.6	145.3	145.6	146.3	147.7	148.2
Dinner (12/77=100)	138.2	142.4	143.2	143.6	144.0	144.8	145.2	139.4	144.3	144.8	145.1	145.6	146.4	146.8
Other meals and snacks (12/77=100)	137.0	143.1	143.9	144.6	144.7	145.4	146.9	138.5	143.9	144.8	145.1	145.4	146.2	147.6
Alcoholic beverages														
Alcoholic beverages at home (12/77=100)	127.4	131.4	130.5	131.2	131.4	132.2	133.3	128.8	132.8	132.5	132.8	132.8	133.4	134.6
Beer and ale	197.6	203.6	202.5	204.0	204.1	205.0	207.4	197.2	203.5	203.1	203.6	203.5	204.3	206.5
Whiskey	140.0	145.4	144.0	144.8	145.0	145.9	146.8	142.0	146.2	146.4	146.2	145.9	146.8	147.7
Wine	224.0	229.7	228.2	227.5	230.0	232.2	234.2	231.6	237.6	238.1	237.4	238.0	239.8	241.6
Other alcoholic beverages (12/77=100)	113.9	117.5	116.3	117.3	117.3	117.5	117.8	113.3	117.1	115.7	116.8	117.4	117.5	117.8
Alcoholic beverages away from home (12/77=100)	129.7	135.4	135.5	135.7	135.8	137.0	137.6	129.4	136.2	136.4	136.6	137.3	138.6	139.1
HOUSING														
Shelter	300.5	326.9	326.6	327.2	328.0	328.3	329.5	301.7	328.6	328.1	328.5	329.3	329.4	330.3
Rent, residential	201.9	211.9	213.6	215.0	216.5	217.8	218.6	201.6	211.5	213.2	214.5	216.0	217.4	218.1
Other rental costs	278.5	308.1	308.7	305.3	306.3	313.6	316.9	278.3	308.0	308.4	305.0	305.3	312.3	315.6
Lodging while out of town	297.4	326.3	324.2	318.6	319.9	331.1	335.9	296.0	325.3	323.3	317.9	318.0	328.4	333.0
Tenants' insurance (12/77=100)	129.3	135.9	140.0	140.4	140.7	141.8	143.5	129.9	136.4	140.1	140.3	140.6	142.0	143.6
Homeownership	335.8	367.8	366.7	367.2	367.8	367.5	368.7	338.2	371.0	369.7	369.8	370.4	369.9	370.8
Home purchase	263.0	274.5	272.5	270.2	270.5	269.3	270.4	262.7	273.8	271.4	268.6	268.7	267.4	268.3
Financing, taxes, and insurance	437.1	501.8	501.8	505.6	506.3	506.0	507.2	442.6	509.0	508.3	511.9	512.9	512.2	513.2
Property insurance	373.1	389.7	392.5	393.3	394.1	393.0	393.7	376.6	391.9	394.7	395.5	396.5	396.6	396.0
Property taxes	198.5	206.2	207.4	208.0	210.7	212.9	215.1	200.6	208.0	209.2	210.0	212.5	214.5	217.2
Contracted mortgage interest cost	565.0	662.0	661.3	666.8	666.6	665.2	666.1	566.5	664.4	662.5	667.7	668.1	666.3	666.6
Mortgage interest rates	211.9	238.2	239.5	244.1	243.9	244.4	243.9	212.3	239.2	240.5	245.3	245.3	245.7	245.4
Maintenance and repairs	302.8	321.6	320.8	322.8	324.1	326.7	328.2	299.9	318.1	319.2	319.8	321.0	323.3	324.6
Maintenance and repair services	328.7	352.5	351.1	353.8	355.4	358.2	359.4	327.7	352.5	354.2	354.9	356.5	359.2	360.1
Maintenance and repair commodities	242.4	248.7	249.3	249.7	250.3	252.5	254.6	238.6	244.1	244.0	244.5	244.9	246.4	248.2
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	141.6	146.2	146.7	146.5	147.3	149.4	150.9	136.9	139.1	139.9	140.0	140.5	142.3	143.7
Lumber, awnings, glass, and masonry (12/77=100)	124.0	125.0	124.4	124.1	124.3	124.6	124.6	123.1	123.2	122.3	121.8	121.6	121.9	121.6
Plumbing, electrical, heating, and cooling supplies (12/77=100)	127.3	131.2	132.4	133.1	131.5	131.9	133.8	127.0	131.7	132.1	132.4	131.6	131.8	133.4
Miscellaneous supplies and equipment (12/77=100)	125.2	131.2	131.7	131.6	132.5	133.6	134.8	127.8	134.3	133.7	134.2	134.7	135.7	136.9
Fuel and other utilities	304.5	331.1	330.1	329.8	331.8	336.2	337.1	305.6	332.3	330.9	330.9	332.7	337.0	337.9
Fuels	387.4	422.4	419.0	417.6	420.0	426.9	427.6	387.3	422.2	418.4	417.4	419.6	426.2	426.8
Fuel oil, coal, and bottled gas	675.6	673.4	672.7	676.1	682.5	686.0	683.1	678.5	677.0	675.9	679.3	685.5	688.9	686.0
Fuel oil	712.0	705.7	704.3	706.8	713.5	716.8	713.8	714.2	709.0	707.1	709.6	716.0	719.3	716.3
Other fuels (6/78=100)	157.5	163.8	165.0	167.7	169.4	170.9	170.0	159.4	165.3	166.4	169.1	170.8	172.1	171.4
Gas (piped) and electricity	322.9	364.5	360.6	358.3	359.9	367.4	368.7	322.1	363.6	359.3	357.5	358.8	366.0	367.3
Electricity	271.3	309.8	303.0	298.6	300.3	306.6	306.8	271.1	309.9	302.7	297.7	299.3	305.3	305.5
Utility (piped) gas	389.0	431.7	434.5	437.0	438.2	447.2	450.8	386.8	428.5	430.8	436.0	436.4	445.2	448.7

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

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982	1981					1982		
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
HOUSING—Continued														
Fuel and other utilities—Continued														
Other utilities and public services	173.6	187.4	189.4	190.7	191.9	192.7	193.9	173.9	187.8	189.8	191.0	192.2	193.1	194.3
Telephone services	142.4	152.5	154.3	155.6	156.8	157.2	157.9	142.5	152.7	154.5	155.8	156.9	157.3	158.0
Local charges (12/77 = 100)	113.5	120.5	121.5	123.5	124.4	124.0	125.3	113.6	120.7	121.8	123.8	124.6	124.2	125.4
Interstate toll calls (12/77 = 100)	101.8	114.9	116.6	116.7	116.7	116.8	116.6	101.9	115.1	116.6	116.8	116.8	116.9	116.7
Intrastate toll calls (12/77 = 100)	101.2	103.9	105.5	105.3	107.1	109.2	109.1	101.0	103.7	105.3	105.0	106.9	109.0	108.8
Water and sewerage maintenance	274.7	304.1	305.2	306.1	307.4	309.8	313.3	276.3	306.0	307.3	307.9	309.4	312.2	315.7
Household furnishings and operations	214.9	224.5	225.6	227.2	227.7	228.4	230.2	211.7	221.2	222.2	223.6	224.2	224.9	226.7
Housefurnishings	180.8	187.9	188.7	189.4	189.2	189.8	191.4	178.5	185.7	186.6	187.3	187.1	187.7	189.3
Textile housefurnishings	195.1	207.7	210.4	211.7	211.2	210.1	216.0	196.9	213.0	214.1	214.7	213.9	212.5	218.5
Household linens (12/77 = 100)	118.6	127.7	130.1	130.8	128.8	127.3	131.0	121.4	129.7	132.0	131.9	129.9	128.6	132.1
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	124.8	131.4	132.2	133.1	134.7	134.8	138.5	124.4	136.3	135.2	136.1	137.4	137.0	141.0
Furniture and bedding	199.3	207.7	209.2	209.7	209.7	209.5	209.4	195.6	202.7	203.8	205.3	206.0	205.9	205.5
Bedroom furniture (12/77 = 100)	131.3	137.6	137.4	139.6	138.6	139.7	140.5	127.7	132.9	132.3	135.2	135.2	136.5	137.1
Sofas (12/77 = 100)	114.5	118.6	119.3	118.7	119.4	117.3	116.4	113.2	117.4	119.0	118.8	119.5	117.6	116.5
Living room chairs and tables (12/77 = 100)	115.9	116.8	117.0	118.8	119.0	118.9	118.6	115.2	117.2	118.5	118.9	119.1	119.0	118.8
Other furniture (12/77 = 100)	129.1	137.3	137.3	137.1	138.4	138.5	138.1	126.6	132.3	133.0	133.1	134.0	133.9	133.4
Appliances including TV and sound equipment	143.9	147.7	147.8	148.2	147.9	148.8	149.9	142.9	146.7	147.2	147.7	147.5	148.5	149.6
Television and sound equipment (12/77 = 100)	107.9	108.7	109.1	109.0	108.9	108.8	109.2	106.8	107.8	108.1	108.3	108.0	107.9	108.4
Television	105.7	104.6	105.0	104.8	104.7	104.4	104.5	104.2	103.6	103.8	103.6	103.3	103.1	103.3
Sound equipment (12/77 = 100)	111.0	113.4	113.8	113.9	113.7	113.8	114.5	109.6	112.4	112.8	113.4	112.9	113.0	113.8
Household appliances	168.2	175.7	175.3	176.1	175.9	178.0	179.7	167.8	174.4	175.1	175.9	176.0	178.1	179.9
Refrigerators and home freezers	168.4	177.5	177.0	178.7	179.9	180.8	182.6	172.3	180.6	181.6	182.7	185.3	186.1	187.9
Laundry equipment (12/77 = 100)	123.7	129.7	130.5	130.7	130.5	132.2	133.5	122.8	128.8	129.8	130.8	130.3	132.4	133.8
Other household appliances (12/77 = 100)	115.4	119.7	118.9	119.4	118.7	120.6	121.6	113.7	117.1	117.1	117.4	116.8	118.5	119.7
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	115.1	118.8	118.2	118.7	117.9	119.4	121.0	114.2	116.0	115.9	116.8	116.2	117.4	118.9
Office machines, small electric appliances, and air conditioners (12/77 = 100)	115.7	120.8	119.8	120.1	119.6	121.9	122.4	113.1	118.3	118.4	118.1	117.3	119.7	120.5
Other household equipment (12/77 = 100)	127.9	133.1	134.2	134.4	134.0	134.9	136.7	125.6	131.6	132.4	132.4	131.9	132.9	134.7
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	128.7	134.8	135.4	136.1	135.9	136.3	139.1	120.8	129.6	129.6	129.7	128.3	128.6	131.0
Clocks, lamps, and decor items (12/77 = 100)	124.1	128.2	128.7	129.5	128.4	128.6	129.8	121.7	123.8	124.5	125.2	124.7	124.8	126.0
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	134.8	140.4	141.1	141.2	141.0	142.3	143.3	131.0	137.8	137.9	137.5	137.1	138.2	139.5
Lawn equipment, power tools, and other hardware (12/77 = 100)	119.9	124.5	127.2	126.9	126.3	127.8	130.3	123.8	129.2	131.2	131.6	131.5	133.2	135.5
Housekeeping supplies	262.8	273.3	274.3	275.4	277.4	279.1	282.4	260.1	270.4	271.2	271.9	274.1	275.7	278.8
Soaps and detergents	256.2	268.9	269.3	269.7	271.6	275.5	278.0	254.3	265.6	265.3	265.2	268.0	272.0	274.4
Other laundry and cleaning products (12/77 = 100)	129.3	135.7	136.7	137.3	138.8	139.6	141.0	129.6	135.8	136.6	137.0	137.5	138.4	139.8
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	138.4	139.9	141.8	143.6	144.5	145.1	145.7	139.2	140.4	142.4	143.9	144.4	145.1	145.6
Stationery, stationery supplies, and gift wrap (12/77 = 100)	121.4	127.2	128.1	128.5	128.8	128.8	130.4	122.4	128.7	130.8	131.3	131.6	131.7	133.4
Miscellaneous household products (12/77 = 100)	135.9	142.8	142.8	143.0	145.4	146.2	146.9	132.2	138.1	137.8	137.4	140.4	141.2	141.8
Lawn and garden supplies (12/77 = 100)	134.0	137.8	136.6	136.8	136.7	137.1	141.8	126.1	131.1	129.0	129.6	129.4	129.2	134.1
Housekeeping services	281.6	298.3	300.5	305.2	306.9	307.4	308.1	279.4	296.9	298.9	303.9	305.4	305.9	306.8
Postage	257.3	308.0	308.0	337.5	337.5	337.5	337.5	257.3	308.1	308.1	337.5	337.5	337.5	337.5
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	138.2	144.7	145.5	147.0	147.8	148.4	149.4	137.8	144.9	145.2	146.7	147.6	148.0	149.1
Appliance and furniture repair (12/77 = 100)	123.6	129.0	131.3	132.2	133.0	133.6	134.2	122.4	128.3	130.5	131.2	131.6	132.2	132.8
APPAREL AND UPKEEP	182.0	190.7	191.5	191.3	190.5	187.3	188.0	181.8	190.5	190.6	190.5	189.4	186.5	187.3
Apparel commodities	173.2	181.4	182.1	181.8	180.7	177.0	177.6	173.3	181.6	181.5	181.5	180.1	176.7	177.4
Apparel commodities less footwear	169.6	178.0	178.4	177.9	176.6	172.8	173.4	169.6	178.1	177.7	177.3	175.6	172.2	173.0
Men's and boys'	171.6	181.1	183.6	183.6	181.6	178.7	179.3	172.2	181.4	182.9	183.2	181.7	178.6	179.4
Men's (12/77 = 100)	107.8	114.3	115.9	115.9	114.5	112.9	113.0	108.2	115.0	115.8	115.9	115.0	113.3	113.5
Suits, sport coats, and jackets (12/77 = 100)	100.5	108.8	109.8	109.9	106.4	104.3	104.8	96.1	102.1	102.0	102.0	99.5	97.8	98.2
Coats and jackets (12/77 = 100)	95.6	101.0	102.4	102.8	101.4	96.4	95.8	96.0	106.1	104.9	105.1	104.1	97.6	97.2
Furnishings and special clothing (12/77 = 100)	125.3	132.7	134.3	133.6	134.2	133.6	134.7	120.2	128.5	130.0	129.8	130.6	129.8	131.1
Shirts (12/77 = 100)	114.8	120.6	123.0	123.0	122.7	120.7	119.3	116.8	123.9	125.5	125.4	125.3	123.3	121.8
Dungarees, jeans, and trousers (12/77 = 100)	102.7	107.8	109.2	109.8	108.5	108.2	108.6	108.7	113.5	114.7	115.5	114.1	113.6	114.1
Boys' (12/77 = 100)	112.6	116.4	118.1	118.0	117.2	114.6	116.0	111.9	114.8	116.4	116.5	115.4	112.9	114.3
Coats, jackets, sweaters, and shirts (12/77 = 100)	104.3	111.3	111.9	111.6	109.9	104.7	105.9	107.0	112.3	113.5	112.8	110.9	105.3	106.3
Furnishings (12/77 = 100)	119.1	125.0	125.6	127.0	127.5	127.3	128.2	116.1	120.9	121.8	123.3	123.5	123.3	124.2
Suits, trousers, sport coats, and jackets (12/77 = 100)	116.6	117.0	119.9	119.3	118.8	117.2	119.1	114.2	114.4	116.6	116.9	115.9	114.7	116.7
Women's and girls'	153.4	162.9	161.2	160.6	159.6	154.3	154.7	155.4	164.9	162.7	162.1	160.7	156.4	157.1
Women's (12/77 = 100)	101.9	108.1	106.8	106.3	105.8	102.3	102.9	103.5	109.8	108.1	107.6	107.1	103.9	104.8
Coats and jackets	160.7	170.8	167.3	164.0	161.8	158.4	156.4	159.1	177.8	171.4	166.3	167.3	161.6	163.1
Dresses	156.9	170.8	166.9	165.0	164.0	153.1	152.8	150.5	155.5	151.5	151.9	149.5	140.7	140.9
Separates and sportswear (12/77 = 100)	97.1	101.1	100.4	101.1	100.7	96.7	96.3	99.7	103.3	102.3	101.9	101.3	97.3	96.8
Underwear, nightwear, and hosiery (12/77 = 100)	116.4	122.8	123.0	124.1	124.8	124.0	126.2	116.0	122.7	123.4	124.0	124.5	123.7	126.0
Suits (12/77 = 100)	90.0	95.4	92.4	89.5	87.7	82.0	87.0	103.6	115.0	110.2	108.5	106.0	104.0	105.6
Girls' (12/77 = 100)	102.8	109.7	109.2	109.2	107.7	104.4	102.7	102.7	108.8	108.4	108.4	106.0	104.2	103.1
Coats, jackets, dresses, and suits (12/77 = 100)	94.4	103.3	99.8	100.3	98.4	93.4	92.6	93.5	103.3	99.8	99.9	96.1	91.2	91.5
Separates and sportswear (12/77 = 100)	104.2	111.0	112.0	111.3	108.9	106.3	103.4	105.8	110.0	110.6	110.2	107.5	108.2	106.0
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	113.9	117.9	119.6	120.0	120.7	119.2	118.0	112.5	115.5	118.5	119.0	119.5	118.2	117.0

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

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982		1981					1982	
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
APPAREL AND UPKEEP—Continued														
Apparel commodities—Continued														
Apparel commodities less footwear—Continued														
Infants' and toddlers'	254.3	266.4	268.5	264.9	259.4	259.6	262.2	264.0	279.8	281.6	274.1	270.6	270.1	271.4
Other apparel commodities	212.3	213.3	216.2	214.8	214.5	212.9	214.3	204.4	206.2	206.1	203.2	201.4	203.2	202.8
Sewing materials and notions (12/77 = 100)	112.2	118.3	118.1	118.6	118.3	116.2	117.6	112.2	116.4	116.3	116.4	116.2	114.3	115.9
Jewelry and luggage (12/77 = 100)	147.9	146.2	149.0	147.5	147.4	146.7	147.4	141.3	140.9	141.1	141.0	138.4	137.5	138.1
Footwear	194.9	202.4	204.2	205.4	205.7	202.8	202.8	194.9	202.3	204.1	206.2	205.9	203.1	203.3
Men's (12/77 = 100)	125.0	128.8	129.3	130.3	130.7	130.3	130.7	125.7	129.7	130.3	132.3	132.5	132.2	132.6
Boys' and girls' (12/77 = 100)	125.3	129.7	131.1	132.1	132.1	130.1	129.5	126.2	130.7	132.2	134.0	134.8	132.5	132.3
Women's (12/77 = 100)	117.9	123.5	124.9	125.2	125.4	122.6	122.7	115.9	121.2	122.5	122.9	121.6	118.9	119.0
Apparel services	249.9	262.0	263.2	264.6	266.4	267.6	269.4	248.7	260.0	262.1	262.3	264.4	265.5	267.2
Laundry and drycleaning other than coin operated (12/77 = 100)	147.6	155.7	157.1	158.2	159.2	160.0	161.4	147.3	155.0	156.4	156.3	157.8	158.5	159.9
Other apparel services (12/77 = 100)	133.3	138.2	137.5	137.9	139.1	139.4	139.8	132.9	137.4	138.3	138.6	139.6	139.9	140.3
TRANSPORTATION	270.9	285.2	287.2	289.1	289.8	289.9	288.0	272.1	286.6	288.9	290.8	291.5	291.6	289.6
Private	269.4	281.9	283.9	285.8	286.5	286.6	284.5	271.0	284.1	286.4	288.3	289.0	289.0	286.9
New cars	184.8	191.3	192.5	195.3	197.0	197.4	195.5	185.0	191.4	192.7	195.2	196.9	197.3	195.3
Used cars	234.3	272.8	278.2	281.4	281.9	280.5	279.7	234.4	272.8	281.4	281.9	281.9	280.5	279.7
Gasoline	410.8	411.2	409.9	409.5	408.4	406.0	399.1	412.5	412.4	411.3	410.9	409.8	407.5	400.6
Automobile maintenance and repair	285.4	298.7	301.3	302.8	304.1	305.5	307.7	285.4	299.3	301.8	303.4	304.8	306.2	308.4
Body work (12/77 = 100)	139.2	147.4	148.7	149.9	150.6	151.5	153.7	139.2	146.1	147.2	148.3	148.9	149.8	151.2
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	136.8	143.1	144.0	144.2	144.7	145.7	146.5	138.3	145.5	146.5	147.3	148.5	149.5	150.2
Maintenance and servicing (12/77 = 100)	133.7	138.9	140.3	140.9	141.5	142.0	142.7	133.5	139.2	140.3	140.5	141.0	141.5	142.3
Power plant repair (12/77 = 100)	135.5	142.6	144.0	144.9	145.6	146.2	147.3	134.7	141.9	143.5	144.7	145.1	145.7	146.8
Other private transportation	234.2	244.2	247.5	249.5	250.6	253.3	253.4	236.9	246.9	250.6	253.0	254.2	256.9	256.8
Other private transportation commodities	205.8	212.6	212.7	213.4	214.5	215.5	214.8	207.5	215.5	216.1	216.8	216.9	218.0	217.3
Motor oil, coolant, and other products (12/77 = 100)	141.6	147.7	148.0	148.5	148.7	148.2	149.3	139.0	145.3	144.8	146.7	147.2	146.9	147.8
Automobile parts and equipment (12/77 = 100)	131.8	136.0	136.0	136.4	137.2	138.1	137.4	133.4	138.4	138.9	139.2	139.2	140.0	139.4
Tires	183.5	189.7	189.4	189.7	191.5	192.8	191.3	186.6	194.1	194.6	195.1	195.2	196.5	195.1
Other parts and equipment (12/77 = 100)	129.3	132.8	133.4	134.1	133.9	134.3	134.6	129.3	133.2	134.3	134.1	133.9	134.5	134.9
Other private transportation services	244.0	255.0	259.1	261.5	262.6	265.8	266.1	247.0	257.7	262.2	265.1	266.6	269.7	269.8
Automobile insurance	253.7	262.0	264.6	265.4	266.0	266.8	268.1	253.2	261.8	264.3	265.0	265.6	266.6	268.0
Automobile finance charges (12/77 = 100)	165.1	178.0	184.4	188.7	190.5	190.9	188.9	163.9	176.5	183.1	187.6	189.9	190.3	188.3
Automobile rental, registration, and other fees (12/77 = 100)	116.7	120.1	120.2	120.7	120.8	127.6	128.9	119.3	119.8	120.0	121.1	121.4	128.4	129.5
State registration	146.9	147.9	147.9	149.0	149.0	166.9	167.1	147.0	148.0	148.0	149.0	149.0	166.2	166.5
Drivers' licenses (12/77 = 100)	105.4	109.6	109.9	110.4	111.9	117.3	121.7	105.1	109.5	109.8	110.3	111.9	117.1	121.7
Vehicle inspection (12/77 = 100)	125.8	(¹)	(¹)	(¹)	128.3	129.2	129.3	126.6	(¹)	(¹)	(¹)	129.0	130.5	130.6
Other vehicle-related fees (12/77 = 100)	134.7	140.9	141.2	141.3	141.6	142.5	144.8	147.2	145.9	146.5	148.6	149.2	150.4	152.4
Public	288.1	329.1	330.8	333.2	333.8	334.9	336.8	280.6	324.5	326.6	328.2	328.6	329.4	331.0
Airline fare	334.1	372.5	372.0	374.5	374.7	375.5	379.3	332.7	371.8	372.9	373.1	372.8	372.7	376.3
Intercity bus fare	312.8	351.4	361.3	362.2	365.2	367.3	365.7	312.2	351.7	362.1	362.9	366.1	368.9	367.4
Intracity mass transit	248.4	298.6	301.7	304.4	304.6	305.9	306.7	247.8	299.2	301.3	303.6	303.9	305.1	305.8
Taxi fare	271.4	288.6	289.3	291.3	294.7	296.3	296.7	277.7	297.1	298.1	300.4	304.1	305.6	306.1
Intercity train fare	276.5	305.0	315.0	319.2	319.2	318.1	314.0	276.9	305.2	314.9	318.9	318.9	317.9	314.5
MEDICAL CARE	282.6	301.7	304.8	308.2	310.2	313.4	316.2	284.4	300.9	304.0	307.1	309.1	312.0	314.9
Medical care commodities	179.2	190.8	192.1	193.1	194.9	195.9	197.7	179.6	191.9	192.9	193.8	195.4	196.4	198.3
Prescription drugs	165.0	176.5	178.6	179.6	181.0	181.9	183.7	165.3	178.0	179.4	180.3	181.9	182.8	184.7
Anti-infective drugs (12/77 = 100)	129.2	136.5	136.8	136.3	137.8	138.2	138.4	129.5	139.2	139.6	139.7	140.1	140.4	140.4
Tranquilizers and sedatives (12/77 = 100)	131.9	140.0	141.9	143.6	144.8	145.4	146.8	130.7	139.7	141.3	143.3	144.4	144.9	146.5
Circulatories and diuretics (12/77 = 100)	121.9	127.8	129.5	130.4	131.9	132.2	134.0	122.9	129.0	130.5	131.0	131.8	132.1	134.0
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	147.4	160.6	161.9	163.3	164.6	165.6	168.4	146.5	161.4	162.8	164.1	165.9	166.9	169.7
Pain and symptom control drugs (12/77 = 100)	130.9	141.7	144.1	144.9	145.9	147.3	148.8	133.3	143.8	144.2	145.4	147.3	148.7	150.3
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	124.5	134.1	136.8	137.5	138.1	138.8	139.9	125.2	134.6	136.1	136.8	138.0	138.8	139.9
Nonprescription drugs and medical supplies (12/77 = 100)	128.9	136.7	137.0	137.8	139.2	139.9	141.1	129.4	137.4	137.9	138.5	139.7	140.4	141.6
Eyeglasses (12/77 = 100)	123.1	126.9	127.4	127.8	128.4	128.3	128.9	122.3	126.0	126.0	126.7	127.1	127.1	127.6
Internal and respiratory over-the-counter drugs	202.7	217.8	217.3	218.6	221.6	222.8	225.1	203.0	218.9	219.5	220.2	222.8	223.9	226.4
Nonprescription medical equipment and supplies (12/77 = 100)	124.5	131.4	132.7	133.7	134.6	135.9	137.1	126.5	132.6	133.8	134.7	135.2	136.6	137.7
Medical care services	305.2	326.1	329.7	333.7	335.7	339.4	342.4	307.4	324.7	328.3	332.0	334.0	337.5	340.6
Professional services	267.2	284.3	286.4	288.4	290.0	292.0	294.2	271.6	284.5	286.2	288.2	290.3	292.2	294.3
Physicians' services	287.7	304.9	307.9	311.3	313.0	315.5	318.8	293.9	308.6	310.9	314.1	316.0	318.6	321.7
Dental services	252.8	270.8	271.6	272.3	273.9	275.8	276.8	257.0	268.4	269.5	270.1	272.3	274.1	274.9
Other professional services (12/77 = 100)	130.0	137.7	138.9	139.5	140.3	140.3	141.5	128.5	134.3	134.9	136.2	137.2	137.2	138.5
Other medical care services	351.1	376.5	382.1	388.4	390.9	396.8	400.8	351.3	374.1	380.3	386.2	388.1	393.8	398.0
Hospital and other medical services (12/77 = 100)	146.1	156.6	159.0	161.9	162.7	165.6	167.1	145.2	154.8	157.9	160.6	161.1	164.0	165.7
Hospital room	458.2	494.6	503.0	515.4	519.3	529.4	533.8	455.9	488.5	498.9	509.6	512.6	522.0	527.0
Other hospital and medical care services (12/77 = 100)	145.5	155.0	157.2	159.2	159.6	162.2	163.8	144.4	153.4	156.1	158.3	158.4	161.2	163.0

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

[1967=100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982	1981					1982		
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
ENTERTAINMENT	216.7	224.0	225.5	226.8	227.3	229.2	231.2	215.0	221.5	223.4	224.3	224.4	226.1	228.1
Entertainment commodities	219.7	227.9	228.9	230.3	230.6	232.0	234.3	216.2	224.0	224.2	225.5	225.4	226.7	228.9
Reading materials (12/77 = 100)	130.9	138.1	138.7	139.8	139.6	142.9	144.1	130.7	137.8	138.3	139.3	139.1	142.1	143.3
Newspapers	253.8	266.3	267.1	267.6	267.7	270.5	273.1	254.0	266.2	266.9	267.5	267.6	270.1	272.8
Magazines, periodicals, and books (12/77 = 100)	132.9	141.1	141.9	143.9	143.5	149.0	149.9	132.9	141.2	141.7	143.7	143.4	148.8	149.7
Sporting goods and equipment (12/77 = 100)	124.7	127.3	128.3	130.2	130.0	129.5	131.5	119.3	121.3	121.4	122.8	122.4	122.4	123.9
Sport vehicles (12/77 = 100)	126.5	128.4	129.4	(¹)	132.1	^c (¹)	133.9	118.1	118.7	118.6	(¹)	120.2	^c (¹)	121.9
Indoor and warm weather sport equipment (12/77 = 100)	115.9	119.1	119.2	119.6	119.9	120.1	119.6	115.3	117.2	117.3	118.2	117.9	118.2	117.7
Bicycles	187.2	193.2	194.4	194.3	193.9	194.8	197.3	188.3	193.9	195.9	196.3	195.2	196.2	198.9
Other sporting goods and equipment (12/77 = 100)	120.6	125.0	126.6	126.7	126.2	125.3	127.0	119.2	125.8	126.2	126.9	126.3	125.2	127.4
Toys, hobbies, and other entertainment (12/77 = 100)	126.3	131.0	131.3	131.3	132.0	132.2	133.2	125.8	130.6	130.5	130.8	130.9	131.2	132.3
Toys, hobbies, and music equipment (12/77 = 100)	124.7	129.4	129.6	129.7	130.1	130.8	131.7	123.0	127.1	126.2	126.7	126.9	127.7	128.6
Photographic supplies and equipment (12/77 = 100)	122.6	126.4	126.0	125.5	125.2	125.2	126.9	124.4	127.7	127.8	127.5	126.3	126.3	127.9
Pet supplies and expenses (12/77 = 100)	132.0	137.2	138.3	138.3	140.2	139.7	140.6	131.9	138.8	139.9	140.1	140.9	140.5	141.6
Entertainment services	213.0	218.9	221.0	222.3	223.0	225.5	227.1	213.9	218.3	223.3	223.4	223.9	226.1	227.8
Fees for participant sports (12/77 = 100)	129.4	134.3	136.4	137.3	137.6	139.6	140.9	129.0	134.0	138.9	139.1	139.3	141.2	142.5
Admissions (12/77 = 100)	125.3	128.0	128.3	128.9	129.7	131.2	131.6	126.2	127.3	128.2	128.3	128.7	130.1	130.6
Other entertainment services (12/77 = 100)	122.0	122.5	123.1	123.4	123.7	124.2	125.0	123.0	122.7	124.2	124.1	124.3	124.7	125.9
OTHER GOODS AND SERVICES	227.4	243.0	245.2	245.9	246.7	248.4	250.3	225.6	239.3	241.4	242.5	243.5	245.0	247.1
Tobacco products	212.3	221.7	225.3	226.2	226.8	227.1	230.7	211.9	220.9	224.5	225.4	225.9	226.2	229.8
Cigarettes	214.8	224.2	228.1	228.9	229.7	230.0	233.6	214.5	223.4	227.2	228.1	228.7	229.1	232.7
Other tobacco products and smoking accessories (12/77 = 100)	126.5	133.1	134.0	134.7	134.4	134.7	136.8	126.4	134.4	134.7	135.0	134.7	135.0	136.9
Personal care	224.6	236.3	236.9	237.7	239.1	240.9	242.3	223.2	233.6	234.1	235.5	237.1	238.8	240.4
Toilet goods and personal care appliances	219.5	231.2	231.6	232.5	234.7	236.4	238.5	218.5	231.1	231.4	233.1	235.4	236.9	239.2
Products for the hair, hairpieces, and wigs (12/77 = 100)	128.3	134.1	134.9	135.4	136.5	137.2	138.4	126.7	133.3	131.8	133.3	135.8	136.4	137.8
Dental and shaving products (12/77 = 100)	132.9	140.0	139.8	140.5	141.2	144.0	145.6	131.2	138.0	138.0	139.3	139.8	142.6	144.2
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	123.2	130.7	131.2	131.8	133.2	134.1	135.0	122.8	130.4	131.6	132.2	133.7	134.5	135.8
Other toilet goods and small personal care appliances (12/77 = 100)	127.5	134.2	133.7	134.3	136.0	135.9	137.0	129.0	137.4	138.2	139.1	139.1	138.9	140.2
Personal care services	230.0	241.5	242.3	243.1	243.9	245.7	246.5	228.1	236.3	237.1	238.1	239.2	241.0	241.8
Beauty parlor services for women	231.7	243.0	243.9	244.8	245.2	246.9	247.7	229.4	236.1	236.7	237.8	238.8	240.5	241.3
Haircuts and other barber shop services for men (12/77 = 100)	128.5	135.3	135.6	135.9	136.8	138.0	138.4	127.6	133.9	134.5	134.9	135.7	136.8	137.2
Personal and educational expenses	254.4	281.5	284.6	284.9	285.1	288.1	289.2	255.0	281.8	284.8	285.6	285.9	288.9	290.2
Schoolbooks and supplies	229.8	252.1	254.5	254.6	254.5	260.7	262.9	233.6	255.9	258.3	258.3	258.5	264.8	267.1
Personal and educational services	260.4	288.5	291.7	292.1	292.3	294.8	295.8	260.6	288.5	291.6	292.5	292.8	295.2	296.3
Tuition and other school fees	132.7	147.4	149.0	149.1	149.1	150.5	150.6	132.9	147.7	149.3	149.4	149.4	150.7	150.9
College tuition (12/77 = 100)	132.1	146.3	148.2	148.3	148.3	149.9	150.1	132.1	146.1	148.1	148.1	148.1	149.6	149.8
Elementary and high school tuition (12/77 = 100)	134.4	151.5	151.6	152.0	152.0	152.1	152.2	134.3	152.1	152.2	152.7	152.7	152.8	152.9
Personal expenses (12/77 = 100)	137.1	150.0	152.3	152.8	153.4	154.3	156.1	136.3	148.5	150.4	152.1	152.7	153.7	155.3
Special indexes:														
Gasoline, motor oil, coolant, and other products	404.8	405.4	404.3	403.9	402.8	400.5	393.9	406.3	406.5	405.4	405.1	404.0	401.8	395.3
Insurance and finance	370.7	417.6	419.0	422.2	423.1	423.9	424.8	370.4	416.4	417.6	420.9	422.1	422.8	423.5
Utilities and public transportation	262.3	293.3	292.7	292.6	293.9	297.7	299.1	261.0	292.4	291.6	291.5	292.6	296.4	297.7
Housekeeping and home maintenance services	314.6	335.7	335.9	339.6	341.3	343.0	344.0	313.4	335.5	337.3	339.9	341.5	343.3	344.2

¹ Not available.

c=corrected.

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

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000-1.250 million)			Size class C (75,000-385,000)			Size class D (75,000 or less)		
	1981			1981			1981			1981		
	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.
Northeast												
EXPENDITURE CATEGORY												
All items	143.8	144.2	144.2	152.3	152.9	150.7	156.2	159.2	158.1	149.2	150.7	151.4
Food and beverages	139.7	139.6	143.3	139.9	139.6	142.7	142.6	142.8	145.7	137.4	137.0	140.4
Housing	147.8	148.0	146.0	161.4	161.9	155.7	170.1	176.3	172.5	156.6	159.3	159.5
Apparel and upkeep	118.9	117.5	117.0	124.8	123.1	120.5	124.8	125.9	123.1	126.5	125.4	119.9
Transportation	156.3	157.9	156.5	164.0	165.4	164.2	162.0	162.7	161.6	159.7	161.8	161.7
Medical care	140.0	142.0	145.1	143.6	146.6	147.0	146.5	146.3	148.7	142.3	143.0	144.8
Entertainment	131.8	131.9	133.3	129.6	131.0	132.4	129.5	133.7	136.1	133.2	134.3	137.6
Other goods and services	134.6	135.4	136.9	138.0	138.7	140.6	141.5	142.0	142.9	137.5	138.5	140.6
COMMODITY AND SERVICE GROUP												
Commodities	142.1	141.8	142.1	149.6	149.6	147.9	149.8	151.1	150.1	146.4	147.2	147.6
Commodities less food and beverages	143.7	143.2	141.4	154.3	154.5	150.5	153.1	154.9	152.2	150.7	152.1	151.0
Services	146.0	147.3	146.9	156.5	158.0	155.1	166.7	172.5	171.0	153.5	156.1	157.3
North Central region												
EXPENDITURE CATEGORY												
All items	152.6	152.6	153.6	148.8	149.2	151.9	145.9	147.4	149.1	146.7	147.6	151.0
Food and beverages	139.7	139.8	141.6	139.3	139.3	140.8	140.3	140.7	143.1	143.3	143.4	144.7
Housing	164.4	163.3	164.9	153.6	153.8	159.9	147.5	150.0	152.7	148.3	149.1	155.5
Apparel and upkeep	115.5	113.7	112.7	127.2	128.0	121.1	123.4	122.4	121.8	123.1	123.6	119.5
Transportation	161.2	162.9	161.1	159.5	160.8	159.7	161.2	162.3	161.0	158.6	160.1	160.3
Medical care	142.8	144.6	148.4	145.6	146.8	150.8	145.3	147.7	150.3	147.7	151.2	154.5
Entertainment	132.2	134.1	137.1	123.8	124.4	126.4	131.3	132.6	136.1	128.4	129.2	132.5
Other goods and services	136.0	137.0	138.8	142.4	142.9	145.1	135.1	135.6	137.3	140.4	141.7	144.6
COMMODITY AND SERVICE GROUP												
Commodities	145.7	145.1	145.2	142.9	142.9	145.4	141.4	142.2	143.5	140.7	140.7	142.1
Commodities less food and beverages	148.5	147.6	146.9	144.4	144.4	147.3	141.9	142.8	143.6	139.6	139.5	141.0
Services	162.9	163.7	166.1	158.3	159.5	162.6	153.3	156.1	158.4	156.2	158.7	165.0
South												
EXPENDITURE CATEGORY												
All items	150.9	152.0	152.6	153.4	155.9	157.2	149.2	152.3	154.0	149.4	150.8	152.3
Food and beverages	141.2	141.4	144.2	141.1	141.3	144.8	141.2	141.9	144.1	144.0	143.4	146.1
Housing	158.6	160.3	160.2	162.5	166.7	168.3	154.7	159.7	162.7	153.5	156.2	158.8
Apparel and upkeep	124.4	123.5	122.6	122.6	123.7	121.1	118.3	118.2	117.0	111.8	110.4	105.7
Transportation	160.6	161.9	161.5	162.3	164.1	162.8	160.2	162.3	160.7	160.6	161.6	159.9
Medical care	141.6	143.2	145.9	145.9	147.6	150.5	148.8	153.0	155.4	156.3	160.1	162.5
Entertainment	127.1	127.4	129.3	133.4	137.1	140.0	134.8	136.4	140.4	138.8	138.4	140.4
Other goods and services	139.2	139.7	141.2	139.5	139.5	140.7	138.5	139.9	142.0	139.5	140.5	147.9
COMMODITY AND SERVICE GROUP												
Commodities	145.0	145.9	146.8	145.7	147.5	148.4	143.6	145.3	146.0	144.1	145.1	145.0
Commodities less food and beverages	146.6	147.9	148.0	147.7	150.1	149.9	144.6	146.7	146.8	144.2	145.8	144.6
Services	159.3	160.5	160.7	164.9	168.6	170.4	157.9	163.1	166.3	157.4	159.5	163.3
West												
EXPENDITURE CATEGORY												
All items	156.3	156.1	157.9	155.0	155.1	157.1	149.2	149.4	150.2	152.1	149.1	153.3
Food and beverages	140.3	140.8	143.9	144.9	145.4	147.9	141.4	140.1	143.4	145.5	145.8	148.1
Housing	167.1	165.5	167.2	162.6	161.6	164.9	153.5	153.8	154.4	153.9	146.1	153.9
Apparel and upkeep	121.8	121.9	121.7	127.6	127.1	126.4	116.5	117.1	118.8	135.9	135.6	131.9
Transportation	161.8	162.9	164.2	163.5	165.0	163.6	162.1	162.8	160.9	162.5	164.6	164.5
Medical care	150.5	155.7	157.8	148.1	151.3	153.7	149.4	151.1	154.8	150.4	152.8	157.9
Entertainment	133.0	133.6	135.1	132.5	133.9	135.5	131.4	129.4	130.4	144.4	145.6	147.8
Other goods and services	140.1	141.0	144.5	141.4	142.8	145.3	136.1	136.8	137.1	145.5	148.0	147.6
COMMODITY AND SERVICE GROUP												
Commodities	145.1	144.9	146.0	147.0	147.2	148.4	144.4	143.7	145.2	146.2	145.5	147.5
Commodities less food and beverages	147.1	146.6	146.9	147.8	148.0	148.6	145.6	145.1	145.9	146.5	145.4	147.3
Services	171.2	170.9	173.7	166.0	166.0	169.1	156.1	157.5	157.3	160.9	154.6	161.8

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

[1967 = 100 unless otherwise specified]

Area ¹	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1981					1982		1981					1982	
	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Feb.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
U.S. city average ²	263.2	279.3	279.9	280.7	281.5	282.5	283.4	263.5	279.1	279.7	280.4	281.1	282.1	282.9
Anchorage, Alaska (10/67=100)	...	250.5	...	253.7	...	253.0	...	...	245.9	...	249.3	...	248.6	...
Atlanta, Ga.	263.0	...	281.5	...	282.2	...	279.8	266.4	...	283.0	...	284.1	...	282.7
Baltimore, Md.	...	279.9	...	280.7	...	282.1	...	...	281.6	...	280.9	...	282.3	...
Boston, Mass.	...	272.8	...	274.2	...	274.0	...	...	273.6	...	274.3	...	273.4	...
Buffalo, N.Y.	251.4	...	262.5	...	264.3	...	259.9	249.7	...	261.2	...	262.7	...	258.0
Chicago, Ill.-Northwestern Ind.	259.6	276.9	276.1	277.0	273.9	275.4	274.9	258.8	275.8	276.3	277.3	274.4	275.9	275.4
Cincinnati, Ohio-Ky.-Ind.	...	275.2	...	276.6	...	285.7	...	...	277.1	...	279.0	...	288.4	...
Cleveland, Ohio	273.5	...	282.8	...	281.6	...	285.9	273.9	...	282.3	...	281.2	...	285.0
Dallas-Ft. Worth, Tex.	274.4	...	292.5	...	295.1	...	293.6	272.9	...	288.8	...	291.0	...	289.8
Denver-Boulder, Colo.	...	298.9	...	297.8	...	305.4	...	...	304.2	...	302.8	...	310.5	...
Detroit, Mich.	270.2	284.2	281.5	279.6	278.3	280.8	277.8	265.5	280.2	278.2	276.4	275.1	277.8	274.8
Honolulu, Hawaii	243.3	...	259.3	...	258.3	...	262.2	243.5	...	259.1	...	259.3	...	263.2
Houston, Tex.	281.5	...	300.0	...	302.7	...	304.1	277.7	...	295.9	...	298.8	...	300.3
Kansas City, Mo.-Kansas	261.9	...	272.6	...	273.5	...	276.0	260.1	...	271.3	...	272.0	...	274.1
Los Angeles-Long Beach, Anaheim, Calif.	261.6	279.3	281.3	281.8	282.3	285.8	285.6	265.0	282.9	284.9	285.5	286.1	289.8	289.4
Miami, Fla. (11/77=100)	...	150.2	...	153.6	...	155.2	...	...	151.0	...	154.7	...	156.4	...
Milwaukee, Wis.	...	286.9	...	287.5	...	291.3	...	...	292.1	...	291.5	...	295.3	...
Minneapolis-St. Paul, Minn.-Wis.	260.6	...	291.6	...	298.7	...	306.0	262.4	...	291.6	...	298.3	...	305.3
New York, N.Y.-Northeastern N.J.	252.7	268.8	268.0	267.8	267.9	268.5	269.0	252.7	267.8	267.0	266.9	266.9	267.5	267.8
Northeast, Pa. (Scranton)	...	271.5	...	272.2	...	272.5	...	...	275.0	...	275.2	...	274.5	...
Philadelphia, Pa.-N.J.	255.9	274.4	274.7	274.1	274.9	275.7	275.5	258.1	274.5	275.2	274.5	274.1	275.1	275.1
Pittsburgh, Pa.	265.5	...	277.7	...	281.8	...	278.6	266.4	...	278.4	...	282.6	...	280.0
Portland, Oreg.-Wash.	...	291.1	...	278.7	...	288.4	...	...	288.8	...	276.3	...	285.5	...
St. Louis, Mo.-Ill.	...	273.4	...	273.8	...	278.4	...	...	273.0	...	273.0	...	277.1	...
San Diego, Calif.	...	313.9	...	321.3	...	323.1	...	...	308.0	...	315.1	...	317.4	...
San Francisco-Oakland, Calif.	260.5	...	297.0	...	294.0	...	295.8	261.6	...	295.6	...	292.7	...	294.9
Seattle-Everett, Wash.	...	288.6	...	289.2	...	295.9	...	...	284.3	...	285.7	...	291.9	...
Washington, D.C.-Md.-Va.	...	271.8	...	275.5	...	278.0	...	...	275.7	...	279.3	...	281.8	...

¹The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated

Area is used for New York and Chicago.
² Average of 85 cities.

23. Producer Price Indexes, by stage of processing

[1967 = 100]

Commodity grouping	Annual average 1981	1981										1982		
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
FINISHED GOODS														
Finished goods	269.8	266.0	268.5	269.6	270.5	271.8	271.5	271.5	274.3	†274.7	275.3	277.4	277.4	276.9
Finished consumer goods	271.2	268.2	270.6	271.5	272.3	273.5	273.0	273.1	275.1	†275.2	275.6	277.4	278.1	277.2
Finished consumer foods	253.5	252.6	251.9	252.8	253.8	257.6	256.3	256.2	254.0	252.7	253.0	256.4	258.2	257.1
Crude	263.6	279.7	279.3	263.1	258.9	262.7	256.9	253.5	253.8	†260.0	273.4	280.1	282.0	262.9
Processed	250.6	248.1	247.4	249.8	251.3	255.0	254.2	254.4	252.0	†249.9	249.1	252.2	253.9	254.4
Nondurable goods less foods	319.4	316.0	320.4	321.0	322.0	322.5	322.1	324.2	324.3	†325.4	325.9	328.1	329.3	328.0
Durable goods	218.5	214.0	216.6	218.1	218.2	218.1	218.3	215.8	224.5	†224.7	225.0	225.8	223.5	223.5
Consumer nondurable goods less food and energy	208.6	204.8	207.3	207.7	208.4	209.5	210.4	211.8	212.6	†213.6	213.4	216.2	218.8	219.6
Capital equipment	264.3	258.1	260.8	262.5	263.8	265.4	265.8	265.3	271.5	†273.0	274.1	276.1	274.8	275.7
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	306.0	302.0	305.8	306.7	307.2	308.5	310.1	309.7	309.4	309.0	309.6	311.3	311.3	310.9
Materials and components for manufacturing	286.2	281.6	284.1	285.1	285.8	287.9	289.8	290.2	290.2	†289.5	289.7	290.8	291.3	290.8
Materials for food manufacturing	260.9	267.5	263.1	259.0	262.4	260.5	261.0	254.6	250.9	†246.8	247.3	252.9	254.3	252.0
Materials for nondurable manufacturing	285.9	279.4	284.3	287.0	287.7	289.2	291.0	291.2	290.9	†289.4	289.5	289.4	289.5	289.5
Materials for durable manufacturing	312.2	306.9	310.6	311.2	310.7	314.4	316.0	317.1	316.7	†314.9	314.4	314.2	313.5	311.2
Components for manufacturing	259.2	254.2	255.4	256.3	257.3	259.5	261.8	263.8	265.1	†266.9	267.7	269.7	271.1	272.0
Materials and components for construction	287.5	282.7	288.0	288.5	289.6	290.4	290.7	290.0	290.1	†290.2	290.8	291.9	292.8	293.3
Processed fuels and lubricants	595.0	598.3	608.5	608.7	605.7	602.0	607.8	601.4	596.9	†595.1	597.7	605.7	597.1	593.5
Manufacturing industries	498.2	503.9	509.0	510.7	505.4	500.3	508.3	500.5	497.5	†496.4	498.6	507.7	498.7	497.1
Nonmanufacturing industries	680.5	681.6	696.2	695.2	694.3	692.0	695.6	690.5	684.7	†682.2	685.3	692.0	683.9	678.4
Containers	276.2	270.9	274.3	276.4	277.2	278.8	280.3	280.6	280.9	†280.6	280.6	282.2	285.2	286.5
Supplies	263.9	258.9	262.4	264.0	264.6	266.0	266.1	266.1	266.6	†267.2	268.7	269.8	270.7	270.9
Manufacturing industries	253.2	248.8	250.6	252.3	253.4	255.0	256.0	256.8	258.2	†259.2	261.5	262.5	263.5	264.8
Nonmanufacturing industries	268.6	265.2	268.7	270.2	270.5	272.0	271.6	271.1	271.2	†271.6	272.7	273.9	274.8	274.4
Feeds	230.4	231.7	239.2	242.9	235.4	232.8	229.1	221.3	215.9	212.0	214.7	215.2	212.7	208.8
Other supplies	276.4	270.6	272.9	273.8	276.3	278.7	279.3	280.7	282.3	†283.7	284.4	285.8	287.6	288.1
CRUDE MATERIALS														
Crude materials for further processing	329.1	334.2	336.3	334.4	335.4	337.3	333.0	327.4	319.9	†313.9	311.6	318.2	321.5	319.9
Foodstuffs and feedstuffs	257.4	262.1	263.5	260.6	264.3	267.2	261.8	253.4	245.7	238.3	233.7	242.5	248.3	247.9
Nonfood materials	481.6	488.4	492.1	492.4	487.4	487.2	485.3	486.0	479.2	†476.3	479.1	481.1	479.3	475.0
Nonfood materials except fuel	413.9	430.9	432.5	428.3	418.1	413.1	413.9	410.2	404.1	†397.8	396.4	399.7	395.1	387.4
Manufacturing industries	429.6	448.6	450.2	445.5	434.2	428.7	429.6	425.4	418.6	†411.7	409.9	413.2	407.6	398.5
Construction	262.4	259.2	261.5	261.7	262.6	262.6	263.1	263.6	264.7	†264.8	267.1	269.6	272.1	275.1
Crude fuel	676.5	703.6	716.6	738.4	759.2	781.2	766.7	788.7	779.0	†792.5	814.7	810.0	823.5	837.7
Manufacturing industries	865.4	805.8	821.9	850.6	877.2	902.6	883.0	911.4	898.4	915.8	944.5	936.3	953.4	972.8
Nonmanufacturing industries	674.3	635.0	645.8	662.2	678.5	698.1	687.8	704.8	697.8	†708.2	725.3	723.6	734.4	744.5
SPECIAL GROUPINGS														
Finished goods excluding foods	273.2	268.7	272.1	273.3	274.1	274.7	274.6	274.7	279.1	†280.0	280.6	282.3	281.8	281.5
Finished consumer goods excluding foods	276.3	272.5	276.1	277.0	277.7	277.9	277.7	277.9	281.6	†282.4	282.8	284.4	284.1	283.3
Finished consumer goods less energy	233.9	230.2	231.8	232.8	233.4	235.0	235.0	234.9	237.2	†237.2	237.3	239.8	240.8	240.7
Intermediate materials less foods and feeds	310.1	305.4	309.5	310.7	311.2	312.7	314.5	314.6	314.6	†314.5	315.1	316.6	316.6	316.3
Intermediate materials less energy	285.2	280.5	283.7	284.7	285.5	287.2	288.5	288.7	288.8	†288.5	289.0	290.1	290.9	290.7
Intermediate foods and feeds	250.7	255.6	254.9	253.1	253.2	251.1	250.2	243.5	239.3	†235.2	236.4	240.4	240.6	237.8
Crude materials less agricultural products	545.8	551.8	556.0	557.5	551.3	550.6	549.1	551.4	543.4	†540.7	544.1	545.7	543.9	538.2
Crude materials less energy	254.0	259.6	261.1	257.9	259.7	261.8	258.0	250.4	243.2	†235.8	231.6	239.2	243.4	242.8

¹ Data for November 1981 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

† = revised.

24. Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1981	1981									1982			
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. 1	Dec.	Jan.	Feb.	Mar.
	All commodities	293.4	290.3	293.4	294.1	294.8	296.2	296.4	295.7	296.1	295.5	295.9	296.2	298.5	297.9
	All commodities (1957-59 = 100)	311.3	308.0	311.3	312.0	312.8	314.3	314.5	313.7	314.2	313.5	313.9	316.4	316.7	316.1
	Farm products and processed foods and feeds	251.5	253.5	253.8	252.9	254.3	256.8	254.2	250.3	246.0	242.5	241.2	246.2	248.5	247.5
	Industrial commodities	304.1	299.6	303.5	304.7	305.1	306.2	307.2	307.4	309.0	309.3	310.1	311.7	311.4	311.0
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	254.9	260.7	263.3	259.6	260.7	263.3	257.9	251.1	243.1	237.4	234.5	242.1	247.1	244.6
01-1	Fresh and dried fruits and vegetables	267.0	292.8	286.1	275.3	263.3	265.6	258.1	252.8	248.8	254.0	279.8	288.3	289.3	256.4
01-2	Grains	248.4	261.8	264.7	257.7	257.1	257.4	242.7	227.0	227.6	226.5	213.6	225.2	223.2	220.9
01-3	Livestock	248.0	239.3	246.6	251.8	263.0	266.5	262.0	257.3	244.5	231.1	225.0	236.8	251.2	255.6
01-4	Live poultry	201.2	213.5	195.4	207.2	210.0	215.3	210.3	196.7	185.7	175.0	171.4	186.8	197.3	197.7
01-5	Plant and animal fibers	242.0	270.1	274.2	258.3	259.6	251.3	232.5	206.5	211.7	198.5	188.4	198.2	193.6	199.7
01-6	Fluid milk	287.4	289.5	287.2	283.6	285.0	284.3	285.0	287.3	294.3	288.2	286.7	287.6	285.8	282.5
01-7	Eggs	187.1	180.4	196.2	165.0	174.6	185.1	180.7	193.2	193.8	209.7	195.5	187.0	200.6	204.0
01-8	Hay, hayseeds, and oilseeds	274.1	289.5	296.3	299.0	285.3	290.0	284.3	267.2	230.4	221.1	218.8	218.4	217.6	213.7
01-9	Other farm products	274.3	295.9	295.9	259.7	242.7	250.2	263.9	268.9	263.3	273.1	280.2	280.1	273.7	273.0
02	Processed foods and feeds	248.7	248.5	247.6	248.2	249.9	252.2	251.2	248.9	246.6	244.3	244.0	247.4	248.3	248.1
02-1	Cereal and bakery products	255.5	252.2	253.9	256.3	256.4	258.3	257.7	258.5	256.9	256.5	255.9	256.6	255.3	254.2
02-2	Meats, poultry, and fish	246.2	242.0	239.1	245.2	248.6	257.1	254.4	253.3	246.6	240.0	236.3	244.2	247.4	249.7
02-3	Dairy products	245.7	245.1	245.4	244.6	245.2	245.1	245.3	245.5	246.8	246.9	247.2	247.7	248.0	248.0
02-4	Processed fruits and vegetables	261.1	255.2	258.0	259.4	262.5	265.9	267.3	270.0	271.7	270.5	271.4	272.8	274.7	275.7
02-5	Sugar and confectionery	276.8	302.0	284.5	262.8	274.8	266.0	267.3	246.8	246.7	244.1	250.9	260.8	260.3	255.0
02-6	Beverages and beverage materials	247.5	245.4	246.0	247.6	248.1	249.0	249.4	249.1	250.0	251.4	251.5	253.5	254.2	255.7
02-7	Fats and oils	227.5	229.8	232.4	228.2	227.3	234.8	229.5	224.3	223.4	221.5	219.3	217.0	218.1	214.1
02-8	Miscellaneous processed foods	250.1	249.2	249.9	251.1	251.5	252.2	252.1	253.0	249.9	250.1	250.1	250.5	250.9	246.6
02-9	Prepared animal feeds	230.3	231.1	237.7	241.0	234.3	232.2	228.9	222.9	218.1	214.7	217.2	217.7	215.4	212.0
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	199.6	195.2	197.6	199.2	200.1	201.3	202.4	202.9	204.0	203.6	203.1	203.7	204.2	205.0
03-1	Synthetic fibers (12/75 = 100)	156.7	148.9	151.5	156.4	157.9	159.7	161.2	161.0	162.7	161.6	162.4	163.7	164.1	163.8
03-2	Processed yarns and threads (12/75 = 100)	137.8	134.6	135.0	138.6	139.3	140.3	142.0	142.3	144.4	140.3	139.8	135.3	134.9	140.8
03-3	Gray fabrics (12/75 = 100)	146.7	144.7	146.6	145.8	147.4	148.2	149.0	149.1	148.0	147.4	147.7	148.3	147.4	147.1
03-4	Finished fabrics (12/75 = 100)	125.2	123.2	124.9	125.7	125.6	126.0	126.8	126.8	126.7	126.5	125.8	126.7	126.9	125.7
03-81	Apparel	185.5	181.4	184.3	185.2	186.2	187.2	187.8	188.0	189.9	190.8	189.1	190.1	191.0	191.7
03-82	Textile housefurnishings	228.2	221.3	222.1	224.0	223.9	227.1	228.8	232.2	233.0	233.4	238.1	241.9	245.5	246.2
04	Hides, skins, leather, and related products	261.5	261.2	263.5	263.7	261.6	261.1	261.3	261.7	260.0	259.8	262.7	264.5	263.3	262.7
04-2	Leather	319.5	322.5	337.8	330.0	321.0	319.0	313.7	313.2	313.7	311.3	311.9	320.3	317.8	315.5
04-3	Footwear	241.2	240.4	241.1	241.4	241.5	242.4	242.5	242.9	238.6	239.8	241.7	241.4	239.2	240.6
04-4	Other leather and related products	243.5	238.4	238.5	244.2	244.3	242.9	245.1	245.0	245.0	245.4	250.5	252.7	253.3	253.3
05	Fuels and related products and power	694.4	696.5	707.2	709.0	707.6	704.9	704.3	703.5	698.1	698.1	702.7	705.8	697.6	690.1
05-1	Coal	497.3	481.1	486.1	487.3	491.7	505.5	507.0	510.2	510.8	512.7	515.6	526.1	529.1	527.0
05-2	Coke	456.5	430.1	430.1	467.9	469.7	469.7	469.7	469.7	469.7	469.7	470.3	470.3	470.3	468.1
05-3	Gas fuels ²	939.8	889.9	907.8	933.9	954.6	969.4	949.3	976.6	965.6	983.0	1007.7	990.2	987.9	993.8
05-4	Electric power	366.8	351.2	355.5	360.4	366.6	374.6	385.8	383.8	378.4	378.3	383.8	392.5	392.6	404.1
05-61	Crude petroleum ³	803.6	842.8	842.5	839.9	815.9	798.9	796.8	796.8	788.2	785.9	787.4	787.4	770.4	745.0
05-7	Petroleum products, refined ⁴	805.8	825.5	840.9	835.3	828.1	816.3	813.4	806.1	802.3	798.3	798.3	802.9	789.4	770.5
06	Chemicals and allied products	287.8	280.4	286.0	288.6	290.5	291.3	293.3	293.3	292.4	292.0	292.7	293.4	294.5	294.6
06-1	Industrial chemicals ⁵	363.8	354.5	362.4	368.5	369.7	370.4	371.5	371.8	367.9	363.7	364.6	363.8	362.8	362.6
06-21	Prepared paint	249.9	246.6	248.1	250.0	250.0	250.7	250.7	250.7	250.7	254.5	256.7	259.3	259.3	259.3
06-22	Paint materials	300.2	290.5	295.4	300.3	300.8	304.5	308.5	308.0	308.1	308.3	307.9	308.7	308.6	306.8
06-3	Drugs and pharmaceuticals	193.4	189.3	191.0	192.4	193.2	195.5	195.0	197.8	198.5	198.2	198.7	200.9	203.0	204.8
06-4	Fats and oils, inedible	295.6	295.7	312.7	312.1	303.1	290.9	305.6	285.6	277.7	282.5	280.4	272.8	274.2	290.1
06-5	Agricultural chemicals and chemical products	284.8	275.8	277.8	279.1	288.9	288.9	293.4	292.6	293.1	295.7	294.5	295.8	297.9	297.0
06-6	Plastic resins and materials	289.2	279.4	285.1	287.9	289.0	295.9	297.5	296.8	299.5	293.2	297.0	293.8	295.9	286.8
06-7	Other chemicals and allied products	254.4	248.3	255.3	254.8	256.3	254.8	257.3	257.4	256.9	259.9	260.2	262.8	265.0	267.7
07	Rubber and plastic products	232.8	228.4	230.8	231.8	233.4	232.1	234.1	235.7	237.3	238.0	239.0	239.5	241.0	241.8
07-1	Rubber and rubber products	256.7	252.1	253.0	254.4	256.8	254.7	256.9	260.3	262.9	264.4	266.4	267.3	269.7	269.3
07-11	Crude rubber	281.7	281.2	279.8	283.2	285.2	284.2	284.7	283.1	279.8	279.0	280.7	281.8	282.1	282.8
07-12	Tires and tubes	250.9	248.6	250.7	251.2	251.2	246.8	249.9	256.5	257.1	255.9	255.9	256.6	256.6	256.3
07-13	Miscellaneous rubber products	252.4	243.5	243.8	245.7	250.9	251.4	253.1	253.9	261.1	266.7	271.4	272.6	274.9	278.1
07-2	Plastic products (6/78 = 100)	128.4	126.0	128.2	128.6	129.1	128.7	129.8	129.9	130.3	130.3	130.3	130.5	130.9	132.0
08	Lumber and wood products	292.8	294.4	299.4	298.4	298.1	296.5	294.5	289.3	284.3	282.1	285.2	285.7	285.4	285.4
08-1	Lumber	325.2	326.2	333.6	336.3	335.8	332.4	329.9	320.2	311.7	306.6	309.7	310.6	308.3	308.1
08-2	Millwork	273.4	275.7	276.5	274.8	272.2	273.6	272.3	271.4	271.3	271.8	273.6	276.8	278.4	276.4
08-3	Plywood	245.7	248.8	256.0	248.3	251.5	247.8	245.6	240.8	234.3	233.5	239.2	236.8	235.7	237.1
08-4	Other wood products	239.2	236.9	238.3	238.2	239.8	240.7	239.8	240.5	239.9	239.3	239.5	239.4	239.8	239.6

See footnotes at end of table.

24. Continued—Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1980	1981										1982		
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
INDUSTRIAL COMMODITIES—Continued															
09	Pulp, paper, and allied products	273.7	269.0	271.4	272.1	272.9	274.9	275.9	277.8	279.2	'280.4	280.7	283.9	285.4	286.3
09-1	Pulp, paper, and products, excluding building paper and board	271.0	266.8	268.6	269.9	271.2	272.3	273.7	274.8	275.7	'275.8	276.2	276.1	277.0	277.3
09-11	Woodpulp	398.1	390.2	394.1	394.2	394.2	394.2	394.2	394.2	402.3	'413.7	417.0	412.8	412.8	414.1
09-12	Wastepaper	175.7	185.1	184.2	182.7	182.9	182.1	182.1	178.5	165.1	144.5	143.4	135.2	128.8	129.2
09-13	Paper	280.0	273.8	275.2	275.9	278.5	279.7	282.1	285.9	287.8	'287.4	287.5	288.8	289.5	289.5
09-14	Paperboard	258.2	255.1	255.7	258.8	259.2	259.4	260.6	261.6	261.6	'261.6	261.6	259.3	259.7	261.4
09-15	Converted paper and paperboard products	259.0	255.3	257.3	258.8	259.9	261.2	262.4	262.8	263.2	'263.1	263.9	263.9	264.9	265.5
09-2	Building paper and board	231.3	227.9	232.5	237.3	237.4	235.5	234.2	234.2	233.3	'232.1	227.7	233.2	231.1	237.5
10	Metals and metal products	300.4	296.4	298.8	299.1	298.4	302.0	304.1	304.9	305.3	'304.2	303.6	305.1	305.0	303.6
10-1	Iron and steel	333.8	328.2	331.0	330.4	330.1	338.8	339.9	339.8	341.3	'340.0	339.7	343.1	343.0	342.4
10-13	Steel mill products	337.6	328.7	331.8	331.8	332.2	344.9	344.9	345.3	348.7	'348.6	348.9	350.8	350.5	350.5
10-2	Nonferrous metals	286.0	286.5	288.4	287.7	284.5	282.8	287.3	289.4	285.4	'281.1	277.5	275.4	274.2	267.6
10-3	Metal containers	315.9	314.1	314.1	314.1	314.1	315.2	318.7	318.8	318.2	'318.1	318.2	323.4	325.4	326.1
10-4	Hardware	262.4	258.6	258.5	259.4	259.7	263.8	265.3	267.8	269.5	'271.5	269.4	271.3	272.5	275.7
10-5	Plumbing fixtures and brass fittings	267.4	259.5	265.3	266.2	268.9	270.9	271.2	271.6	272.9	'273.1	273.9	274.4	276.1	278.9
10-6	Heating equipment	223.9	219.5	219.8	222.3	223.5	226.4	227.9	228.5	229.0	'228.8	229.2	232.2	231.9	233.5
10-7	Fabricated structural metal products	295.4	289.4	293.1	294.0	295.0	297.9	299.3	300.0	302.6	'303.2	302.7	303.1	303.5	304.5
10-8	Miscellaneous metal products	270.8	264.7	267.2	269.7	269.4	272.0	272.9	273.7	276.1	'278.0	281.4	284.3	284.0	284.6
11	Machinery and equipment	263.1	257.5	259.6	260.7	262.1	264.8	266.2	268.1	269.3	'270.4	271.6	273.5	274.9	275.7
11-1	Agricultural machinery and equipment	287.7	279.8	282.5	285.7	286.8	288.1	290.3	292.8	295.5	'300.8	301.3	302.2	303.7	304.6
11-2	Construction machinery and equipment	320.8	312.8	317.0	318.4	320.1	323.8	325.0	326.5	328.3	'329.6	332.0	330.2	338.1	337.4
11-3	Metalworking machinery and equipment	301.2	294.9	298.7	299.9	301.3	302.9	303.5	305.3	306.6	'307.9	312.2	313.7	315.8	317.0
11-4	General purpose machinery and equipment	288.5	282.3	284.4	285.9	287.0	290.6	292.3	293.9	295.1	'296.2	297.2	299.6	300.8	301.5
11-6	Special industry machinery and equipment	308.0	301.0	303.2	307.2	308.8	311.0	310.3	312.8	314.6	'315.0	316.5	319.5	320.3	320.6
11-7	Electrical machinery and equipment	220.1	216.0	217.4	217.5	219.2	221.1	222.8	224.2	225.3	'226.0	226.9	228.3	229.4	230.5
11-9	Miscellaneous machinery	252.3	247.0	248.5	248.8	250.1	254.0	256.0	258.5	259.0	'259.8	259.8	261.3	263.4	264.1
12	Furniture and household durables	198.4	195.8	196.4	197.4	197.3	199.5	199.6	201.0	201.3	'202.1	202.2	202.7	203.9	204.7
12-1	Household furniture	219.4	214.5	216.5	216.4	218.6	220.0	220.7	222.2	222.8	'225.1	227.0	228.2	228.3	228.5
12-2	Commercial furniture	257.6	253.4	254.5	257.7	257.9	258.7	259.1	261.6	262.1	'263.3	264.1	266.6	271.6	273.9
12-3	Floor coverings	178.6	174.1	175.3	179.5	180.7	182.8	181.9	181.7	180.9	'182.3	180.7	179.6	179.8	179.8
12-4	Household appliances	186.9	184.2	185.1	185.5	186.1	188.8	189.1	190.1	190.8	'190.9	190.2	192.0	193.8	195.9
12-5	Home electronic equipment	89.1	91.4	90.9	90.8	86.7	87.4	87.6	87.8	88.1	'88.0	87.8	87.8	87.5	86.8
12-6	Other household durable goods	280.8	278.1	275.3	276.7	276.4	282.1	280.9	285.8	285.8	'285.3	285.5	282.8	283.0	284.3
13	Nonmetallic mineral products	309.5	300.9	310.8	312.0	313.6	314.3	314.1	313.2	313.3	'313.7	313.6	315.1	318.4	319.7
13-11	Flat glass	212.9	204.8	210.2	210.2	210.3	218.3	218.3	218.3	218.5	'218.5	218.5	216.0	216.1	216.2
13-2	Concrete ingredients	296.3	292.6	297.4	297.5	297.5	297.7	298.0	298.5	298.4	'298.5	298.5	305.9	308.1	309.5
13-3	Concrete products	291.2	286.9	289.9	291.2	293.5	293.4	293.4	292.9	293.3	'293.4	293.5	294.8	295.6	296.0
13-4	Structural clay products, excluding refractories	249.7	244.6	246.0	250.1	250.7	250.9	250.9	255.3	256.2	'256.5	257.1	257.1	257.4	257.4
13-5	Refractories	302.5	296.1	296.4	304.0	307.1	307.1	307.1	307.1	307.8	'308.9	309.8	315.4	330.9	338.4
13-6	Asphalt roofing	407.0	390.5	415.9	407.4	428.5	421.9	420.9	401.6	402.9	'410.2	404.2	399.7	398.8	392.8
13-7	Gypsum products	256.2	257.6	256.8	261.1	260.7	259.7	255.3	252.9	252.4	'251.3	249.7	250.4	255.0	260.7
13-8	Glass containers	328.5	311.4	326.7	335.3	335.3	335.5	335.5	335.5	335.5	'335.5	334.8	334.7	349.6	355.2
13-9	Other nonmetallic minerals	463.9	441.7	479.1	477.6	476.8	476.2	475.3	474.3	473.3	'473.5	475.4	474.9	479.0	480.1
14	Transportation equipment (12/68 = 100)	235.4	228.1	231.9	233.6	234.3	235.0	235.9	231.8	244.5	'246.3	246.7	248.3	244.7	244.9
14-1	Motor vehicles and equipment	237.5	229.5	233.9	236.0	236.7	237.4	238.4	232.8	247.8	'248.9	249.2	250.4	246.1	246.4
14-4	Railroad equipment	338.2	333.9	335.7	331.2	331.4	338.1	338.7	338.7	338.7	'341.3	346.3	352.4	352.4	352.8
15	Miscellaneous products	265.6	264.0	266.0	266.9	266.3	263.2	262.6	267.0	268.5	'269.5	267.3	268.4	273.7	272.9
15-1	Toys, sporting goods, small arms, ammunition	212.2	211.1	211.3	211.4	211.2	213.2	212.7	213.6	213.0	'212.7	213.8	219.3	221.0	221.6
15-2	Tobacco products	268.3	256.3	268.7	268.7	268.7	268.8	268.8	274.5	278.2	'278.2	277.9	277.9	306.4	306.4
15-3	Notions	259.6	247.3	248.4	268.8	268.0	267.5	267.7	267.8	269.7	'269.7	269.7	270.5	270.7	271.8
15-4	Photographic equipment and supplies	210.1	211.2	212.4	212.5	212.5	211.4	207.1	208.7	208.9	'209.0	209.5	210.3	210.8	212.5
15-5	Mobile homes (12/74 = 100)	(⁶)	155.0	(⁶)	(⁶)	(⁶)	158.1	158.3	158.7	159.1	'159.3	159.0	159.1	159.6	
15-9	Other miscellaneous products	346.9	351.3	349.0	346.9	346.9	333.1	334.6	345.5	348.5	'344.8	343.2	341.9	340.9	334.3

¹ Data for November 1981 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

² Prices for natural gas are lagged 1 month.

³ Includes only domestic production.

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

⁵ Some prices for industrial chemicals are lagged 1 month.

⁶ Not available.

r = revised.

25. Producer Price Indexes, for special commodity groupings

[1967=100 unless otherwise specified]

Commodity grouping	Annual average 1981	1981										1982		
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
All commodities — less farm products	295.7	291.9	295.0	296.1	296.7	298.0	298.7	298.5	299.5	299.4	300.0	301.9	301.8	301.4
All foods	251.9	253.4	251.4	250.3	252.2	255.2	253.7	251.7	249.1	247.4	248.0	252.0	253.5	251.5
Processed foods	252.2	253.3	250.3	250.5	253.1	256.0	255.0	252.8	250.0	247.6	246.9	251.0	252.2	252.1
Industrial commodities less fuels	258.6	261.8	262.9	263.5	265.0	266.0	266.4	268.7	269.0	269.4	270.9	271.4	271.6	271.6
Selected textile mill products (Dec. 1975 = 100)	135.9	132.2	134.5	135.7	135.9	136.8	137.2	138.1	138.2	138.4	138.3	139.3	140.0	139.0
Hosiery	134.3	130.5	134.2	134.6	135.7	135.8	135.3	135.5	136.5	136.5	136.7	137.0	137.0	137.5
Underwear and nightwear	203.5	202.0	202.1	202.3	203.5	204.7	204.7	204.7	204.7	205.7	206.6	212.4	216.0	216.4
Chemicals and allied products, including synthetic rubber and fibers and yarns	278.6	271.0	276.1	279.0	281.2	282.3	284.0	284.4	283.8	283.2	284.0	284.9	286.0	285.8
Pharmaceutical preparations	186.8	182.1	184.0	185.7	186.6	189.0	188.4	191.6	192.8	192.5	193.0	195.5	198.0	200.0
Lumber and wood products, excluding millwork	303.1	304.8	312.3	311.5	312.2	308.7	306.2	298.0	290.1	286.4	290.4	290.2	288.3	288.6
Special metals and metal products	279.4	273.5	276.8	277.9	277.9	280.2	281.9	280.1	286.7	286.8	286.6	288.0	286.1	285.5
Fabricated metal products	280.0	274.7	277.0	278.5	279.0	281.7	283.1	283.9	286.0	287.0	287.9	290.0	290.4	291.5
Copper and copper products	204.0	204.8	207.7	206.6	203.7	202.5	206.2	205.1	201.9	198.9	195.9	195.1	194.1	191.0
Machinery and motive products	256.7	250.2	253.1	254.4	255.6	257.4	258.6	257.7	264.3	265.8	266.7	268.5	267.6	268.2
Machinery and equipment, except electrical	288.3	281.9	284.3	285.9	287.3	290.4	291.7	293.8	295.0	296.4	297.8	300.1	301.6	302.2
Agricultural machinery, including tractors	296.2	288.3	289.6	293.7	294.8	295.6	298.2	301.6	305.7	312.5	312.4	313.7	314.6	315.5
Metalworking machinery	329.4	323.5	325.9	327.1	328.3	330.1	331.4	333.9	336.7	338.3	339.8	342.1	343.3	346.4
Numerically controlled machine tools (Dec. 1971 = 100)	239.4	235.7	235.7	237.3	241.4	241.7	241.8	241.8	241.8	242.2	242.3	240.5	240.1	240.3
Total tractors	324.0	311.8	316.8	322.0	322.5	325.5	327.8	330.7	338.3	342.2	340.4	346.2	346.2	346.4
Agricultural machinery and equipment less parts	289.0	281.5	283.2	286.7	287.9	288.6	291.1	294.0	297.6	303.5	303.9	305.3	306.3	307.3
Farm and garden tractors less parts	298.9	287.6	289.3	297.7	298.0	298.0	301.4	305.5	313.0	319.6	316.5	318.5	318.5	318.8
Agricultural machinery, excluding tractors less parts	294.4	289.1	290.2	290.8	292.5	293.9	295.8	298.7	299.9	303.5	309.3	310.0	311.6	307.3
Industrial valves	314.8	310.1	314.0	314.3	315.3	317.5	319.8	322.7	322.4	323.4	321.9	325.2	326.8	327.1
Industrial fittings	302.1	298.9	302.7	303.0	303.0	303.0	303.0	304.3	304.1	304.1	304.1	304.1	304.1	304.1
Construction materials	283.0	279.0	283.9	284.2	285.0	285.7	285.5	284.4	284.6	284.1	285.1	286.4	286.9	287.4

¹ Data for November 1981 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication. r= revised.

26. Producer Price Indexes, by durability of product

[1967=100]

Commodity grouping	Annual average 1981	1981										1982		
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
Total durable goods	269.8	264.9	267.8	268.6	269.1	270.8	271.9	271.8	275.0	275.4	275.9	277.4	277.3	277.3
Total nondurable goods	312.4	310.9	314.2	314.8	315.7	316.8	316.2	315.0	312.8	311.4	311.6	314.7	315.3	314.2
Total manufactures	285.9	282.3	285.3	286.2	286.9	288.0	288.6	288.3	289.8	289.7	290.0	291.8	291.9	291.9
Durable	269.6	264.4	267.2	268.2	268.9	270.6	271.7	271.7	275.1	275.8	276.3	277.8	277.7	277.8
Nondurable	303.6	301.7	304.9	305.7	306.4	306.9	306.9	306.3	305.5	304.5	304.5	306.8	307.2	305.8
Total raw or slightly processed goods	330.7	331.2	334.6	334.2	335.4	337.9	335.8	332.7	326.4	323.3	323.8	329.0	330.6	329.9
Durable	271.4	281.7	286.0	280.4	272.4	271.2	275.9	270.4	263.7	253.4	248.4	254.4	254.4	250.7
Nondurable	334.0	333.8	337.1	337.1	338.9	341.8	339.1	336.3	330.0	327.4	328.3	333.4	335.1	334.7

¹ Data for November 1981 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication. r= revised.

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

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981										1982		
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
MINING															
1011	Iron ores (12/75 = 100)	167.3	168.1	168.1	168.1	168.1	168.1	168.1	168.1	168.1	171.3	171.3	171.3	171.3	171.3
1092	Mercury ores (12/75 = 100)	346.0	335.4	354.1	347.9	352.0	358.3	365.4	364.5	354.1	343.7	347.9	313.7	325.0	
1211	Bituminous coal and lignite	493.9	478.5	483.5	484.5	488.4	502.1	503.4	506.0	506.2	507.8	510.7	521.3	524.7	
1311	Crude petroleum and natural gas	898.8	901.7	908.6	919.7	713.7	911.5	900.3	913.6	900.8	907.5	922.6	917.6	913.5	
1442	Construction sand and gravel	277.3	275.2	278.0	278.4	278.4	278.4	278.2	279.2	279.7	279.8	280.4	287.0	289.5	
1455	Kaolin and ball clay (6/76 = 100)	138.7	137.1	137.1	137.1	137.1	137.1	137.1	137.1	143.4	143.4	143.4	147.1	149.6	
MANUFACTURING															
2011	Meatpacking plants	243.1	236.1	237.8	243.6	245.9	252.6	250.9	252.7	244.1	237.0	234.5	236.6	243.8	247.0
2013	Sausages and other prepared meats	241.3	230.4	227.5	230.4	238.1	246.0	254.0	253.9	252.2	248.9	246.7	245.7	250.5	248.2
2016	Poultry dressing plants	192.0	203.9	186.7	196.2	198.3	203.6	201.2	188.8	175.5	172.8	166.7	(²)	(²)	(²)
2021	Creamery butter	274.8	273.6	273.4	273.4	273.5	273.8	273.7	275.0	279.2	279.5	275.0	275.0	276.4	276.8

See footnotes at end of table.

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

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981										1982		
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
MANUFACTURING—Continued															
2022	Cheese, natural and processed (12/72 = 100)	215.8	215.7	216.2	216.2	216.1	213.8	214.5	215.0	215.4	215.9	217.1	218.6	217.9	216.8
2024	Ice cream and frozen desserts (12/72 = 100)	211.9	210.6	211.4	212.4	212.4	212.7	212.7	212.5	212.5	212.8	212.8	212.8	212.8	210.9
2033	Canned fruits and vegetables	248.5	241.5	244.0	245.9	248.9	251.6	252.9	254.3	257.0	256.4	258.8	259.6	262.2	262.7
2034	Dehydrated food products (12/73 = 100)	177.6	172.9	174.2	175.3	175.0	180.5	178.7	183.4	182.1	181.4	182.1	184.0	181.8	181.5
2041	Flour mills (12/71 = 100)	195.9	195.1	201.5	199.4	199.3	196.5	191.0	195.3	191.1	191.5	189.3	191.4	187.4	187.3
2044	Rice milling	277.2	298.0	300.9	300.3	300.3	297.4	284.3	268.2	247.3	235.4	215.1	205.9	192.2	183.5
2048	Prepared foods, n.e.c. (12/75 = 100)	124.6	126.6	128.5	129.8	127.5	125.9	124.8	119.6	117.3	116.4	116.4	116.6	116.5	114.8
2061	Raw cane sugar	273.5	318.8	275.7	224.8	263.3	272.2	254.6	212.3	219.9	224.3	230.8	247.6	245.1	233.0
2063	Beet sugar	320.6	370.7	350.5	334.4	339.7	274.1	287.5	270.7	250.3	230.4	272.4	292.5	292.6	272.4
2067	Chewing gum	309.8	323.1	323.1	303.1	303.1	303.1	303.2	303.2	303.2	303.2	303.2	303.3	303.3	303.4
2074	Cottonseed oil mills	199.0	204.4	218.4	216.6	212.3	212.0	206.0	182.3	172.0	167.2	182.3	184.9	170.6	158.2
2075	Soybean oil mills	245.8	253.2	259.1	258.1	248.4	253.7	245.8	234.2	229.7	221.2	221.5	222.6	219.9	217.8
2077	Animal and marine fats and oils	288.1	284.2	301.7	304.3	291.3	288.8	294.1	281.2	274.0	272.3	266.6	260.3	262.6	271.8
2083	Malt	282.5	286.1	286.1	286.1	286.1	286.1	286.1	275.4	275.4	275.4	275.4	267.1	267.1	267.1
2085	Distilled liquor, except brandy (12/75 = 100)	134.7	133.9	133.9	134.3	134.6	134.6	135.5	135.5	135.5	137.9	137.9	140.1	137.9	140.2
2091	Canned and cured seafoods (12/73 = 100)	187.8	187.6	187.7	187.3	187.5	187.4	188.4	188.8	188.2	188.3	188.5	187.2	187.0	187.7
2092	Fresh or frozen packaged fish	369.6	385.2	393.5	378.2	375.5	367.6	347.1	353.5	356.9	360.8	371.1	398.3	390.8	420.7
2095	Roasted coffee (12/72 = 100)	238.0	238.3	238.5	238.6	238.6	236.4	235.7	237.3	238.2	239.2	240.4	245.0	247.1	248.7
2098	Macaroni and spaghetti	252.0	243.6	243.6	246.6	246.6	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5
2111	Cigarettes	277.7	264.2	278.3	278.3	278.3	278.3	278.3	284.2	288.4	288.4	288.4	288.4	319.7	319.7
2121	Cigars	169.1	167.0	168.5	168.5	168.5	169.7	169.7	174.5	174.5	174.5	171.6	171.6	175.6	175.6
2131	Chewing and smoking tobacco	320.9	320.7	320.8	320.8	320.8	321.0	321.3	325.3	326.1	326.1	326.0	326.0	349.4	349.4
2211	Weaving mills, cotton (12/77 = 100)	234.1	232.3	235.3	233.5	234.3	234.7	237.4	236.0	233.2	229.8	235.2	227.5	226.9	226.5
2221	Weaving mills, synthetic (12/77 = 100)	136.6	133.3	134.9	135.7	137.1	138.0	139.3	139.5	139.4	139.8	139.5	139.8	139.8	139.9
2251	Women's hosiery, except socks (12/75 = 100)	113.5	108.9	114.1	114.2	115.6	115.5	115.0	115.0	115.2	115.1	115.3	115.6	115.6	116.2
2254	Knit underwear mills	210.2	209.7	209.8	210.0	210.0	210.7	210.8	210.9	210.9	212.8	212.9	228.7	234.7	235.5
2257	Circular knit fabric mills (6/76 = 100)	110.8	109.1	110.8	110.5	110.4	111.0	112.0	111.9	112.0	112.4	111.7	111.8	112.3	110.6
2261	Finishing plants, cotton (6/76 = 100)	144.9	144.6	146.9	147.0	146.2	146.3	146.2	145.4	144.9	143.5	141.4	140.5	140.3	140.8
2262	Finishing plants, synthetics, silk (6/76 = 100)	126.5	124.3	125.2	126.6	126.6	127.1	127.8	129.0	129.1	129.1	128.6	129.3	129.7	128.3
2272	Tufted carpets and rugs	154.3	150.2	151.5	154.5	155.6	158.3	157.4	157.3	155.7	157.0	156.3	155.1	155.3	155.7
2281	Yarn mills, except wool (12/71 = 100)	221.8	220.7	220.9	224.1	225.8	225.1	225.4	223.8	222.4	219.9	217.9	216.0	215.3	215.6
2282	Throwing and winding mills (6/76 = 100)	138.6	131.3	131.5	139.1	139.3	142.7	146.8	148.0	154.5	145.6	146.0	135.3	135.2	150.8
2284	Thread mills (6/76 = 100)	151.4	148.4	150.8	150.9	151.1	151.1	151.1	154.8	157.0	157.0	156.8	156.8	156.8	156.8
2298	Cordage and twine (12/77 = 100)	134.8	130.9	132.7	134.3	134.3	134.3	134.3	139.3	139.3	139.3	140.7	141.0	141.0	141.0
2311	Men's and boys' suits and coats	223.9	220.1	220.3	220.4	224.6	225.9	226.2	226.5	227.4	228.4	230.7	230.7	232.1	233.9
2321	Men's and boys' shirts and nightwear	208.8	207.1	207.6	207.1	207.5	210.5	210.6	211.5	212.4	212.6	211.2	190.9	191.7	192.7
2322	Men's and boys' underwear	230.6	231.0	231.0	231.0	230.7	230.8	230.8	230.8	230.8	233.0	233.0	237.6	246.9	247.4
2323	Men's and boys' neckwear (12/75 = 100)	114.6	115.4	115.4	115.4	115.4	113.9	113.9	113.9	113.9	113.9	113.9	115.3	117.3	117.3
2327	Men's and boys' separate trousers	186.1	185.3	186.0	186.1	186.1	186.4	186.4	186.4	186.8	186.9	186.8	187.0	187.0	188.2
2328	Men's and boys' work clothing	248.4	242.3	247.0	248.2	248.3	250.8	251.1	251.2	253.1	253.2	252.5	251.9	251.8	252.9
2331	Women's and misses' blouses and waists (6/78 = 100)	119.8	116.4	118.3	118.4	118.5	121.0	121.2	121.3	126.4	126.7	123.9	123.8	123.8	123.9
2335	Women's and misses' dresses (12/77 = 100)	121.1	118.5	118.4	122.3	122.5	123.0	124.3	123.5	123.4	124.1	122.5	122.6	123.2	123.6
2341	Women's and children's underwear (12/72 = 100)	169.9	168.8	169.0	169.2	170.5	170.6	170.6	170.6	170.6	171.6	172.2	175.3	175.4	175.7
2342	Brassieres and allied garments (12/75 = 100)	136.8	134.9	135.0	135.0	136.9	138.8	138.8	138.8	138.8	138.9	140.5	145.5	149.2	149.2
2361	Children's dresses and blouses (12/77 = 100)	120.3	119.2	120.7	120.5	120.5	121.6	121.7	121.7	122.0	122.5	119.6	122.0	122.0	122.0
2381	Fabric dress and work gloves	289.3	289.1	289.1	292.1	292.1	289.2	289.2	289.2	289.2	289.2	289.2	293.8	297.4	295.5
2394	Canvas and related products (12/77 = 100)	132.1	127.8	129.3	130.0	130.1	130.1	131.1	131.1	137.6	137.6	140.3	145.5	145.5	147.8
2396	Automotive and apparel trimmings (12/77 = 100)	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0
2421	Sawmills and planing mills (12/71 = 100)	228.2	228.6	233.3	234.8	234.8	233.5	231.2	225.2	219.5	216.5	218.3	218.5	217.6	217.1
2436	Softwood veneer and plywood (12/75 = 100)	142.0	147.2	152.6	145.7	148.1	143.8	139.6	135.4	129.3	129.0	134.1	132.0	131.1	132.3
2439	Structural wood members, n.e.c. (12/75 = 100)	156.6	157.1	158.3	158.2	158.2	157.6	158.9	156.6	154.8	154.2	153.0	153.2	153.2	152.3
2448	Wood pallets and skids (12/75 = 100)	152.5	152.7	153.1	153.1	153.0	153.1	152.9	152.8	152.0	150.4	150.2	149.8	148.9	148.1
2451	Mobile homes (12/74 = 100)	156.8	155.0	155.8	155.9	156.1	158.1	158.3	158.7	159.2	159.3	160.1	160.2	160.7	162.7
2492	Particleboard (12/75 = 100)	172.8	172.3	180.9	184.5	182.3	179.6	173.6	170.5	168.0	166.9	164.7	171.3	170.2	173.4
2511	Wood household furniture (12/71 = 100)	197.4	193.3	195.4	196.2	197.5	198.6	199.2	200.1	201.0	202.0	201.9	203.3	204.2	204.8
2512	Upholstered household furniture (12/71 = 100)	174.9	170.1	171.8	169.7	173.9	175.1	175.1	175.3	175.6	179.5	184.9	184.1	182.0	182.0
2515	Mattresses and bedsprings	193.7	189.5	190.5	190.4	190.5	191.3	194.6	195.2	195.2	197.5	202.2	207.5	210.0	210.0
2521	Wood office furniture	254.6	253.5	254.5	254.6	254.6	254.7	254.7	257.1	257.1	257.0	258.6	262.9	271.8	271.9
2611	Pulp mills (12/73 = 100)	253.2	246.9	251.2	251.3	251.3	251.3	251.3	251.3	255.0	262.5	265.5	260.9	260.9	262.9
2621	Paper mills, except building (12/74 = 100)	156.3	153.3	153.9	154.3	155.7	157.0	157.4	158.8	159.8	159.7	159.8	161.8	162.0	161.9
2631	Paperboard mills (12/74 = 100)	151.8	150.8	151.0	152.1	152.3	151.7	152.4	153.7	153.6	153.5	152.7	152.6	153.6	153.2
2647	Sanitary paper products	343.8	343.0	343.2	344.3	344.4	344.2	344.3	344.3	344.0	344.1	345.8	345.6	345.6	345.6
2654	Sanitary food containers	245.3	237.9	239.2	239.2	242.2	246.0	252.9	253.2	253.4	253.3	254.7	255.3	258.3	261.4
2655	Fiber cans, drums, and similar products (12/75 = 100)	163.0	160.7	160.8	160.9	160.9	162.0	163.2	163.2	167.6	167.6	1			

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

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981										1982		
			Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec.	Jan.	Feb.	Mar.
3021	Rubber and plastic footwear (12/71 = 100)	184.4	183.6	183.6	184.0	184.1	185.0	185.4	185.3	185.0	185.0	185.2	186.1	186.5	189.1
3031	Reclaimed rubber (12/73 = 100)	193.4	187.6	187.7	187.7	187.7	192.9	200.3	200.3	200.3	200.3	200.3	198.1	198.1	204.9
3079	Miscellaneous plastic products (6/78 = 100)	128.8	126.3	128.7	129.1	129.6	129.2	130.2	130.3	130.8	130.8	130.8	130.9	131.3	132.5
3111	Leather tanning and finishing (12/77 = 100)	150.6	151.4	158.6	154.7	150.7	151.3	148.5	148.3	148.2	146.8	147.3	150.7	149.2	148.2
3143	Men's footwear, except athletic (12/75 = 100)	169.1	167.6	168.7	168.9	169.6	170.7	171.4	170.9	170.5	170.6	171.5	172.6	171.6	173.6
3144	Women's footwear, except athletic	217.8	218.7	218.7	219.3	218.5	218.9	217.8	218.2	212.5	212.7	214.6	213.8	211.3	211.6
3171	Women's handbags and purses (12/75 = 100)	155.5	149.7	149.7	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4
3211	Flat glass (12/71 = 100)	175.6	168.1	174.5	174.5	174.6	180.0	180.0	180.0	180.0	180.1	180.1	177.3	177.4	177.5
3221	Glass containers	328.4	311.4	326.6	335.2	335.2	335.4	335.4	335.4	335.4	335.4	335.4	334.8	334.7	355.1
3241	Cement, hydraulic	328.5	324.4	332.4	332.3	331.0	331.6	331.6	332.0	330.3	330.3	327.2	336.4	338.2	338.3
3251	Brick and structural clay tile	296.9	295.3	296.0	297.4	298.5	298.9	298.9	299.9	299.9	300.5	301.8	291.4	291.8	291.8
3253	Ceramic wall and floor tile (12/75 = 100)	132.5	127.1	129.6	132.1	132.1	132.1	132.1	140.4	140.4	140.4	137.8	136.8	136.8	136.8
3255	Clay refractories	310.4	308.1	308.6	311.0	312.2	312.3	312.3	312.5	313.9	315.2	317.1	327.0	346.5	357.5
3259	Structural clay products, n.e.c.	222.7	213.0	212.7	223.9	223.9	223.9	223.9	227.5	231.7	231.7	237.0	196.4	196.7	196.8
3261	Vitreous plumbing fixtures	254.9	249.4	252.0	252.5	255.8	258.7	259.6	259.0	259.0	259.3	260.1	261.1	260.6	260.7
3262	Vitreous china food utensils	335.0	328.0	328.2	336.6	336.6	336.6	336.6	336.8	336.8	344.7	344.7	347.7	347.7	347.3
3263	Fine earthenware food utensils	308.9	307.9	308.2	309.6	309.6	309.6	309.6	313.8	313.8	315.0	314.4	314.5	314.5	314.4
3269	Pottery products, n.e.c. (12/75 = 100)	160.1	158.5	158.6	160.6	160.7	160.7	160.7	161.8	161.8	163.7	163.6	164.2	164.2	164.1
3271	Concrete block and brick	270.4	263.2	267.4	271.2	271.2	271.2	274.0	274.2	274.2	274.2	275.3	274.8	276.0	276.3
3273	Ready-mixed concrete	298.7	296.0	298.5	299.4	301.7	300.7	300.0	299.2	299.5	299.4	299.5	301.1	301.4	302.0
3274	Lime (12/75 = 100)	172.5	172.6	172.4	172.6	173.0	173.1	173.9	173.7	173.7	173.5	174.0	179.1	184.0	186.0
3275	Gypsum products	257.3	257.9	257.1	261.4	260.9	261.8	258.9	252.9	251.5	252.5	250.6	250.9	253.9	260.5
3291	Abrasive products (12/71 = 100)	232.5	223.1	232.7	233.2	234.1	235.0	235.1	237.3	237.6	240.1	240.0	239.9	245.0	247.8
3297	Nonclay refractories (12/74 = 100)	185.3	178.9	178.9	186.6	189.7	189.7	189.7	189.7	189.7	190.2	190.2	191.1	198.1	200.5
3312	Blast furnaces and steel mills	342.8	334.0	336.7	337.3	338.2	350.1	350.0	350.3	353.1	353.0	353.2	354.9	354.6	354.5
3313	Electrometallurgical products (12/75 = 100)	121.8	120.0	120.8	120.6	120.7	121.2	121.5	121.4	125.4	125.4	125.3	125.3	123.4	120.3
3316	Cold finishing of steel shapes	316.2	306.1	308.2	308.2	309.5	325.0	325.7	326.2	326.4	326.4	326.7	327.0	327.0	327.0
3317	Steel pipes and tubes	341.5	326.1	333.1	334.1	336.3	348.2	350.6	350.5	362.0	362.3	363.1	363.8	364.2	366.0
3321	Gray iron foundries (12/68 = 100)	299.5	295.6	297.0	298.4	298.4	298.8	299.9	302.0	303.3	305.2	304.7	308.0	310.4	310.6
3333	Primary zinc	326.5	299.7	311.9	332.7	335.1	335.4	353.8	355.9	337.0	337.5	327.3	308.0	308.9	298.6
3334	Primary aluminum	333.5	332.2	332.8	334.2	332.5	334.2	334.4	333.6	333.5	332.5	332.8	332.4	327.9	320.7
3351	Copper rolling and drawing	212.4	211.8	213.1	212.6	210.6	209.4	212.9	214.1	212.3	209.2	208.6	205.6	204.1	199.6
3353	Aluminum sheet, plate, and foil (12/75 = 100)	175.9	172.1	173.8	174.4	176.1	177.3	177.4	178.0	179.9	180.2	180.9	181.5	181.6	181.4
3354	Aluminum extruded products (12/75 = 100)	180.1	177.3	180.6	180.7	180.8	181.2	181.3	181.2	181.3	181.4	181.1	180.7	180.8	180.5
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100)	159.1	157.2	157.3	157.4	157.3	157.2	157.7	163.0	166.2	166.1	166.1	166.6	165.9	165.9
3411	Metal cans	305.3	304.7	304.7	304.7	305.5	306.7	306.8	307.0	306.0	306.6	310.3	314.4	315.1	315.1
3425	Hand saws and saw blades (12/72 = 100)	201.3	198.0	198.1	200.2	200.2	204.1	204.2	204.6	204.8	205.0	205.6	211.0	214.2	214.3
3431	Metal sanitary ware	265.0	258.5	262.8	264.8	265.2	269.2	269.7	270.2	270.3	271.6	272.0	270.9	271.8	273.8
3465	Automotive stampings (12/75 = 100)	146.4	144.2	145.0	145.0	145.2	146.2	146.4	146.9	147.4	149.7	153.7	154.6	152.5	152.6
3482	Small arms ammunition (12/75 = 100)	160.5	157.2	157.8	157.8	157.8	157.8	159.9	159.9	159.9	159.9	165.3	173.2	173.2	173.2
3493	Steel springs, except wire	245.1	239.5	241.2	241.7	241.9	243.7	248.9	252.4	253.9	254.1	254.3	256.4	257.2	256.6
3494	Valves and pipe fittings (12/71 = 100)	248.4	244.8	247.6	247.9	248.5	250.0	251.0	252.7	252.9	253.5	253.8	255.8	257.1	257.4
3498	Fabricated pipe and fittings	361.4	338.5	358.8	359.9	361.6	364.6	370.0	375.1	377.7	378.6	379.4	378.6	377.7	376.5
3519	Internal combustion engines, n.e.c.	311.0	302.6	306.0	306.2	307.2	312.0	314.2	322.1	323.2	326.4	321.5	327.3	330.0	330.7
3531	Construction machinery (12/76 = 100)	157.0	152.6	154.4	155.3	156.9	159.0	159.5	160.1	161.0	161.6	162.1	164.8	163.1	163.2
3532	Mining machinery (12/72 = 100)	282.3	276.2	279.5	280.0	280.8	282.7	285.3	286.9	288.5	290.8	291.8	293.9	297.5	299.6
3533	Oilfield machinery and equipment	395.4	378.2	382.2	384.6	390.3	401.3	406.5	411.3	415.6	418.2	420.1	427.1	429.1	433.7
3534	Elevators and moving stairways	253.5	250.3	251.2	251.2	251.2	252.1	252.8	254.6	257.0	260.7	261.4	268.0	268.9	269.9
3542	Machine tools, metal forming types (12/71 = 100)	306.4	301.9	303.0	304.5	305.7	307.6	309.5	312.0	311.7	312.3	313.0	313.5	316.9	324.5
3546	Power driven hand tools (12/76 = 100)	147.1	145.2	146.4	147.0	147.1	148.2	148.4	148.6	149.5	149.5	149.3	153.3	153.4	153.4
3552	Textile machinery (12/69 = 100)	243.4	240.0	244.0	241.2	244.4	246.2	245.4	248.2	248.0	249.5	250.0	249.8	250.7	253.4
3553	Woodworking machinery (12/72 = 100)	224.5	224.7	225.5	219.1	219.7	224.0	225.4	228.9	228.9	229.1	229.0	229.4	229.2	229.6
3576	Scales and balances, excluding laboratory	226.2	224.2	230.0	230.2	230.3	226.6	226.6	226.1	226.2	226.2	226.4	228.2	228.9	228.8
3592	Carburetors, pistons, rings, valves (6/76 = 100)	177.9	171.5	172.0	172.0	176.5	180.8	181.3	182.1	185.4	187.2	187.1	185.0	189.4	190.2
3612	Transformers	209.7	204.3	206.0	207.8	209.6	210.7	212.8	214.5	217.3	222.0	219.8	220.3	221.9	222.4
3623	Welding apparatus, electric (12/72 = 100)	227.2	222.1	224.3	225.9	227.2	228.3	229.6	231.6	232.5	233.2	234.7	235.9	236.0	231.5
3631	Household cooking equipment (12/75 = 100)	141.1	141.1	140.5	140.7	141.0	140.5	141.5	141.6	141.6	141.9	142.6	144.6	146.3	146.9
3632	Household refrigerators, freezers (6/76 = 100)	132.3	127.6	129.4	129.5	130.8	135.5	135.5	136.4	137.8	137.9	138.4	138.6	139.6	140.8
3633	Household laundry equipment (12/73 = 100)	174.2	170.9	173.5	173.9	173.6	174.1	174.6	177.2	177.0	178.4	178.8	179.8	180.4	186.2
3635	Household vacuum cleaners	156.8	158.5	158.4	158.5	158.6	158.6	158.8	158.8	161.3	161.0	154.0	158.7	158.3	158.8
3636	Sewing machines (12/75 = 100)	146.6	131.9	131.8	153.8	153.8	153.8	153.8	153.8	156.0	156.0	155.4	155.4	155.2	155.2
3641	Electric lamps	277.5	272.6	275.5	275.1	276.5	275.2	280.0	283.1	285.9	284.8	282.7	282.0	286.2	283.5
3644	Noncurrent-carrying wiring devices (12/72 = 100)	250.4	240.6	242.6	242.8	251.5	253.3	253.8	258.5	258.7	262.1	264.6	261.5	261.5	261.5
3646	Commercial lighting fixtures (12/75 = 100)	154.4	151.4	156.1	156.2	154.4	155.5	157.6	158.9	159.3	158.4	159.9	161.1	163.2	163.2
3648	Lighting equipment, n.e.c. (12/75 = 100)	155.7	152.7	153.2	153.3	153.7	153.8	161.3	161.7	162.0	162.4	162.7	162.7	167.8	168.8
3671	Electron tubes receiving type	309.7	285.0	285.0	285.1	312.5	327.4	327.5	327.5	327.5	327.8	342.3	371.8	374.9	375.1
3674	Semiconductors and related devices	90.4	91.3	91.2	90.6	90.3	89.2	89.2	91.4	91.6	92.0	91.9	90.9	90.8	91.2
3675	Electronic capacitors (12/75 = 100)	170.3	173.2	168.7	168.5	171.2	171.4	178.8	172.4	171.5	168.1	168.0	166.4	169.3	168.6
3676	Electronic resistors (12/75 = 100)	141.3	139.9	140.0	140.8	141.2	142.1	142.5	142.7	142.7	143.0	142.5	142.9	143.9	144.0
3678	Electronic connectors (12/75 = 100)	154.8	154.5	154.4	153.7	154.3	155.0	155.8	156.5	156.3	155.8	156.6	157.2	156.9	157.1
3692	Primary batteries, dry and wet	182.2	184.2	182.6	181.0	181.0	181.6	182.7	182.7	182.7	182.7	182.7	182.1		

PRODUCTIVITY DATA

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

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input**, or labor productivity, measure the value of goods and services produced per hour of labor. **Compensation per hour** includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

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

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

The use of the term "man hours" to identify the labor component of productivity and costs, in tables 28 through 31, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

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

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

Beginning with the September 1976 issue of the *Review*, the productivity tables 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.

28. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950-81

[1977=100]

Item	1950	1955	1960	1965	1970	1974	1975	1976	1977	1978	1979	1980	1981
Private business sector:													
Output per hour of all persons	50.3	58.2	65.1	78.2	86.1	92.7	94.8	97.9	100.0	99.8	99.5	99.3	100.4
Compensation per hour	20.0	26.3	33.9	41.7	58.2	78.0	85.5	92.9	100.0	108.4	119.3	131.5	144.6
Real compensation per hour	50.4	59.6	69.4	80.0	90.8	95.9	96.3	98.8	100.0	100.7	99.6	96.7	96.4
Unit labor cost	39.8	45.2	52.1	53.3	67.6	84.2	90.2	94.8	100.0	108.6	119.9	132.4	144.0
Unit nonlabor payments	43.5	47.8	50.8	57.8	63.4	78.9	90.7	94.4	100.0	105.1	110.9	118.3	130.5
Implicit price deflator	41.0	46.1	51.7	54.8	66.2	82.4	90.4	94.7	100.0	107.4	116.9	127.6	139.4
Nonfarm business sector:													
Output per hour of all persons	56.2	62.7	68.2	80.4	86.7	93.1	95.0	98.1	100.0	99.8	99.1	98.8	99.7
Compensation per hour	21.8	28.3	35.6	42.8	58.6	78.4	86.0	93.0	100.0	108.5	119.0	130.8	143.9
Real compensation per hour	55.0	63.9	73.0	82.2	91.5	96.4	96.8	99.0	100.0	100.7	99.3	96.2	95.9
Unit labor cost	38.8	45.1	52.3	53.2	67.6	84.3	90.5	94.8	100.0	108.7	120.0	132.4	144.3
Unit nonlabor payments	42.8	47.9	50.5	58.2	64.0	76.1	88.9	94.0	100.0	103.6	108.5	117.6	130.3
Implicit price deflator	40.2	46.0	51.7	54.9	66.4	81.6	89.9	94.5	100.0	107.0	116.2	127.4	139.6
Nonfinancial corporations:													
Output per hour of all employees	(¹)	(¹)	66.3	79.9	85.4	91.3	94.4	97.4	100.0	100.4	100.4	101.0	103.5
Compensation per hour	(¹)	(¹)	36.3	43.0	58.3	77.6	85.5	92.5	100.0	108.2	118.7	130.7	143.9
Real compensation per hour	(¹)	(¹)	74.2	82.6	91.0	96.4	96.3	98.5	100.0	100.5	99.1	96.2	95.9
Unit labor cost	(¹)	(¹)	54.7	53.8	68.3	85.1	90.6	95.0	100.0	107.8	118.2	129.4	139.1
Unit nonlabor payments	(¹)	(¹)	54.6	60.8	63.1	75.7	90.9	95.0	100.0	103.8	108.3	117.3	132.3
Implicit price deflator	(¹)	(¹)	54.7	56.2	66.5	81.8	90.7	95.0	100.0	106.4	114.8	125.2	136.7
Manufacturing:													
Output per hour of all persons	49.5	56.5	60.1	74.6	79.2	90.9	93.5	97.7	100.0	100.9	102.0	101.7	104.5
Compensation per hour	21.5	28.8	36.7	42.9	57.6	76.4	85.5	92.4	100.0	108.2	118.8	131.6	146.2
Real compensation per hour	54.1	65.2	75.1	82.3	89.9	93.9	96.3	98.3	100.0	100.5	99.2	96.8	97.4
Unit labor cost	43.4	51.0	61.1	57.4	72.7	84.1	91.4	94.6	100.0	107.3	116.5	129.4	140.0
Unit nonlabor payments	55.1	59.4	62.0	70.3	66.0	70.4	88.5	95.1	100.0	104.7	105.7	108.7	(¹)
Implicit price deflator	46.8	53.4	61.3	61.2	70.7	80.1	90.6	94.7	100.0	106.5	113.4	123.4	(¹)

¹ Not available.

29. Annual changes in productivity, hourly compensation, unit costs, and prices, 1971-81

Item	Year											Annual rate of change	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1950-81	1960-81
Private business sector:													
Output per hour of all persons	3.6	3.5	2.7	-2.3	2.3	3.3	2.1	-0.2	-0.3	-0.2	1.1	2.4	2.1
Compensation per hour	6.6	6.5	8.0	9.4	9.6	8.6	7.7	8.4	10.1	10.2	10.0	6.2	7.2
Real compensation per hour	2.2	3.1	1.7	-1.4	0.4	2.7	1.2	0.7	-1.1	-2.9	-0.3	2.3	1.7
Unit labor cost	2.9	2.9	5.2	11.9	7.2	5.1	5.5	8.6	10.4	10.4	8.8	3.6	5.0
Unit nonlabor payments	7.6	4.5	5.9	4.4	15.0	4.1	5.9	5.1	5.5	6.6	10.3	3.3	4.5
Implicit price deflator	4.4	3.4	5.4	9.4	9.7	4.7	5.6	7.4	8.8	9.2	9.3	3.5	4.9
Nonfarm business sector:													
Output per hour of all persons	3.3	3.7	2.5	-2.4	2.1	3.2	2.0	-0.2	-0.7	-0.3	0.9	2.1	1.8
Compensation per hour	6.6	6.7	7.6	9.4	9.6	8.1	7.6	8.5	9.7	9.9	10.1	5.9	7.0
Real compensation per hour	2.2	3.3	1.3	-1.4	0.4	2.2	1.0	0.7	-1.4	-3.2	-0.3	2.0	1.5
Unit labor cost	3.1	2.8	4.9	12.1	7.4	4.7	5.5	8.7	10.4	10.3	9.0	3.7	5.0
Unit nonlabor payments	7.4	3.2	1.3	5.9	16.7	5.7	6.4	3.6	4.8	8.4	10.8	3.3	4.4
Implicit price deflator	4.5	3.0	3.7	10.1	10.3	5.1	5.8	7.0	8.6	9.7	9.6	3.6	4.8
Nonfinancial corporations:													
Output per hour of all employees	4.8	3.0	2.6	-3.4	3.4	3.2	2.7	0.4	0.0	0.6	2.5	(¹)	2.0
Compensation per hour	6.5	5.8	7.7	9.7	10.1	8.2	8.1	8.2	9.7	10.1	10.1	(¹)	6.9
Real compensation per hour	2.1	2.5	1.4	-1.1	0.9	2.3	1.5	0.5	-1.4	-3.0	-0.3	(¹)	1.4
Unit labor cost	1.6	2.8	4.9	13.6	6.5	4.9	5.3	7.8	9.7	9.5	7.4	(¹)	4.8
Unit nonlabor payments	7.4	2.7	1.5	7.1	20.1	4.6	5.2	3.8	4.4	8.3	12.8	(¹)	4.0
Implicit price deflator	3.5	2.8	3.8	11.4	10.9	4.8	5.2	6.4	7.9	9.1	9.2	(¹)	4.5
Manufacturing:													
Output per hour of all persons	6.1	5.0	5.3	-2.4	2.9	4.4	2.4	0.9	1.1	-0.3	2.7	2.6	2.6
Compensation per hour	6.1	5.4	7.2	10.6	11.9	8.0	8.3	8.2	9.8	10.7	11.1	5.8	6.9
Real compensation per hour	1.8	2.0	0.9	-0.3	2.5	2.1	1.7	0.5	-1.3	-2.5	0.7	2.0	1.4
Unit labor cost	0.0	0.3	1.7	13.3	8.8	3.4	5.7	7.3	8.6	11.0	8.2	3.1	4.1
Unit nonlabor payments	11.2	0.8	-3.3	-1.8	25.9	7.4	5.2	4.7	0.9	2.9	(¹)	(¹)	(¹)
Implicit price deflator	3.1	0.5	0.3	9.0	13.1	4.6	5.6	6.5	6.4	8.8	(¹)	(¹)	(¹)

¹ Not available.

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

[1977=100]

Item	Annual average		Quarterly indexes										
			1979			1980				1981			
	1980	1981	II	III	IV	I	II	III	IV	I	II	III	IV
Private business sector:													
Output per hour of all persons	99.3	100.4	99.7	99.4	99.1	99.5	99.1	99.4	99.1	100.3	101.2	100.9	99.2
Compensation per hour	131.5	144.6	118.1	120.7	123.2	126.4	130.1	133.1	135.9	139.8	143.3	146.5	148.5
Real compensation per hour	96.7	96.4	100.3	99.2	98.0	96.7	96.6	96.9	96.0	96.1	96.9	96.3	95.8
Unit labor cost	132.4	144.0	118.5	121.4	124.3	127.0	131.3	133.9	137.1	139.4	141.6	145.2	149.7
Unit nonlabor payments	118.3	130.5	110.4	111.5	112.2	115.2	116.0	119.7	122.7	127.6	129.3	132.4	132.5
Implicit price deflator	127.6	139.4	115.8	118.1	120.2	123.0	126.1	129.1	132.2	135.4	137.5	140.9	143.9
Nonfarm business sector:													
Output per hour of all persons	98.8	99.7	99.1	98.9	98.8	98.9	98.2	99.0	99.0	100.0	100.4	99.9	98.2
Compensation per hour	130.8	143.9	117.7	120.2	123.0	126.0	129.4	132.3	135.4	139.2	142.4	145.7	147.9
Real compensation per hour	96.2	95.9	100.0	98.8	97.8	96.4	96.0	96.3	95.7	95.7	96.3	95.8	95.4
Unit labor cost	132.4	144.3	118.7	121.5	124.4	127.4	131.8	133.6	136.8	139.1	141.9	145.8	150.6
Unit nonlabor payments	117.6	130.3	107.7	109.2	110.1	113.9	115.1	119.2	122.0	127.8	128.7	132.2	132.7
Implicit price deflator	127.4	139.6	115.1	117.4	119.7	122.9	126.3	128.8	131.9	135.3	137.5	141.2	144.6
Nonfinancial corporations:													
Output per hour of all employees	101.0	103.5	100.7	100.5	99.9	100.2	100.1	101.8	101.8	103.3	103.9	103.8	(¹)
Compensation per hour	130.7	143.9	117.6	120.1	122.7	125.7	129.3	132.5	135.5	139.2	142.3	145.5	(¹)
Real compensation per hour	96.2	95.9	99.9	98.7	97.5	96.2	95.9	96.5	95.7	95.7	96.2	95.6	(¹)
Total unit costs	129.7	140.9	115.3	118.2	121.3	124.2	129.2	131.1	134.1	136.0	138.7	142.2	(¹)
Unit labor cost	129.4	139.1	116.8	119.5	122.8	125.4	129.1	130.2	133.1	134.7	137.0	140.2	(¹)
Unit nonlabor costs	130.2	146.1	111.2	114.6	117.2	120.9	129.3	133.8	136.9	139.5	143.6	147.7	(¹)
Unit profits	90.2	103.4	100.7	97.5	92.2	95.5	83.4	89.1	92.4	106.8	102.8	106.7	(¹)
Implicit price deflator	125.2	136.7	113.7	115.9	118.1	121.0	124.1	126.4	129.5	132.7	134.7	138.2	(¹)
Manufacturing:													
Output per hour of all persons	101.7	104.5	102.3	102.0	102.1	102.0	100.7	100.7	103.2	104.2	105.2	105.5	102.5
Compensation per hour	131.6	146.2	118.6	119.8	122.3	125.4	130.0	133.9	137.3	141.1	144.8	148.0	150.7
Real compensation per hour	96.8	97.4	100.7	98.5	97.2	96.0	96.5	97.5	97.0	97.1	97.9	97.3	97.2
Unit labor cost	129.4	140.0	115.9	117.5	119.8	122.9	129.0	133.0	133.0	135.5	137.6	140.3	147.0

¹ Not available.

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

[1977=100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	II 1980 to III 1980	III 1980 to IV 1980	IV 1980 to I 1981	I 1981 to II 1981	II 1981 to III 1981	III 1981 to IV 1981	III 1979 to III 1980	IV 1979 to IV 1980	I 1980 to I 1981	II 1980 to II 1981	III 1980 to III 1981	IV 1980 to IV 1981
	Private business sector:											
Output per hour of all persons	1.3	-1.1	4.7	3.5	-1.1	-6.5	0.0	0.0	0.8	2.1	1.5	0.0
Compensation per hour	9.5	8.6	11.9	10.4	9.3	5.5	10.3	10.3	10.6	10.1	10.1	9.3
Real compensation per hour	1.6	-3.8	0.5	3.2	-2.3	-2.1	-2.3	-2.0	-0.6	0.3	-0.6	-0.2
Unit labor costs	8.1	9.8	6.9	6.6	10.6	12.9	10.3	10.3	9.7	7.8	8.5	9.2
Unit nonlabor payments	13.7	10.2	17.1	5.3	10.1	0.0	7.4	9.3	10.8	11.5	10.6	8.0
Implicit price deflator	9.8	9.9	10.0	6.2	10.4	8.7	9.4	10.0	10.1	9.0	9.1	8.8
Nonfarm business sector:												
Output per hour of all persons	3.6	-0.2	4.4	1.4	-1.7	-6.8	0.2	0.2	1.2	2.3	0.9	-0.8
Compensation per hour	9.0	9.8	11.7	9.6	9.5	6.2	10.1	10.1	10.5	10.0	10.2	9.2
Real compensation per hour	1.2	-2.7	0.3	2.5	-2.2	-1.5	-2.5	-2.2	-0.7	0.3	-0.6	-0.2
Unit labor costs	5.3	10.1	7.0	8.1	11.5	14.0	9.9	9.9	9.2	7.6	9.2	10.1
Unit nonlabor payments	15.0	9.9	20.2	3.0	11.3	-1.6	9.1	10.8	12.2	11.8	10.9	8.8
Implicit price deflator	8.2	10.0	11.0	6.5	11.4	10.0	9.6	10.2	10.1	8.9	9.7	9.7
Nonfinancial corporations:												
Output per hour of all employees	6.7	0.0	6.3	2.2	-0.5	(¹)	1.3	1.9	3.1	3.8	2.0	(¹)
Compensation per hour	10.2	9.4	11.4	9.3	9.2	(¹)	10.3	10.4	10.8	10.1	9.8	(¹)
Real compensation per hour	2.2	-3.1	0.0	2.1	-2.5	(¹)	-2.2	-1.9	-0.5	0.3	-0.9	(¹)
Total unit costs	6.2	9.4	5.6	8.4	10.3	(¹)	11.0	10.5	9.5	7.4	8.4	(¹)
Unit labor costs	3.2	9.4	4.8	7.0	9.7	(¹)	8.9	8.4	7.4	6.1	7.7	(¹)
Unit nonlabor costs	14.7	9.5	7.9	12.3	11.8	(¹)	16.8	16.8	15.4	11.1	10.4	(¹)
Unit profits	30.3	15.7	77.9	-13.9	15.7	(¹)	-8.6	0.3	11.8	23.3	19.7	(¹)
Implicit price deflator	7.9	9.9	10.4	6.2	10.7	(¹)	9.1	9.6	9.7	8.6	9.3	(¹)
Manufacturing:												
Output per hour of all persons	-0.1	10.3	3.8	4.0	1.2	-11.0	-1.2	1.1	2.1	4.5	4.8	-0.7
Compensation per hour	12.7	10.5	11.6	10.8	9.3	7.4	11.8	12.3	12.5	11.4	10.5	9.8
Real compensation per hour	4.6	-2.2	-0.2	3.5	-2.4	-0.4	-1.0	-0.2	1.1	1.5	-0.2	0.2
Unit labor costs	12.8	0.1	7.5	6.5	8.0	20.7	13.2	11.0	10.2	6.6	5.5	10.5

¹ 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 in major bargaining units measure actual changes during the reference period, whether the result of a newly negotiated increase, a deferred increase negotiated in an earlier year, or a cost-of-living 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 1,000 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.

32. Wage and benefit settlements in major collective bargaining units, 1977 to date

[In percent]

Measures and industry	Annual average					Quarterly average								
	1977	1978	1979	1980	1981	1979	1980				1981			
						IV	I	II	III	IV	I	II	III	IV
Wage and benefit settlements, all industries:														
First-year settlements	9.6	8.3	9.0	10.4	10.2	8.5	8.8	10.2	11.4	8.5	7.7	11.6	10.5	11.0
Annual rate over life of contract	6.2	6.3	6.6	7.1	8.3	6.0	6.7	7.4	7.2	6.1	7.2	10.8	8.1	5.8
Wage rate settlements, all industries:														
First-year settlements	7.8	7.6	7.4	9.5	9.8	6.3	8.2	9.1	10.5	8.3	7.1	11.8	10.8	9.0
Annual rate over life of contract	5.8	6.4	6.0	7.1	7.9	5.3	6.5	7.3	7.4	6.5	6.2	9.7	8.7	5.7
Manufacturing:														
First-year settlements	8.4	8.3	6.9	7.4	7.2	5.6	7.2	6.7	8.4	7.8	6.4	8.2	9.0	6.6
Annual rate over life of contract	5.5	6.6	5.4	5.4	6.1	4.2	5.7	5.1	5.6	5.8	5.5	6.7	7.5	5.4
Nonmanufacturing (excluding construction):														
First-year settlements	8.0	8.0	7.6	9.5	9.8	7.8	9.4	10.3	9.5	8.2	8.0	11.8	8.6	9.6
Annual rate over life of contract	5.9	6.5	6.2	6.6	7.3	7.4	7.6	8.5	5.9	6.8	7.3	9.1	7.2	5.6
Construction:														
First-year settlements	6.3	6.5	8.8	13.6	13.5	7.5	10.8	12.2	15.4	14.3	11.4	12.9	16.4	11.4
Annual rate over life of contract	6.3	6.2	8.3	11.5	11.3	7.6	9.1	10.4	13.0	12.0	10.3	11.1	12.4	11.7

33. Effective wage adjustments in major collective bargaining units, 1977 to date

[In percent]

Measures and industry	Average annual changes					Average quarterly changes								
	1977	1978	1979	1980	1981	1979	1980				1981			
						IV	I	II	III	IV	I	II	III	IV
Total effective wage rate adjustment, all industries	8.0	8.2	9.1	9.9	9.5	1.6	1.6	3.3	3.5	1.3	1.7	3.2	3.3	1.5
Change resulting from —														
Current settlement	3.0	2.0	3.0	3.6	2.5	.5	.4	1.0	1.7	.5	.4	1.1	.5	.4
Prior settlement	3.2	3.7	3.0	3.5	3.8	.4	.5	1.4	1.2	.3	.5	1.4	1.5	.4
Cost-of-living adjustment clause	1.7	2.4	3.1	2.8	3.2	.7	.7	.8	.7	.6	.7	.7	1.2	.6
Manufacturing	8.4	8.6	9.6	10.2	9.4	2.4	2.0	3.4	2.9	1.7	2.3	2.4	3.1	1.9
Nonmanufacturing	7.6	7.9	8.8	9.7	9.5	1.0	1.3	3.2	4.0	1.1	1.2	3.8	3.4	1.1

NOTE: Because of rounding and compounding, the sums of individual items may not equal totals.

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

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month or year	Beginning in month or year (thousands)	In effect during month or year (thousands)	Number (thousands)	Percent of estimated working time
1947	270		1,629		25,720	
1948	245		1,435		26,127	.22
1949	262		2,537		43,420	.38
1950	424		1,698		30,390	.26
1951	415		1,462		15,070	.12
1952	470		2,746		48,820	.38
1953	437		1,623		18,130	.14
1954	265		1,075		16,630	.13
1955	363		2,055		21,180	.16
1956	287		1,370		26,840	.20
1957	279		887		10,340	.07
1958	332		1,587		17,900	.13
1959	245		1,381		60,850	.43
1960	222		896		13,260	.09
1961	195		1,031		10,140	.07
1962	211		793		11,760	.08
1963	181		512		10,020	.07
1964	246		1,183		16,220	.11
1965	268		999		15,140	.10
1966	321		1,300		16,000	.10
1967	381		2,192		31,320	.18
1968	392		1,855		35,567	.20
1969	412		1,576		29,397	.16
1970	381		2,468		52,761	.29
1971	298		2,516		35,538	.19
1972	250		975		16,764	.09
1973	317		1,400		16,260	.08
1974	424		1,796		31,809	.16
1975	235		965		17,563	.09
1976	231		1,519		23,962	.12
1977	298		1,212		21,258	.10
1978	219		1,006		23,774	.11
1979	235		1,021		20,409	.09
1980	187		795		20,844	.09
1981	145		729		16,908	.07
1981: January	6	12	12.0	29.6	257.9	.01
February	7	10	10.7	20.9	118.5	.01
March	16	20	201.6	207.8	861.8	.04
1982 ^P : January	2	4	6.1	11.4	199.9	.01
February	2	6	2.5	13.9	236.9	.01
March	2	7	7.1	20.1	330.6	.02

NOTE: This table now includes only work stoppages involving 1,000 workers or more.

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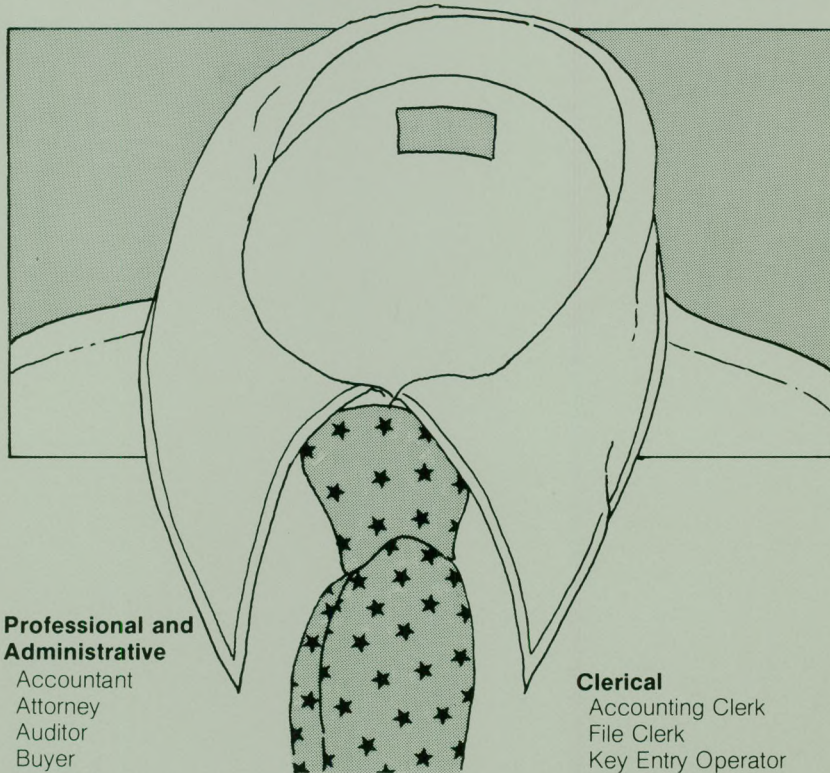
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