



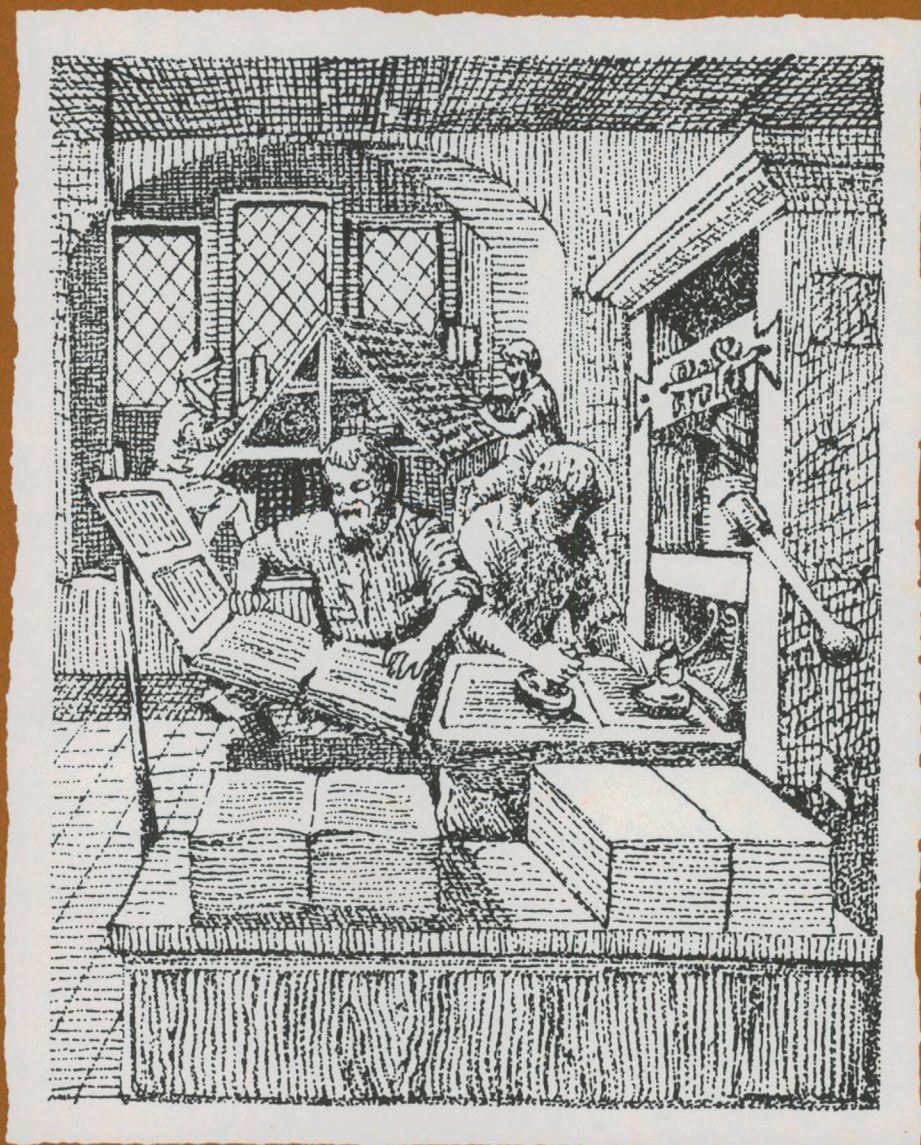
MONTHLY LABOR REVIEW

August 1970

U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics

In this issue

Technological changes
in the printing industry





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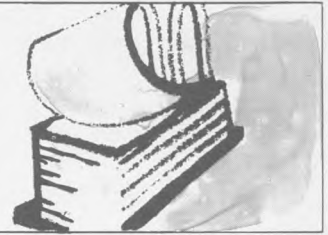
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Labor Month in Review



Job vacancies. The Department of Labor announced the first results of its new job vacancy survey. The survey is designed to show how many jobs are vacant, where, and in what occupations—information that has long been sought by administrators, economists, and other students of the labor market. Survey results will be published monthly.

The first results, covering manufacturing nationally and in 25 areas, revealed that:

- At the end of May, 151,000 job vacancies were immediately available for filling in the Nation's manufacturing industries.

- Almost two-fifths of these jobs had remained vacant for 30 days or more.

- The May job vacancy rate for manufacturing was 0.8 percent. The vacancy rate is the number of vacancies as a percentage of the number of jobs available—employment plus vacancies.

- Manufacturing vacancies in May 1970 were 48 percent below the level of May 1969.

- The average rate of job openings for 25 metropolitan areas ranged from 0.3 percent in Detroit and Jersey City to 1.6 percent in Greensboro and Tampa.

- Occupational data, covering manufacturing establishments in 12 metropolitan areas, showed that about 25 percent of the vacancies available in February 1970 were for white-collar occupations, with the remaining 75 percent for blue-collar and service workers. This was roughly similar to the occupational composition of employment nationally.

The job vacancy survey, launched early in 1969, was developed and tested over the past year. The program is a cooperative Federal-State venture. State employment security agencies collect data from a representative sample of employers for use in preparing both National and local summaries. The Department of Labor provides guidance and

support to the State agencies through the Bureau of Labor Statistics and the Manpower Administration.

For the purposes of the survey, a *current job vacancy* is defined as a vacant job that is immediately available for filling, and for which the firm is actively trying to find or recruit a worker from outside the firm. *Included* in this definition are openings for all kinds of positions, classifications, and employment, full-time, permanent, temporary, and seasonal. *Excluded* are jobs to be filled by recall from layoff, transfer, promotion, demotion, or return from paid or unpaid leave; jobs unoccupied because of labor-management disputes; and job openings for which "new" workers were already hired and scheduled to start work later.

Future releases of the job vacancy survey will provide job vacancy data for manufacturing establishments in 50 metropolitan areas and for the total nonagricultural sector in 26 of the largest areas. For 17 of these areas, quarterly occupational information also will be available.

Once available, the full range of job vacancy data will provide, for the first time, a comprehensive measure of the jobs employers are trying to fill along with several important characteristics of the demand for labor: the industry in which the demand exists, the occupations currently in demand, and the geographic location of the vacant jobs. With this information and other economic data, labor market analysts should be in a much better position to evaluate to what extent labor market problems may be due to the inability of the labor market to absorb all those who want jobs and occupational and geographic imbalances between available jobs and workers. Job vacancy data themselves also will provide additional evidence of economic trends and may prove to be a sensitive indicator of developments in the economy.

Labor demand created by growth in output is balancing the labor-saving effects of new technology, but requirements for individual occupations are changing significantly

ROBERT V. CRITCHLOW

Technological changes in the printing and publishing industry

TECHNOLOGICAL CHANGES being introduced at an increasingly quick pace throughout the printing industry have important implications for manpower. Two factors have combined to hasten the introduction of new technology: The demand for printed materials has grown to such an extent that it can no longer be met entirely by conventional printing processes and, concurrently, the state of technology has reached a point at which vastly more productive printing equipment is commercially available. Some of the innovations, such as typesetting computers and plastic printing plates, are new; others, such as web-offset presses and perforated paper tape for operating typesetting machines, have existed for 30 or 40 years, but were little used until the last decade. Use of the new technologies results in increased productivity, greater quality control at a higher level of output, and more flexibility in what is produced and the manner of its production.

These technological changes may not reduce total employment because of the offsetting demand for labor created by growth in output, but the changes are affecting the industry's manpower. Some occupations, such as typesetters, may decrease in number while others—printing press operators, lithographic platemakers, and computer-related occupations—will increase. Moreover, skill requirements are changing significantly, making retraining increasingly necessary.¹

Characteristics of the industry

As the printing and publishing industry is undergoing technological change, its economic condition is characterized by increasing employment, rising production, growing capital investment, intensified

research and development, predomination of small firms, and strong craft unions that are showing a trend toward mergers as a response to the changes.

EMPLOYMENT IS INCREASING. In 1969, there were nearly 1.1 million employees in the printing industry—approximately 365,000 more than in 1947. This represented a 50-percent growth in printing industry employment, contrasted to the 29-percent growth in all manufacturing employment and 15 percent in nondurable manufacturing. The average annual rates of increase in employment during the two periods of 1947–58 and 1958–69 were approximately the same for the industry as a whole, but not for the selected subindustry groups shown in table 1.

Employment of women in the industry has increased from 250,000 in 1959 to 348,000 in 1969, an increase of 39 percent (compared with a 22-percent increase of all employees over this period). Women have also increased as a percentage of total industry employment, from 28 percent in 1959 to 32 percent in 1969.

About one-third of all printing employees work in printing craft occupations, with the remaining two-thirds employed in positions such as clerks, salesmen, maintenance workers, reporters and editors, and managers. The newspaper and commercial printing segments of the industry each account for roughly one-third of total industry employment. Within these groups, employment gains have been greatest in the rapidly growing lithographic sector of commercial printing.

PRODUCTION IS RISING. Production increased at an even greater rate than employment during 1947–69 as new equipment was introduced in the industry. Over this period, the Federal Reserve Board index of production more than doubled (table 2) as demand for printed materials rose with expansion of population, business activity,

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and income levels. The 4.3-percent annual rate of increase in 1958-69 was higher than the 3.3-percent increase during the earlier 1947-58 period.

CAPITAL SPENDING IS GROWING. Nearly \$1 billion was spent for new plant and equipment in 1969.² Expenditures per employee have been greatest in the lithographic sector of commercial printing, averaging nearly \$1,000 per employee in 1967, compared with nearly \$800 for the industry as a whole. (See table 3.) This primarily reflects the rapid acceptance of web-offset printing, introduced into commercial printing during the 1950's. In the early 1960's, web-offset printing was further extended into small, suburban newspaper printing and contributed to the significant increase in new capital expenditures per newspaper employee.

SMALL FIRMS PREDOMINATE. The printing and publishing industry is characterized by a large number of small establishments widely distributed throughout the United States—about 4 out of 5 with fewer than 20 employees. In 1963, establishments with less than 20 employees accounted for 81 percent of all establishments and 17 percent of all employment. Establishments with 100 employees or more constituted only 4 percent of all establishments in 1963, but claimed 58 percent of total employment.³

R&D ACTIVITIES ARE BEING INTENSIFIED. Most research and development in the industry is carried out by equipment manufacturers, trade associations, industry research organizations, and medium-to-large firms with the capital and willing-

Table 1. Trends in employment, printing and publishing industry, selected subgroups and periods, 1947-69

[All employees, in thousands]

Year	Total printing and publishing	Newspapers	Commercial printing					
			Except lithographic		Lithographic			
1947.....	721	248	180		50			
1958.....	873	314	194		74			
1969.....	1,086	366	213		121			
Percent change								
	Total	Average annual rate	Total	Average annual rate	Total	Average annual rate		
1947-69.....	50.6	1.8	47.6	1.5	18.3	0.6	142.0	4.4
1947-58.....	21.0	1.9	26.4	1.9	7.9	1.2	48.9	4.1
1958-69.....	24.4	2.0	16.6	1.4	9.8	.7	63.5	4.8

Table 2. Production indexes, printing and publishing industry
[1957-59=100]

Year	Total printing and publishing		Newspapers	
	1947.....	69.7		69.3
1958.....	96.9		96.3	
1969.....	155.9		142.4	
Percent change				
	Total	Average annual rate	Total	Average annual rate
1947-69.....	123.7	3.6	105.5	2.7
1947-58.....	39.0	3.3	39.0	2.8
1958-69.....	60.9	4.3	47.9	3.6

SOURCE: Federal Reserve Board.

ness to experiment. In addition to traditional equipment manufacturers, firms not generally associated with the printing industry—such as companies making electronic computers—are developing new and more productive printing equipment. Because of the lack of capital and of research expertise among small firms, industry research organizations and trade associations (such as the American Newspaper Publishers' Association) are important sources of new technological developments.

Description of new technologies

The quickening pace of technological change is illustrated by the changes that have occurred in methods of setting type. Hand composition was the sole method of typesetting for several centuries until the first commercial typesetting machines became available in the 1880's. The next important innovation—the teletypesetter—was developed 50 years later. Two decades later, in the 1950's, photographic typesetting machines became available commercially. Technological innovation has accelerated in the last 10 years, with computerized typesetting, cathode ray tube typesetters, optical character reading equipment, and high speed data transmission among the major advances. Approximately 600 typesetting computers, for example, were reported installed in the United States in the fall of 1968, compared with about 100 in the spring of 1964.⁴ Important advances that have occurred in the major production processes are described in table 4, with a brief summary of their economic advantages and the occupations affected by their use.

While many new technologies are available in the printing industry, frequently involving the application of electronics and advanced photographic techniques, a large segment of the industry—the small printing firms—will continue to use manually operated typesetting machines and other printing equipment. An exception to this is the large number of small daily and weekly newspapers that are converting to photographic typesetting and web-offset printing.

Several factors slow the rate of diffusion of new technology to small firms. Small firms have limited capital resources for experimenting with, and purchasing, new equipment, especially expensive equipment like computers and high-speed printing presses. Moreover, the needs of small firms are for equipment that is highly flexible to meet their usual small volume production runs. The new technology is not often designed to meet these needs. Nor are the owners of many small printing shops particularly receptive to technological change. Many have not developed the philosophy, prevalent in large firms, of actively seeking information on new technology. A further influence is that much of the conventional printing equipment—such as linecasting machines and printing presses—not only serves the need of many small firms quite well, but also has a useful life of a decade or more. Therefore, the new technologies will be introduced primarily in newspapers (of all sizes) and in medium-to-large commercial, book, and periodical printers, where their volume may return economic savings to justify large outlays.

Impact on occupations and skills

Specific occupations and skills in the major printing functions of composition, platemaking, and press work will be greatly affected by the new technologies.

COMPOSING ROOM. The use of phototypesetters and computers can have a considerable effect on composing room employees, who constitute approximately one-half of the industry's craftsmen. The higher operating speeds (separately or in a combined computer-phototypesetter system) require a smaller number of man-hours to perform a given amount of work than the traditional hot metal method. Further, the skills needed to operate phototypesetters and computers are often different from those used in hot-metal typesetting.

Table 3. Expenditures for new plant and equipment, printing and publishing industry, average per employee, selected periods, 1947-69

Year	Printing and publishing	Newspapers	Commercial printing	
			Except lithographic	Lithographic
1947.....	\$313.96	\$329.39		
1958.....	468.27	445.31	\$509.88	\$699.34
1967.....	783.47	798.99	765.90	989.40
	Percent change			
1947-67.....	149.5	142.6		
1947-58.....	49.1	35.2		
1958-67.....	67.3	79.4	50.2	41.5

¹ Preliminary.

NOTE: Dashes indicate data not available.

SOURCE: Bureau of the Census and Bureau of Labor Statistics.

Consequently, although hot-metal typesetting will remain in use for many more years, its importance will continue to decline and fewer hot-metal typesetters will be needed.

Several new skills are necessary in photo-composition. Type and graphic displays must be assembled and pasted onto layout sheets (paste makeup). A knowledge of photographic processes is necessary for both setting copy onto film and developing the film for platemaking. The developed film must then be assembled and arranged into pages (stripping).

An increasingly necessary, but perhaps not so obvious, skill is the ability to use a typewriter keyboard in which the keys are arranged in a different manner from the Linotype keyboard. Most phototypesetters and the more recent models of hot-metal typesetters are operated by a typewriter keyboard that is directly attached to the typesetting machine, or, more frequently, by tape that is prepared on a separate tape-punching machine utilizing a typewriter keyboard.

The introduction of computers into the typesetting process also requires a new set of skills. Computer input is generally paper tape punched on machines utilizing the typewriter keyboard mentioned above. New jobs of computer console operators and programmers are being created. These often can be filled by retraining composing room employees who might otherwise be displaced. A relatively small number of systems analysts will be needed; industry practice thus far has been to hire from outside the firm to fill these positions. Also, computer maintenance will require personnel with a good background in electronics.

PLATEMAKING. The new equipment used in automatic film developing systems, electronic color separation, and electronic engraving, and the new materials used in making letterpress printing plates, are affecting a part of the printing process that has traditionally involved large amounts of highly skilled handwork. With the exception of the still experimental plastic plate systems, these innovations share the advantages of rapid output and consistent high quality (in comparison, the work of even a highly skilled craftsman is not completely consistent from job to job).

The new platemaking equipment puts more emphasis on technical skills to operate, and less on craft skills. Some knowledge of electronics and familiarity with machine operations is particularly important. Traditionally trained craftsmen are generally capable of being retrained for this work.

PRESSWORK. The increasing automation of printing press operations is changing the skill requirements of pressmen considerably. Electronic monitors and controls can perform many press operations faster and more reliably than the press crew. This frees the crew from machine operations,

allowing them to spend more time on quality control; but in the process, traditional craft skills become less important, and technical knowledge and ability become more critical.

Web-offset printing presses have received wide acceptance in commercial printing and small-to-medium newspaper printing, where they are expected eventually to print 90 percent of the country's newspapers.

For commercial printers who previously used sheet-fed offset presses, web-offset offers faster press speed and less paper handling; but the skills involved in operating web-fed presses are quite different from those for sheet-fed press operation. For example, web-offset press crewmembers must be able to make decisions faster, and must be more physically agile, than their counterparts operating sheet-fed presses. This generally necessitates training a new press crew, as there is little crossover from sheet-fed offset to web-offset.

Newspapers converting from web-letterpress to web-offset generally decrease their make-ready time, but often must add an additional man to the press crew. Although web-offset is somewhat more complex than web-letterpress, the skills involved are basically similar (a situation that does not

Table 4. Description and impact of innovations in printing technology

Technology	Description and advantages	Occupations affected
Computers.....	The primary typesetting functions are "justification" (deciding where to end a line of type so that it remains within predetermined margins) and "hyphenation" (deciding when and where to hyphenate words that would exceed the margins). Computers can make justification and hyphenations in a fraction of the time needed by typesetting machine operators, and thereby make the typesetting process faster and more simple.	Linecasting machine operators, Teletypesetter keyboard operators.
Phototypography.....	Type is set on strips of photographic film or light-sensitive paper, rather than in metal. Most phototypesetting machines are operated by punched paper tape (rather than by directly attached keyboards), and thus can be run by computer-finished tape. The primary advantage of phototypography is speed. The fastest automated hot-metal machines can set type at speeds of 7-8 characters per second (cps). Most phototypesetting machines operate at speeds of 15-30 cps, and the latest cathode ray tube machines can go up to 1,000 cps. Another advantage is a lower rate of typographical errors.	Composing room employees trained in hot-metal typesetting.
Automated photographic and platemaking equipment.	Automatic film processing systems, electronic color separation equipment, and electronic engraving equipment all operate at considerably faster speed than the conventional (and time consuming) manual processes. Quality of the machine-produced work is both consistent and high, while the quality of handwork is very much a function of the craftsman's skill, and consistency varies even for a highly skilled craftsman.	Photoengravers and lithographers involved in film processing, photographic art work, and plate engraving will be affected, as skill requirements are lower.
Plastic printing plates for letterpress newspaper printing.	Lightweight, low cost, flexible plastic printing plates have been developed that can be used on existing letterpress printing presses in place of the large, heavy lead stereotype plates currently in use. These new plates offer superior printing quality and longer life than lead stereotype plates.	Photoengravers, electrotypers, and stereotypers.
Web-offset printing presses (web-fed lithographic presses).	Web-offset presses print on large rolls (webs) of paper rather than individual pre-cut sheets. For commercial printers who previously used sheet-fed offset, web-offset offers faster printing speeds and paper handling. Newspapers converting from web-letterpress to web-offset gain the advantages of increased printing quality (especially for photographs), faster make-ready time, and improved compatibility with phototypesetting machines.	Sheet-fed offset and web-fed letterpress printing press operators.

Table 5. Outlook for employment

Department	Outlook
Composing room.....	<p>Employment expected to decline slightly, even though the volume of printing will increase, because of the greater productivity of new technology.</p> <p>Linecasting machine operators will be among the most rapidly declining occupations, with some employees retraining for tape punching occupations.</p> <p>Photocomposition, with its attendant tape punching, machine monitoring, film processing, and paste make-up operations, will come to dominate composing room operations. Employees presently trained in hot-metal typesetting can be retrained for these jobs.</p> <p>Computers will become more widely used, creating new jobs for computer typists, programmers, and console operators. Many of these jobs will be filled by composing room employees who would otherwise be displaced.</p> <p>Machinists with electronics training are, and will continue to be, in high demand.</p>
Platemaking.....	<p>Platemaking employment will increase, although employment in particular occupations will decline.</p> <p>Lithography, as the fastest growing printing process, will be responsible for the most growth in platemaking occupations. However, even lithographic platemaking growth will be somewhat limited by the laborsaving aspects of new technology.</p> <p>Photoengraving employment should remain fairly constant in spite of an increase in output. This will result from a combination of laborsaving technology and increased competition from lithography. Some photoengravers have retrained for lithographic occupations—a trend that is expected to continue.</p> <p>Employment in electrotyping and stereotyping will decline moderately in spite of the expected increase in printing output. More productive duplicate platemaking equipment, more durable printing plate materials, and competition from lithography will bring about the decline in employment.</p>
Presswork.....	<p>Due to the increase in printing volume, and in the size and complexity of printing presses, employment for press operators and assistants is expected to rise moderately. The greatest rise will occur in web-offset (lithographic) presswork. The increased speeds and efficiency of new presses will limit to some extent the increase in presswork employment.</p>

exist between sheet-fed presses and web-fed presses), so that web-letterpress crews can be retrained for web-offset operation.

Outlook for employment

Employment in the printing industry is estimated to increase slightly between 1970 and 1975. Some categories of employees, however, particularly typesetters and those engaged in duplicate platemaking functions, are expected to decrease in number. As indicated in table 5, these declines will be offset by employment growth in such occupations as printing press operators and lithographic platemakers. The introduction of electronic computers in composing room functions will require key new positions involving programming, computer console operation, and related functions. The growing substitution of electronic for mechanical equipment will require more maintenance employees with a background in electronics.

Innovations in printing technologies have focused attention on methods of preparing employees for new job demands. The printing trade unions, in particular, are intensively involved in developing methods of easing the impact of technological change on its members, many of whom are in jobs where skills are being substantially modified.

Illustrative of the pressure that unions believe themselves to be under is the increasing number of strikes in the newspaper and commercial

printing segment of the industry. This is particularly true of strikes lasting over 100 days which, according to BLS data, totaled 19 during 1947-57 and 65 for the 1958-68 period. Apart from wage disputes that have been a part of most strikes, a common thread—especially in the longer strikes—has been controversy over the introduction of new technology and the conditions of its use.

Some of the more important attitudes and policies developed in response to the effects of technological change relate to job security and retraining. Data from the latest BLS surveys of collective bargaining agreements in the printing industry, covering those in effect during 1962-67 and covering 1,000 workers or more, show the extent of industry contract provisions relating to adjustment to technological change:

	Contracts studied	Contracts having provisions
Plant movement, transfer, and relocation allowances.....	28	3
Severance pay and layoff benefits.....	37	6
Paid vacations and holidays.....	33	33
SUB plans and wage-employment guarantees.....	37	1
Training and retraining.....	28	13

Training programs have been an important technique of preparing employees to meet changing job requirements. The International Typographical Union (ITU), for example, has long maintained that its interest can best be served by supplying industry with the most skilled workers available. The union's training center in Colorado offers courses in computer operations, all forms of

composition, film processing (including color film), platemaking, and offset press operations. Most of the courses are 3 weeks in length, allowing union members to complete a course while on vacation.

The International Printing Pressmen and Assistants Union also has supported technological change and advocated retraining programs for members whose skills have become obsolete. For many years IPPAU operated a training school. However, it became impractical to keep up with the rapidly increasing variety of printing presses entering the market, and the school was replaced by an informally structured program in which members receive training on the particular presses used where they are employed.

Management officials in many printing firms also are aware of the importance of training programs and many programs have been developed, ranging from informal on-the-job training to comprehensive programs involving employee testing, lectures within the company, and attendance at special schools. In some firms, displaced employees are assigned to "retraining pools" from whence they are retrained and assigned to other jobs available within the firm.

Some unions have established formal organizations to study the manpower implications of technological change. The Lithographers and Photoengravers International Union (LPIU), for example, concerned over the threat of technological change to job security, established a Committee on Technological Developments during its 1965 convention. The Committee's purpose is to study the employment impact and the cost savings effects of technological changes, and, based on this, to formulate plans that locals can use in negotiations with employers that will assist the members in acquiring a fair share of the benefits involved. LPIU has developed a two-part policy for providing job security in a time of technological change: extensive training programs—including training centers in major cities—and early retirement of older union members. Discussions with employers over early retirement began in late 1965, and by the end of 1966 over half of the members covered under contracts negotiated during the year had gained early retirement benefits.

Mergers of unions have been another consequence of changing technology. The rationale behind the merger trend is that the new technologies

often cut across traditional craft lines, jeopardizing union security and giving rise to jurisdictional disputes between unions. The largest merger has been between the Amalgamated Lithographers of America and the International Photoengravers' Union, forming the Lithographers' and Photoengravers' International Union. Local 1 (New York area) of ALA rejected the merger and became an independent union, later arranging an informal association with the International Typographical Union. The International Stereotypers' and Electrotypers' Union reportedly is also contemplating a merger. Other mergers have been discussed between various unions, but were not realized. This is, however, a trend that could continue.

As unions have become more concerned over job security, they have attempted—with fair success—to establish some degree of control over the use of the new equipment. It is not uncommon for collective bargaining contracts to contain provisions specifying that when new equipment is introduced, it will be operated by the union members covered in the contract, or that the union members will have the first opportunity to receive the training (often at company expense) necessary to operate the new equipment, or that employees who are displaced will be retrained by the company for other jobs. More stress is also being placed on factors such as pensions, retirement age, shorter workweeks, and formal training.

A specific—and rather unusual—example is provided by Local 6 (New York) of the Irv. In its negotiations with New York City newspapers, the union demanded all of the direct savings that resulted from company use of typesetting computers and a payment from the newspapers in return for newspaper usage of "outside" (TTS) tapes. Until these demands were met, union members refused to operate the equipment. By early 1966, three large newspapers had agreed to these conditions. The money contributed by the newspapers was used to establish funds for retraining displaced employees, supplemental unemployment benefits, incentives for early retirement, and supporting pension and welfare funds that could suffer if union memberships were reduced.

A more recent development is an agreement worked out in early 1968 to study the effects of automation on manpower. The parties to the agree-

ment are IPU Local 6, three New York newspapers, and some of the commercial printing shops in the city. The results of the study are to be used to determine how the benefits of automation can be most widely spread among employers and employees.⁵ In 1970, negotiations between IPU and the newspapers were predominantly concerned with wages rather than with new technologies.

Outlook for the industry

Technological innovation will continue to change the printing industry during the decade of the 1970's. Although the pace at which innovations will be diffused may be slower than in other industries due to the particular structure and economic characteristics of the printing industry, substantial change will occur, causing considerable modification in job skills. Consequently, training programs and other methods of adjustment will continue to be needed. Special attention should be given to revising trade school curriculums to include such newer developments as phototypography and electronics.

The rising demand for printed products will ease the impact of technological change on manpower. This situation has occurred before, although on a more restricted basis, with the introduction of linecasting machines in the late 19th century and improvements in printing presses (especially the development of automatic press feeders) in the early 20th century. In both instances, considerable retraining was necessary and in the latter case,

one group—manual press feeders—experienced considerable displacement.⁶ But, in both cases, demand increased sufficiently to mitigate the displacement for most of the affected groups. In the current situation, technological change is so widespread that it affects all facets of the printing process. Displacement will probably occur in certain occupations; but attrition should be able to handle much of it when combined with increased demand for printed products, a somewhat slow rate of diffusion of technological change, and extensive retraining. □

—FOOTNOTES—

¹ The Bureau of Labor Statistics is studying the manpower implications of technological change in the printing and publishing industry. A forthcoming report on the study will be based on data obtained by BLS staff during field visits to selected newspapers and commercial printers using new technology and on a review of industry technical publications and other literature.

² *U.S. Industrial Outlook 1970* (U.S. Department of Commerce, Business and Defense Services Administration), p. 58.

³ U.S. Bureau of the Census.

⁴ Survey by Composition Information Services, Inc., Los Angeles, Calif.

⁵ Further information on the policies developed by IPU Local 6 to meet the problems posed by technological change can be found in Harry Kelber and Carl Schlesinger, *Union Printers and Controlled Automation* (New York, The Free Press, 1967).

⁶ Elizabeth F. Baker, *Displacement of Men by Machines* (New York, Columbia University Press, 1933).

A British view on longer term trends

One other broad trend foreseen was the increasing need for easier movement between occupations and categories of skill in order to cope successfully with the manpower effects of technological changes. The first requisite was seen by many as a broader initial training, incorporating the idea that retraining, quite possibly more than once and to different occupations, is almost inevitable in the average working lifetime. . . . while specialization was likely to become more and more necessary, it must be founded on a broad training which would give both an understanding of the work in other departments and a flexibility to accept retraining when necessary.

—*Printing and Publishing*,

Department of Employment and Productivity, Manpower Studies No. 9 (London, H. M. Stationery Office, 1970).

The relationship between changes in wage rates and in hourly earnings

Data from a sample of 87 establishments indicate the possibility of diverse movements in the two pay series

VICTOR J. SHEIFER

TO WHAT EXTENT are general wage rate changes reflected in average hourly earnings data? In practice, do wage rate changes so dominate that there is little difference in the movements of hourly earnings and rate changes? Or are fluctuations in premium pay and changes in the occupational mix and other factors of sufficient importance to cause significant deviations in the behavior of the two measures?

This question is important in an analysis of statistics of wage movements, since alternative measures of wage change sometimes present apparent anomalies. For example, although average hourly earnings of manufacturing production workers advanced considerably less between December 1968 and December 1969 than during the same period a year earlier (5.8 percent compared with 6.9 percent), general wage rate adjustments effective in the 2 years were much the same—5.2 percent in 1968 and 5.1 percent in 1969.

A limited amount of information bearing on this issue was derived by analyzing replies, covering the December 1966–July 1967 period, from 87 establishments¹ reporting in two Bureau of Labor Statistics programs—one on wage developments in manufacturing (which covers general wage rate changes) and the other dealing with data on employment, payroll, and hours (which yields average hourly earnings data). This article compares changes in the establishments surveyed in gross hourly earnings, the most commonly used earnings series, and effective wage rate adjustments, conceptually the most closely related wage rate data.

Because the analysis was made as part of an internal program evaluation rather than as part of a comprehensive assessment of the relationship

between the two statistical series, the study covered only a short time span and a small number of observations. Furthermore, since the questionnaire on wage developments in manufacturing is not sent to establishments when information for them is available from the Bureau's separate current wage developments project (which covers most unionized situations involving 1,000 workers or more), the establishments in the study discussed in this article are relatively small and are not a representative sample of manufacturing units. Despite these shortcomings, the findings throw some light on the question under consideration, serving to clarify issues and, possibly, to stimulate further research.

The statistical series

The Bureau's survey of wage developments in manufacturing defines general wage rate increases as those affecting, at any one time, at least 10 percent of the production and related workers in an establishment or all workers covered by a single collective bargaining agreement even if the agreement applies to fewer than 10 percent of the workers.² The Bureau prepares separate series covering wage decisions reached in given time periods and wage changes placed into effect during those periods.³ The latter include, in addition to wage changes currently decided upon, those previously determined but deferred, and changes under cost-of-living escalator provisions.

The Bureau derives average hourly earnings in an establishment by dividing total payroll outlays in a given time period by the number of hours paid for.⁴ As in general wage change statistics, several series are available. Data covering gross average hourly earnings are available for all establishments. Data on earnings excluding overtime and the effects of interindustry employment shifts are available for manufacturing industries only.⁵

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Conceptual differences

The distinction between wage rate and earnings changes can be clarified when we recognize that, although an individual worker's wage rate ordinarily is the primary determinant of his hourly earnings, it does not necessarily follow that, over short periods, fluctuations in his hourly earnings are the result of wage rate changes. Earnings fluctuations may stem from variations in output under incentive wage plans or in the volume of premium-paid overtime, holiday, weekend, or late shift work. Moreover, promotion, job reevaluation, or within-grade wage adjustments may affect an employee's wage rate even in the absence of a general wage change.

The forces affecting earnings do not always move in the same direction. A worker's hourly earnings may decline despite a wage rate boost, for example, because of a drop in premium overtime work or a transfer from night to day work resulting in loss of a night-shift differential.

Average hourly earnings are, of course, affected by adjustments in the pay of individual workers. Consequently, the various forces that influence an individual worker's earnings also affect the average for a group of workers. However, even if individual earnings remain unchanged, the average for a plant as a whole could be affected by a change in the occupational mix, for example, the hiring or dismissal of workers and the resulting change in the relative number of employees at various earnings levels. Similarly, shifts in employment among plants with differing wage levels will affect multiplant averages.⁶

Establishments showing wage increases

Average differences between hourly earnings changes and general wage rate increases in 55 establishments where wage rates increased during the period are shown in table 1. (None of the factories reported a wage reduction, and 32 reported no wage change.) Since it is conceivable that the longrun impact of a wage change is not immediately apparent, possible lagged adjustments are considered. Data for 1-month intervals compare the wage rate increase with the earnings change during the month of the increase. Data for intervals of 2 months or more compare the same rate increase with earnings changes over successively longer time spans beginning with the

month prior to the rate increase.

Fewer months were available for comparison of wage rate changes with average hourly earnings changes in instances where plants increased wage rates near the end of the December 1966–July 1967 period.⁷ Consequently, the varying averages among time intervals in the top half of table 1 are the result both of developments within the establishments and of changes in the size of the sample. To eliminate the influence of changes in the sample, the bottom half of the table is restricted to the establishments (there were only nine of them) for which 7-month data were available.

Table 1 is limited to averages; individual establishment data are depicted in the scatter diagrams on page —. The diagonal line on these diagrams serves as a reference line, showing the locus of all points representing equal changes in earnings and wage rates. Actual observations above and below the diagonal line reflect instances in which earnings changes were greater and less, respectively, than wage rate increases. The number of observations above and below the diagonal line is presented, as is the coefficient of correlation between the wage rate increases and the earnings changes.⁸

A detailed examination of table 1 or inspection of the scatter diagrams impresses us with the

Table 1. Average differences between general wage rate increases and hourly earnings changes in 55 establishments increasing wage rates, December 1966–July 1967¹

[Cents per hour]

Time interval since general wage rate change	Number of establishments studied	Average earnings change less rate increase	
		Sign of change ignored	Sign of change considered
All establishments			
1 month.....	55	7.9	-1.8
2 months.....	46	9.3	-1.4
3 months.....	36	9.9	-2.3
4 months.....	27	12.7	1.6
5 months.....	24	11.4	.9
6 months.....	20	9.8	-1.8
7 months.....	9	9.9	-5.6
Establishments for which 7-month comparisons could be made			
1 month.....	9	9.0	-3.5
2 months.....	9	8.6	-1.5
3 months.....	9	7.9	-4.4
4 months.....	9	18.0	6.1
5 months.....	9	14.4	.6
6 months.....	9	8.2	-4.0
7 months.....	9	9.9	-5.6

¹ Averages were computed by giving equal weight to each establishment.

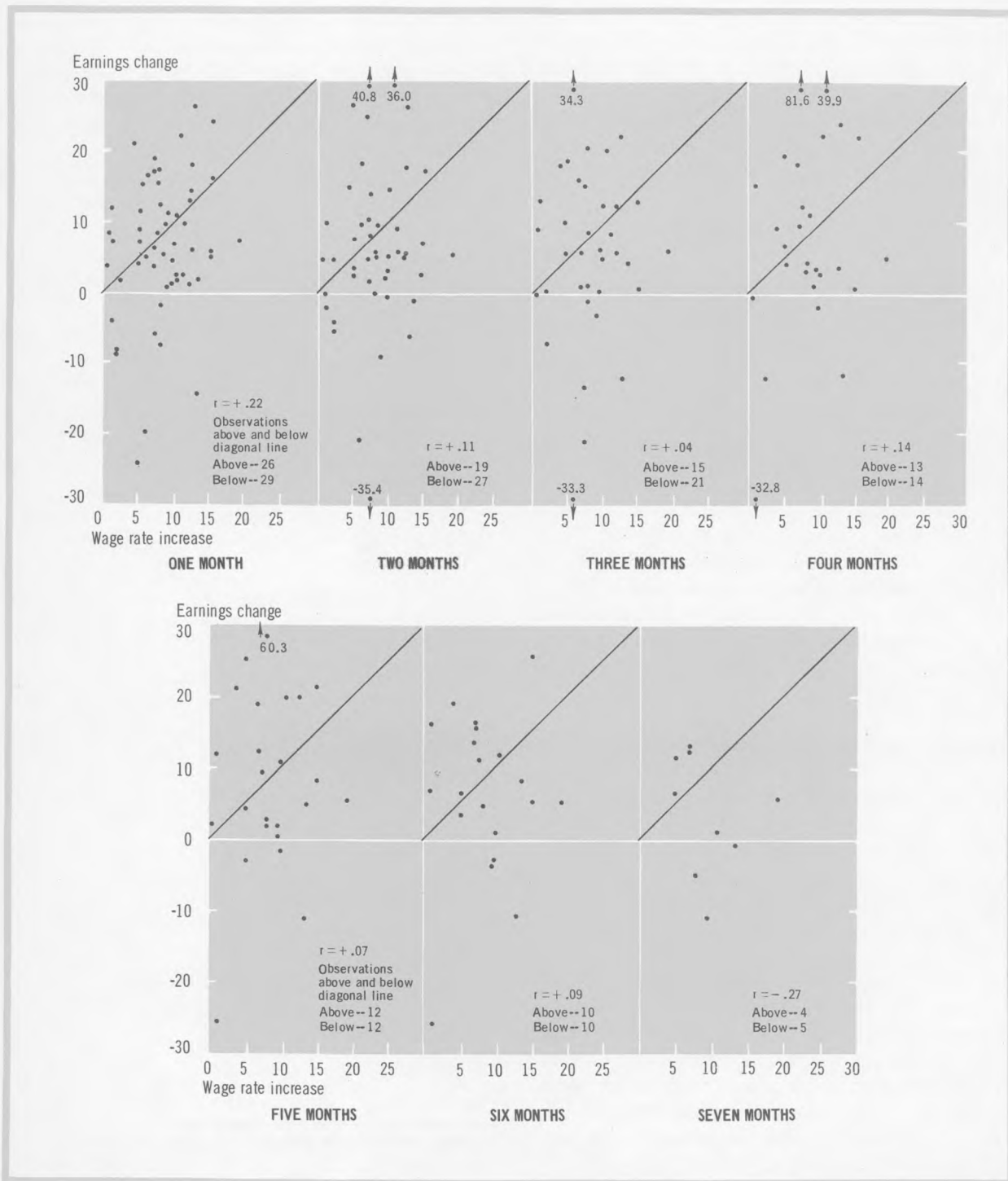
absence of any indication of a clear and consistent relation between general wage rate increases and average hourly earnings movements in individual establishments. This is true not only for the

month of the wage-rate adjustment but also for comparisons involving average hourly earnings over longer time spans.

Table 1 shows an average difference (sign

Chart 1. General wage increases and hourly earnings changes in 55 establishments increasing wages, December 1966-July 1967

[Data in cents per hour]



ignored) between the earnings change in the month of the wage increase and the wage increase of 7.9 cents per hour in all 55 establishments. The scatter of the points on the diagram is so great that the coefficient of correlation between 1-month earnings changes and wage rate increases is only +.22, which is not statistically significant, that is, it could easily have arisen by chance from a situation in which the true correlation was zero.

Assuming wage changes do dominate the picture, but only after a time lag, we would expect a closer relation in comparisons using longer time intervals. However, contrary findings are revealed in table 1 and the scatter diagrams; the average difference between earnings and wage changes rose to 9.9 cents and the correlation coefficient actually became negative when 7-month earnings changes (for which there were only nine observations) were compared with the wage rate change. The data, admittedly sketchy, provide little support for a time-lag hypothesis. None of the correlation coefficients shown were found to be significant, but the fact that all coefficients except that for the 7-month interval were positive indicates the presence of some weak relationship.

Conceivably, the closer average relationship between earnings and wage changes in the 1-month comparison was the result of developments in establishments not included in the 7-month comparison. Therefore, for what it is worth, a separate analysis was made of the nine establishments for which 7-month data are available. As the bottom half of table 1 shows, if we confine ourselves to these nine units, we still find the average spread between earnings changes and wage increases increasing, although to a considerably lesser degree, when 7-month earnings changes are used in place of 1-month changes.

Before concluding this discussion, we should note that in five of the seven scatter diagrams, a majority of the observations are below the diagonal line, reflecting a tendency for earnings changes to be less than wage rate increases. This raises an interesting question: Are employers often in a position to take steps—and if so do they—to reduce the cost impact of wage increases?

Explanatory variables

Since the Bureau's monthly employment, payroll, and hours survey provides hours and employ-

ment data as well as earnings information, we are able to consider in a very limited way two factors possibly contributing to the divergent earnings and wage rate changes just discussed.⁹

The influence of variations in premium pay for overtime hours can be examined by comparing wage rate-earnings relationships involving gross and straight-time hourly earnings. Coefficients of correlation between wage rate and gross hourly earnings changes (as shown on the scatter diagrams) are listed below, together with corresponding coefficients based upon hourly earnings adjusted to eliminate the influence of overtime premiums:

Time period	Coefficients	
	Based on gross earnings	Based on straight-time earnings
1 month.....	.22	.25
2 months.....	.11	.16
3 months.....	.04	.12
4 months.....	.14	.17
5 months.....	.07	.13
6 months.....	.09	.27
7 months.....	-.27	-.32

Except for the 7-month comparison, substitution of straight-time earnings improves the relationship but not to a great extent, the coefficients remaining low. At least for the establishments and time period considered, the lack of any substantial correlation between wage rate and gross earnings changes can be explained only to a limited degree by overtime premiums.

Even more negative findings on the impact of employment variations are shown in table 2. No systematic relationship can be discerned between straight-time earnings-wage rate differentials and

Table 2. Straight-time earnings-wage rate differentials and employment changes in 55 establishments increasing wages, December 1966-July 1967

Time period covered by earnings and employment changes	Number of establishments					
	Earnings change exceeding wage increase, and employment			Earnings change less than wage increase, and employment		
	Rising	Falling	Unchanged	Rising	Falling	Unchanged
Total.....	47	46	5	59	52	7
1 month ¹	13	8	-----	12	18	3
2 months.....	9	9	2	17	7	2
3 months.....	7	10	-----	9	9	1
4 months.....	7	7	1	4	7	1
5 months.....	6	5	1	7	5	-----
6 months.....	3	5	1	8	3	-----
7 months.....	2	2	-----	2	3	-----

¹ In 1 establishment, excluded from this tabulation, the earnings change was equal to the wage increase and employment increased over the month.

the direction of employment changes. The proportion of instances in which earnings changes were less than wage increases is not significantly different for cases when employment rose than when employment decreased. If changes in employment did influence establishment earnings levels, their impacts clearly were submerged by forces that could not be isolated.

Changes in other establishments

The preceding discussion suggests that a variety of forces other than wage rate changes may have marked effects on average hourly earnings within individual establishments. This impression is reinforced by examination of the monthly average hourly earnings changes in the 32 establishments that made no general adjustments in wage rates. For these establishments, the average (sign ignored) of the 224¹⁰ month-to-month variations in hourly earnings was as high as 6.6 cents.

As one would expect, changes were in opposite directions in many of these factories; and, within individual units, changes in a given direction in 1 month were frequently offset by opposite movements the next month. Nevertheless, the extent to which changes in opposite directions cancel out is surprisingly large and suggestive of a major influence by random factors; over the 7-month period, the average monthly change per establishment, taking account of the direction of the change, was less than 0.05 cent in the 32 factories.

Multiestablishment data

Although individual establishments are the basic building blocks, analysts commonly are interested in the overall pattern revealed by multiestablishment data, such as averages for separate industries or for the economy as a whole. Consideration of such multiestablishment averages provides further evidence of the importance of random effects.

As shown in table 3, the positive and negative divergences between gross earnings and wage rate changes in individual establishments largely cancel out in affecting multiestablishment averages. Differences exist in the month-to-month changes in earnings and wages, but the overall December-July increases in the two series are practically the same.

As one might expect, the average hourly earn-

Table 3. Gross average hourly earnings and average wage rate adjustments in 87 establishments, December 1966-July 1967

Month	Average hourly earnings	Earnings change from prior month	Average wage rate adjustment during preceding month
Total.....		\$.053	\$.056
December.....	\$2.585		
January.....	2.588	.003	.013
February.....	2.603	.015	.008
March.....	2.593	-.010	.005
April.....	2.626	.033	.004
May.....	2.632	.006	.008
June.....	2.630	-.002	.009
July.....	2.638	.008	.009
Based on aggregate man-hour weights for each establishment			
Total.....		.056	.053
December.....	2.728		
January.....	2.724	-.004	.012
February.....	2.733	.009	.006
March.....	2.736	.003	.004
April.....	2.757	.021	.003
May.....	2.764	.007	.008
June.....	2.778	.014	.009
July.....	2.784	.006	.011

ings series exhibits greater month-to-month variability than does the wage rate adjustment series. In this connection, differences in reporting variability inherent in the two statistical systems should be considered.

It is also interesting to observe that the same inferences would be drawn from the bottom as from the top half of table 3. Substitution of man-hour weights for equal weights raises the level of the hourly earnings series, indicating higher earnings in the larger establishments. However, month-to-month variation is modified to a much smaller degree; during the period covered, monthly fluctuations in establishment man-hours were not a major factor.¹¹

Before concluding from table 3 that there are no significant differences in the movements of the two statistical series, several issues must be considered. For one thing, not all wage studies are based on "all manufacturing" data. It is conceivable that, as in individual establishments, significant differences between earnings and wage rate changes exist on the industry level and only average out on the overall manufacturing level.¹² Unfortunately, the size of the sample used in this study is too small for even the most casual examination of this point.

Secondly, if we eliminate December from consideration, our conclusions must be modified.

Overall January–July changes are:

	Earnings change	Wage rate adjustment
Equal establishment weights.....	\$0.050	\$0.043
Man-hour weights.....	.060	.041

Particularly when man-hour weights are employed, the similarity of the aggregate changes in each of the series is noticeably reduced by elimination of the initial month.

Shortrun and longrun comparisons

However, whether we deal with a 6- or 7-month period, we must emphasize the shortrun nature of the data. Since hourly wage rates are the dominant influence on employers' hourly payments to workers, regardless of time span, a strong force is operating to produce consistency in the behavior of earnings and wage rate change series. On the other hand, as we have seen, centrifugal forces may also be present, and at least some of them are likely to differ in intensity depending upon the period studied.

On a priori grounds, one would expect the short-run forces leading to divergent behavior in the two series to be largely of a seasonal or of a random nature; for example, fluctuations in premium payments when seasonal or short-term unexpected changes in orders cause an establishment to vary the amount of overtime work. Our finding of much divergence in individual establishments but greater uniformity on a multiunit level is in line with this view.¹³

Systematic patterns of divergence are more likely to be noticeable over intermediate and long time spans—patterns in which positive or negative differences dominate at least for a time and produce significant variations in the behavior of earnings and wage rate changes. For example, cyclical forces enter the picture; the extent of overtime and of upgrading to attract or maintain a labor force is influenced by conditions in the labor market and tends to produce consistent variations in movements of earnings and wage rates in periods of prosperity and recession. Similarly, technological developments, partly through their effects on the skill mix, have a longrun effect on hourly earnings, independent of general wage rate changes.

In support of this view, cyclical and secular patterns can be observed in the comparative movements of manufacturing gross hourly earn-

ings, hourly earnings excluding overtime, and earnings excluding overtime and effects of inter-industry employment shifts. Variations in overtime and employment, the forces responsible for this behavior, are also influential in the shortrun but in a more erratic and less systematic manner.

Both overtime and interindustry employment variations curbed the upward movement of gross hourly earnings during postwar business contractions but had the opposite effect during expansions. This is shown in table 4 by the progressively smaller increases from left to right during expansions and by the progressively larger increases in contractions.

Over the entire 1939–69 period, the comparative behavior of the three series, not unexpectedly, resembled that during business expansions. Rates of increase in percent were the following:

	Total increase	Annual (compound) rate of increase
Gross hourly earnings.....	408.8	5.6
Straight-time earnings.....	386.4	5.4
Earnings excluding overtime and inter- industry employment shifts.....	358.7	5.2

Over the periods considered, both overtime premiums and interindustry employment shifts led to divergent movements in hourly earnings and wage rate changes.¹⁴ Whether other forces affecting hourly earnings—such as reclassifications of individual workers, merit increases, administration of incentive plans, geographic shifts in employ-

Table 4. Annual rates of increase in manufacturing production workers earnings during business cycle expansions and contractions, 1948–69

[In percent]

Period	Gross average hourly earnings	Straight- time average hourly earnings	Earnings excluding overtime and interindustry employment shifts
Expansions:			
October 1949–July 1953.....	6.8	6.6	5.9
August 1954–July 1957.....	5.4	5.1	4.8
April 1958–May 1960.....	3.8	3.5	3.2
February 1961–December 1969.....	4.2	4.0	3.9
Contractions:			
November 1948–October 1949.....	-.7	(1)	1.2
July 1953–August 1954.....	.6	1.7	2.5
July 1957–April 1958.....	2.7	3.3	4.4
May 1960–February 1961.....	1.2	2.4	3.2

¹ Less than 0.05 percent.

NOTE: Dating of expansions and contractions is based upon business cycle turning dates designated by the National Bureau of Economic Research. In the absence of any decision to the contrary, the period from February 1961 to December 1969 (the latest month for which final data were available when this article was written) has been treated as one of expansion.

SOURCES: Data for 1948–1961 and 1969 are from *Summary of Manufacturing, Production Workers Earnings Series, 1939–68* (BLS Bulletin 1616, 1969), pp. 2–3, and Supplement 2, 1970.

ment, and changes in the occupational employment mix—reinforced or moderated this development is a question beyond the scope of this article.¹⁵

Concluding observations

There is an understandable desire to describe changes in even so complex a phenomenon as wages by use of a single all-embracing statistical series. Use of an average hourly earnings series represents a step in this direction.¹⁶ However, the more general the wage measure, the more difficult it is to interpret. Thus, unlike a pure wage rate change series which measures variations in a single factor, average hourly earnings data reflect the combined effect of a variety of forces which individually are not isolated.

Both wage rate change and average hourly earnings series have their uses and their limitations. Certainly, where availability of series is not a restriction, the researcher should not be indifferent as to which he analyzes. While the conceptual differences are well recognized, much less is known about the comparative movements of the two series.

The study reported in this article found little

correlation in the short-term movements of wage rates and hourly earnings in individual establishments. On the all-manufacturing level, greater similarity was found in the shortrun movements of average hourly earnings and average wage rate adjustments. Nevertheless, two factors—changes in overtime premiums and interindustry employment shifts—were found that could loosen the relation between the two series as the time span expands.

The tentative nature of these sample findings must be emphasized. To what extent would conclusions drawn from a study of 87 establishments over a 7-month period vary with a larger sample or longer time span? Are the specific results in any way peculiar to conditions during the first half of 1967? How significantly were the results influenced by possible errors in reporting and analyzing the data? What are the primary factors responsible for the findings? While it would be possible for us to speculate on these points, the information developed in this study is insufficient to provide adequate answers. The data are provocative but not conclusive; their greatest value is as a contribution to development of working hypotheses for more intensive analysis. □

—FOOTNOTES—

¹ The 87 establishments remained after selecting every ninth unit in the wage developments in manufacturing sample (yielding 208 establishments) and then deleting those not in the employment, payroll, and hours survey (80) and those for which complete information was not available for the entire period (41).

² The Bureau's measurement of wage rate changes is limited to general wage changes. Both the wage developments in manufacturing and the employment, payroll, and hours surveys (for manufacturing industries) provide wage or earnings data only for production and related workers.

³ Wage rate change data covering major collective bargaining situations are published in the Bureau's monthly *Current Wage Developments*, and data for manufacturing industries are in annual *Monthly Labor Review* articles and in reports entitled *Wage Developments in Manufacturing*.

⁴ Use of hours paid for rather than hours worked as the denominator largely eliminates the influence of changes in paid leave provisions. If payments per hour of leave are the same as earnings per hour worked, the addition, say, of an extra paid holiday will change neither total payroll nor hours paid for, merely changing the composition of

each of these quantities. (The growth of paid leave over the years has caused a rise in total payments per hour worked relative to payments per hour paid for.)

⁵ Convenient compilations of BLS hourly earnings data are *Employment and Earnings Statistics for the United States, 1909-68* (BLS Bulletin 1312-6, 1968); *Employment and Earnings, States and Areas, 1939-68* (BLS Bulletin 1370-6, 1969); and *Summary of Manufacturing Production Workers Earnings Series, 1939-68* (BLS Bulletin 1616, 1969).

⁶ For a listing of major factors influencing the average hourly earnings series, see *Summary of Manufacturing Production Workers Earnings Series, 1939-68*, p. 14.

⁷ December-July data for each factory were needed for the multiestablishment averages of table 3.

⁸ In computing correlation coefficients, equal weight was given to each observation. Two issues arising in the preparation of table 1 and the scatter diagrams must be mentioned. Five of the establishments granted more than 1 wage increase, cost-of-living escalator adjustments in addition to other general increases being involved in three of these cases. To avoid complicating the presentation, the analysis in these instances stops with the month

prior to the second increase. Furthermore, where the wage rate adjustment was not uniform for all production and related workers in an establishment, the increase shown is the average change for all workers in the unit.

⁹ Neither the employment, payroll, and hours survey nor the wage developments in manufacturing program collects data on other variables influencing average hourly earnings. No other sources of data were utilized in the analysis summarized in this article.

¹⁰ Thirty-two observations in each of 7 months.

¹¹ The average hourly earnings column of table 3 applies to the 55 establishments raising wages and the 32 factories reporting no general wage change. Average wage rate adjustments were computed by averaging the total amount of wage increase during the month over all 87 establishments, including those that did not raise wages. Included in the computations were the second and subsequent increases omitted from table 1 and the scatter diagrams based on it. (See footnote 8.)

Current aggregate man-hour weights were used in computing the average hourly earnings data shown in the bottom half of the table; the figures are comparable to the hourly earnings data published by the Bureau. To preserve a pure wage rate change series, constant (December) man-hour weights were used in computing the average wage rate adjustments shown in the bottom half of the table. In this respect, the wage rate change data differ from published figures in the computation of which employment, rather than man-hour, weights are used. Moreover, the weights are adjusted annually—January figures are used throughout the year—to reflect establishment employment changes. See *BLS Handbook of Methods for Surveys and Studies* (BLS Bulletin 1458, 1966), chapters 2 and 17.

¹² See John E. Maher, "An Index of Wage Rates for Selected Industries, 1946-1957," *Review of Economics and Statistics*, August 1961, pp. 278-281.

¹³ Industries reach their peaks at different times of the year, thus leading to some averaging out of the seasonal factor in the same manner as for random influences. For year-by-year comparisons of earnings and wage adjustment changes, see William Davis and Lily Mary David, "Pattern of Wage and Benefit Changes in Manufacturing," *Monthly Labor Review*, February 1968, pp. 40-48.

¹⁴ Although employment weights are used in deriving Bureau measures of wage rate change (footnote 11), employment fluctuations have less impact on these measures than on hourly earnings series.

¹⁵ For additional comparisons of earnings and wage changes, see Maher, *op. cit.*; and Richard A. Lester, "Negotiated Wage Increases, 1951-1967," *Review of Economics and Statistics*, May 1968, pp. 173-181. See also John T. Dunlop, *Wage Determination Under Trade Unions* (New York, Augustus M. Kelley, Inc., 1950), pp. 15-26. Lester's comparison, it must be pointed out, is between earnings changes and wage decisions, rather than effective wage rate changes. In this connection, see discussion on p. 10.

¹⁶ Average hourly earnings is by no means the most comprehensive statistic. Bureau studies of employer payments for supplementary compensation, including outlays not appearing on the payroll, permit development of data on average hourly compensation. See *Employee Compensation in the Private Nonfarm Economy, 1966* (BLS Bulletin 1627, 1969).

Sophistication in the use of planning

There is much more to planning than figuring out an effective and economical distribution of available resources and arranging for the efficient conduct of a particular operation. Planning implies a thoughtful formulation of goals, the input of as much relevant information as possible, the creation of a system offering multiple options, and the possibility of reformulating goals as circumstances demand. Planning should allow for continuous feedback between anticipation of possible futures and

events as they actually happen. In other words, the sophisticated forms of planning involve a continuously evolving teleological attitude in which ends influence the selection and development of means, the ends themselves having to be reformulated as the program evolves.

—RENE DUBOS,

Reason Awake: Science for Man
(New York, Columbia University Press, 1970).

The impact of commuters on the Mexican-American border area

A study of the commuter system examines the problems attributed to "green carders" and explores some solutions

ANNA-STINA ERICSON

APPROXIMATELY 70,000 persons cross the Mexican border daily to work in the United States. Of these, 20,000 are U.S. citizens living in Mexico; about 50,000 are Mexican immigrants who have valid U.S. immigration documents but who, for various reasons, continue to live in Mexico while they work in the United States. The majority of those who cross the border work in nine U.S. border cities, where, in some cases, they make up a significant part of the local labor force. These commuters contribute to the labor surplus situation prevailing on the U.S. side of the border, which has a depressing effect on wages and on trade union organizing campaigns.

Various proposals have been made in Congress and elsewhere to alleviate the economic and social hardships commuters are said to cause in U.S. border towns. But the present commuter system also has defenders who point out that retail and wholesale trade in towns on the U.S. side of the border is dependent upon the purchases of Mexican workers who earn U.S. wages. There is a great deal of interchange between the U.S. and Mexican border cities in all aspects of trade, commerce, and tourism. The cities are engaged in many joint undertakings, mutually beneficial to the social and cultural development of the people as well as to their economic and social development. This article examines the impact of commuters on commerce, employment, wages, and trade union organization, and possible remedies to counteract problems created by the commuter system.

The commuter

The Immigration and Naturalization Service refers to commuters as those aliens who lawfully have the privilege of residing in the United States but who choose to reside in foreign contiguous

territory and commute to their jobs in the United States.¹ The practice of commuting internationally grew up because many towns along the Canadian and Mexican borders are really single communities separated by the international boundaries. The immigration laws of the 1920's, which were designed in large part to protect American labor standards, gave Mexicans and Canadians who worked in the United States admission as non-resident aliens coming to the United States for purposes of "business" or "pleasure," within the meaning of the immigration law. In April 1927, immigration authorities changed position and declared that aliens coming to work in the United States would be classified as immigrants and would have to acquire commuter status. This interpretation of the immigration law was upheld by the Supreme Court in 1929.

The first step in acquiring commuter status is to achieve lawful admission to the United States as an immigrant.² Since 1965, the immigrant applicant has also had to obtain a labor certification unless he is the parent, spouse, or child of a U.S. citizen or resident alien.³ The immigrant's certification specifies that there is a shortage of workers in his particular occupation in the United States and that his employment will not adversely affect wages and working conditions of U.S. residents.

Upon admission to the United States, the commuter is registered as an immigrant and is given an Alien Registration Receipt Card (Form I-151), known as a "green card" from its former color. This card certifies his immigrant status and

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Table 1. Number of green card commuters from Mexico and of Americans unemployed

Port of entry, by State and county	December 1969		November-December 1967	
	Mexican commuters ¹	American unemployed	Mexican commuters	American unemployed
Total border ports of entry-----	49, 770	-----	40, 176	-----
California-----	20, 753	-----	15, 284	-----
San Ysidro (San Diego).....	11, 697}	18, 300	7, 535}	17, 300
Tecate (San Diego).....	63}		56}	
Andrade (Imperial).....	14}	3, 389	31}	4, 900
Calexico (Imperial).....	8, 979}		7, 690}	
Arizona-----	5, 647	-----	5, 148	(⁴)
San Luis (Yuma).....	3, 616	² 869	3, 553	1, 500
Nogales (Santa Cruz).....	1, 388	175	1, 118	275
Naco (Cochise).....	113}		94}	800
Douglas (Cochise).....	522}	577	380}	
Other.....	8	-----	3	-----
New Mexico-----	31	-----	30	-----
Columbus (Luna).....	31	(⁵)	30	⁵ 287
Texas-----	23, 339	-----	19, 714	-----
El Paso (El Paso).....	13, 493}	3, 325	11, 760}	4, 200
Fabens (El Paso).....	321}		279}	
Del Rio (Val Verde).....	200	774	317	500
Eagle Pass (Maverick).....	2, 089	1, 215	1, 635	1, 200
Laredo (Webb).....	3, 456	3, 325	2, 669	3, 300
Roma (Starr).....	106}		73}	
Hidalgo (Hidalgo).....	1, 061}	3, 960	937}	4, 200
Progreso (Hidalgo).....	82}		50}	
Brownsville (Cameron).....	2, 430	2, 770	1, 917	2, 000
Other.....	101	-----	77	-----

¹ Cumulative unduplicated count since November-December 1967. Commuters cross into the United States at least twice a week.
² October 1969.
³ Not available.
⁴ These figures are 1967 annual averages.
⁵ March 1968.

SOURCE: Immigration and Naturalization Service, U.S. Department of Justice, and Manpower Administration, U.S. Department of Labor.

permits his reentry into the United States following temporary absences of less than 1 year. An alien is entitled to commuter status only if he has a job in this country and can lose this status if he is unemployed in the United States for more than 6 months.

In the past, the Immigration and Naturalization Service took periodic 1-day counts of alien commuters and has kept a continuous unduplicated count since a survey it conducted in November-December 1967. At that time, all "green cards," as they were presented at the border ports of entry, were picked up for verification and were grommetted to identify commuter status. In November-December 1967, 40,176 alien Mexican commuters were registered. By the end of December 1969, their number had grown to 49,770, as shown in table 1.

In addition to immigrants who commute to jobs in the United States from their Mexican residences, about 20,000 U.S. citizens also commute from Mexico to U.S. jobs. Most of these citizens were born of Mexican or Mexican-

American parents and probably never lived in the United States or lived there only briefly.

Border area residents also classify as commuters those nonimmigrant visitors who possess non-immigrant visas or border crossing cards and work illegally in the United States. The largest number of these commuters have 72-hour border crossing cards, valid for purposes of business or pleasure within a 25-mile area from the border. These cards do not authorize their holders to live or work in the United States, but many do.

The numbers who work without proper authorization are difficult to determine. In fiscal year 1969 over 200,000 Mexicans were apprehended for being in this country illegally. Of this number, roughly one-fourth had been in the United States from 1 month to a year, long enough to have been employed. The largest group (80 percent) of deportable Mexican aliens apprehended had entered without inspection. The next largest group (14 percent) were those holding visitor border crossing cards. Obviously, not all people who have border crossing cards work in the United States, but a sufficient number do to cause U.S. border residents to consider the practice widespread.

Employment and earnings

Employment in the border area is heavily concentrated in low-wage, low-skill industries: Agriculture, services, wholesale and retail trade, government, and light manufacturing. The San Diego area differs from the general pattern because there is more heavy manufacturing and higher wage industries.

There is limited information available about the jobs held by legal commuters, the "green carders." What is available was collected by the Immigration and Naturalization Service at the time of the 1967 survey of commuters. Commuters are found in the same types of occupations in which resident workers are found. Studies reveal that commuters generally receive the same wages resident workers receive when working in the same enterprise.

OCCUPATIONAL DISTRIBUTION. Forty percent of the commuters in November-December 1967 said they did farm work, 9 percent were general laborers, 8 percent were in clerical and sales occupations, 7 percent were maids in private households, 6 percent were in construction, and 5.6 percent were in hotel and restaurant occupations. Other signifi-

cant occupational groupings were the following: Metalworkers, 4 percent; sewing machine operators, 4 percent; and truckdrivers, 2.7 percent.

Farm work was particularly important among commuters entering in California and Arizona. It accounted for 60 percent or more of all commuters in those States.⁴ Calexico in Imperial County, Calif., and San Luis in Yuma County, Ariz., received the bulk of Mexican commuter farm workers; over 80 percent of all commuters entering these ports were farm workers. In Texas, only 18 percent of the commuters listed farm work as their occupation. The important Texas ports of entry for farm workers were Eagle Pass in Maverick County and Hidalgo in Hidalgo County (the port of entry for McAllen) in the Lower Rio Grande Valley. Commuters entering other Texas ports of entry were more likely to be general laborers, clerical and salesworkers, domestic servants, construction workers, metalworkers, or hotel and restaurant workers.

Commuters are found working with resident workers and competing with them for available jobs. Resident workers may occasionally find themselves at a disadvantage in the job market because some employers favor commuter workers. A study of the El Paso garment industry revealed that some employers prefer commuters because they believe they are superior workers, are more cooperative, less troublesome, and more reliable because "they have to work."⁵

EARNINGS. In the border cities, wage rates are lower than in the rest of the border States and lower than national averages for similar industries or occupations. Statutory minimum wages, where they apply, tend to be the prevailing wages, and there are numerous examples of prevailing wages below the statutory minimum where the legal minimum wage does not apply. A minority of workers are paid at wage rates above the minimum.

In January 1968 the Department of Labor made a survey of wages paid to commuters and U.S. residents in the same occupations in Laredo, Tex.⁶ Data were obtained from 95 establishments for 1,075 residents and 608 commuters in 48 broad occupational groupings. The establishments surveyed employed at least 5 commuters at the time of the Immigration and Naturalization Service survey in November and December 1967.⁷

Twenty-five occupations, in which 5 commuters or more were employed, accounted for 84 percent of the residents and 94 percent of the commuters in the sample. The occupations in which the commuters were concentrated paralleled those reported in the Immigration and Naturalization Service survey, except that the Department of Labor study covered establishments only, excluding farm workers and domestics. Average hourly earnings for the 25 surveyed occupations ranged from \$0.81 for busboys and \$0.86 for service station attendants to \$2.10 for customs appraisers. Commuters and resident workers in the same establishment received identical wages in each occupational classification.

The Federal minimum wage in effect at the time (\$1.40 an hour) was the rate most commonly paid to the commuters; 48 percent of the commuters surveyed received precisely that amount, and 28 percent received less. The ready supply of workers (both residents and alien commuters) kept the prevailing wage at the Federal minimum where it applied and below that level for the number who worked in occupations not covered.

Since this study was completed, a study was conducted to determine the impact of the commuter on the El Paso apparel industry in 1968-69.⁸ It found that wages in the apparel industry in El Paso "were low compared to wages in the same industry for other States and regions in the United States and, in addition, when compared with the same industry in other cities in Texas." Most of the workers surveyed received the minimum wage or just slightly more. The study concluded that the Federal minimum wage for the industry was actually the maximum because of the large number of workers willing to work at this wage. Those workers included commuters, Mexican nationals with temporary visitor permits, "wetbacks," and the unemployed and underemployed residents of El Paso—all of whom have a depressing effect on wages in El Paso. Some employers do not differentiate between these categories of persons but consider them all from the same labor pool.

Besides being an area where the prevailing wages are at or below the Federal minimum wage, the border also has a relatively high incidence of Federal wage-hour violations. Almost one-fourth of the workers living in the border States who were paid less than the statutory

Table 2. Border area labor force and unemployment rates, 1968 and 1969

[In percent]

State and labor market area (county in parentheses)	Current labor force	Unemployment	
		1969 annual average	1968 annual average
Arizona.....	671,000	2.9	3.7
Yuma (Yuma).....	127,200	(?)	4.0
Tucson (Pima).....	117,000	3.1	4.0
Nogales (Santa Cruz).....	5,650	4.7	5.7
Southern Arizona (Cochise).....	20,625	3.2	3.4
California.....	8,496,000	4.0	4.5
San Diego (San Diego).....	455,600	3.8	3.9
Imperial (Imperial).....	35,400	8.6	8.1
Texas.....	4,650,000	2.7	2.7
Brackettville (Kinney).....	1,100	6.7	9.5
Brownsville-Harlingen-San Benito (Cameron).....	48,310	6.2	5.8
Carrizo Springs (Dimmit).....	3,200	9.2	8.9
Crystal City (Zavala).....	5,900	11.2	10.8
Del Rio (Val Verde).....	9,670	7.5	6.8
Eagle Pass (Maverick).....	7,940	11.9	9.1
El Paso (El Paso).....	123,250	3.7	4.0
Laredo (Webb).....	30,825	8.5	9.0
McAllen (Hidalgo).....	63,280	5.9	5.8
Rio Grande City (Starr).....	4,700	12.6	11.5
Uvalde (Uvalde).....	6,200	6.6	6.4
Zapata (Zapata).....	1,900	11.7	10.7

¹ Data for labor force in October 1969. Data for all other labor market areas are for December 1969.

² Not available.

³ 6.6 percent after removing Mexican commuter workers from the labor force figure.

minimum wage in 1969 lived in the border counties. A third of all workers in the border States who suffered equal pay and McNamara-O'Hara Service Contract Act violations lived in the border counties. These are high levels of violations, particularly since the border counties do not represent a high proportion of employment covered in those States.

UNEMPLOYMENT. Unemployment rates along the U.S. side of the border, except in two or three cities, are far higher than the average unemployment rates for the border States and are among the highest in the country. (See table 2.) Nevertheless, a comparison of the number of the unemployed with the number of commuters, as shown in table 1, suggests that at least in some of the border cities there would be a labor shortage without the commuters. Other estimates of the local manpower situation quickly dismiss this suggestion. These estimates, prepared by area CAMPS committees,⁹ reveal that unemployment figures published by the local employment services understate actual conditions. Job opportunities are so limited in some cities that large numbers of potential workers do not actively seek work and are not counted as unemployed. In most of the cities, large numbers of employed workers work fulltime at jobs that pay less than

poverty level wages, or they work only part time because they are unable to get full-time employment. These workers are classified as underemployed.

Combining the estimated unemployed and underemployed reveals a very different picture of the economic conditions of workers in the U.S. border cities from that shown by published unemployment data. In the cities for which such calculations could be made, estimates of unemployment and underemployment range from about 8 percent to almost 50 percent of the labor force. (See table 3.) The presence of large numbers of Mexican commuters in these labor markets is an obvious disadvantage to resident workers.

PRESSURE OF MEXICAN UNEMPLOYMENT. Unemployment is also a serious problem along the Mexican side of the border. For years, commuters have crossed into the United States to work, but since the end of the bracero program in 1964, they have been more visible and have increasingly entered agricultural occupations. Because of the bracero program, large numbers of Mexicans migrated to the border area in hopes of getting jobs in the United States. As a result, the populations of the Mexican border towns have increased dramatically, faster than it has been possible to create jobs, and the pressure to work on the U.S. side of the border has increased greatly.

Table 3. Estimated unemployment and underemployment in selected border labor market areas, 1969, and published labor market statistics

Labor market area (County in parentheses)	Labor force 1969 ¹ average	Published unemployment 1969 ¹		Estimated unemployment ²	Estimated underemployed ²	Combined underemployed and unemployed	
		Number	Rate			Number	Rate
San Diego (San Diego).....	436,400	16,600	3.8	16,600	26,300	42,900	9.8
Imperial (Imperial).....	32,600	2,600	8.0	7,824	(³)	7,824	24.0
Nogales (Santa Cruz).....	5,650	322	5.7	(⁴)	(⁵)	476	8.4
El Paso (El Paso).....	122,000	4,390	3.6	14,375	45,000	59,375	48.7
Laredo (Webb).....	29,700	2,520	8.5	3,115	4,152	7,267	24.4
McAllen (Hidalgo).....	62,900	3,700	5.9	4,320	17,000	21,320	33.9
Brownsville (Cameron).....	48,800	3,040	6.2	2,940	12,965	15,905	32.6

¹ Based on reports from State Employment Security Agencies.

² Based on the Comprehensive Manpower Plans, Fiscal Year 1970, prepared by the local Area Manpower Coordinating Committees, and published in the Arizona, California, and Texas Cooperative Manpower Plans for Fiscal Year 1970.

³ Estimated on the basis of the proportion of Mexican Americans in the labor force and Mexican American unemployment rates (both given in the CAMPS plan) and assuming that Mexican Americans make up 50 percent of the area's unemployed.

⁴ Not available.

NOTE: Where the information on underemployment differentiated between disadvantaged and nondisadvantaged, the figures for the disadvantaged underemployed only were used. The figures on those not in the labor force but who local manpower planning officials thought could or should be in the labor force are not included, if it was possible to identify them.

At the same time that the bracero program ended and restrictions were placed by the U.S. Government on temporary agricultural workers from Mexico, the duty-free allowance that Americans were permitted to bring back into the United States after a trip abroad was reduced from \$500 to \$100. The liquor allowance was simultaneously cut from a gallon to a quart. These events had an immediate negative impact on several of the Mexican border cities, since bracero remittances and tourist purchases, including the sales of liquor, were the mainstays of their economies.

Until Mexico launched its border industrialization program in late 1966, the Mexican Government had done little to help create jobs in its border area.¹⁰ By the end of January 1970, over 17,000 persons were employed in the industries created under this program, and an unknown number of workers were employed in ancillary jobs. This program stimulates additional northward migration of Mexicans eager to work in the new plants.

In an effort to determine the magnitude of unemployment and underemployment, the Mexican National Minimum Wage Commission, under the auspices of the U.S.-Mexico Commission for Border Development and Friendship, conducted a survey of unemployment and underemployment in six border cities in 1969. This survey inquired about the characteristics of the people surveyed and the number who commute to work in the

United States. Without the U.S. jobs, the Mexican figures on unemployment and underemployment would be significantly higher. Officials interviewed during the surveys said that a cause contributing to the high rates of unemployment on the Mexican side of the border is the continuing migration of workers from the interior regions of Mexico who hope to find jobs on the U.S. side of the border. Table 4 summarizes the findings of the Mexican survey.

In the six border cities, from 119,587 to 130,587 workers were unemployed and underemployed in 1969—roughly one-fifth of the combined labor force of 611,100 of these cities. Close to 10 percent of this group of workers were looking for work for the first time. Forty to 45 percent of the workers reported that they were holding or had held jobs in the United States. Of those who had worked in the United States, the largest number worked as farm laborers. The next largest groups worked as factory workers, domestics, office workers, and gardeners, in that order. Of those who worked in Mexico, the unemployed and underemployed were most often farm laborers or bricklayers. Significant numbers were mechanics, chauffeurs, carpenters, and painters.

Over a third of the workers surveyed fell into the 25 years or younger age group (the proportion was as high as 75 percent in Matamoros), and close to half of them were single. Between 30 and 52 percent were natives of the area. In Ciudad Juarez only 15 percent were natives, and in Tijuana none of those surveyed were natives of the area. These figures confirm the strong attraction the border area has for Mexicans elsewhere in the country and indicate no lessening in the pressures of continuing population growth and migration.

Trade union organization

Organized labor in the United States is concerned that the presence of Mexican commuters, particularly in the grape fields of California, is a deterrent to the organization of farm workers and to the right of organized workers to strike. At its 1969 convention, the AFL-CIO passed two resolutions about Mexican border crossers. Resolution 208, which identifies the commuter with "strikebreaking and unfair competition with workers seeking their rights to organize on the farms and in the factories of the U.S.," calls

Table 4. Summary findings of survey of unemployment and underemployment in 6 border cities, 1969

Municipio	Population (late 1968—early 1969)	Labor force	Unemployed and underemployed		Number reported working in the United States	
			Number	Percent of labor force	Number	Percent of labor force
Tijuana.....	450,000	157,000	31,000	19.7	9,000	5.7
Mexicali.....	564,700	181,381	133,587	118.5	10,000	6.0
Nogales.....	60,000	19,000	8,000	42.1	² 3,500-4,500	6.7-7.9
Ciudad Juarez...	480,000-500,000	150,000	30,000-40,000	20.0-26.7	³ 18,000-22,500	12.0-15.0
Nuevo Laredo...	135,000	43,600	10,000	22.9	4,500	9.2
Matamoros.....	185,000	60,125	7,000-8,000	11.6-13.3	2,800	4.7

¹ If the total number of persons looking for work for the first time (an estimated 10,000) is included, as they are in the other municipios, the number of unemployed increases to 39,355. The higher figure produces an unemployment rate of 21.7 percent.

² An estimated 3,000 additional persons were reported as having applied for papers to work in the United States and were awaiting a reply.

³ An estimated 19,000 additional persons were reported as having applied for papers to work in the United States, but the survey indicated that it takes from six months to a year before their papers are acted upon.

SOURCE: Based on data published in "Revista Mexicana del Trabajo," Secretaría del Trabajo y Previsión Social, September 1969.

for Congressional action to control the "widespread use of Mexican commuters which undermines American wage and labor standards, narrows employment opportunities for American workers, and provides a constant threat of strike-breaking." In its resolution supporting the farm workers' organizing efforts (Resolution 233), the AFL-CIO describes how the growers employ green card commuters as strikebreakers, reiterates its support to bring farm workers under the protection of the National Labor Relations Act, and urges "improvements in the Government's immigration policies."

The use of green card commuters as strikebreakers was barred in June 1967, by a Federal regulation which precludes the use of the green card by an alien who has left this country and seeks to reenter to accept or continue employment at a place where the Secretary of Labor has determined that a labor dispute exists. In practice, this regulation has been difficult to enforce because green card commuters may decide to become residents of the United States during a labor dispute in order to keep their jobs.

The United Farm Workers Organizing Committee (UFWOC) claims that the Immigration and Naturalization Service has yet to use the regulation for its expressed purpose and that commuters have had little difficulty crossing the border to work in strikebreaking situations. A UFWOC organizer in Delano, Calif., testifying before the Subcommittee on Migratory Labor of the Senate Committee on Labor and Public Welfare in May 1969, reported that the fear of losing their jobs to commuter workers stops many resident agricultural workers from striking.

Several legislative proposals responsive to trade union concern have been introduced in the Congress in recent years. These include an amendment to the National Labor Relations Act to make it an unfair labor practice for employers to hire aliens illegally in the United States or for employers to hire commuters to replace regular employees during a labor dispute. Some of the proposals would extend coverage of the National Labor Relations Act to the agriculture industry.

Proposals for change in the commuter system

There is a lack of consensus among border area residents about commuters. In its 1968 report, the Good Neighbor Commission in Texas, an organi-

zation which has statutory responsibility for the State of Texas to survey the conditions and problems of migrant labor, stated that the positions of persons for and against the commuter system are "adamant almost to the point of being unnegotiable and without compromise."¹¹

There is concern, however, about the effects on the U.S. border cities of changing the longstanding practice of commuting. Any curtailment of the commuter system would probably result in the large-scale movement of commuters and their families to the United States. The housing supply for low- and moderate-income families is already in short supply, and a sudden or even fairly gradual influx of the commuters would seriously exacerbate this situation.

The large-scale movement of Mexican commuters and their families to the United States could also have serious short-term consequences for resident workers. The change in status from commuter to resident would do nothing to alleviate the labor surplus situation already existing in most border cities. During periods of recession, there would be increased competition for jobs, since the commuters then would not have the option of returning to Mexico to live while retaining their immigrant status.

In spite of these and other misgivings about the consequences of changing the commuting system, the concern of the labor movement for the organizing efforts of border area workers and the newly aroused concern of the Mexican-American community with poverty and their lack of economic opportunities are gathering support for a change in the commuter system.

Eliminating the commuter system

Some opponents of the commuter system would like to see all commuters prohibited. But eliminating the commuter system immediately seems to be a harsh alternative. Since the system of commuting has been sanctioned administratively by the United States for over 40 years, the commuters have obtained their immigrant status on the good faith assurance that the United States would not change an administrative practice of such long standing. An abrupt change could create serious personal hardships for the commuters and would probably cause diplomatic difficulties with both Canada and Mexico. Closing the border to commuters could also result in a great increase in

illegal entrants. Terminating the commuter system over a period of time might prevent some of the difficulties mentioned. At least it would make it possible for the U.S. communities to start constructing housing and schools to meet anticipated needs and for the commuters to plan how to move their families to this country.

If the Government were to adopt this alternative, it could eliminate commuter status as of a certain date. Only those aliens already having "green cards" would be permitted to continue to cross the border to jobs in the United States. The question then becomes how long they would be permitted to continue commuting. If they were permitted to continue indefinitely, there would be minimal hardship on Mexican commuters' families. Families would not have to be uprooted, and the commuter practice would disappear through attrition, since no new commuter cards would be issued, not even to family members.

Alternatively, the present commuters could be given a time period, say a period of 2 to 5 years, in which to make the transition from Mexican residents to bona fide U.S. residents or lose their immigrant status. Under this alternative, special arrangements would probably have to be made to give the immediate families of present commuters unique consideration in regard to the Western Hemisphere annual immigration ceiling of 120,000. The family members could be admitted on a one-time-only basis without regard to this ceiling during the transition period, or additional numbers could be added to the ceiling to take care of those already on the waiting list. A bill (S. 3545) introduced by Senator Edmund S. Muskie on March 4, 1970, would accommodate the family members by the addition of numbers to the Western Hemisphere immigration ceiling for a 2-year period following the effective date of the bill.

A recent survey of commuters¹² reveals that between 80 and 90 percent of all commuters would want to move to the United States if commuting were no longer permitted. An influx of between 40,000 and 45,000 commuters and their families could create a massive shortage of housing, education, and other public services. If that number of commuters decided to take up permanent residence in the United States and were able to bring their families with them, a Mexican population of between 200,000 and 300,000 people could be expected to move to the

United States in a relatively brief span of time. Probably a small proportion of these families would try to move to areas away from the border, but a majority could be expected to reside in the U.S. border towns.

Absorbing such large numbers of Mexicans would be an intolerable financial burden for the border communities. Income generated by the new residents through the payment of rents or mortgage loans, payments for utilities, and local taxes would be more than offset by the cost of providing low-income housing, schools, sanitation, and other services. At least in the early years, Federal and State aid would undoubtedly be needed. Administration of such a program might be similar to that provided in federally impacted areas, or to that provided to Cuban refugees since the revolution which brought Fidel Castro into power.¹³

Strenuous efforts at all levels of government and by private organizations would have to be made to attract new industries to the U.S. border towns so that the change in the commuter system would not result in added burdens of underemployment and unemployment. Large scale training and education programs coupled to credit availability, tax relief, and other programs would make these incentives even more attractive. Consideration might also be given to mobility and relocation assistance to help both local residents and immigrants who are not able to find employment or who want to locate elsewhere. If the numbers who locate away from the border area are sufficiently large and if they tend to concentrate in specific locations, these localities might also need financial assistance.

Labor certification

Much of the controversy centering around the commuter system stems from the effect that commuters have on wages and employment levels in the border communities. Because large numbers of commuters, indeed the bulk of them according to Immigration and Naturalization Service officials, are not required to get labor certification because of their relationship to a citizen or an immigrant, current labor certification procedures have little impact on the regulation of commuter traffic. If the decision is made to permit the continuation of commuting, or to continue it only

for those Mexicans who are commuters as of a certain date, consideration should be given to changing the labor certification requirements. At the present time, immigrants to this country need to be certified only once, at the time of application, and then only if the immigrant applicant is not a parent, spouse, or child of a U.S. citizen or resident alien.¹⁴ To be effective in controlling the numbers of commuters from Mexico (and Canada), the certification by the Secretary of Labor would have to apply to all commuters, or be required at periodic intervals.

Under the present Immigration and Nationality Act, labor certifications are made either through the use of lists of occupations (schedules), which permit the processing of applications without individual review by the Department of Labor, or by individual case review. These methods are responsive to economic and manpower conditions and expedite the processing of cases. The wage level used is that prevailing for the occupation. The legislative proposals currently before Congress would not change the present method of certification; they would merely require it periodically.

If, in addition, the exceptions to the labor certification requirement were tightened and an adverse effect wage were added to the certification language, the procedure of labor certification might be more effective in limiting the numbers of commuters from Mexico. For example, the exception from labor certification applying to Western Hemisphere immigrants could be amended to prevent the automatic exception of the parents of children under a certain age. (Many Mexican children are U.S. citizens by virtue of having been born in a U.S. border city hospital but have never lived in this country.) Also, an adverse effect wage requirement could be added which would require commuters to be paid at a somewhat higher rate than the prevailing wage. This might have the advantage of preventing wage competition by Mexicans and pushing local prevailing wages upward. Administration of an adverse effect wage that is higher than the prevailing wage could be very cumbersome unless a system of wage information, similar to the occupation schedules, could be developed.

If a change in the system is made, it would be useful to provide safeguards in the new system to prevent commuters from losing their immigrant status immediately if their jobs would not qualify

for recertification and to prevent unscrupulous employers from abusing the commuters. The safeguard would allow for a specified interval during which the commuter could seek another job or move to the United States.

Work permit

An alternative to the commuter system would be to institute a new nonimmigrant border crossing card—the nonresident work permit. This alternative would permit workers living in Canada or Mexico to work in the United States at jobs where qualified U.S. residents were not available. The work permit could be issued for a specified period of time and would be renewable if the condition under which it was originally granted continued to exist. A periodic review to make such a determination would be required. Care should be taken that this system not be used to exploit the foreign worker and that more than a pro forma certification of lack of availability of resident workers is made before issuing the work permit.

Other alternatives

COMMUTATION TAX. Commuters are frequently cited as a financial drain on the municipal services of U.S. border cities because they pay no property or school taxes, yet use many local services. It has been suggested¹⁵ that a weekly commutation tax, collected from the employers, would help pay for these services. A tax of \$1 a week per commuter would provide \$2.5 million annually (50 weeks times 50,000 commuters), which could be divided among the local, county, State, and Federal Governments. While such a tax might not be a serious financial liability for employers, it might be enough of an administrative problem that it would encourage employers to hire U.S. residents instead of Mexican commuters. Such a tax could also be paid by the commuters themselves as a payroll deduction. This would put the tax burden on the commuters who are already earning only a minimum salary in most cases; but, since living costs on the Mexican side of the border are lower than on the U.S. side, this tax might be tolerable.

COMMUTER TICKET. Large numbers of people in the United States commute daily on the railroads from their residences in the suburbs to their jobs

in the cities. A similar system could be developed for border commuters. Cards or tickets could be issued subject to labor certification rather than a fee. A fee could also be charged, that would in effect be a commuter tax added to the commuter ticket. In any event, the card or ticket would be punched or picked up automatically each time the commuter crosses into the States, and an accurate record would simultaneously be made of the number crossing on any 1 day.

LOCAL INITIATIVE. There are steps which the border area people themselves can take to reduce the abuses of the commuter practice and to provide greater opportunities for U.S. residents. Chambers of commerce, industrial development groups, State employment offices, women's organizations, and other business and service groups could begin a major campaign to give job preference to U.S. residents. Some employers in border cities already do this. Since many commuters have U.S. addresses, such a campaign would force employers and workers alike to prove that a worker's U.S. address is a bona fide residence which he inhabits.

Local businessmen, instead of advertising the special advantages of establishing plants in the Mexican border area, might advertise the benefits of a U.S. border location and aggressively seek the means of raising local revenues to provide favorable plant sites, good transportation to and from major markets, and other facilities.

Workers in the border area could strive to make their State employment security agencies provide manpower services in a more effective manner. They could do this individually or work through their own Mexican American organizations or their unions. Union organization in most of the border area is very weak, because of obstacles put up by employers and State laws and because of the surplus of labor in the border area. However, the major unions have few organizing campaigns in the border area outside of southern California.

Conclusions

In various studies, the following adverse effects of the commuter system have been identified:

- Wages are lower along the border because of the impact of the commuter.
- Unemployment is higher in areas where commuters are present.
- The incidence of violations of the wage and hour law is greater in the border area.
- Collective bargaining in the border areas is hampered by the availability of commuter workers.

There are difficulties, however, in changing the present system which has had legal validity for so many years. Mexican nonresident aliens, as well as many U.S. border residents, consider it a right. The economies and the social and political climate of the border communities have been shaped by the availability of a large pool of low-skill and

Mexican-American workers in the United States

In order to understand the present status of Mexican-Americans in the United States, it is imperative that we investigate the conditions on the U.S.-Mexico Border. Since the turn of the century Mexico has supplied, legally or illegally, a large portion of the labor force, mostly unskilled, which has contributed to the development of the Southwest. The fluctuations of the U.S. economy are clearly reflected in the movements of people across the border. Much of this labor force has first found a place, however precarious, in agricultural endeavors before moving into the urban environment. Many con-

tinue working as farm laborers although living in the city. Whether they have come as legal immigrants, as "braceros," as "commuters," as "wetbacks," or as "visitors," they have left an imprint in the society. Thus what happens on the border has repercussions in Detroit, Chicago, Denver, San Antonio, and certainly Delano.

—Julian Samora in Preface to Ernesto Galarzza, *Spiders in the House and Workers in the Field* (Notre Dame, Ind., University of Notre Dame Press, 1970).

relatively low-wage Mexican labor.

A number of alternative solutions to the commuter system have been suggested. A major consideration in choosing any alternative or combination of alternatives is that an abrupt end to the practice of commuting would result in hardships for both the commuters and their families and for the U.S. border cities in which they work. The studies that have been made conclude that, if forced to choose between taking up permanent residence in the United States or surrendering their "green cards," an overwhelming

proportion—as high as 80 or 90 percent—of the commuters would move to the U.S. side of the border. They would become residents of communities which may already be in some economic distress and are ill-equipped to handle unanticipated massive demands for services. If the commuters and their families are to be relocated without seriously disrupting these border communities, provision must be made to ensure the availability of basic services such as housing, education, medical care, and family assistance and to expand employment opportunities. □

—FOOTNOTES—

¹ There are also Canadian commuters, but because of more similar wage and other labor standards between Canada and the United States, the employment of Canadian workers does not have the depressing economic effect that the employment of Mexican workers has.

² Until July 1, 1968, when an annual ceiling of 120,000 was imposed there was no numerical limitation on immigration from independent Western Hemisphere countries and the Canal Zone.

³ Immigration and Naturalization Service officials have stated that this exclusion means that the "bulk" of immigrants from Mexico do not need labor certification.

⁴ At the time this survey was conducted, seasonal agricultural employment was at or near its peak in the border areas. Among the commuters who listed farm work as their occupation were 7,743 who had been doing migratory farm work in the United States but were then back in the border area and commuting from Mexico. Had they not been identified as commuters at that time, it is likely that they would now be counted as seasonal workers, that is, Mexicans with immigrant visas who enter the United States and follow the crops, returning to Mexico to live at the end of the season. Since August 1968 the Immigration and Naturalization Service has listed these aliens as seasonal workers, and by December 1969 had identified 4,628 of them in an unduplicated, noncumulative count.

⁵ Brian Scott Rungeling, "Impact of Mexican Alien Commuters on the Apparel Industry of El Paso (A Case Study)," a Ph. D. dissertation. University of Kentucky, June 30, 1969, p. 74.

⁶ Stanley M. Knebel, "Restrictive Immigration Standards: Probable Impact on Mexican Alien Commuter,"

Farm Labor Developments (U.S. Department of Labor), November 1968.

⁷ A subsample of eight gasoline service stations employing less than five commuters was also included.

⁸ Brian Scott Rungeling, op. cit., chapters IV and V.

⁹ Committees of the Cooperative Area Manpower Planning System (CAMPS). Composed of officials working with manpower and related matters, these committees are organized at local, State, regional, and national levels, the initial local plans being acted on and consolidated at successively higher levels.

¹⁰ See Anna-Stina Ericson, "An Analysis of Mexico's Border Industrialization Program," *Monthly Labor Review*, May 1970, pp. 33-40.

¹¹ "Alien Labor, Commuters and Immigration Reform," in *Texas Migrant Labor, The 1968 Migration* (Texas Good Neighbor Commission, 1969), p. 5.

¹² David S. North, *The Border Crossers, People Who Live in Mexico and Work in the United States*; September 1, 1969, draft of a study financed under a Manpower Administration Research Contract, p. 225.

¹³ The number of Cuban refugees who have been registered in the Cuban Refugee Program (which is entirely voluntary) since it began in January 1959 was 366,902 as of March 20, 1970. Of these, 242,606 have been resettled in over 3,000 communities in 50 States. (Department of Health, Education, and Welfare, Office of the Cuban Refugee Program.)

¹⁴ This exception applies to all Western Hemisphere applicants. The exception is slightly different for Eastern Hemisphere applicants.

¹⁵ David North, op. cit., p. 254.

Relations between management and labor in West Germany

Three major employer groups
coordinate efforts
to limit labor's effectiveness
at the bargaining table and
in legislatures

ELLEN M. BUSSEY

THE FRAMEWORK within which trade unions achieve their aims varies considerably among Western industrialized nations. In Germany, unions face an elaborate, tightly knit structure of management organizations which act with considerable solidarity to curtail labor's power. The activities of these organizations are interrelated and coordinated in a way that enables them to face the trade unions effectively at the bargaining table as well as in the larger sphere of national politics where many of Germany's labor-management confrontations take place.

Despite the backing of the law, the divided trade union movement has never been a match for this powerful adversary—not even in the period between the two world wars. In 1933, trade unions were disbanded and the leaders persecuted; and when they were reestablished in 1945, they lacked adequate human and material resources. The post-World War II “economic miracle” gave renewed strength to management organizations, which had remained relatively intact. When a new, unified trade union federation developed, it again found organized management a formidable foe. The long-range, and often vague, measures proposed by the unions to curb the power of the business community made slow progress while consuming a great deal of scarce talent, energy, and time.

German management organizations

There are three national employers' confederations, a coordinating committee in which repre-

sentatives of the three meet at irregular intervals to discuss policy, and a research institute which serves all the management organizations and prepares studies on management's point of view. Economic policy is the domain of the National Confederation of German Industry (Bundesverband der Deutschen Industrie—BDI), which in 1968 consisted of 39 member industrial organizations. Trade union policy is not its concern, but the research it conducts and the recommendations it makes are often of considerable importance to the National Confederation of German Employers' Associations (Bundesvereinigung der Deutschen Arbeitgeberverbände—BDA), which is responsible for collective bargaining policy and for all other matters relevant to labor. There are no official statistics on the proportion of German industrial firms organized in the BDI and BDA, but estimates expressed in conversations put membership at approximately 80 percent.¹

As its name implies, the third major management organization, the German Chamber of Industry and Commerce (Deutscher Industrie und Handelstag—DIHT) is concerned mainly with the promotion of trade. But it also has responsibility for the elaborate system of German apprenticeship training. The latter is administered by a committee of which half the members come from local chambers of industry and commerce and half are union-appointed workers employed by the member firms. Since apprenticeship is required for a vast number of occupations in industry and commerce, and since the great majority of German youngsters enter such training at age 15, it is readily apparent how far-reaching—and how important to labor—this task of DIHT is.²

Two or three times a year, representatives of the 3 confederations plus 11 other independent business organizations meet as the Joint Committee for the German Economy (Gemeinschaftsausschuss der Deutschen Gewerblichen Wirt-

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schaft) to coordinate activities and policies. A regular chairman serves a 2-year term and secretariat responsibilities rotate biennially among member organizations. Any major topic of interest to management may receive attention. In 1966, the focus was on economic stabilization measures, and on efforts of the Social Democratic Party (SPD) and the labor wing of the Christian Democratic Union (CDU) to effect major changes in vocational training through legislation. In 1968 codetermination and wage policy were the main concern.

Until World War II, activities of management organizations were generally shrouded in secrecy. When the confederations were reestablished after the war, they realized that much could be gained from efforts to improve their public image. In January of 1951 the Institute for German Industry (Deutsches Industrieinstitut—DI) was created, not only to provide scientific research for the existing management organization but also to influence public opinion.³ Since its formation, the institute has published books and pamphlets to explain management's views to the public and to point out what is at stake for the economy as a whole if labor demands are met. In the last few years, several publications have appeared which countered labor's campaign to expand the existing system of codetermination.⁴ The DI also publishes an irregular bulletin, *Argumente zu Unternehmerfragen*, to supply management with quick, up-to-date information to counter current trade union demands.⁵

Management and collective bargaining

Of all the management organizations, the National Confederation of German Employers' Associations has the greatest impact on labor, since its very reason for existence is to confront the trade unions on behalf of management. In this task it is reinforced by publications, research studies, and technical assistance from the other management organizations. But, in the end, its success depends on the solidarity it is able to achieve among member firms in implementing the social policy decided upon, and on the effectiveness of its members' bargaining with the unions.

The employers' confederation was formed in November 1950 despite the trade unions' objections. The scheme of its organization differs little from that of the pre-1933 confederation of German Employers' Associations, but it rests on a

broader base. Its membership consists of 43 national organizations of employers in specific industries, which are subdivided into regional organizations corresponding to the collective bargaining units of the trade unions. Where regional organizations have achieved considerable importance, they may join the BDA directly. On January 1, 1968, 13 such organizations were members. In collective bargaining a group of firms is represented by a BDA member organization, a fact that greatly strengthens the position of individual firms, particularly the smaller ones.

Collective bargaining in the Federal Republic is conducted by employers' organizations and trade unions on an industrial and, usually, regional basis. For all practical purposes, the German labor movement has been unified since 1949 in the German Trade Union Federation (Deutscher Gewerkschaftsbund—DGB), which had over 6,375,000 members on December 31, 1968.⁶ The actual power within the federation resides in its member industrial unions. DGB headquarters officially represents the German labor movement and serves as a clearinghouse of ideas. It may suggest guidelines and tries to coordinate activities, but it cannot interfere in collective bargaining as this is the exclusive prerogative of the 16 member unions. Decisions in this respect are made by national industrial unions or by their regional branches, depending on whether a union bargains on a national or regional basis. Most agreements cover about 100,000 workers in one industry in a given region. Other arrangements exist but they are the exception rather than the rule. Only a few German labor unions are organized to bargain on a plant level.

Fringe benefits, with minor exceptions, are only indirectly a subject of collective bargaining in the Federal Republic since extensive legislation covers such items as health insurance, vacations, notice, and dismissal pay. These compulsory added labor costs are very much an area of contention between the unions and employers' organizations, but the battles are fought within a larger framework than labor-management negotiations. Yet the employers cite these legislated fringe benefits when they bargain over wage increases. A study by the U.S. Bureau of Labor Statistics shows that hourly earnings in Germany did constitute a considerably smaller proportion of estimated total labor cost per hour in 1968 (71 percent) than in the United States (84 per-

cent), but that a number of European countries had lower proportions of earnings to total labor costs than did Germany.⁷

In the event negotiations are unsuccessful and a strike or lockout results, BDA member firms are entitled to compensation from their respective organizations. A special strike fund exists but the amounts of financial aid available to members is not made public. In general, a firm may count on being compensated for fixed expenses as well as salaries of white-collar workers who are not striking, and for claims that may be brought by outsiders, such as customers or suppliers, for damages resulting from the strike or lockout.

The total financial burden due to strikes is not quite as great for the BDA as it appears. Since the trade unions have committed themselves to strike benefits equal to 90 percent of wages, thus virtually pricing themselves out of the area of industrywide stoppages, they usually strike key firms. Management decisions to allow conflicts to develop into strikes or lockouts are made by the respective management bargaining units and do not need BDA's approval. However, once a course of action has been agreed upon, it is maintained by means of discipline among the firms in the unit.

The degree of solidarity one ascribes to German employers' organizations depends on where one expects to find it—at what level and on what issues. Usually rebuke for not having acted with sufficient unity comes from the BDA and is centered on the wage issue. At the confederation level, solidarity on this issue is virtually impossible due to differences in economic and labor market conditions among industries and regions. It is obvious that solidarity will vary from one member organization to another and, generally, will depend to a considerable extent on the degree of heterogeneity of firms within a bargaining unit, the stature of the organization's leaders and their influence, and the problems encountered with the trade unions. But in practice firms usually do not deviate too greatly from the rest of the group. Few want to risk the bad feeling, and possibly adverse business consequences, that might result from offending against the majority position. Also, membership is voluntary and the purpose of belonging would be negated if a firm strongly and consistently opposed to the policy made by its spokesmen. There are, furthermore, a certain

number of binding decisions—usually on strikes and lockouts—which national and regional organizations of employers have been authorized by member firms to make. These vary from one organization to another, but where they exist member firms must comply. If they do not, they are usually expelled.⁸

Beyond the bargaining table

Interaction of employers' and workers' organizations in Germany is by no means confined to determining who will get what piece of the economic pie. Although the class struggle idea was discarded along with Marxist slogans during the late 1950's, the aims of trade union officials, as expressed in word and deed, leave little doubt that their concern goes beyond the present welfare of their membership. They wish to enhance the general status in society for the stratum they feel they represent, not merely to improve its economic wellbeing. In conceiving of their role in this manner they come into conflict with management organizations on a broad spectrum of political, economic, and social matters.

Probably the most important bone of contention since the end of World War II has been codetermination. Some aspects of what this term now covers—such as a type of plant council—existed in the days of the Weimar Republic, and Fürstenberg dates the concept back to the 1848 Constitutional Assembly of Frankfurt.⁹ In its present form, however, codetermination has existed in Germany since 1951 when it was legislated after a hard-fought battle by labor. Conventionally the term is used to denote rights given workers by the *Mitbestimmungsgesetz* (Codetermination Law) of 1951, the *Betriebsverfassungsgesetz* (Plant Organization Law) of 1952, and the *Personalvertretungsgesetz* (Personnel Representation Law) of 1955. The term is loosely applied, for it has actual relevance only with respect to the 1951 law, which is restricted to the coal and steel industry. The latter allows labor equal representation with management on the firm's supervisory board (*Aufsichtsrat*) and one representative on the board of directors (*Vorstand*), as well as the right to establish plant councils. In other private enterprises only the 1952 law applies, giving labor the right to organize plant councils and entitling it to one-third of the membership on the supervisory

board. The 1955 law adapts the 1952 provisions to workers in public services.

In practice, however, even parity representation on the board of supervisors¹⁰ has not given labor much influence, since this body meets only a few times a year for general recommendations and is not involved in the day-to-day decisionmaking of the enterprise. The labor representative on the board of directors is also of limited value to the union. He is paid by management and is sworn to secrecy like other members of the board. Thus, the unions cannot use him as a source of information and can only hope that he represents their interests at the board meetings. In this they have been disappointed because continuous association with management and constant exposure to their problems has caused many labor representatives to identify with management. In any event, the labor representative's responsibility is limited to personnel and social matters, such as holidays, vacation pay, coffee breaks, work hours, and shifts.

The plant councils, authorized by the laws of 1952 and 1955 for all enterprises with five or more employees, consist of representatives of all workers in a plant, whether organized by a union or not. The councils are specifically prohibited from engaging in collective bargaining but, in practice, they have had considerable influence in setting wages and working conditions. They must be consulted by management on all social and personnel matters. As a result, members of councils often maintain they have a better understanding of an enterprise than do union representatives, thus encouraging union members to identify with the plant councils rather than the unions.

In spite of these negative aspects of the codetermination issues, the trade unions have probably given more attention to its extension than to any other question, with the possible exception of wages. German labor sees in codetermination a means of achieving its long-range aim of restructuring German economic life in a manner that would give the working man a permanent and secure voice in the management of industry. Codetermination appears to have become a substitute for socialism, which has been largely abandoned by trade union policymakers, and it is clear why management organizations have opposed codetermination.

Since codetermination was established by law, the question of broadening it does not just involve a confrontation of management and labor. The

debate has shifted back and forth for years with no end in sight. Recent prosperity has made it seem that management is doing a good job of running its business as is. When the most recent coalition government was formed, the uncompromising attitude of the Free Democratic Party (Freie Demokratische Partei—FDP) against the broadening of codetermination powers for labor made the Social Democratic Party shelve the issue for the time being.

Essentially the DGB wishes to extend to all industries the kind of codetermination that prevails in the coal and steel industry, with greater power for the plant councils. It also wants a voice in economic policymaking through labor representation in the chambers of industry and commerce and, at a higher level, on provincial and Federal economic councils to be established for this purpose. Management organizations have countered by contending that there is no substance to union claims that codetermination has achieved important successes in the coal and steel industry through labor-inspired planning. Other industries have also planned, they say, and the reason structural changes in coal and steel did not have a disastrous effect on employment is that the rapid growth of the economy as a whole alleviated the problem. With respect to plant councils, employers' organizations have insisted that the law is adequate but the workers have not availed themselves of all the opportunities it offers. They contend that the unions are not really interested in giving the worker a voice in running his enterprise, but are concerned with the influence of their leaders on the kind of long-range economic reforms they have always advocated. This, they state, is apparent from the unions' wish to extend codetermination to national policymaking, an aim that would result in a completely transformed economic system rather than merely in greater codetermination.¹¹

In the last two decades, German labor unions have also taken a strong interest in public education—not just in developing trade unionists. Traditionally, most children of workingmen have left school after 8 years to enter apprenticeship. Such statistics as exist show that the proportion of workers' children who go on to universities is very small.¹² By establishing a network of classes and schools for their members, the unions have sought not only to raise the educational level of the

present labor force, but to provide the members with the necessary impetus to send their children to schools of higher learning. Labor has also charged that the educational system as a whole discriminates against those who do not come from an intellectual environment. It has campaigned successfully for a ninth year of compulsory schooling, is now pushing for a tenth, and is asking for extensive revisions of the apprenticeship system.

The special schooling provided by the unions has, at times, been challenged by management organizations, who see in it an attempt to develop an antiestablishment, leftist-oriented group of the population, and unionists have felt compelled to defend their educational efforts.¹³ But reaction has been particularly strong to union proposals regarding apprenticeship training. The DGB wants more training taken out of the plant and transferred to schools. It has stressed that young workers need to learn new methods and not those that were taught two or three decades ago; and that trainees become too specialized when they learn their trade predominantly in one plant.

Labor has also advocated that the Government take the responsibility for training away from the Chamber of Industry and Commerce, and establish vocational training boards at district and Land levels. These would include representatives of workers and employers, as well as teachers and youth organizations, and would operate under the general supervision of the Ministry of Labor. Finally, the DGB has proposed that apprentices receive negotiated wages rather than merely educational allowances. Employers have agreed that the practical and theoretical parts of training need to be better integrated, but have strongly and successfully resisted the widespread reforms advocated by the labor unions. The existing apprenticeship system has been sacred territory of special concern to management organizations, since a trainee will eventually make a substantial contribution to the enterprise in which he serves.¹⁴

The new law on vocational training (*Berufsbildungsgesetz*),¹⁵ effective September 1969, was received with disappointment by organized labor. The law brought up to date the list of occupations for which youth could be trained, and provided for the establishment of committees on vocational training at the Federal, provincial, and regional levels. Labor and management will have an equal voice on these committees, but the latter will be

largely advisory. Training will continue to be administered by the chambers of industry and commerce. The law encourages, but does not compel, the extension of theoretical training and the creation of centralized workshops sponsored by groups of employers.

Another major debate between labor and management organizations has centered on income redistribution. The unions have come to realize that they cannot accomplish their aims in this direction through wage demands, particularly since real wages have pretty consistently remained behind productivity increases.¹⁶ Social security has reached such an advanced stage that labor asks only for minor changes. The type of income redistribution labor has emphasized in recent years is reflected in its drive to get more capital into the workers' hands. The aim is to make it possible for the worker to accumulate savings from which he eventually can expect a return that will make him financially more independent, and generally more prosperous. Various plans have been proposed, mostly by labor, and some efforts have been made by the Government and management, to further this concept. Government subsidies have been given to long term savings accounts and to home construction, and two laws have been passed—one in 1961 and one in 1965 (amended July 1, 1969)—granting tax incentives to employers for special bonuses to workers who obligate themselves to save the money or to use it for home construction. Organized labor and the Social Democratic Party have advanced plans which included compulsory profit sharing; a fund created by an excess profits tax, with shares to be held by workers; and the investment wage—an additional negotiated wage increase which would be invested by the employers for the worker and, therefore, would have no inflationary effect.

None of the three suggestions has been popular with management, although the construction workers, who are usually ahead of other unions in negotiating special benefits, have a contract allowing the employer to deposit a small investment wage (about \$50 a year) to a special account in a worker's name. There has been no major objection to the two bonus laws since the maximum bonus is small—about \$78 a year in 1961 and \$117 a year in 1965—and it is a voluntary, traditional gesture on the part of the employer to give yearend bonuses anyway. Management

organizations have generally agreed with the principle of increased savings and investment among workers, but to date the results of trade union efforts along this line have been meager. Concessions made have been so small that even if they were fully implemented they would do little to change the financial position of the worker. In practice they have not even aroused much interest among the beneficiaries, further negating the intended results. According to figures recently released by the Federal Labor Ministry, 20 percent of the total eligible work force made savings under these laws in 1968.¹⁷

There are more than 80 laws in Germany which assign to trade unions some responsibilities, either of a political or economic nature.¹⁸ This fact emphasizes the extent to which organized labor has become involved in matters other than collective bargaining, and sets the stage for labor's preoccupation with a variety of problems.

For the foreseeable future, labor and employers' organizations will confront each other on fundamental economic, social, and political issues. Traditionally management organizations have

been powerful opponents of labor unions and have, at best, regarded them with paternalism. Efforts to educate the workers about the issues involved and to produce leaders who can confront management on an equal basis, the gradual passing of DGB leadership to a new generation, as well as political changes brought about by the elections of last September, will be important determinants of the form worker-management relations will take in the future. The recent change in the Government will provide a more sympathetic political setting where legislative action is the trade unions' aim. Radical changes are not likely, however, since the SPD must govern with the help of the FDP. The latter represents many diverse interests, some strongly opposed to those of the trade unions. Important, also, will be the extent to which the trade unions will be able to counter the efforts of management to shape public opinion. Management organizations have harped upon the well-known German fear of inflation when opposing union wage demands, and have taken credit for postwar prosperity from which the workers have benefited. □

—FOOTNOTES—

¹ For comprehensive information on the histories and activities of the BDI and BDA, see Bundesverband der Deutschen Industrie, *Der Weg Zum Industriellen Spitzenverband* (Darmstadt, Hoppenstedts Wirtschafts-Archiv GmbH, 1956); Walter Raymond Stiftung, *Aufgaben und Stellung der Arbeitgeber und Arbeitnehmer Organisationen in der Bundesrepublik Deutschland* (Köln, Westdeutscher Verlag, 1966); and Roswitha Leckebusch, *Entstehung und Wandlungen der Zielsetzungen der Struktur und der Wirkungen von Arbeitgeberverbänden* (Berlin, Duncker and Humblot, 1966).

² More information on the history and activities of the DIHT may be found in Deutscher Industrie- und Handelstag, *Der Deutsche Industrie- und Handelstag in Seinen Ersten Hundert Jahren, Zeugnisse und Dokumente* (Bonn, DIHT, 1962); and Deutscher Industrie- und Handelstag, *Koblenzer Strasse 148* (Bonn, DIHT, 1966).

³ Writing about the founding of the institute, Dr. Wolfgang Mansfield states: "Six years after the collapse of Germany in 1945, German entrepreneurs had managed to overcome the destruction of war and dismantling, and had been able to get the economy back on its feet. But there was hardly a voice in the country which lauded the accomplishments of the business community. Instead, a large proportion of the intellectuals who are such an important influence on public opinion, had become radicals. Academicians, professional people, journalists, bureaucrats, teachers and theologians, had suffered greatly during the inflation of the twenties and the currency

reform of 1948 and, not understanding the economic causes behind these catastrophies, blamed industrialists and businessmen. They saw in them, people who had succeeded in nefarious ways to retain and enlarge their assets, while those who were outside the production process had been robbed of their savings. They were inclined to agree with the occupation authorities that the trade unions were the only guarantors of true democracy, and to believe the pronouncements of organized labor uncritically." (In Ludwig Losacker, "Das Industrieinstitut und Sein Vorsitzender," Deutsches Industrieinstitut, *Fünfzehn Jahre Industrieinstitut* (Köln, Deutscher Industrie-Verlag, 1966), p. 14; author's translation.

⁴ See, for instance, Roland Tittel, *Mitbestimmung in der Bundesrepublik Deutschland, Tatsachen und Forderungen* (Köln, Deutsches Industrieinstitut, 1966); and Deutsches Industrieinstitut, *Die Entwicklung der Mitbestimmung in den Unternehmen der Eisen- und Stahlindustrie sowie des Kohlen- und Erzbergbaus von 1954 bis 1966* (Köln, DI, October 1966).

⁵ For more information on the activities of the Institute for German Industry, see Deutsches Industrieinstitut, *Fünfzehn Jahre Deutsches Industrieinstitut* (Köln, Deutscher Industrie-Verlag, 1966).

⁶ Separate confederations exist for government officials (Deutscher Beamten Bund—Confederation of German Government Officials), and for a minority of white-collar workers (Deutsche Angestellten Gewerkschaft—Union

of German White-Collar Workers). In 1967, these two organizations had 725,000 and 481,300 members, respectively.

⁷ U.S. Department of Labor, Bureau of Labor Statistics, *Average Hourly Earners and Estimated Supplementary Labor Costs of Wage Earners in Manufacturing* (unpublished, made available to the author in April 1969).

⁸ A recent example of this was the synthetic fibers firm Correcta of Hesse. During a strike the union insisted on a separate collective agreement with this company. The employers' organization for that industry and area refused, but the firm negotiated nevertheless and granted the union most of its requests. As a result it lost its membership in the employer's organization. (*Der Arbeitgeber*, December 1968.)

⁹ Friedrich Fürstenberg, "Workers' Participation in Management in the Federal Republic of Germany," *Bulletin of the International Institute for Labor Studies*, June 1969, pp. 94-148. Other useful descriptions and analyses of German codetermination may be found in Werner M. Blumenthal, *Codetermination in the German Steel Industry* (Princeton, N.J., Princeton University Press, 1956), and Verein für Sozialpolitik, *Zur Theorie und Praxis der Mitbestimmung* (Berlin, Dunker und Humblot, 1962).

¹⁰ Actually an extra, neutral member is elected to avoid deadlocks.

¹¹ See Deutsches Industrieinstitut, *Mitbestimmung in der Bundesrepublik Deutschland, Tatsachen und Forderungen* (Köln, DI, 1966).

¹² According to Dahrendorf, two thirds of all German children have parents either in agricultural or in blue-

collar occupations but barely 10 percent of all university students are recruited from these groups. (Rolf Dahrendorf, *Society and Democracy*, Garden City, N.Y., Doubleday & Co., 1967, p. 76.)

¹³ See, for instance, Franz Deus, "Geschichte der Gewerkschaften und deren Verhältnisse zu den Arbeitgeberverbänden," in Walter Raymond Stiftung, *Aufgaben und Stellung der Arbeitgeber- und Arbeitnehmer-Organisationen in der Bundesrepublik Deutschland* (Köln, Westdeutscher Verlag, 1966), pp. 94-98.

¹⁴ A good, short discussion of the German apprenticeship system and its problems is available in Gertrude Williams, *Apprenticeship in Europe* (London, Chapman and Hall, 1963), pp. 17-47.

¹⁵ See a report on the law in the *Monthly Labor Review*, January 1970, p. 73.

¹⁶ This was most recently pointed out again by Heinz Markman, the new Director of the DGB's Economic Research Institute, in an interview (*Der Arbeitgeber*, February 21, 1969, p. 99).

¹⁷ For more information on German programs and proposals for capital accumulation for the worker, see Georg Leber, *Accumulation of Assets for the Worker* (Frankfurt/Main, I.G. Bau-Steine-Erden, 1965); and *Labor Developments Abroad*, U.S. Department of Labor, Bureau of Labor Statistics, June 1965.

¹⁸ Günter Drews, *Abhandlungen zum Arbeits- und Wirtschaftsrecht*, Bd. 5 (Heidelberg, 1958), as quoted in Walter Raymond Stiftung, op. cit., p. 94.

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.

Special Labor Force Report
examines employment experience
of the Nation's youth
not in school in October 1969

HOWARD HAYGHE

Employment of high school graduates and dropouts

DURING THE 1970's, 34 million young workers are expected to enter the American labor force, about 7 million more than during the 1960's. Most of them will be high school and college graduates, but some will be school dropouts.

What kind of work can these youths expect to do in their first years out of school? Who are most likely to be unemployed? Even though the proportion of youth in the labor force who will have completed high school is projected to rise, there will still be a significant proportion of young people who will not have completed high school. What special employment problems may be faced by this group?

This article discusses the labor force characteristics of young high school graduates and school dropouts, income of families of graduates and dropouts, and types of jobs they obtain. The data are based on the supplementary questions to the October 1969 Current Population Survey.¹

Graduates in 1969

An estimated 2.8 million young people graduated from high school in 1969 (table 1), nearly double the number graduating 10 years earlier. Over the past decade, a growing proportion of the graduates continued on to college so that by 1969 over half (53 percent) of the year's graduates were in college at the time of the survey, compared with 46 percent in 1959 (see chart 1). As in the past, proportionally more men than women were enrolled in college in October 1969—about 60 percent and 47 percent, respectively, of those who graduated in 1969 and nearly all of them were full-time students.

For most students, concentration on studies took precedence over labor force participation; in

October 1969, 35 percent of them were working or looking for work. However, this proportion represents a significant increase from 1959 when only 26 percent of the college students were in the labor force. The increase in the proportion of college students in the work force may reflect the rising costs in higher education. Also, the relatively high level of economic activity and more plentiful job opportunities during the late 1960's encouraged many students to seek work. They apparently had about as much difficulty finding jobs as their high school classmates who did not continue their schooling. Their unemployment rate, at 11.4 percent, was the same as for high school graduates not enrolled in college.

Of the 1.3 million graduates who did not go on to college, over 1 million were working or looking for work in October 1969. As usual, a much greater proportion of the boys than girls were in the labor force and relatively more single than married girls were in the labor force. One of the reasons for the lower labor force rate of women is the fact that about 18 percent of the female graduates were married at the time of the survey and one-half of them were not in the labor force, presumably because of household responsibilities. Another reason for the lower rate for women is that a greater proportion of the women were not in the labor force while attending special schools for training in secretarial skills, data processing, and other fields.

The unemployment rate in October 1969 for the year's high school graduates, at 11.4 percent, was lower than during the early 1960's, in line with the improvement in the economy. The high unemployment rate for newly graduated women, nearly twice that of their male counterparts, was partly due to the extremely high rate for Negro graduates.²

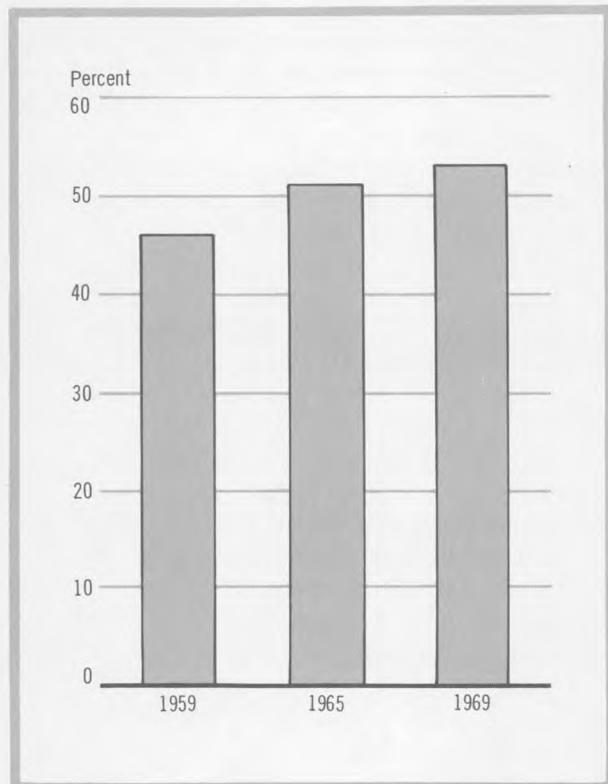
Howard Hayghe is an economist in the Division of Labor Force Studies, Bureau of Labor Statistics.

School dropouts

As in previous years, youths who had dropped out of school in the year ending in October 1969 were less likely to be in the labor force and more likely to be unemployed than were recent high school graduates (table 2).

As of October 1969, some 660,000 young persons aged 16 to 24 had left elementary or high-school sometime during the preceding year, about the same number as in the past 2 years. About half of the dropouts were young men. A significantly smaller proportion of them were in the labor force compared with the recent high school graduates. This is partly because dropouts were younger—about half the dropouts but relatively few graduates were 16 and 17 years old. At this young age, persons are often out of the labor force because they continue to depend on parents for economic support; also, there are legal restrictions on the kinds of jobs they can hold. A larger proportion of women dropouts than graduates were married, 42 percent and 18 percent re-

Chart 1. Proportion of high school graduates¹ enrolled in college in October of year of graduation, 1959, 1965, and 1969



¹ 16 to 24 years old.

spectively. Because family and household responsibilities tend to keep married women out of the work force, the labor force rate for the women dropouts was far lower than for the graduates. Other factors, such as emotional or academic problems, which induced many girls and boys to leave school, would also have hampered their attempts to enter the job market.

Status of 16- to 21-year-olds

In October 1969, nearly three-fourths of all 16- to 21-year-olds in the labor force and no longer in school (regardless of when they last attended school) had at least a high school education. For the Negroes, the proportion was 57 percent and for whites it was 75 percent. From 1965 to 1969, the proportions of both Negro and white youths who were high school graduates increased (chart 2). However, the gap in the proportions between these two groups remained unchanged, despite efforts of Federal, State and local government officials, as well as private individuals, to encourage potential dropouts to remain in school.

A much greater proportion of the high school graduates than the school dropouts were in the labor force in October 1969, about 80 percent compared with 60 percent (table 3). These rates reflect the age and sex composition of these two groups, as well as their educational attainment. Over one-fifth of the dropouts aged 16 to 21 were 16 or 17 years old compared with only 3 percent of the graduates. Of these young dropouts, only about half were in the labor force. Proportionally fewer women dropouts than graduates were in the labor force. While there was only a 10-percentage point difference between the rates for male graduates and dropouts, the labor force participation rate of female graduates was 32 percentage points higher than that of the female dropouts (39 percent). An important cause of this differential was the fact that a much larger proportion of the female dropouts were married and thus probably had family responsibilities keeping them away from the labor force.

The unemployment rate for dropouts aged 16 to 21 was nearly twice that of graduates of the same age. The 8-percent rate for graduates was quite high, however, compared with that for workers age 25 and over, about 2.2 percent in October 1969. Among both graduates and dropouts, unemployment rates were inversely related

Table 1. College enrollment and labor force status of 1969 high school graduates,¹ October 1969

[Numbers in thousands]

Characteristic	Civilian noninstitutional population		Civilian labor force					Not in labor force
			Number	As percent of population	Employed	Unemployed		
	Number	Percent				Number	As percent of civilian labor force	
Both sexes, total.....	2,842	100.0	1,577	55.5	1,397	180	11.4	1,265
White.....	2,538	89.3	1,405	55.4	1,277	128	9.1	1,133
Negro and other races.....	304	10.7	172	56.6	120	52	30.2	132
Enrolled in college.....	1,516	53.3	528	34.8	468	60	11.4	988
Full time.....	1,466	51.6	487	33.2	430	57	11.7	979
Part time.....	50	1.8	41	(?)	38	3	(?)	9
Not enrolled in college.....	1,326	46.7	1,049	79.1	929	120	11.4	277
Men, total.....	1,352	100.0	786	58.1	718	68	8.7	566
Enrolled in college.....	812	60.1	300	36.9	269	31	10.3	512
Not enrolled in college.....	540	39.9	486	90.0	449	37	7.6	54
Women, total.....	1,490	100.0	791	53.1	679	112	14.2	699
Enrolled in college.....	704	47.2	228	32.4	199	29	12.7	476
Not enrolled in college.....	786	52.8	563	71.6	480	83	14.7	223
Single.....	647	43.4	494	76.4	425	69	14.0	153
Married and other marital status ²	139	9.3	69	49.6	55	14	(?)	70

¹ 16 to 24 years old.² Percent not shown where base is less than 75,000.³ Includes widowed, divorced, and separated women.

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

to age. The rates for 16- and 17-year-olds were about double those for 20- and 21-year-olds.

Unemployment was much higher among Negro youths than among white youths. Proportionally, over twice as many Negro as white high school graduates in the labor force were unemployed. For Negro youth, educational achievement did not seem to be the determining factor in the likelihood of unemployment; Negro graduates had about the same unemployment rate as Negro dropouts (15.8 percent and 18.1 percent, respectively). Other factors such as job discrimination, quality of schooling, and geographic location appear to play a part in the relatively high unemployment of young Negro graduates.

For dropouts, age 16 and 17, finding employment is often difficult; about 23 percent of those in the labor force were jobless in October 1969. Many lack the experience and education needed to perform the available jobs. Often, employers may feel that these young persons are too immature to be good workers and are reluctant to hire them. In addition, State and Federal child labor laws may limit the jobs which 16- and 17-year-olds can take.

About half the States require employment certificates for minors 16 and 17 years old. While the objective of this requirement is to protect the young workers from potential danger and abuse, it does result in a certain amount of

inconvenience and extra paperwork for both employer and potential employee. Thus, an employer is tempted to avoid hiring 16- and 17-year-old workers if older workers are available, and a youth might become discouraged with the formal process of obtaining a special work certificate.

Employment in certain hazardous occupations is forbidden to people under 18. Some 17 categories, relating to the manufacture and handling of explosives and radioactive materials and the operation of motor vehicles and other dangerous power equipment, are forbidden by the Federal Government under the Fair Labor Standards Act. States, as well, forbid employers to hire 16- and 17-year-olds for hazardous jobs in mines or meat-packing plants as well as in jobs that might be morally objectionable, such as working in establishments serving liquor.³ It is not possible to measure the net impact these laws have on the employment of youths in this age group. However, it can be assumed that some of the employment difficulties faced by 16- and 17-year-olds are added to by the certification requirements and their complete exclusion from certain types of jobs.

Some 16- to 21-year-olds are unemployed because they lack experience or because of their age. Other young people are unemployed as a result of the adjustment process that takes place as they

Table 2. Employment status of 1969 high school graduates not enrolled in college and dropouts,¹ October 1969

[Numbers in thousands]

Characteristic	Civilian noninstitutional population		Civilian labor force					Not in labor force	
	Number	Percent	Number	As percent of population	Employed	Unemployed		Total	In special schools
						Number	As percent of civilian labor force		
1969 HIGH SCHOOL GRADUATES NOT ENROLLED IN COLLEGE									
Total.....	1,326	100.0	1,049	79.1	929	120	11.4	277	103
Men.....	540	40.7	486	90.0	449	37	7.6	54	18
Women.....	786	59.3	563	71.6	480	83	14.7	223	85
Single.....	647	48.8	494	76.4	425	69	14.0	153	(?)
Married and other marital status ²	139	10.5	69	49.6	55	14	(4)	70	(?)
White.....	1,136	85.7	911	80.2	834	77	8.5	225	96
Negro and other races.....	190	14.3	138	72.6	95	43	31.2	52	7
1968-69 SCHOOL DROPOUTS³									
Total ⁴	661	100.0	405	61.3	337	68	16.8	256	22
Men.....	341	51.6	279	81.8	238	41	14.7	62	11
Women.....	320	48.4	126	39.4	99	27	21.4	194	11
Single.....	185	28.0	89	48.1	70	19	21.3	96	11
Married and other marital status ²	135	20.4	37	27.4	29	8	(4)	98	
White.....	519	78.5	316	60.9	267	49	15.5	203	19
Negro and other races.....	142	21.5	89	62.7	70	19	21.3	53	3

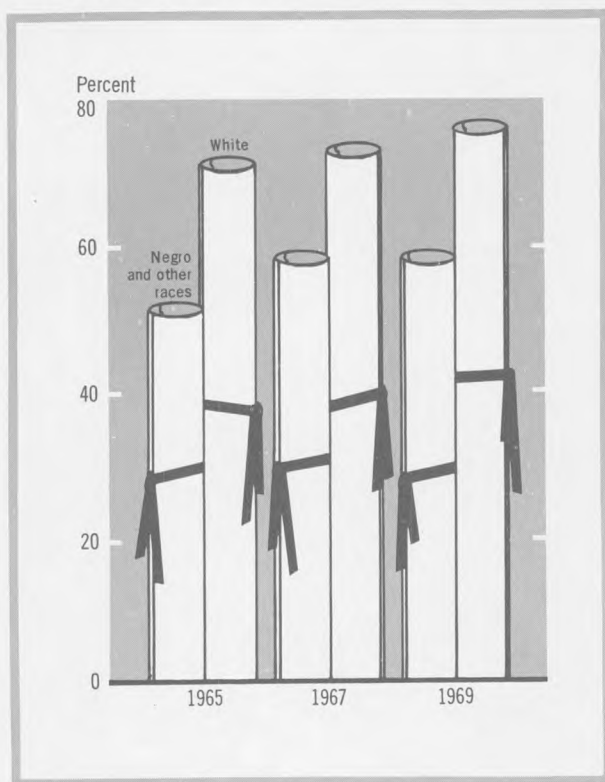
¹ 16 to 24 years old.² Not available.³ Includes widowed, divorced, and separated women.⁴ Percent not shown where base is less than 75,000.⁵ Persons who dropped out of school between October 1968 and October 1969.⁶ In addition, 86,000 persons 14 and 15 years old dropped out of school.**Table 3. Employment status of high school graduates not enrolled in college and dropouts,¹ October 1969**

[Numbers in thousands]

Age, sex, and color	Graduates not enrolled in college						Dropouts					
	Civilian noninstitutional population	Civilian labor force					Civilian noninstitutional population	Civilian labor force				
		Total	As percent of population	Employed	Unemployed			Total	As percent of population	Employed	Unemployed	
					Number	As percent of civilian labor force					Number	As percent of civilian labor force
Both sexes, total.....	5,339	4,223	79.1	3,897	326	7.7	2,683	1,588	59.2	1,358	230	14.5
16 and 17 years old.....	160	125	78.1	108	17	13.6	610	328	53.8	252	76	23.2
18 and 19 years.....	2,322	1,869	80.5	1,707	162	8.7	1,006	613	60.8	526	87	14.2
20 and 21 years.....	2,857	2,229	78.0	2,082	147	6.6	1,067	647	60.6	580	67	10.4
White.....	4,715	3,742	79.4	3,492	250	6.7	2,083	1,223	58.7	1,059	164	13.4
Negro and other races.....	624	481	77.1	405	76	15.8	600	365	60.8	299	66	18.1
Men, total.....	1,765	1,650	93.5	1,540	110	6.7	1,170	977	83.5	868	109	11.2
16 and 17 years old.....	43	41	(?)	37	4	(?)	272	206	75.7	172	34	16.5
18 and 19 years.....	814	739	90.8	680	59	8.0	474	397	83.8	355	42	10.6
20 and 21 years.....	908	870	95.8	823	47	5.4	424	374	88.2	341	33	8.8
White.....	1,542	1,445	93.8	1,358	87	6.0	888	743	83.7	663	80	10.8
Negro and other races.....	223	205	91.5	182	23	11.3	282	234	83.0	205	29	12.4
Women, total.....	3,574	2,573	72.0	2,357	216	8.4	1,513	611	40.4	490	121	19.8
16 and 17 years old.....	117	84	71.9	71	13	15.5	338	122	36.1	80	42	34.4
18 and 19 years.....	1,508	1,130	94.9	1,027	103	9.1	532	216	40.6	171	45	20.8
20 and 21 years.....	1,949	1,359	69.7	1,259	100	7.4	643	273	42.5	239	34	12.5
White.....	3,173	2,297	72.4	2,134	163	7.1	1,195	480	40.2	396	84	17.5
Negro and other races.....	401	276	68.8	223	53	19.2	318	131	41.2	94	37	28.2

¹ 16 to 21 years old.² Percent not shown where base is less than 75,000.

Chart 2. High school graduates as percent of out-of-school youth in labor force,¹ October 1965, 1967, and 1969



¹ 16 to 21 years old.

enter the labor force. After the graduate or dropout has spent some time working, he may modify or establish his job goals, and, in doing so, leave one job to seek another. As he tries to realize his changed goals, he may become unemployed. Evidence of this is given in the reasons cited by unemployed graduates and dropouts for their unemployment, shown in chart 3.

The largest proportion of the unemployed, whether graduates or dropouts, were jobless because they were just entering or reentering the labor force. However, about 40 percent were unemployed because they had either quit or lost their jobs. By quitting or being laid off, the graduate or dropout is undergoing a process of adjustment, finding out what sort of work he is capable of doing and wants to do.

Unemployment rates are higher for young high school graduates and dropouts than for older persons. The proportions of these groups who looked for work for only a short time—fewer than

5 weeks in October 1969—was about the same, while a much smaller proportion of the jobless dropouts than of graduates or of adult workers (25 to 44 years old) were unemployed for 15 weeks or more:

Percent unemployed..	Graduates	Dropouts	Adult workers
	100.0	100.0	100.0
Less than 5 weeks.....	60.6	64.8	63.6
5 to 14 weeks.....	25.5	30.4	24.5
15 to 26 weeks.....	12.0	3.9	6.3
27 weeks or more.....	1.8	.9	5.6

One reason for the relatively fewer long-term unemployed dropouts could be that they may become discouraged about finding a job because their lesser amount of education and training hampers them in their job search. After a period of time, they may leave the labor force until they believe job prospects are better.

First jobs

What kinds of jobs do young people hold in the first few years after leaving school? Is there a relationship between characteristics such as sex or educational attainment and the occupation at which the young worker is employed?

Table 4 shows that high school graduates 16 to 21 years old were more likely than dropouts to be employed in white-collar jobs. Proportionately twice as many graduates with no college training held white-collar jobs as did dropouts. However, nearly three-fourths of both these graduates and dropouts were in blue-collar occupations predominantly as operatives. Young men with at least some college education were more likely to be in white-collar occupations than those with only 4 years of high school—nearly 50 percent and 20 percent, respectively.

Regardless of the amount of schooling they had, much greater proportions of women than men were in white-collar occupations, primarily in clerical work. Nearly 70 percent of those with only high school diplomas were in white-collar jobs, including 60 percent in clerical occupations. Women who had completed 1 year of college or more were even more likely to be white-collar workers, particularly in the professional and technical positions. Female dropouts, like male dropouts, tended to find employment in blue-collar and service occupations rather than in the white-collar field. Only

Table 4. Occupations of employed high school graduates not enrolled in college and school dropouts,¹ by sex, October 1969

[Percent distribution]

Major occupation and sex	Graduates			Dropouts
	Total	High school, 4 years only	College, 1 year or more	
MEN				
All occupation groups: Number (thousands).....	1,540	1,281	259	868
Percent.....	100.0	100.0	100.0	100.0
White-collar workers.....	24.2	19.8	46.3	8.8
Professional and technical workers.....	4.7	2.6	15.4	1.3
Managers and proprietors.....	3.6	2.6	8.5	1.0
Clerical workers.....	11.2	10.6	13.9	4.8
Sales workers.....	4.7	4.0	8.5	1.7
Blue-collar workers.....	66.5	70.5	46.7	75.4
Craftsmen and foremen.....	16.5	17.1	13.9	13.8
Operatives.....	35.7	38.3	22.4	37.4
Nonfarm laborers.....	14.3	15.1	10.4	24.2
Service workers.....	5.4	5.7	3.5	8.3
Private household workers.....	.2	.2		
Other service workers.....	5.2	5.5	3.5	8.3
Farm workers.....	3.9	4.0	3.5	7.4
WOMEN				
All occupation groups: Number (thousands).....	2,357	1,944	413	490
Percent.....	100.0	100.0	100.0	100.0
White-collar workers.....	72.2	68.9	87.9	24.3
Professional and technical workers.....	5.0	2.7	15.5	1.2
Managers and proprietors.....	1.0	.7	2.7	.2
Clerical workers.....	61.0	60.3	64.6	18.6
Sales workers.....	5.2	5.2	5.1	4.3
Blue-collar workers.....	11.4	12.8	4.3	38.1
Craftsmen and foremen.....	.6	.7	.2	2.0
Operatives.....	10.2	11.5	3.9	34.7
Nonfarm laborers.....	.6	.6	.2	1.4
Service workers.....	16.3	18.1	7.8	35.7
Private household workers.....	2.2	2.3	1.5	9.2
Other service workers.....	14.1	15.8	6.3	26.5
Farm workers.....	(?)	.2		1.8

¹ 16 to 21 years old.² Less than 0.05 percent.**Table 5. Annual income of families of high school graduates not enrolled in college and of dropouts,¹ by color and sex, October 1969**

[Percent distribution]

Color and sex	Graduates							Dropouts						
	Total	Less than \$3,000			\$3,000 to \$4,999	\$5,000 to \$7,499	\$7,500 and over	Total	Less than \$3,000			\$3,000 to \$4,999	\$5,000 to \$7,499	\$7,500 and over
		Total	Less than \$2,000	\$2,000 to \$2,999					Total	Less than \$2,000	\$2,000 to \$2,999			
ALL PERSONS														
Both sexes.....	100.0	6.9	3.2	3.7	11.3	21.2	60.7	100.0	25.1	13.1	12.0	24.4	22.3	28.1
Men.....	100.0	6.2	3.0	3.2	11.9	22.8	59.1	100.0	23.0	12.8	10.2	24.8	21.5	30.7
Women.....	100.0	7.5	3.4	4.1	10.9	19.9	61.8	100.0	28.5	13.6	14.9	23.7	23.7	24.0
WHITE														
Both sexes.....	100.0	4.8	2.0	2.8	9.7	20.0	65.5	100.0	21.1	11.0	10.1	21.2	25.0	32.7
Men.....	100.0	4.9	2.4	2.5	10.2	21.5	63.4	100.0	18.9	11.4	7.5	21.5	25.7	33.9
Women.....	100.0	4.8	1.8	3.0	9.4	18.7	67.1	100.0	24.9	10.2	14.7	20.8	23.7	30.6
NEGRO AND OTHER RACES														
Both sexes.....	100.0	20.6	10.9	9.7	21.2	28.9	29.3	100.0	34.2	17.8	16.4	31.5	16.4	17.8
Men.....	100.0	15.0	7.1	7.9	22.8	31.5	30.7	100.0	33.3	16.1	17.3	33.3	10.7	22.6
Women.....	100.0	24.5	13.6	10.9	20.1	27.2	28.3	100.0	35.4	20.0	15.4	29.2	23.8	11.5

¹ 16 to 21 years old.

NOTE: Includes only families of unmarried persons living with, and related to, head of household. Because of rounding, sums of individual items may not equal totals.

about one-fourth of the women dropouts were in white-collar jobs; the others were about equally divided between those working as operatives or in service occupations.

In comparing the occupations by race, it was found that Negro graduates tended to hold less prestigious jobs requiring less skill and training and probably providing less pay than the white high school graduates. Greater proportions of young white male graduates were employed as white-collar workers or as craftsmen than Negroes. About three-fourths of the Negroes, but only one-half of the young white men were employed as operatives, nonfarm laborers, or in service occupations. The same tendency held true for the young women graduates; proportionally more white girls than Negro were clerical workers and fewer were in operative or service occupations. Similar differences between the occupations held by whites and Negroes were not present among school dropouts. About 60 percent of the men, both white and Negro, were either laborers or operatives and

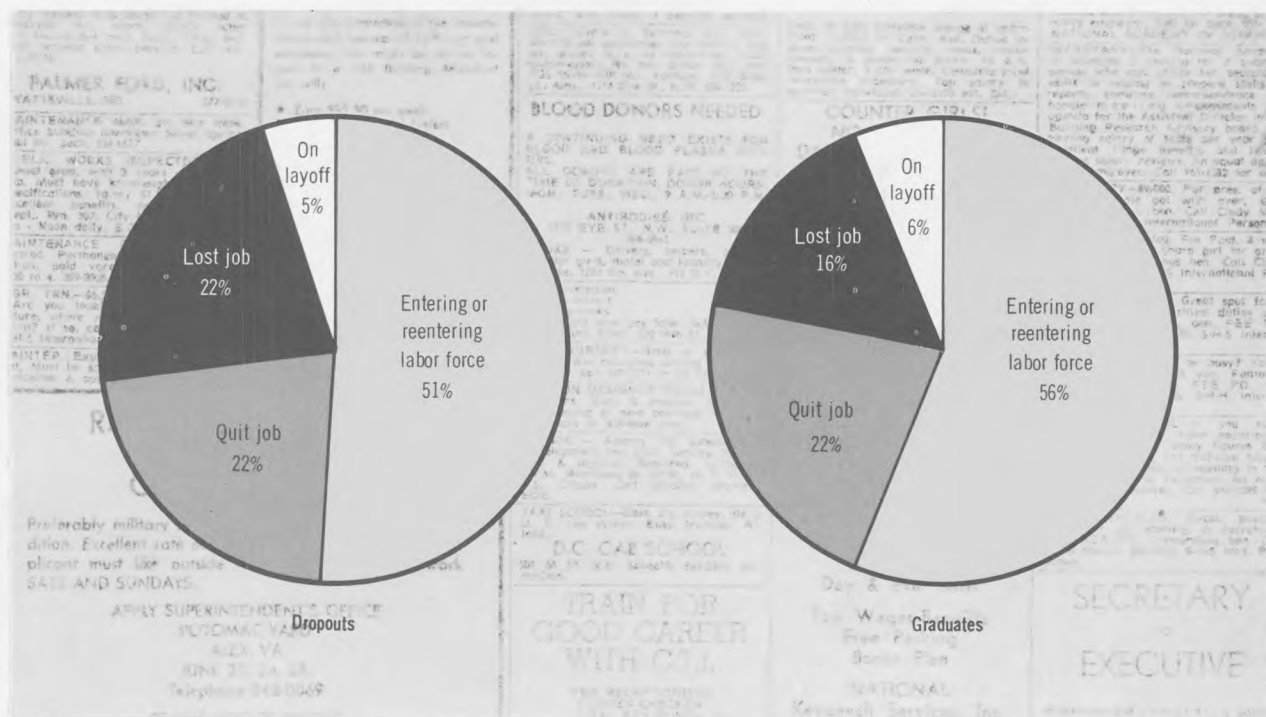
nearly 70 percent of the women dropouts were operatives or service workers.

High school graduation and family income

There is a direct relationship between the amount of family income and the likelihood of a young person's graduating from high school. The higher the family income, the better the chances are that a young man or woman will graduate. Among unmarried youths 16 to 21 years old living at home whose families had incomes of \$3,000 or less, about 40 percent graduated from high school compared with 84 percent of the youths whose family income was \$7,500 or more. A greater proportion of Negro than white youths are dropouts because relatively more of them are in families in the lowest income groups where dropping out is most frequent.

Some of the dropouts undoubtedly left school because of poor grades or difficulty with school authorities, and financial reasons. However, some

Chart 3. Reasons for looking for work, unemployed graduates and dropouts, October 1969



other factors associated with low family income, such as broken homes or low educational aspirations for children by parents whose own educational levels may be low, are probably more influential.

In October 1969, 60 percent of the 16- to 21-

year-old high school graduates were in families whose income was \$7,500 or more, double the proportion for dropouts (table 5). The proportion of dropouts in families with an income of less than \$3,000 a year was over three times that of graduates in families with similar incomes. □

—FOOTNOTES—

¹ This article is based on supplementary questions in the October 1969 Current Population Survey conducted and tabulated for the Bureau of Labor Statistics by the Bureau of the Census. Data presented in this article relate to persons 16 to 24 years of age in the civilian noninstitutional population in the calendar week ending October 18, 1969. All members of the Armed Forces and inmates of institutions are excluded. Estimates of the number of graduates shown here may differ from figures of the Office of Education because of these exclusions, the age limitation, and other minor differences in measurement.

Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census. Sampling variability may be relatively large in cases where the numbers are small. Small estimates,

or small differences between estimates, should be interpreted with caution.

This is the 11th in a series of articles on this subject. The last article appeared in the June 1969 *Monthly Labor Review*, pp. 36-43, and was reprinted with additional tabular data and an explanatory note as Special Labor Force Report No. 108.

² In this report, data for the grouping, "Negro and other races" are used to represent data for Negroes, since Negroes constitute about 92 percent of all persons in the grouping. In addition to Negroes, the grouping includes American Indians, Filipinos, Chinese, and Japanese, among others.

³ See *State Child Labor Standards*, Bureau of Labor Standards, Bulletin 158, revised (Washington, U.S. Department of Labor, 1965).

The cost of illiteracy

The present dimensions of the reading problem in this country are shocking. Although hard numbers are difficult to come by, Federal officials estimate that at least one-third of U.S. public school children cannot read at their age level. Somewhere between 8 and 12 million children have reading difficulties so severe that they are headed toward functional illiteracy. . . .

In an increasingly technological society, functional illiterates pay a heavy price for their handicap. Today, 50 percent of the young adults who are unemployed cannot read well enough to hold a job requiring reasonable skills, and there are fewer and fewer unskilled jobs. Twenty-five years ago, 30 percent of all

jobs were for unskilled workers; the figure has fallen to 17 percent today. Current estimates indicate that unskilled laborers will be able to handle only 5 percent of all jobs in the United States for the year 1975. Thus, functional illiteracy means a national productivity loss in terms of unemployment among those who cannot read. It also costs the Nation dearly in a number of other ways: . . . While the burden falls heaviest on the functionally illiterate themselves, the social cost they impose on the Nation as a whole is so great that it concerns the Federal government.

—Sumner Myers,
"For All Our Children—'The Right to Read,'" *Looking Ahead*, June 1970.

Special Labor Force Report
notes a continued upgrading to 1985
as the educational attainment
of whites and Negroes, men and women
converges toward a median of 12.6 years

DENIS F. JOHNSTON

Education of adult workers: projections to 1985

THE ADULT LABOR FORCE of 1985 will be younger, better educated, and more homogeneous (among race, sex, and age groups) in its educational attainment than it is today. In the span of just over a generation (from 1950 to 1985), the Nation's adult labor force is expected to increase by about 77 percent, but the number of high school graduates will more than double and the number of college graduates will triple in the same 35-year period. Further, gaps in educational attainment between men and women and white and Negro workers will narrow so that by 1985 the years of school completed for each of these groups will have converged toward a median of over 12 years.

These vast changes in educational composition are to be accompanied by, and will partly result from, a major shift in the age distribution of the Nation's adult work force. In 1965, workers 25 to 34, whose average educational attainment is higher than that of older workers, amounted to 24 percent of the civilian labor force 25 and over. By 1985, this younger and relatively better educated group will make up 34 percent of the workers 25 and over—a rise in number from 14.2 million in 1965 to 28.3 million in 1985. Their attitudes, values, and even life styles, shaped by exposure to the educational milieu of the sixties and early seventies, are bound to have a strong effect on work during the 1980's and beyond.

The expected convergence in the educational attainment of the white and Negro races reflects the continuing response of "Negro and other" youth to the increased educational opportunities

available to them.¹ Table 1 shows that the 1950 census disclosed a gap of 3.3 years in the median educational attainment of white workers 25 and over (10.3 years) and of the corresponding "Negro and other" group (7.0 years). By 1965 this gap had narrowed to 2.3 years (12.2 years among white adult workers and 9.9 years among the "Negro and other" group). The projections presented in this report reflect the assumption that this convergence will continue, so that by 1985, white workers 25 and over are expected to have a median educational attainment of 12.6 years, and Negro and other workers an attainment of 12.3 years—with a remaining "gap" of only 0.3 years.

Another major development, the spread of higher levels of educational attainment among every age group of the labor force, demonstrates the increased availability of higher education. By 1985, the principal beneficiaries of the immediate post-World War II "GI Bill" will have advanced into the 60-69 age group, while the younger age cohorts immediately following will have enjoyed equal or greater opportunities to further their education. This means that even persons 65 and over in the labor force are expected to have a median educational attainment of 12 years by 1985, a rise from 9.0 years in 1965. In contrast, the median educational attainment of the younger adult workers (25 to 34 years old) is expected to rise only slightly, from 12.5 years in 1965 to 12.7 years in 1985, providing a more homogeneous labor force with respect to its average amount of formal education than in 1965.² (See table 2.)

A similar convergence in the educational attainment of men and women workers is already evident. Since World War II, the prevailing job opportunities have attracted large numbers of women with only average amounts of schooling, so that the educational distribution of the female labor force now resembles that of the female

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NOTE: The projected civilian labor force numbers in this report are consistent with the projected total labor force in Sophia C. Travis, "The U.S. labor force: projections to 1985," *Monthly Labor Review*, May 1970, pp. 3-12.

Table 1. Years of school completed by persons 25 years old and over in the civilian labor force, by sex and race, selected years, 1950 to 1985
[Percent distribution]

Race, sex, and year	Total		Elementary school			High school		College		Median years of school completed
	Number (in thousands)	Percent	Less than 5 years ¹	5 to 7 years	8 years	1 to 3 years	4 years	1 to 3 years	4 years or more	
ALL RACES										
Both sexes										
1950 census.....	47,240	100.0	9.3	15.3	20.1	18.0	21.3	7.8	8.0	9.9
1957-59 ²	55,909	100.0	6.3	11.4	16.8	19.2	27.8	8.4	10.2	11.4
1964-65-66.....	60,067	100.0	4.1	8.7	13.4	18.9	32.8	9.6	12.5	12.2
1967-68-69.....	63,618	100.0	3.1	7.2	11.0	17.6	36.4	11.0	13.7	12.3
Projected: 1975.....	69,803	100.0	2.4	5.3	8.2	17.8	39.9	11.2	15.2	12.4
1980.....	76,327	100.0	1.8	4.0	6.1	16.8	42.4	12.0	16.9	12.5
1985.....	83,644	100.0	1.3	2.9	4.5	15.4	44.4	12.7	18.8	12.6
Males										
1950 census.....	34,928	100.0	10.3	16.2	21.2	17.9	19.5	7.1	7.7	9.4
1957-59 ²	38,527	100.0	7.1	12.1	17.6	19.2	25.1	8.2	10.8	11.1
1964-65-66.....	39,821	100.0	4.8	9.3	14.1	18.7	30.0	9.7	13.6	12.1
1967-68-69.....	40,941	100.0	3.6	7.7	11.7	17.3	33.0	11.5	15.2	12.3
Projected: 1975.....	44,713	100.0	2.9	5.7	8.7	17.6	36.9	11.3	16.8	12.4
1980.....	48,665	100.0	2.1	4.3	6.6	16.6	39.7	12.1	18.6	12.5
1985.....	53,282	100.0	1.6	3.1	4.8	15.1	42.3	12.6	20.5	12.6
Females										
1950 census.....	12,312	100.0	6.6	12.9	17.1	18.3	26.5	9.8	8.7	11.2
1957-59 ²	17,382	100.0	4.5	9.9	15.2	19.1	33.7	8.9	8.7	12.0
1964-65-66.....	20,246	100.0	2.8	7.8	12.0	19.3	38.5	9.5	10.3	12.2
1967-68-69.....	22,677	100.0	2.2	6.2	9.6	18.2	42.5	10.3	11.1	12.3
Projected: 1975.....	25,090	100.0	1.5	4.7	7.2	18.1	45.2	11.0	12.2	12.4
1980.....	27,662	100.0	1.1	3.4	5.4	17.1	47.2	12.0	14.0	12.5
1985.....	30,362	100.0	.7	2.4	4.0	15.8	48.2	12.9	16.0	12.6
WHITE										
Both sexes										
1950 census.....	42,459	100.0	6.9	13.9	21.0	18.5	22.7	8.3	8.5	10.3
1964-65-66.....	53,672	100.0	2.9	7.6	13.6	18.4	34.3	10.1	13.1	12.2
1967-68-69.....	56,824	100.0	2.1	6.1	11.0	17.0	37.8	11.5	14.5	12.4
Projected: 1975.....	62,124	100.0	1.8	4.6	8.1	17.0	41.0	11.6	15.9	12.5
1980.....	67,631	100.0	1.3	3.4	6.1	16.0	43.2	12.4	17.8	12.5
1985.....	73,728	100.0	1.0	2.5	4.4	14.5	45.0	13.0	19.7	12.6
Males										
1950 census.....	31,793	100.0	7.9	15.0	22.1	18.5	20.7	7.5	8.3	9.8
1964-65-66.....	36,115	100.0	3.4	8.4	14.3	18.3	31.2	10.1	14.3	12.2
1967-68-69.....	37,057	100.0	2.5	6.8	11.8	16.9	34.1	11.9	16.1	12.4
Projected: 1975.....	40,140	100.0	2.1	5.0	8.7	17.0	37.7	11.7	17.7	12.5
1980.....	43,428	100.0	1.6	3.7	6.6	15.9	40.2	12.4	19.6	12.6
1985.....	47,243	100.0	1.2	2.8	4.7	14.3	42.6	12.9	21.4	12.6
Females										
1950 census.....	10,666	100.0	4.2	10.4	17.7	18.7	29.0	10.7	9.4	11.8
1964-65-66.....	17,557	100.0	1.9	6.0	12.0	18.5	40.7	10.0	10.8	12.3
1967-68-69.....	19,767	100.0	1.4	4.9	9.4	17.3	44.7	10.7	11.6	12.4
Projected: 1975.....	21,984	100.0	1.1	3.8	7.0	17.1	46.9	11.5	12.7	12.4
1980.....	24,203	100.0	.7	2.7	5.2	16.1	48.6	12.3	14.4	12.5
1985.....	26,485	100.0	.6	2.0	3.7	14.8	49.2	13.2	16.5	12.6
NEGRO AND OTHER RACES										
Both sexes										
1950 census.....	4,781	100.0	30.6	28.4	12.2	13.7	8.9	3.3	2.9	7.0
1964-65-66.....	6,531	100.0	13.5	17.8	12.3	22.9	20.7	6.0	7.0	9.9
1967-68-69.....	6,794	100.0	11.5	16.1	10.9	22.5	24.8	7.0	7.2	10.5
Projected: 1975.....	7,679	100.0	7.2	11.5	8.8	24.2	31.2	8.1	9.0	11.8
1980.....	8,696	100.0	5.4	8.7	6.7	23.2	36.3	9.3	10.5	12.2
1985.....	9,916	100.0	3.4	5.8	5.1	22.0	40.5	10.5	12.8	12.3
Males										
1950 census.....	3,135	100.0	35.1	28.0	11.7	12.4	7.8	2.8	2.2	6.6
1964-65-66.....	3,829	100.0	17.2	18.0	12.5	22.0	17.9	5.6	6.7	9.3
1967-68-69.....	3,884	100.0	14.4	16.8	11.0	21.4	22.7	6.9	6.7	10.1
Projected: 1975.....	4,573	100.0	9.3	11.7	8.6	23.5	29.8	8.0	9.0	11.6
1980.....	5,237	100.0	6.8	8.9	6.5	22.4	35.9	9.1	10.4	12.2
1985.....	6,039	100.0	4.4	5.9	4.9	21.4	40.3	10.3	12.8	12.3

Table 1. Years of school completed by persons 25 years old and over in the civilian labor force, by sex and race, selected years, 1950 to 1985—Continued
[Percent distribution]

Race, sex, and year	Total		Elementary school			High school		College		Median years of school completed
	Number (in thousands)	Percent	Less than 5 years ¹	5 to 7 years	8 years	1 to 3 years	4 years	1 to 3 years	4 years or more	
Females										
1950 census	1,646	100.0	22.2	29.1	13.2	16.2	10.9	4.2	4.1	7.9
1964-65-66	2,702	100.0	8.1	17.4	12.0	24.1	24.6	6.4	7.3	10.5
1967-68-69	2,910	100.0	7.7	15.2	10.9	23.8	27.5	7.1	7.8	11.1
Projected: 1975	3,106	100.0	4.1	11.3	9.0	25.2	33.2	8.2	9.0	12.0
1980	3,459	100.0	3.3	8.4	6.9	24.3	37.0	9.5	10.6	12.2
1985	3,877	100.0	1.8	5.5	5.4	22.9	40.8	10.7	12.9	12.4

¹ Includes persons reporting no formal education.

² Totals exclude persons whose educational attainment was not reported. Data by race for March 1957 and March 1959 are not available from the Current Population Survey.

NOTE: Data for combined years are Current Population Survey averages.

population as a whole. The several veterans' benefits provisions enacted since 1945 have benefited working-age men greatly with the result that their educational attainment has advanced faster than that of women. In 1957-59, the median years of school completed by men workers 25 and over (11.1 years) was 0.9 years less than that of women workers. By 1964-66, this difference had been reduced to only 0.1 years (12.1 years for men and 12.2 years for women). By 1985, the corresponding medians are expected to be 12.6 years among both groups of adult workers. The educational upgrading and increased homogeneity across age, sex, and race lines expected to take place between now and 1985 are demonstrated in charts 1 and 2.

The educationally disadvantaged

The magnitude of these anticipated improvements in the educational level of the Nation's labor force draws attention away from a number of persistent problems. Concealed in the above averages and aggregates are the 3.5 million persons who will be working or seeking work under the potential handicap of very limited formal education (less than 8 years completed) in 1985. While their number is expected to decline sharply during this period (from 7.7 million in 1965), their age composition will make it even harder than at present for them to retain rewarding jobs or to find such jobs if they become unemployed. The median age of these less educated workers is expected to rise from 51 years in 1965 to 52 years by 1985, while that of all workers 25 and over is expected to decline during this period from 44 years in

1965 to 41 years in 1985.

In addition, there will be the continuing problem of providing both meaningful job opportunities and needed remedial training for the 20.1 million adult workers in 1985 who will not have completed 4 years of high school. This group is expected to decline from 27.1 million, or 45 percent of the adult labor force, in 1965. Unlike the workers with less than 8 years of schooling, those with less than 4 years of high school will include a considerable number of younger workers whose career aspirations will not be adequately supported by the amount of formal education they will have obtained.³

Despite the rapid improvement in their educational level, Negro workers are still expected to constitute a disproportionate amount of the total number of workers with less than 4 years of high school. By 1985, when 12 percent of the adult labor force is expected to be made up of Negro workers, 18 percent of those with less than a complete high school education will be in the "Negro and other" group.

A further potential problem stems from the continuing imbalance between men and women with respect to higher education. Despite the fact that women college graduates have a much higher rate of labor force participation than less educated women, the proportion of adult working women with college degrees is not expected to converge significantly toward that of adult working men. As indicated in chart 3, nearly 14 percent of adult working men and 10 percent of adult working women had completed 4 years or more of college in 1965. By 1985, over 20 percent of the working men, and 16 percent of the women,

Table 2. Projected educational attainment of the civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985
[Percent distribution]

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
25 YEARS AND OVER									
Total: Number (in thousands).....	69,803	44,713	25,090	76,327	48,665	27,662	83,644	53,282	30,362
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	33.7	34.9	31.5	28.7	29.6	27.0	24.1	24.6	22.9
4 years of high school or more.....	66.3	65.0	68.4	71.3	70.4	73.2	75.9	75.4	77.1
Elementary: Less than 5 years ¹	2.4	2.9	1.5	1.8	2.1	1.1	1.3	1.6	.7
5 to 7 years.....	5.3	5.7	4.7	4.0	4.3	3.4	2.9	3.1	2.4
8 years.....	8.2	8.7	7.2	6.1	6.6	5.4	4.5	4.8	4.0
High school: 1 to 3 years.....	17.8	17.6	18.1	16.8	16.6	17.1	15.4	15.1	15.8
4 years.....	39.9	36.9	45.2	42.4	39.7	47.2	44.4	42.3	48.2
College: 1 to 3 years.....	11.2	11.3	11.0	12.0	12.1	12.0	12.7	12.6	12.9
4 years or more.....	15.2	16.8	12.2	16.9	18.6	14.0	18.8	20.5	16.0
Median years of school completed.....	12.4	12.4	12.4	12.5	12.5	12.5	12.6	12.6	12.6
25 TO 34 YEARS									
Total: Number (in thousands).....	21,301	14,339	6,962	25,474	17,054	8,420	28,264	18,840	9,424
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	21.2	21.9	20.1	17.8	18.2	17.1	14.9	15.0	14.6
4 years of high school or more.....	78.7	78.1	79.9	82.2	81.9	82.9	85.1	85.0	85.4
Elementary: Less than 5 years ¹	0.9	1.1	0.5	.7	.9	.4	.5	.6	.3
5 to 7 years.....	2.0	2.3	1.6	1.3	1.5	1.0	.9	1.0	.7
8 years.....	3.1	3.4	2.6	2.2	2.4	1.8	1.5	1.6	1.3
High school: 1 to 3 years.....	15.2	15.1	15.4	13.6	13.4	13.9	12.0	11.8	12.3
4 years.....	46.2	44.8	49.0	47.3	46.6	48.8	48.1	48.1	48.1
College: 1 to 3 years.....	13.5	13.5	13.5	14.2	14.0	14.5	14.6	14.2	15.3
4 years or more.....	19.0	19.8	17.4	20.7	21.3	19.6	22.4	22.7	22.0
Median years of school completed.....	12.6	12.6	12.6	12.7	12.7	12.7	12.7	12.7	12.7
35 TO 44 YEARS									
Total: Number (in thousands).....	16,044	10,246	5,798	18,386	11,682	6,704	23,009	14,616	8,393
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	30.6	30.9	29.9	25.6	26.2	24.8	21.2	21.2	20.9
4 years of high school or more.....	69.5	69.1	70.1	74.3	73.8	75.2	78.8	78.7	79.0
Elementary: Less than 5 years ¹	2.0	2.4	1.2	1.4	1.7	.9	1.0	1.2	.6
5 to 7 years.....	4.5	5.0	3.6	3.1	3.5	2.4	2.0	2.2	1.6
8 years.....	6.0	6.3	5.4	4.3	4.6	3.9	3.1	3.2	2.8
High school: 1 to 3 years.....	18.1	17.2	19.7	16.8	16.4	17.6	15.1	14.6	15.9
4 years.....	42.3	38.8	48.4	44.7	41.7	49.9	46.5	44.3	50.1
College: 1 to 3 years.....	11.2	11.6	10.6	12.1	12.2	11.9	12.9	12.8	13.2
4 years or more.....	16.0	18.7	11.1	17.5	19.9	13.4	19.4	21.6	15.7
Median years of school completed.....	12.5	12.5	12.4	12.5	12.6	12.5	12.6	12.6	12.6
45 TO 54 YEARS									
Total: Number (in thousands).....	17,145	10,579	6,566	16,252	9,995	6,257	15,987	9,834	6,153
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	38.3	40.8	34.3	35.2	37.4	32.0	29.5	30.6	27.5
4 years of high school or more.....	61.7	59.2	65.7	64.7	62.6	68.0	70.6	69.4	72.5
Elementary: Less than 5 years ¹	2.9	3.6	1.8	2.4	3.1	1.4	1.9	2.4	1.1
5 to 7 years.....	6.4	7.1	5.2	5.5	6.3	4.3	4.1	4.6	3.2
8 years.....	9.4	10.5	7.6	7.9	8.9	6.3	5.8	6.3	4.9
High school: 1 to 3 years.....	19.6	19.6	19.7	19.4	19.1	20.0	17.7	17.3	18.3
4 years.....	38.3	33.2	46.5	39.4	34.4	47.4	43.3	39.2	49.7
College: 1 to 3 years.....	10.1	10.1	10.0	10.6	10.8	10.3	11.3	11.6	10.9
4 years or more.....	13.3	15.9	9.2	14.7	17.4	10.3	16.0	18.6	11.9
Median years of school completed.....	12.3	12.3	12.3	12.4	12.4	12.4	12.5	12.5	12.5
55 TO 64 YEARS									
Total: Number (in thousands).....	12,184	7,507	4,677	12,947	7,844	5,103	12,981	7,847	5,134
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	46.7	49.7	41.7	39.5	42.4	35.1	36.2	39.1	31.7
4 years of high school or more.....	53.4	50.3	58.4	60.5	57.6	64.8	63.8	60.9	68.3
Elementary: Less than 5 years ¹	3.6	4.6	2.0	2.8	3.6	1.5	2.3	3.0	1.2
5 to 7 years.....	8.7	9.1	8.0	6.7	7.2	5.8	5.7	6.4	4.5
8 years.....	14.7	15.6	13.2	10.8	11.7	9.5	8.7	9.7	7.2
High school: 1 to 3 years.....	19.7	20.4	18.5	19.2	19.9	18.3	19.5	20.0	18.8
4 years.....	33.2	29.7	38.8	37.8	33.3	44.7	38.3	33.0	46.5
College: 1 to 3 years.....	9.4	9.5	9.2	10.1	10.3	9.8	10.6	10.8	10.4
4 years or more.....	10.8	11.1	10.4	12.6	14.0	10.3	14.9	17.1	11.4

Table 2. Projected educational attainment of the civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985—Continued
[Percent distribution]

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Median years of school completed.....	12.1	12.0	12.2	12.3	12.2	12.3	12.4	12.3	12.4
65 YEARS AND OVER									
Total: Number (in thousands).....	3,129	2,042	1,087	3,268	2,090	1,178	3,403	2,145	1,258
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	58.9	62.2	52.6	53.1	56.6	47.0	47.0	50.7	40.8
4 years of high school or more.....	41.0	37.7	47.4	46.8	43.5	52.9	53.0	49.4	59.2
Elementary: Less than 5 years ¹	6.7	7.6	5.1	4.4	5.2	3.0	2.7	3.5	1.4
5 to 7 years.....	13.2	13.3	12.9	11.0	11.2	10.7	8.8	9.2	8.3
8 years.....	22.3	23.9	19.2	19.3	20.8	16.7	16.3	17.8	13.7
High school: 1 to 3 years.....	16.7	17.4	15.4	18.4	19.4	16.6	19.2	20.2	17.4
4 years.....	20.2	18.1	24.1	24.4	22.1	28.7	29.3	26.0	34.8
College: 1 to 3 years.....	9.1	7.7	11.8	9.9	8.7	12.1	10.5	9.6	12.2
4 years or more.....	11.7	11.9	11.5	12.5	12.7	12.1	13.2	13.8	12.2
Median years of school completed.....	10.4	9.9	11.8	11.5	11.0	12.1	12.1	11.9	12.3

¹ Includes persons reporting no formal education.

are expected to have completed at least 4 years of college. This continued differential only partially reflects the difference in the proportions of the male and female population 25 and over with 4 years or more of college education. In 1965, 12 percent of the adult male population and 7 percent of the adult women were college graduates. By 1985, these proportions are expected to rise to 18.6 and 12.5 percent, respectively. It cannot be argued that these differences reflect differences in opportunity exclusively. Many young women, anticipating a primary role as mothers and homemakers, may either decide to terminate their formal schooling upon graduating from high school, or may pursue less vocationally oriented courses of study if they do enter college. Others may perceive little economic advantage in completing a rigorous program of higher education, since relatively few highly paid positions have traditionally been open to women. Nevertheless, it is also true that many of the public benefits extended to college students have been largely focused on the men, such as veterans' educational benefits, or have been earmarked for subjects largely pursued by men, such as medicine. Furthermore, many families, if they are unable to fully support the higher education of all their children, may still give fuller support to the educational needs of their male offspring. Insofar as these latter considerations continue to operate, women may be said to enjoy fewer opportunities for higher education, quite apart from their own interests in such education.

The total adult civilian labor force (25 and over) is expected to increase at an annual average rate of 1.6 percent between 1965 and 1985. Over this same 20-year period, the corresponding average rates of increase in the number of high school and college graduates in the labor force will be 3.3 and 3.7 percent per year, respectively.

Among Negro workers, these differentials are even more striking. Their adult labor force is expected to increase at an average rate of 2.1 percent per year, while the numbers of both high school and college graduates are expected to increase at over 5 percent per year, on average.

One obvious implication of these rates of increase relates to the kinds of jobs that become available during this period. Whereas overall expansion in employment opportunity for these adult workers should be maintained at a rate of 1.6 percent per year, jobs for college graduates, providing both meaningful career opportunities and an opportunity to use the higher education that has been acquired, should rise at twice that rate. Even more pressing will be the demand of Negro workers for similar positions—a demand that will be supported by a 5-percent-per-year increase in the number of college graduates in this group.

Measurement of quality

There are three major limitations to be recognized in examining data on years of school completed in order to appraise the educational

attainment of the population or of the labor force. First, these data do not include education, training, or other learning experiences occurring outside the framework of formal schooling.⁴ Second, they do not reflect possible differences in both the quality of education received and the actual quantity of time spent in school—school years, measured in hours of instruction, have varied widely. Third, they do not provide information on the content of the learning, or on the current status of formal education, training, or skill which a person may once have possessed.

A recent estimate of the U.S. Office of Education indicates that some 30 million adults were engaged in "systematic, planned instructional programs" of some kind in 1968. These programs vary from basic education in the "three R's" for adults with less than 8 years of formal education to highly advanced courses for professionals and technicians seeking to refresh or update their specialized knowledge.⁵ Although some of these educational pursuits may lead to receipt of equivalency certificates, and thus be reflected in the data on years of school completed, the bulk of these activities are not included in the official estimates of formal educational attainment.

Information on the quality of schooling received and on the current status of acquired knowledge and training is glaringly deficient. Aside from a number of studies relating to particular schools or school systems, only two large-scale testing programs have been established for the purpose of obtaining representative data for the Nation as a whole: *Project Talent* and *The Equality of Educational Opportunity*.⁶ While the findings of these two surveys provide a wealth of insight into the factors influencing the quality of educational output, neither study has been designed to measure trends in the quality of education over time. In the absence of such longitudinal studies, it is difficult to distinguish the effect of school-centered factors, such as the quality of faculty, library facilities, or per-pupil expenditures, from that of environmental factors, such as possible changes in the community or in the demographic, social, and economic characteristics of families in the community. Furthermore, only longitudinal studies can provide an adequate assessment of educational "quality" in terms of the retention of learning and its use as a foundation for further educational development.⁷ The available data on years of school completed are subject to two important

biases: they tend to understate the actual educational attainment of adults who have supplemented their formal schooling in various ways, and they tend to overstate the educational attainment of those whose formal education took place in schools of inferior quality or under environmental conditions which inhibit learning. When statistics of educational attainment are viewed in the aggregate, these biases may be offsetting to some extent; but for particular population groups, these biases may introduce uncertainty as to the significance of reported data on "years of school completed."⁸

Need versus demand

Along with the general upgrading in the educational attainment of white and Negro workers, particularly the young new entrants to the labor force (see tables 3 and 4), there is a parallel upgrading in the expectations of employers with respect to the educational qualifications of those they seek to employ. Three conditions support a continuation of this parallel rise in demand for and supply of the better-educated workers. First, the supply is ensured by the increasing output of our ever-expanding educational system. Second, the interest of employers in accumulating personnel with the highest possible educational qualifications can be justified on the ground that such personnel are more readily adapted to changing job requirements, are more easily trained in a variety of tasks, and are generally more adaptable to positions of increasing responsibility. Finally, as the attainment of at least a high school diploma becomes more common among job-seekers, potential employers tend to view such attainment as a sign of minimum requisite competence for performing any job. The high school dropout is regarded as lacking not only the formal education of the graduates, but also the basic skills, attitudes, and motivations needed for adequate job performance. The outcome, except under very tight labor market conditions, is a situation in which the job applicant with limited formal education is not given equal consideration for available jobs, quite apart from the actual job requirements themselves.

Excessive reliance upon formal education as a requisite for acceptance into the world of work is not only inherently unjust to the millions of less-educated workers and potential workers who possess the need, desire, and basic competence to

Chart 1. Percent of persons in population and civilian labor force with 4 years of high school or more, by age and sex, selected years

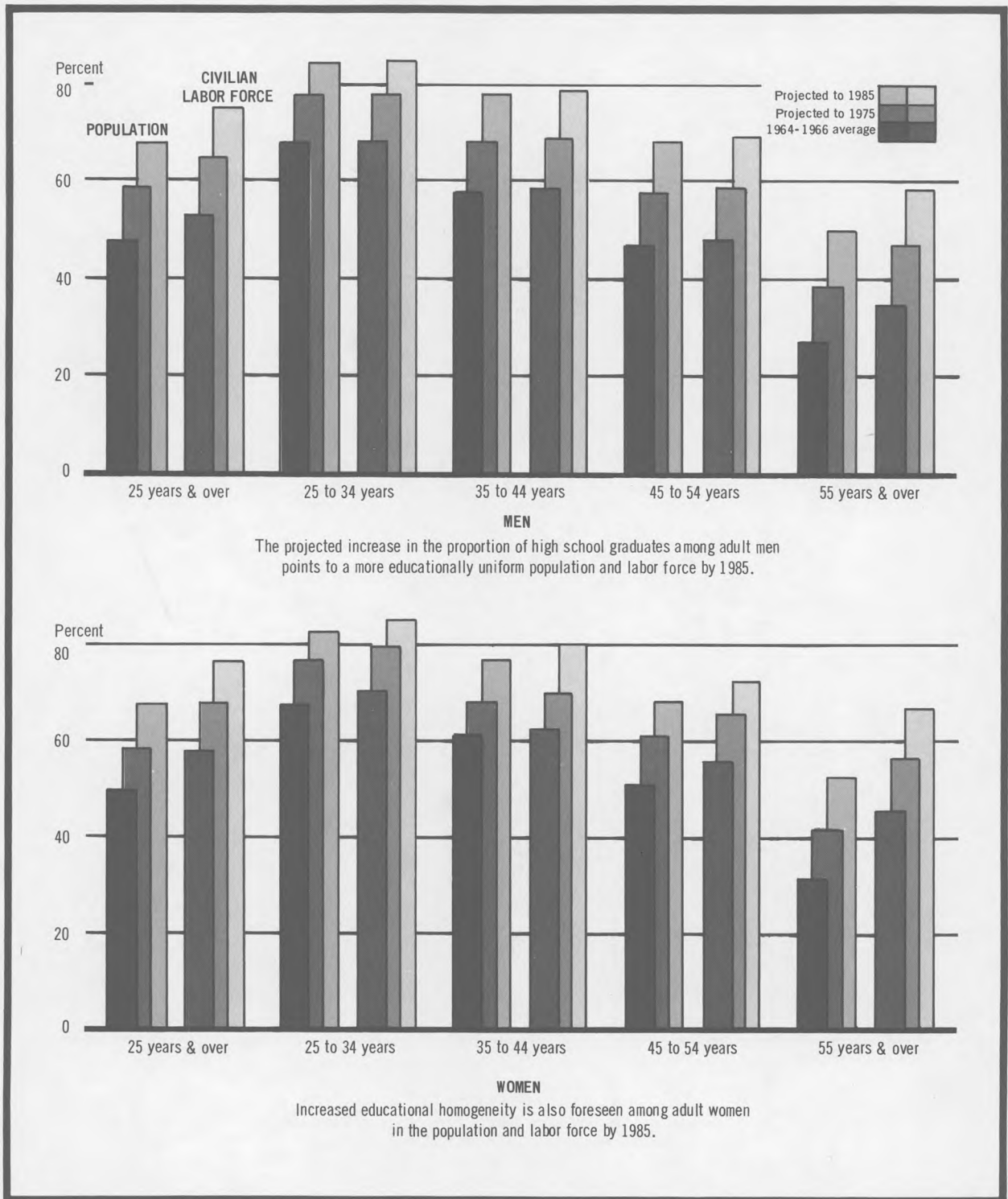


Chart 2. Percent of persons 25 and over in civilian labor force with 4 years of high school or more, by age, race, and sex, selected years

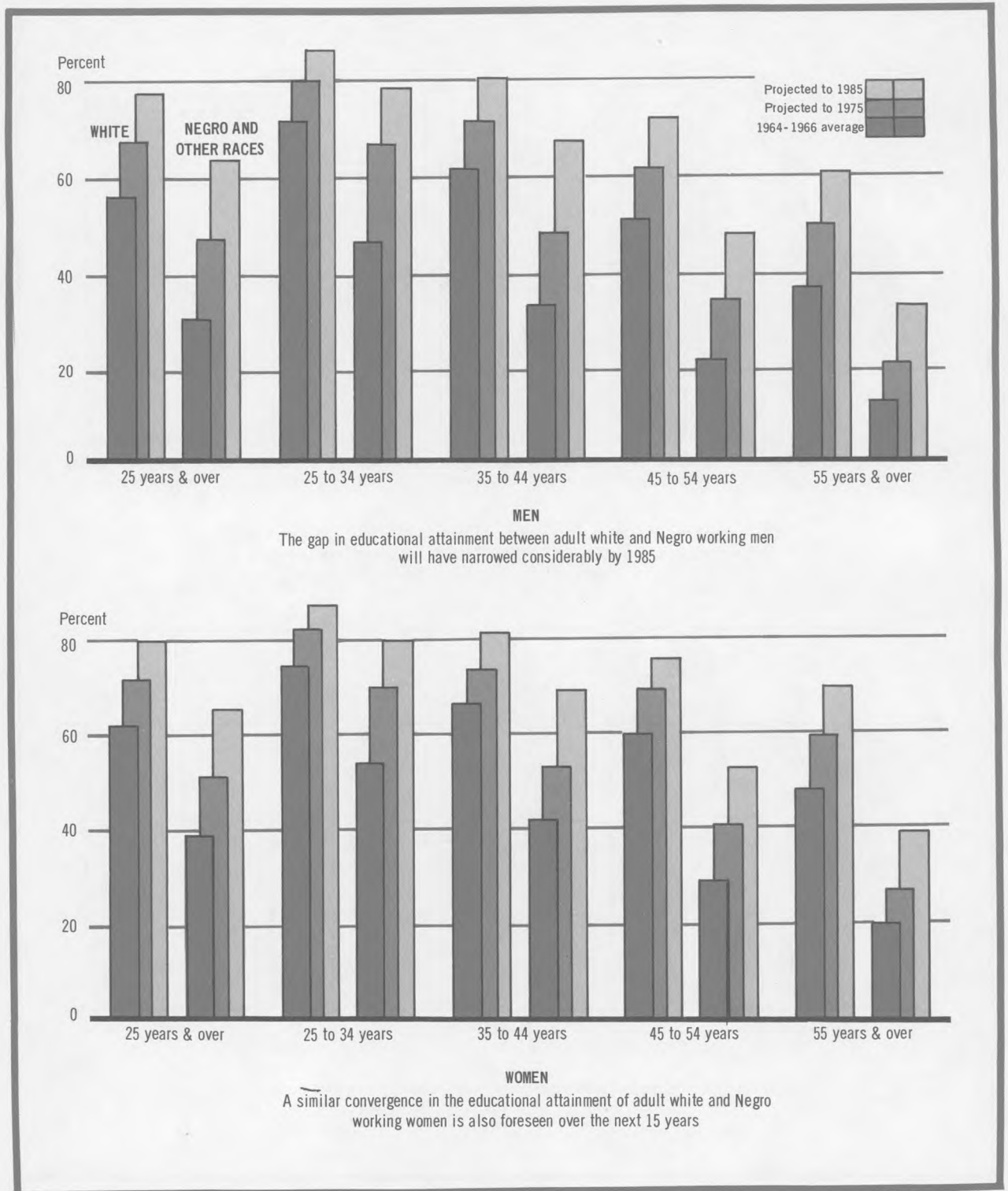
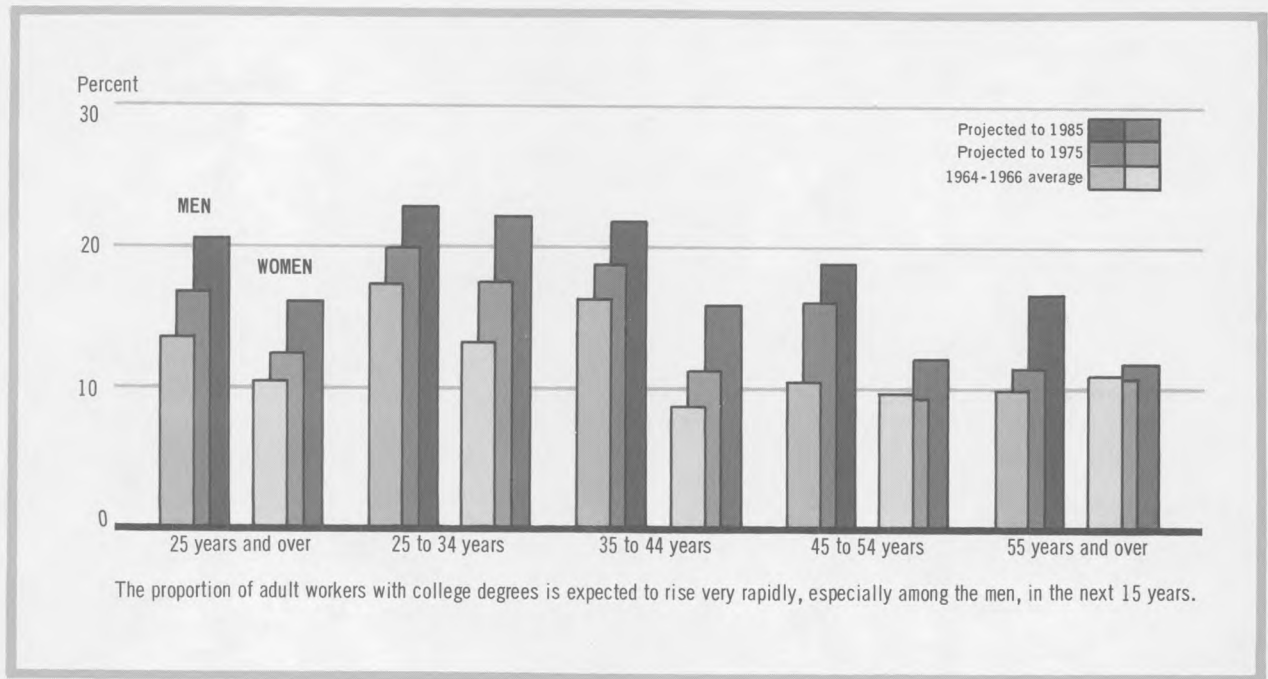


Chart 3. Percent of men and women 25 and over in civilian labor force with 4 years or more of college, by age, selected years



perform useful work; it is also unrealistic, given the nature of many of the jobs which need to be filled.⁹ The real needs of employees can best be met by a selective process which ensures an optimal matching of jobs and workers. This optimum can be missed just as easily by filling jobs with overqualified workers as by hiring underqualified workers. In fact, one of the essential ingredients of any rewarding job is precisely the challenge that accompanies the need to extend one's qualifications while actually performing the job itself.

On methodology

These projections were developed by a method that provides a systematic linkage with the educational projections, by age and sex, for the population as a whole, prepared by the Bureau of the Census.¹⁰ In the age groups where two series of educational distributions were developed (persons 25 to 34 in 1975, 25 to 39, in 1980, and 25 to 44 in 1985) the higher of the two series was adopted.

A. ALL CLASSES. The procedure for projecting the educational distribution of the adult labor force

was carried out in the following sequence.

Step 1. Percentage distributions of the population and of the civilian labor force by sex, for age groups 25 to 34, 35 to 44, 45 to 54, 55 to 64, and 65 and over were obtained for the following educational attainment categories: less than 5 years (including no school years completed), 5 to 7 years, 8 years, 9 to 11 years, 12 years, 13 to 15 years (1 to 3 years of college), and 16 years or more. These data were obtained from the March Current Population Surveys for two periods: (1) An average of 1957 and 1959; and (2) an average of 1964, 1965, and 1966.¹¹

Step 2. The differences in the observed educational distributions of the population and civilian labor force in corresponding age-sex groups were projected to 1985. These projected differences reflected observed trends, either converging or diverging; otherwise they were held constant.

Step 3. The projected differences—positive or negative—in step 2 were applied to the projected educational distributions for the population to obtain a first approximation of the projected educational attainment of the labor force for 1975, 1980, and 1985.

Step 4. The projected percent distributions by

Table 3. Projected educational attainment of the white civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985
[Percent distribution]

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
25 YEARS AND OVER									
Total: Number (in thousands).....	62,124	40,140	21,984	67,631	43,428	24,203	73,728	47,243	26,485
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	31.5	32.8	29.0	26.8	27.8	24.7	22.4	23.0	21.1
4 years of high school or more.....	68.5	67.1	71.1	73.4	72.2	75.3	77.7	76.9	78.9
Elementary: Less than 5 years ¹	1.8	2.1	1.1	1.3	1.6	.7	1.0	1.2	.6
5 to 7 years.....	4.6	5.0	3.8	3.4	3.7	2.7	2.5	2.8	2.0
8 years.....	8.1	8.7	7.0	6.1	6.6	5.2	4.4	4.7	3.7
High school: 1 to 3 years.....	17.0	17.0	17.1	16.0	15.9	16.1	14.5	14.3	14.8
4 years.....	41.0	37.7	46.9	43.2	40.2	48.6	45.0	42.6	49.2
College: 1 to 3 years.....	11.6	11.7	11.5	12.4	12.4	12.3	13.0	12.9	13.2
4 years or more.....	15.9	17.7	12.7	17.8	19.6	14.4	19.7	21.4	16.5
Median years of school completed.....	12.5	12.5	12.4	12.5	12.6	12.5	12.6	12.6	12.6
25 TO 34 YEARS									
Total: Number (in thousands).....	18,663	12,696	5,967	22,153	14,955	7,198	24,390	16,371	8,019
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	19.6	20.3	18.3	16.5	16.9	15.7	13.8	14.0	13.6
4 years of high school or more.....	80.3	79.7	81.6	83.5	83.1	84.3	86.1	86.1	86.4
Elementary: Less than 5 years ¹.....	.7	.9	.4	.6	.7	.3	.4	.5	.3
5 to 7 years.....	1.8	2.0	1.3	1.2	1.3	.8	.8	.9	.6
8 years.....	3.0	3.3	2.4	2.1	2.4	1.7	1.5	1.6	1.2
High school: 1 to 3 years.....	14.1	14.1	14.2	12.6	12.5	12.9	11.1	11.0	11.5
4 years.....	46.3	44.8	49.6	47.3	46.4	49.1	47.9	47.9	48.1
College: 1 to 3 years.....	13.9	13.9	13.8	14.4	14.3	14.8	14.8	14.4	15.5
4 years or more.....	20.1	21.0	18.2	21.8	22.4	20.4	23.4	23.8	22.8
Median years of school completed.....	12.7	12.7	12.6	12.7	12.7	12.7	12.8	12.8	12.8
35 TO 44 YEARS									
Total: Number (in thousands).....	14,164	9,151	5,013	16,256	10,414	5,842	20,292	12,966	7,326
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	27.9	28.4	27.1	23.7	24.3	22.5	19.8	19.8	19.4
4 years of high school or more.....	72.1	71.6	72.9	76.4	75.6	77.5	80.3	80.1	80.6
Elementary: Less than 5 years ¹	1.6	2.0	1.1	1.3	1.5	.8	.9	1.0	.5
5 to 7 years.....	3.9	4.3	3.0	2.7	3.1	2.0	1.8	2.0	1.4
8 years.....	5.6	6.1	4.8	4.2	4.5	3.6	3.0	3.2	2.6
High school: 1 to 3 years.....	16.8	16.0	18.2	15.5	15.2	16.1	14.1	13.6	14.9
4 years.....	43.7	39.8	50.7	45.5	42.1	51.5	46.7	44.3	51.0
College: 1 to 3 years.....	11.7	12.1	10.9	12.5	12.6	12.2	13.3	13.1	13.5
4 years or more.....	16.7	19.7	11.3	18.4	20.9	13.8	20.3	22.7	16.1
Median years of school completed.....	12.5	12.5	12.3	12.6	12.6	12.5	12.6	12.7	12.6
45 TO 54 YEARS									
Total: Number (in thousands).....	15,365	9,567	5,798	14,491	8,997	5,494	14,214	8,816	5,398
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	35.5	38.2	31.0	32.4	34.6	28.8	26.8	28.2	24.6
4 years of high school or more.....	64.6	61.8	69.1	67.6	65.4	71.2	73.2	71.9	75.3
Elementary: Less than 5 years ¹	2.2	2.7	1.4	1.8	2.3	1.1	1.6	2.0	.9
5 to 7 years.....	5.2	6.0	3.7	4.5	5.3	3.2	3.5	4.0	2.6
8 years.....	9.2	10.4	7.3	7.6	8.7	5.8	5.4	6.1	4.3
High school: 1 to 3 years.....	18.9	19.1	18.6	18.5	18.3	18.7	16.3	16.1	16.8
4 years.....	40.0	34.6	48.9	41.0	35.6	49.8	44.7	40.3	51.8
College: 1 to 3 years.....	10.5	10.4	10.6	11.0	11.2	10.7	11.8	12.1	11.3
4 years or more.....	14.1	16.8	9.6	15.6	18.6	10.7	16.7	19.5	12.2
Median years of school completed.....	12.4	12.3	12.4	12.4	12.4	12.4	12.5	12.5	12.5
55 TO 64 YEARS									
Total: Number (in thousands).....	11,069	6,853	4,216	11,742	7,147	4,595	11,720	7,124	4,596
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	43.9	47.2	38.5	36.8	40.0	31.9	33.4	36.5	28.6
4 years of high school or more.....	56.1	52.8	61.5	63.2	60.2	68.1	66.5	63.4	71.5
Elementary: Less than 5 years ¹	2.4	3.2	1.2	1.7	2.4	.7	1.6	2.1	.8
5 to 7 years.....	7.3	7.9	6.2	5.4	6.1	4.3	4.6	5.4	3.4
8 years.....	14.6	15.7	12.8	10.7	11.7	9.1	8.5	9.6	6.8
High school: 1 to 3 years.....	19.6	20.4	18.3	19.0	19.8	17.8	18.7	19.4	17.6
4 years.....	35.0	31.3	41.0	39.5	34.6	47.1	39.8	34.2	48.6
College: 1 to 3 years.....	9.8	9.9	9.7	10.5	10.7	10.3	11.0	11.1	10.9
4 years or more.....	11.3	11.6	10.8	13.2	14.9	10.7	15.7	18.1	12.0
Median years of school completed.....	12.2	12.1	12.3	12.3	12.3	12.4	12.4	12.4	12.4

Table 3. Projected educational attainment of the white civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985—Continued
[Percent distribution]

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Male	Both sexes	Male	Female
65 YEARS AND OVER									
Total: Number (in thousands).....	2,863	1,873	990	2,989	1,915	1,074	3,112	1,966	1,146
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	56.7	60.3	49.8	50.5	54.3	43.9	44.5	48.4	37.7
4 years of high school or more.....	43.3	39.7	50.2	49.4	45.7	56.0	55.5	51.7	62.2
Elementary: Less than 5 years ¹	4.6	5.2	3.4	2.4	2.9	1.7	1.4	1.9	6
5 to 7 years.....	12.2	12.4	11.6	9.6	10.0	8.8	7.5	8.1	6.5
8 years.....	22.9	24.8	19.5	19.8	21.5	16.9	16.4	18.0	13.5
High school: 1 to 3 years.....	17.0	17.9	15.3	18.7	19.9	16.5	19.2	20.4	17.1
4 years.....	21.2	19.0	25.5	25.9	23.3	30.4	30.8	27.4	36.6
College: 1 to 3 years.....	9.7	8.2	12.5	10.4	9.1	12.8	11.0	10.0	12.8
4 years or more.....	12.4	12.5	12.2	13.1	13.3	12.8	13.7	14.3	12.8
Median years of school completed.....	10.8	10.3	12.0	11.9	11.4	12.2	12.2	12.1	12.3

¹ Includes persons reporting no formal education.

years of school completed were then applied to the previously projected civilian labor force totals for each age-sex group. The resultant numbers were then divided by the corresponding population numbers to obtain a labor force participation rate for the population in each age, sex, and educational attainment category for the periods 1957-59, 1964-65-66, 1975, 1980, and 1985.

Step 5. The labor force participation rates obtained in step 4 for 1975, 1980, and 1985 were then adjusted by introducing minor changes in the educational distribution of particular age-sex groups wherever necessary to maintain consistency with observed trends in their participation rates in 1957-59 and 1964-65-66.

B. NEGRO AND OTHER RACES (EXCEPT WHITE). Information from the Current Population Survey on the educational attainment of the population and civilian labor force, by color, is not available prior to March 1964. Furthermore, the projections of educational attainment of the population prepared by the Bureau of the Census are not available for whites and for Negro and other races separately. It was therefore decided to prepare a set of projections of the educational attainment for the "Negro and other" group, by age and sex, to 1985 as a preliminary step in developing a similar projection for the Negro civilian labor force. This was the procedure:

Step 1. The percent distribution of the educational attainment of "All Classes" (whites combined with Negro and other races) and of the "Negro and other" group, for both the popu-

lation and the civilian labor force 25 years old and over, by age and sex, was recorded for the following two periods: (1) An average of March 1964, 1965, and 1966, and (2) an average of March 1967, 1968, and 1969.¹²

Step 2. Observed trends in the differences in the educational distributions of the two population groups were projected to 1985 and applied to the Census Bureau projection of educational attainment of the total population, by age and sex, to obtain a corresponding distribution for the Negro population.

Step 3. Using the projected educational distribution of the Negro population as a guide, a corresponding projection for the civilian labor force was developed as described above for the "All classes" group, steps 2 to 5.

Step 4. Corresponding distributions for the white civilian labor force were obtained by subtracting the number of Negroes in the civilian labor force, by age, sex, and educational attainment category, from the corresponding numbers in "All classes," for 1975, 1980, and 1985.

The projections for Negroes are based upon a very brief time series of actual data (1964 to 1969). Furthermore, these observations are subject to considerable sampling variability because of the small frequencies encountered in many of the cells. For these reasons, among others, the educational attainment projections for the "Negro and other" group are inherently less reliable than those for the labor force as a whole. Some evidence of this instability has been obtained by making intra-cohort comparisons of the reported educational

Table 4. Projected educational attainment of the Negro and other races civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985

[Percent distribution]

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
25 YEARS AND OVER									
Total: Number (in thousands).....	7,679	4,573	3,106	8,696	5,237	3,459	9,916	6,039	3,877
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	51.7	53.1	49.6	44.0	44.6	42.9	36.3	36.6	35.6
4 years of high school or more.....	48.3	46.8	50.4	56.1	55.4	57.1	63.8	63.4	64.4
Elementary: Less than 5 years ¹	7.2	9.3	4.1	5.4	6.8	3.3	3.4	4.4	1.8
5 to 7 years.....	11.5	11.7	11.3	8.7	8.9	8.4	5.8	5.9	5.5
8 years.....	8.8	8.6	9.0	6.7	6.5	6.9	5.1	4.9	5.4
High school: 1 to 3 years.....	24.2	23.5	25.2	23.2	22.4	24.3	22.0	21.4	22.9
4 years.....	31.2	29.8	33.2	36.3	35.9	37.0	40.5	40.3	40.8
College: 1 to 3 years.....	8.1	8.0	8.2	9.3	9.1	9.5	10.5	10.3	10.7
4 years or more.....	9.0	9.0	9.0	10.5	10.4	10.6	12.8	12.8	12.9
Median years of school completed.....	11.8	11.6	12.0	12.2	12.2	12.2	12.3	12.3	12.4
25 TO 34 YEARS									
Total: Number (in thousands).....	2,638	1,643	995	3,321	2,099	1,222	3,874	2,469	1,405
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	32.5	33.5	30.5	26.4	26.9	25.3	21.4	21.8	20.7
4 years of high school or more.....	67.7	66.5	69.5	73.6	73.0	74.6	78.5	78.2	79.3
Elementary: Less than 5 years ¹	2.2	2.9	.9	1.6	2.0	.7	1.1	1.4	.5
5 to 7 years.....	3.7	4.0	3.1	2.3	2.4	2.1	1.4	1.5	1.3
8 years.....	3.8	3.8	3.7	2.6	2.6	2.5	1.7	1.7	1.8
High school: 1 to 3 years.....	22.8	22.8	22.8	19.9	19.9	20.0	17.2	17.2	17.1
4 years.....	45.0	44.6	45.5	47.4	47.6	46.9	49.0	49.6	48.0
College: 1 to 3 years.....	11.1	10.8	11.6	12.3	11.9	13.0	13.2	12.8	14.0
4 years or more.....	11.6	11.1	12.4	13.9	13.5	14.7	16.3	15.7	17.3
Median years of school completed.....	12.4	12.4	12.4	12.5	12.5	12.5	12.6	12.6	12.6
35 TO 44 YEARS									
Total: Number (in thousands).....	1,880	1,095	785	2,130	1,268	862	2,717	1,650	1,067
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	50.2	52.0	47.8	40.9	41.6	40.1	32.2	32.6	31.3
4 years of high school or more.....	49.8	48.0	52.4	59.1	58.4	60.0	67.9	67.4	68.6
Elementary: Less than 5 years ¹	4.4	6.0	2.2	2.5	3.4	1.3	2.1	2.8	.9
5 to 7 years.....	9.3	10.7	7.3	6.2	7.0	5.1	3.6	3.8	3.2
8 years.....	8.6	8.2	9.2	5.6	5.5	5.7	3.7	3.6	3.9
High school: 1 to 3 years.....	27.9	27.1	29.1	26.6	25.7	28.0	22.8	22.4	23.3
4 years.....	31.7	30.0	34.1	39.0	38.5	39.7	44.6	44.6	44.6
College: 1 to 3 years.....	8.0	7.6	8.7	9.1	8.7	9.6	10.5	10.2	10.9
4 years or more.....	10.1	10.4	9.6	11.0	11.2	10.7	12.8	12.6	13.1
Median years of school completed.....	12.0	11.8	12.1	12.2	12.2	12.3	12.4	12.4	12.4
45 TO 54 YEARS									
Total: Number (in thousands).....	1,780	1,012	768	1,761	998	763	1,773	1,018	755
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	63.0	65.8	59.6	59.1	62.5	54.8	50.2	52.0	47.7
4 years of high school or more.....	36.9	34.2	40.5	40.8	37.4	45.2	49.8	48.0	52.4
Elementary: Less than 5 years ¹	9.0	12.3	4.7	7.6	10.4	3.9	4.3	5.9	2.3
5 to 7 years.....	16.7	17.1	16.2	13.8	12.2	12.2	8.9	10.1	7.2
8 years.....	11.1	11.9	10.2	10.4	11.0	9.7	8.5	8.2	8.9
High school: 1 to 3 years.....	26.2	24.5	28.5	27.3	26.0	29.0	28.5	27.8	29.3
4 years.....	23.5	19.9	28.3	26.5	23.6	30.3	31.7	29.6	34.6
College: 1 to 3 years.....	6.6	7.1	5.9	7.0	6.8	7.2	7.7	7.5	8.1
4 years or more.....	6.8	7.2	6.3	7.3	7.0	7.7	10.4	10.9	9.7
Median years of school completed.....	10.5	10.1	11.0	11.0	10.6	11.5	12.0	11.8	12.1
55 TO 64 YEARS									
Total: Number (in thousands).....	1,115	654	461	1,205	697	508	1,261	723	538
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	74.2	76.7	70.9	66.4	67.8	64.7	61.9	64.3	58.7
4 years of high school or more.....	25.8	23.4	29.1	33.6	32.2	35.3	38.2	35.8	41.2
Elementary: Less than 5 years ¹	15.4	19.6	9.5	13.1	16.1	9.1	8.6	11.5	4.8
5 to 7 years.....	22.6	21.3	24.5	19.0	18.8	19.3	15.3	16.0	14.3
8 years.....	15.7	15.0	16.7	12.7	12.1	13.6	11.3	11.5	11.0
High school: 1 to 3 years.....	20.5	20.8	20.2	21.6	20.8	22.7	26.7	25.3	28.6
4 years.....	15.2	13.0	18.2	21.6	20.2	23.5	24.1	20.9	28.4
College: 1 to 3 years.....	4.8	4.9	4.6	6.0	6.3	5.5	7.0	7.6	6.1
4 years or more.....	5.8	5.5	6.3	6.0	5.7	6.3	7.1	7.3	6.7

Table 4. Projected educational attainment of the Negro and other races civilian labor force 25 years old and over, by age and sex, 1975, 1980, and 1985—Continued

Age and years of school completed	1975			1980			1985		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Median years of school completed.....	8.8	8.6	8.9	9.7	9.4	10.1	10.7	10.3	11.1
65 YEARS AND OVER									
Total: Number (in thousands).....	266	169	97	279	175	104	291	179	112
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 4 years of high school ¹	83.5	84.6	81.3	80.9	82.3	78.8	74.1	75.9	71.0
4 years of high school or more.....	16.6	15.4	18.8	19.0	17.7	21.1	26.0	24.0	28.9
Elementary: Less than 5 years ¹	30.2	34.9	21.9	25.4	30.9	16.7	16.3	21.2	9.6
5 to 7 years.....	24.2	23.1	26.0	26.5	24.6	29.8	23.2	21.2	26.3
8 years.....	15.5	14.8	16.7	13.6	13.1	14.4	15.4	15.6	14.9
High school: 1 to 3 years.....	13.6	11.8	16.7	15.4	13.7	18.3	18.8	17.9	20.2
4 years.....	9.1	8.3	10.4	9.3	8.0	11.5	13.3	11.2	16.7
College: 1 to 3 years.....	3.0	2.4	4.2	4.3	4.0	4.8	5.5	5.0	6.1
4 years or more.....	4.5	4.7	4.2	5.4	5.7	4.8	7.2	7.8	6.1
Median years of school completed.....	7.4	6.9	8.1	7.8	7.4	8.3	8.6	8.5	8.9

¹ Includes persons reporting no formal education.

attainment of two cohort groups in the population, by color and sex, as obtained in the Current Population Surveys of March 1964 and March 1969. The first cohort group comprises persons age 20 to 24 in March 1964—a group whose educational attainment would be expected to increase somewhat during the following 5-year period to March 1969, when it would be age 25 to 29 years. During this 5-year period, white men reported an overall educational upgrading of 13.2 percentage points, while Negro men reported an upgrading of 10.4 percentage points. Nearly all of the improvement among the whites stemmed from a reduction in the proportion reporting 1 to 3 years of college and a corresponding rise in the proportion reporting completion of 4 years or more of college. Among Negro men the upgrading was about evenly divided between those who reported completion of 4 years of high school and those who reported completion of 4 years or more of college. Corresponding upgrading among white and Negro women was distributed similarly and amounted to 6.7 and 7.3 percentage points, respectively. The magnitude and direction of changes reported among both color groups for this cohort

are generally in line with expectations.

For the cohort age 25 to 29 in 1964, a different picture emerges. As this group ages over the 5-year period to 1969, we would expect relatively minor changes in its reported educational attainment. Since most adults in this age group who are still engaged in regular schooling would be college graduates pursuing advanced degrees, their attainment of these degrees would not alter their original classification in the "4 years or more of college" group. This expected stability was found among white men and women, who reported a net change of only 2.8 and 2.1 percentage points, respectively, during this 5-year period. Among the "Negro and other" group, however, the reported net change amounted to 9.2 and 10.9 percentage points, respectively. In each case, the largest reported increase was in the percentage with 9 to 11 years of school completed. Taken at face value, these findings suggest that Negroes may be taking far more advantage than whites of available opportunities for adult education. However, the finding that this upgrading is greater among the 25 to 34 group than among the 20 to 29 group suggests some reported upgrading may be spurious.¹³ □

FOOTNOTES

¹ In this report, data for the grouping, "Negro and other races," are used to represent data for Negroes, since Negroes constitute about 92 percent of all persons in the grouping. In addition to Negroes, the grouping includes American Indians, Filipinos, Chinese, and Japanese, among others.

² The stability of the median educational attainment of any group, once it reaches 12 years, reflects the fact that this attainment level is the terminal point for the formal education of many persons.

³ For information on the continuing erosion of the labor

force activity of less-educated older males, see Denis F. Johnston, "Education and the Labor Force," and Charles C. Killingsworth, "The Continuing Labor Market Twist," *Monthly Labor Review*, September 1968, pp. 1-11 and 12-17 respectively.

⁴ John K. Folger and Charles B. Nam, *Education of the American Population* (Washington, U.S. Government Printing Office, 1967), p. 135.

⁵ J. Eugene Welden, "30 Million Adults Go to School," in *American Education*, November 1969 (vol. 5, no. 9), pp. 11-13.

⁶ John C. Flanagan and others, *Studies of the American High School*, Project Talent Monograph Series (Pittsburgh, Pa., University of Pittsburgh, 1962). James S. Coleman and others, *Equality of Educational Opportunity* (Washington, U.S. Government Printing Office, 1966). For an excellent summary of this study, see James S. Coleman, "Equality of Educational Opportunity, Reexamined," *Socio-Economic Planning Sciences* (vol. 2, 1969), pp. 347-354.

⁷ For a critical summary of recent efforts at assessing the quality of education, see Abbott L. Ferriss, *Indicators of Trends in American Education* (New York, Russell Sage Foundation, 1969), pp. 87-99.

⁸ Considerable evidence has been accumulating to the effect that schooling in communities whose inhabitants are predominantly of low socioeconomic status tends to be decidedly inferior in quality, regardless of the racial composition of the student body. See, for example, James S. Coleman and others, op. cit., p. 296 and Alan B. Wilson, *The Consequences of Segregation; Academic Achievement in a Northern Community* (Berkeley, Calif., The Glendessary Press, March 1969).

⁹ See *Credentials and Common Sense; Jobs for People Without Diplomas*, Manpower Report No. 13 (Washington, Manpower Administration, U.S. Department of Labor,

December 1968.)

¹⁰ *Projections of Educational Attainment, 1970 to 1985, March 1968, Current Population Reports, Series P-25, No. 390* (U.S. Bureau of the Census).

¹¹ Current Population Survey data on the educational attainment of the population are presented in *Current Population Reports, Series P-20, No. 77* (for March 1957); No. 99 (for March 1959); No. 138 (for March 1964); and No. 158 (for March 1965 and 1966) (U.S. Bureau of the Census). The civilian labor force data are presented in *Current Population Reports, Series P-50, No. 78* (for March 1957) and Special Labor Force Report No. 1 (for March 1959); No. 53 (for March 1964); No. 65 (for March 1965); and No. 83 (for March 1966), (Bureau of Labor Statistics). These reports were reprinted, with additional tables, from the *Monthly Labor Review*, February 1960, May 1965, March 1966, and June 1967, respectively.

¹² Current Population Survey data on the educational attainment of the population by race are presented in the reports cited in the preceding footnote and in *Current Population Reports, Series P-20, Nos. 169, 182, and 194* for 1967, 1968, and 1969, respectively. Data for the civilian labor force may be obtained in Special Labor Force Report No. 92 and 103 (for 1967 and 1968, respectively), reprinted from the *Monthly Labor Review*, February 1968 and February 1969 (Bureau of Labor Statistics). Data for March 1969 are from unpublished tabulations for a report in preparation.

¹³ This differential upgrading has also been observed by Reynolds Farley, "The Quality of Demographic Data for Nonwhites," *Demography* (vol. 5, No. 1, 1968), pp. 1-10. Dr. Farley notes that as a cohort ages, the years of school completed reported for that cohort increases more rapidly for nonwhites than for whites. He suggests that this increase may be attributed to both overreporting of educational attainment and to selective mortality in the "Negro and other" group.

Differences in salary and type of college

As far as salaries are concerned, there is a surprisingly low correspondence between type of college and earnings 5 years later. Age at that stage in life seems to play a much greater role in predicting salary than does one's alma mater. . . . On the whole, differences in salary appear to depend more on the occupation itself than on the institution which prepared the graduate for the occupation. In the long run, the salary differentials between graduates in the same field but from different institutions may widen as more professional and graduate degree holders fill the labor force.

But from the vantage point of 5 years after college, it appears that the expansion in higher education and the unprecedented demand for college graduates has greatly narrowed the earnings gap between those who went to the most prestigious schools and those who got their education in less exclusive surroundings.

—LAURE M. SHARP,

Education and Employment: The Early Careers of College Graduates

(Baltimore, John Hopkins Press, 1970), pp. 110-111.

Special Labor Force Report,
based on May 1969 survey,
shows that half take
second jobs to meet
current bills or pay debts

VERA C. PERRELLA

Moonlighters: their motivations and characteristics

MULTIPLE JOBHOLDERS—moonlighters—are an important, though small, element in the work force. They have been a fairly steady segment of the employed population during the period between 1956 and 1969, both numerically and as a percent of all employed persons. The number of persons who hold down more than one job has ranged between 3 and 4 million, and the multiple jobholding rate has ranged between 4.5 percent and 5.7 percent. The rate for men has been roughly 3 times that for women. (See box.)

This article deals with information obtained from the May 1969 supplement to the monthly survey of the labor force about reasons for moonlighting, degree of attachment to moonlighting, personal characteristics of multiple jobholders, and occupations, industries, and hours worked on primary and secondary jobs.¹ A brief discussion of some economic and social aspects of moonlighting is included.

Major results

Four million workers held two jobs or more in May 1969. These moonlighters constituted 5.2 percent of all employed persons. The number of moonlighters was 370,000 higher than at the time of the last survey in May 1966, and the multiple jobholding rate increased somewhat. For men, the rate rose to 6.9 percent from 6.4 percent; however, the women's rate, 2.3 percent, was not significantly different. (See table 1.)

The net increase in the number of moonlighters was entirely among workers who were nonfarm wage and salary employees in their primary and secondary jobs. In May 1969, almost 60 percent of the moonlighters were nonfarm wage and salary

employees in both their first and second jobs. Close to 25 percent worked in agriculture in at least one of their jobs, most often as wage and salary workers off the farm on the first job and as self-employed farmers on the second (table 2).

Moonlighting was much more common among men than women. White men had a slightly higher multiple jobholding rate than Negro² men, but among women there was no difference in rates by color.

Reasons for multiple jobholding

It is generally assumed that the overriding reason people take on more than one job is financial necessity. Also, there is some speculation as to whether an appreciable proportion of moonlighters

Survey definitions

For purposes of this survey, multiple jobholders are defined as those employed persons who, during the survey week, (1) had jobs as wage or salary workers with two employers or more, (2) were self-employed and also held wage or salary jobs, or (3) worked as unpaid family workers but also had secondary wage or salary jobs. The primary job is the one at which the greatest number of hours were worked. Also included as multiple jobholders are persons who had two jobs during the survey week only because they were changing from one job to another. This group is very small—only 1 percent of all multiple jobholders in May 1969.

Persons employed only in private households (as a maid, laundress, gardener, babysitter, and so on) who worked for two employers or more during the survey week were not counted as multiple jobholders. Working for several employers was considered an inherent characteristic of private household work rather than an indication of multiple jobholding. Also excluded were self-employed persons with additional farms or businesses, and persons with second jobs as unpaid family workers.

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Table 1. Employed persons with two jobs or more, by sex, 1956-69

Month and year	Persons with two jobs or more			
	Number (thousands)	Multiple jobholding rate ¹		
		Both sexes	Men	Women
May 1969.....	4,008	5.2	6.9	2.3
May 1966.....	3,636	4.9	6.4	2.2
May 1965.....	3,756	5.2	6.7	2.3
May 1964.....	3,726	5.2	6.9	2.1
May 1963.....	3,921	5.7	7.4	2.4
May 1962.....	3,342	4.9	6.4	2.0
December 1960 ²	3,012	4.6	5.9	2.0
December 1959.....	2,966	4.5	5.8	2.0
July 1958.....	3,099	4.8	6.0	2.2
July 1957.....	3,570	5.3	6.6	2.5
July 1956.....	3,653	5.5	6.9	2.5

¹ Multiple jobholders as percent of all employed persons.

² Data for Alaska and Hawaii included beginning 1960.

have only casual attachment to their moonlighting jobs. Information on these two aspects of moonlighting was obtained on a nationwide scale for the first time in May 1969, when persons with 2 jobs or more were asked their main reason for moonlighting, whether they had worked at more than one job in every one of the 4 weeks prior to the survey, and in how many of the 12 months prior to May 1969 they had worked on their secondary jobs.

Although statements about motivation must be interpreted cautiously, information on the reasons why people take on extra jobs has significance. Four out of every 10 moonlighters said their main reason for moonlighting was to meet regular household expenses for food, clothing, utilities, and

rent. One out of 10 said paying off debts was his main reason (table 3). Another 1 in 10 said he was holding a second job mainly to save for the future. The rest of the moonlighters gave a wide variety of reasons, such as getting experience in a different occupation, building up a business, liking the work, needing money for extras, and helping out friends or relatives who needed work done.

A greater proportion of the Negro than of the white moonlighters gave meeting regular household expenses as the main reason. Among the white moonlighters, the same proportion of men and women gave meeting regular expenses; among the black, this reason was given by an appreciably higher proportion of the women than of the men. Three-fourths of the Negro women who were moonlighters worked at a second job for this reason.

Men and women 25 years old and over were considerably more likely to give the need to meet regular household expenses as the main reason than were younger people. The younger men and women are more often single and less likely to have family responsibilities. Paying off debts, saving for the future, and getting experience were more important among the younger moonlighters, decreasing in importance as age increased. This finding accords with the normal pattern of the various stages of career and family phasing linked to age.

There was generally a direct relationship between earnings and the proportion of multiple

Table 2. Type of industry and class of worker of primary and secondary jobs, for persons with two jobs or more, May 1969

[Numbers in thousands]

Type of industry and class of worker of primary job	Total employed	Persons with two jobs or more		Type of industry and class of worker of secondary job					
		Number	Percent of total employed	Agriculture			Nonagricultural industries		
				Total	Wage and salary workers	Self-employed workers	Total	Wage and salary workers	Self-employed workers
Total.....	77,264	4,008	5.2	723	121	602	3,285	2,698	587
Agriculture.....	3,893	273	7.0	57	41	16	216	210	6
Wage and salary workers.....	1,284	75	5.8	38	22	16	37	31	6
Self-employed workers.....	1,962	167	8.5	13	13	(1)	154	154	(1)
Unpaid family workers.....	647	31	4.8	6	6	(2)	25	25	(2)
Nonagricultural industries.....	73,371	3,735	5.1	666	80	586	3,069	2,488	581
Wage and salary workers.....	67,536	3,568	5.3	661	75	586	2,907	2,326	581
Self-employed workers.....	5,264	162	3.1	5	5	(1)	157	157	(1)
Unpaid family workers.....	571	5	.9	-----	-----	(2)	5	5	(2)

¹ Self-employed persons with a secondary business or farm, but no wage or salary job, were not counted as multiple jobholders.

² Persons whose primary job was as an unpaid family worker were counted as mul-

tiple jobholders only if they also held a wage or salary job.

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

Table 3. Main reason for working at two jobs or more, by age, sex, color, and marital status, May 1969

Characteristic	Total		Main reason for working at two jobs or more				
	Number (thousands)	Percent	Meet regular expenses	Pay off debts	Save for the future	Get experience ¹	Other ²
Both sexes, total.....	4, 008	100. 0	40. 0	8. 8	13. 4	8. 0	29. 8
White.....	3, 640	100. 0	38. 2	8. 8	13. 5	8. 2	31. 2
Negro and other races.....	368	100. 0	58. 6	9. 3	11. 4	5. 4	15. 3
Men, total.....	3, 350	100. 0	39. 6	9. 2	14. 2	8. 4	28. 6
White.....	3, 059	100. 0	38. 2	9. 1	14. 2	8. 6	29. 9
Negro and other races.....	291	100. 0	54. 8	10. 3	13. 4	5. 9	15. 5
16 to 24 years.....	395	100. 0	27. 1	13. 9	15. 9	8. 1	34. 9
25 to 44 years.....	1, 824	100. 0	41. 2	10. 3	14. 5	9. 6	24. 5
45 years and over.....	1, 131	100. 0	41. 5	5. 8	12. 9	6. 5	33. 2
Married, wife present.....	2, 922	100. 0	42. 5	8. 9	13. 6	8. 4	26. 7
Women, total.....	658	100. 0	42. 2	7. 0	9. 3	5. 9	35. 6
White.....	581	100. 0	38. 1	7. 2	10. 0	6. 2	38. 4
Negro and other races.....	77	100. 0	72. 7	5. 2	3. 9	3. 9	14. 3
16 to 24 years.....	135	100. 0	17. 8	11. 1	14. 1	11. 9	45. 2
25 to 44 years.....	271	100. 0	48. 1	7. 4	8. 1	5. 9	30. 4
45 years and over.....	252	100. 0	48. 8	4. 4	7. 9	2. 8	36. 1
Married, husband present.....	309	100. 0	44. 2	5. 8	7. 4	6. 5	36. 1

¹ Including persons who said their main reason was to get experience in a different occupation or to build up a business.

² Includes such reasons as liking the work done on secondary job, needing money for

extras, and helping out friends or relatives. Also included are a small number of persons who changed jobs during the week.

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

jobholders who reported they were holding a second job to meet regular household expenses. For example, among the moonlighting men who had usual wage or salary earnings of less than \$100 a week, about one-half gave this as the main reason, compared with about one-third of the men earning \$150 a week or more. The men earning \$150 or more were more likely to report saving for the future or to get experience at a new job or business.

Frequency of moonlighting

Moonlighters apparently have more than a casual attachment to working at more than 1 job. In May 1969, 7 out of 10 moonlighters had worked at both their main and extra jobs in each of the 4 weeks preceding the survey (table 4), and almost half of all the moonlighters had worked at both jobs in all 12 months in the year preceding May 1969 (table 5). Another 18 percent had moonlighted in at least 7 to 11 of those months.

There was no significant difference between men and women, nor between whites and Negroes, in the proportions who worked in each of the preceding 4 weeks. With respect to age, there was no difference for women, but the men 25 years old

and over, most of whom were married, were more likely than the younger men to have worked in each of the preceding 4 weeks. The moonlighters who had worked at both their primary and secondary jobs in each of the preceding 4 weeks were twice as likely to have moonlighted in all 12 months as those who had not worked in each of the weeks. Moonlighting in each of the 4 weeks prior to the survey was just as common (75 percent) among those who were moonlighting to save for the future or to get experience as it was for those who were doing it to meet regular household expenses or pay off debts. Moonlighting in each of the 4 weeks or in all 12 months was more common among those whose second jobs were in agriculture than those whose second jobs were in nonagricultural industries, and among those who were self-employed than those who were wage or salary workers, on second jobs.

The proportion of moonlighters who worked in all 12 months at their second jobs was not directly related to earnings. Among male moonlighters who were wage or salary workers on their first jobs, 54 percent of those with weekly earnings of \$150 or more on their primary jobs moonlighted in each of the preceding 12 months, compared with only 28 percent of those who

earned less than \$60. This does not appear to agree with the finding that the lower earners were more likely to moonlight to meet regular expenses. Several factors may underlie this seeming contradiction. The low earners are mainly the younger moonlighters who, on the one hand, are more likely to be recent labor force entrants and at the lower skill and experience levels, and, on the other hand, less likely to have as many dependents or family responsibilities as men in the middle years. The younger men, therefore, may neither want, nor have available to them, as steady a secondary job as the older ones. In addition, they may not have been in the work force all of the preceding 12 months.

Of course, both the regularity and length of time of moonlighting depend upon availability of the work as well as the propensity of the worker to want, need, or persevere in a second job. Older workers more often have the experience and skills

which are in demand than do younger workers. For example, 40 percent of the moonlighters were professional workers, farmers, or managers in their secondary jobs. These are the kinds of jobs which generally require both continuity and regularity of work.

Male household heads

The tendency to hold more than one job varies with age, sex, and marital and household-head status. A very small proportion of single persons, most of whom are young, have a second job—fewer than 4 percent among the men.

The relatively high multiple jobholding rates of married men emphasize the importance of economic responsibility for their families as a reason for moonlighting. Among these household heads who were wage and salary workers on their primary jobs, the rate increased as the number of children under 18 years old in the family increased:

Number of children	Multiple jobholding rate ¹
Total.....	8.2
No children under 18 years.....	6.0
1 child under 18 years.....	7.8
2 children under 18 years.....	8.9
3 or 4 children under 18 years.....	10.5
5 children under 18 years.....	11.3

¹ Persons with 2 jobs or more as percent of all employed.

Table 4. Persons with two jobs or more, by number of weeks in which they worked at secondary job in 4 weeks ending in survey week, May 1969
(Numbers in thousands)

Characteristic	Total number of multiple jobholders ¹	Worked in each of 4 weeks	
		Number	Percent of total
Both sexes.....	3,963	2,822	71.2
Men.....	2,320	2,388	71.9
Women.....	643	434	67.5
White.....	3,602	2,567	71.3
Negro and other races.....	361	255	70.6
MEN			
Under 25 years old.....	382	211	55.2
25 years and over.....	2,938	2,177	74.1
Married, wife present.....	2,908	2,119	72.9
WOMEN			
Under 25 years old.....	130	84	64.6
25 years and over.....	513	350	68.2
Married, husband present.....	303	191	63.0
REASONS FOR MULTIPLE JOBHOLDING			
Meet regular household expenses.....	1,604	1,216	75.8
Pay off debts.....	354	252	71.2
Save for the future.....	535	407	76.1
Get experience ²	320	241	75.3
Other ³	1,150	706	61.4
INDUSTRY AND CLASS OF WORKER ON SECONDARY JOB			
Agriculture.....	719	562	78.2
Nonagriculture.....	3,244	2,260	69.7
Wage and salary worker on secondary job.....	2,775	1,918	69.1
Self-employed on secondary job.....	1,188	904	76.1

¹ Excludes a small number of persons who changed jobs during the week ended May 17, 1969.

² See table 3, footnote 1.

³ See table 3, footnote 2.

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

Industry

Workers whose primary jobs were in State and local government and in the postal service had the highest multiple jobholding rates (11 percent and 10 percent, respectively). As in previous surveys, wage and salary workers in construction and in educational services also had high rates. These industries include workers with both high and low earnings and job security. Self-employed persons in agriculture also had rates much higher than average. The high moonlighting rates may result in part from regular work schedules which leave time free when other work is available. On the other hand, the rate for workers in manufacturing, in which working hours may be harder to rearrange, was below the overall average of 5.2 percent.

The industries in which the largest proportions of the moonlighters found their secondary jobs were service and finance, agriculture, and retail trade—industries which have requirements for part-time workers. About 64 percent of all the

Table 5. Persons with two jobs or more in May 1969, by number of months in which they worked at secondary job in year ending April 1969

[Percent distribution]

Characteristic	Total		Number of months in which they worked at secondary job					
	Number of multiple jobholders ¹ (thousands)	Percent	None	1 month	2-3 months	4-6 months	7-11 months	All 12 months
Both sexes.....	3,963	100.0	8.6	4.8	8.5	12.8	17.6	47.7
White.....	3,602	100.0	8.2	4.9	8.2	13.0	17.9	47.8
Negro and other races.....	361	100.0	12.2	3.9	11.1	11.4	14.1	47.4
Worked in each of last 4 weeks.....	2,822	100.0	1.5	3.7	6.5	11.2	20.0	57.1
Did not work in each of last 4 weeks.....	1,141	100.0	26.2	7.5	13.4	16.7	11.6	24.6
Men.....	3,320	100.0	8.1	4.2	7.8	12.7	16.5	50.7
Worked in each of last 4 weeks.....	2,388	100.0	1.5	3.3	5.5	11.0	18.3	60.4
Did not work in each of last 4 weeks.....	932	100.0	24.8	6.6	13.6	17.1	11.9	25.9
Married, wife present.....	2,908	100.0	6.8	4.2	7.5	12.3	16.4	52.8
Women.....	643	100.0	11.7	7.8	11.8	13.2	23.2	32.3
Worked in each of last 4 weeks.....	434	100.0	1.4	5.8	12.0	12.7	29.3	38.9
Did not work in each of last 4 weeks.....	209	100.0	32.4	11.4	12.4	14.8	10.5	18.6
Married, husband present.....	303	100.0	13.0	6.0	12.0	15.3	23.3	30.6
REASONS FOR MULTIPLE JOBHOLDING								
Meet regular household expenses.....	1,604	100.0	5.5	3.7	7.6	12.8	19.3	51.1
Pay off debts.....	354	100.0	8.7	9.3	11.3	18.0	15.5	37.2
Save for the future.....	535	100.0	8.0	3.7	7.8	10.2	15.8	54.4
Get experience ²	320	100.0	9.1	6.6	4.7	12.2	19.1	48.3
Other ³	1,150	100.0	13.2	5.0	10.2	12.4	16.3	42.9
INDUSTRY AND CLASS OF WORKER ON SECONDARY JOB								
Agriculture.....	719	100.0	6.9	3.2	6.7	11.1	11.9	60.1
Nonagriculture.....	3,244	100.0	9.0	5.2	8.9	13.2	18.8	45.0
Wage or salary workers on secondary job.....	2,775	100.0	10.6	5.7	9.2	13.9	19.3	41.3
Self-employed on secondary job.....	1,188	100.0	4.0	2.8	7.0	10.1	13.4	62.7

¹ Excludes a small number of persons who changed jobs during the week ended May 17, 1969.² See table 3, footnote 1.³ See table 3, footnote 2.

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

moonlighters worked in these three industry groups in their secondary jobs; only about 43 percent of all the moonlighters worked in these industries in their primary jobs.

Most of the moonlighters worked in different industries in their primary and secondary jobs. The service, finance, and real estate group was the only one in which close to half of the moonlighters had both their jobs in the same industry. However, the range of different industries included in this very broad major group is extensive, so that many of the moonlighters may in fact have been in quite different industries in their primary and secondary jobs. Of the other broad industry groups, farming (21 percent) and retail trade (19 percent) were the only ones in which the proportion with both jobs in the same industry was much higher than 10 percent.

Although the multiple jobholding rate for factory workers was about average, they were one-fourth of all moonlighters, a proportion which has remained relatively unchanged for the past several years for which data are available. Relatively few

factory workers who moonlight hold a second factory job. In May 1969, only 11 percent held two jobs in manufacturing; nearly one-fourth were in agriculture, mainly as self-employed farmers; and other large groups worked in retail trade and service and finance or were self-employed in nonfarm industries.

Occupation

Persons who were protective service workers (policemen, security guards, and firemen, for example) and farmers on their primary jobs had the highest multiple jobholding rates (table 6). Among men, the rate for teachers below the college level (17 percent) was more than double the rate for all men. On the other hand, the rate for men who were managers and proprietors was only 5.3 percent. Many of these workers regularly work long hours on their primary job, and average earnings for their occupation group are far above the average for all workers.

Although most moonlighters work at different

Table 6. Multiple jobholding rates,¹ by occupation and sex, May 1969

Occupation group	Both sexes	Men	Women
All occupations.....	5.2	6.9	2.3
Professional, technical, and kindred workers.....	6.9	9.2	3.1
Engineers.....	4.6	4.6	.....
Medical and other health workers.....	5.6	12.0	1.6
Teachers, except college.....	7.1	16.8	2.8
Other professional, technical, and kindred workers.....	7.6	8.6	4.6
Farmers and farm managers.....	8.6	8.8	2.6
Managers, officials, and proprietors, except farm.....	4.7	5.3	1.3
Clerical and kindred workers.....	3.3	6.6	2.1
Sales workers.....	4.7	6.3	2.6
Retail trade.....	4.0	6.6	2.4
Other sales workers.....	5.7	6.0	3.9
Craftsmen, foremen, and kindred workers.....	6.4	6.5	2.0
Carpenters and construction craftsmen.....	6.6	6.7	.....
Mechanics and repairmen.....	7.2	7.2	(?)
Other craftsmen, foremen, and kindred workers.....	5.8	6.0	1.6
Operatives and kindred workers.....	5.0	6.7	1.1
Drivers and deliverymen.....	6.9	6.9	5.6
Other operatives and kindred workers.....	4.6	6.6	1.0
Private household workers.....	3.6	.....	3.6
Service workers, except private household.....	5.1	8.8	2.5
Protective service workers.....	15.7	16.6	.....
Waiters, cooks, and bartenders.....	2.8	3.8	2.4
Other service workers.....	4.1	6.6	2.6
Farm laborers and foremen.....	5.1	5.6	4.3
Laborers, except farm and mine.....	5.6	5.6	3.7

¹ Persons with 2 jobs or more as percent of total employed in each occupation. Total employed is sum of single jobholders in an occupation and those with two jobs or more whose primary job is in that occupation.

² Percent not shown where base is less than 75,000.

occupations in their main and extra jobs, there is relatively more correspondence in occupation than in industry. More than half of all the moonlighters whose main jobs were in the professional, technical, and kindred occupations also worked in that group in their extra jobs. Examples of this type of combination are the accountant who is a salaried worker by day but self-employed in the evening or on weekends and the elementary school teacher who has adult education classes in the evenings. This percentage for the professional group was considerably higher than in any other group.

Hours

PRIMARY JOBS. Most moonlighters work full-time (35 hours or more a week) on their primary jobs; only about 1 out of every 5 worked part time (less than 35 hours a week) in May 1969. The largest single group—41 percent—worked the 40-hour work week, which has become the full-time norm. The large increases in part-time workers, along with some increase in normal work weeks shorter than the usual 40-hour norm of recent years, have not resulted in significant increases in the proportions of workers who moonlight, because, when unemployment is not high, most people who work part time do so out of choice and

because the shorter work hours have not necessarily been accompanied by commensurate decreases in pay. Moreover, most part-time workers are women who work part time out of choice. While a significant number of women work at more than one job, moonlighting continues more a man's than a woman's activity.

Moonlighters whose main jobs were in agriculture had the largest proportion who worked 49 hours or more; of the self-employed among them, more than half worked that many hours on their main jobs. As with the farm workers, the self-employed moonlighters in nonfarm industries on their main jobs had the largest proportion (35 percent) who worked 49 hours or more on those jobs.

SECONDARY JOBS. Multiple jobholders worked an average (median) of 13 hours on their secondary jobs during the survey week, a number which has changed little over the years for which comparable data are available. About 25 percent of the workers put in only 1 to 7 hours of extra work and another 30 percent, 8 to 14 hours. Teenagers averaged fewer hours than adults.

Male multiple jobholders were not only more likely than women to be full-time workers on their main jobs (84 percent compared with 50 percent) but also more likely to have worked longer hours on their second jobs. Their median hours were 14 and 10, respectively. Nearly one-half of the men but only one-third of the women worked 15 hours or more on their secondary jobs.

The industries in which the largest proportions of moonlighters worked 22 hours or more on their second jobs during the survey week were agriculture, manufacturing, and business and repair services. Among those self-employed in agriculture, almost one-third worked 22 hours or more. In nonagricultural industries, manufacturing and business and repair services each had about 30 percent who worked 22 hours or more.

By occupation and hours of second job, moonlighters who were farmers and farm managers, nonfarm managers and officials, nonfarm laborers, and operatives had the largest proportions working 22 hours or more, with the proportions ranging from about one-fourth to one-third.

TOTAL HOURS. Since most of the moonlighters worked full time on their main jobs, the total

number of hours worked a week on both jobs was relatively high. Half of all the moonlighters totaled more than 55 hours a week, and almost 2 out of 5 worked at least 60 hours a week.

The moonlighters who were self-employed in agriculture on their main jobs put in the greatest total number of hours on both jobs; about 3 out of every 5 worked a total of 60 hours or more during the survey week. Among multiple jobholders who were in nonfarm industries on their primary jobs, only those in State and local government had more than 50 percent working at least 60 hours. On the other hand, only 27 percent of the workers in the service and finance industry worked that many hours on both jobs.

Social and economic aspects

Despite its relatively rare occurrence—or perhaps because of it, since that which is atypical generally draws attention—moonlighting arouses considerable interest and comment, not all favorable. To some people, moonlighting represents a retrogressive practice which undermines efforts to obtain shorter hours and higher pay. Others contend that shortening the work week will only lead to higher moonlighting rates, or that on-the-job accidents are bound to increase because of fatigue caused by excessive work hours. Still others view moonlighting as a threat to job security or rates of pay, arguing that if employers can hire moon-

lighters at lower wages than union scale, regular workers are threatened through outright job loss, lower regular pay, or loss of overtime pay. Some employers disapprove of moonlighting because they feel it lessens productivity.

To some, the opportunity to hold more than one job, restricted only by the marketability of one's skills and the availability of one's time, represents a desirable exercise of freedom of choice, even though it is recognized that the circumstances which lead some workers to take that option are unfortunate, as in the case of the individual whose primary job earnings are too low to furnish the basic necessities. As indicated by the reasons moonlighters gave for holding more than one job, motivations for moonlighting vary, albeit financial necessity is the single most often given reason.

While data for support or rebuttal of all these arguments are not available, some important points do emerge from what data there are. For instance, neither the number of moonlighters nor the percentage they constitute of all employed persons shows any clear pattern of movement up or down relative to the unemployment rate.

The probability that persons with more than one job take work away from the unemployed is small. The secondary jobs in which moonlighters are self-employed (1.2 million in May 1969) would provide few job opportunities to the unemployed whose skills and financial resources would probably preclude their taking over a farm or business,

Employers and moonlighting

That some workers hold regular outside employment, or "moonlight," is readily acknowledged by their primary employers. Most companies do not have an official policy either sanctioning or forbidding moonlighting, but many of these same firms do place restrictions on it. These restrictions are similar to those imposed by companies which explicitly permit their employees to moonlight and, furthermore, they tend to match up with the reasons given to justify its prohibition by firms which forbid moonlighting. These are the chief findings of The Conference Board's latest Survey of Busi-

ness Opinion and Experience, in which 136 manufacturing companies participated.

Almost 80 percent of the companies (106) which replied neither explicitly permit nor forbid outside employment by their full-time workers. But 82 of these firms place explicit or implicit constraints on it, while the remaining 24 companies take absolutely no notice of moonlighting.

—PATRICK J. DAVEY AND JAMES K. BROWN,
"The Corporate Reaction to 'Moonlighting,'" *The Conference Board Record*, June 1970, p. 31.

however small. Other factors are the difficulty of matching the location of the jobs and jobseekers and of matching jobs usually held only by men or only by women. Also, such jobs are typically for only a small number of hours, with commensurately low earnings; and many of them may be short term or intermittent, while the unemployed look mainly for full-time permanent jobs. Only 8 percent, or 320,000, of the moonlighters had worked the equivalent of a full-time week on their second jobs in the May 1969 survey, whereas about 80 percent of the 2.1 million unemployed in May were looking for full-time jobs.

The role of moonlighting in agriculture cannot be discounted. The small farmer is disappearing rapidly. For a significant proportion of this diminishing group, moonlighting is the only means of continuing as farmers. Without the opportunity to earn money in another job, many small farm owners would be unable to maintain their farms and their chosen way of life. In May 1969, 600,000 moonlighters were self-employed in agriculture on their secondary jobs. At that time, the total number of persons self-employed in primary jobs

in agriculture was 2 million. Thus, the moonlighters self-employed in agriculture on the second job represent an addition of nearly one-third to the number of persons self-employed in agriculture. In no other industry are multiple jobholders such a high percentage of the employed. And, of course, some of the 165,000 moonlighters who are self-employed in agriculture on their primary jobs must also be assumed to be among the number for whom moonlighting makes the difference between being able to continue in agriculture and having to give it up.

Similarly, moonlighting offers some persons an avenue to self-employment in nonfarm industries, another group which has declined as a proportion of all employed persons. Working at a wage or salary job for security while trying to build up a business of one's own is a not uncommon practice. Without that security, the attempt might be impossible. In May 1969, over half a million moonlighters were self-employed in nonagricultural industries in their secondary jobs, and another 160,000 were self-employed in nonagricultural industries in their primary jobs. □

—FOOTNOTES—

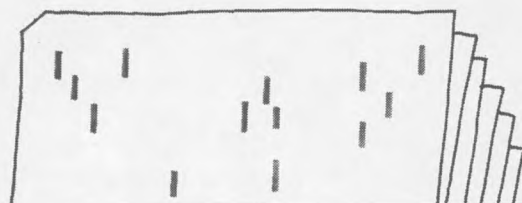
¹ Data in the current report are based primarily on information from supplementary questions to the May 1969 monthly survey of the labor force, conducted for the Bureau of Labor Statistics by the Bureau of the Census through its Current Population Survey. The data relate to the week of May 11-17.

This is the eighth in a series of reports on this subject. The most recent was published in the *Monthly Labor Review*, October 1967, pp. 17-22, and reprinted with

additional tabular data and explanatory notes as Special Labor Force Report No. 90.

² In this report, data for the grouping "Negro and other races" are used to represent data for Negroes, since Negroes constitute about 92 percent of all persons in the grouping. In addition to Negroes, the grouping includes American Indians, Filipinos, Chinese, and Japanese, among others.

Research Summaries



PH. D. HOLDERS IN PRIVATE INDUSTRY

MICHAEL F. CROWLEY

PRIVATE INDUSTRY employed almost 36,000 scientists and engineers with a doctor's degree in 1968, accounting for about one-third of the Nation's total employment of such professionals. Eight of every 10 were engaged in research and development (R&D) activities, most of them doing research. By 1980 the need for doctorates in private industry is expected to increase by 50 percent.

These were the findings of a special study made by the Bureau of Labor Statistics, with financial support of the National Science Foundation, to determine the employment level of, and factors influencing the requirements for, Ph. D. scientists and engineers in private industry. The results, summarized here, have been published in *Ph. D. Scientists and Engineers in Private Industry, 1968-80* (BLS Bulletin 1648, 1970). They were derived primarily from information gathered in interviews with officials of about 70 companies which employed some 35 to 40 percent of all Ph. D. scientists and engineers in private industry. Estimates of the 1968 employment were based on a special BLS survey.

Only a small number of openings for Ph. D. scientists and engineers were not filled in mid-1968. The few firms experiencing hiring difficulties did not feel the problem greatly hindered operations or planned programs. Among the company officials interviewed who did feel there was an overall shortage of Ph. D. scientists and engineers,

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more than half represented companies that were not experiencing any hiring problems. A few firms hinted at an overall surplus of Ph. D. scientists and engineers. Based on their recruiting experience, several firms indicated that Ph. D.'s have been more available relative to demand during the last few years than during the late 1950's and 1960's.

Research and development activity is the key factor that determines private industry's requirements for scientists and engineers holding the Ph. D. degree. For work outside of R&D, most companies did not indicate a specific need for such persons. Two major aspects of R&D activities are involved in determining requirements for Ph. D. holders—the magnitude of R&D activities (in dollars expended); and the nature of the R&D activity involved, that is, the research-development mix. Most officials interviewed felt that changes in these aspects had been, and would continue to be, significant in determining their firms' requirements for persons with the Ph. D. degree. Some company officials attributed changes in such requirements primarily to changes in only one of the above factors.

Many firms indicated that the proportion of R&D scientists and engineers with Ph. D. degrees is considerably greater in research than in development. Therefore, a shift in emphasis between

Table 1. Illustrative projections of 1980 requirements for Ph. D. scientists and engineers in private industry, by occupation group

Occupation	Estimated 1968 employment	Projected 1980 requirements	Percent change, 1968-80
Total.....	35,800	55,000	53.5
Engineers.....	12,800	20,100	57.5
Mathematicians.....	800	1,300	56.6
Physical scientists.....	19,500	29,500	51.6
Life scientists.....	2,800	4,100	47.1

research and development would result in different requirements for Ph. D. holders. A few firms attributed most or all of their increased Ph. D. employment in the past to a shift from development to research, or felt that future growth of their requirements for Ph. D. personnel would be due to such a shift.

Another significant factor affecting requirements for Ph. D. scientists and engineers was a widespread feeling that the longrun trend towards increased sophistication and complexity of science and technology has created, and will continue to create, a need for a generally higher level of education. In terms of Ph. D. requirements, this may mean that over the long run, even with a constant research-development mix, an increasing proportion of total requirements for scientists and engineers in R&D would be for those with doctorates. Most firms anticipated a continued increase in such requirements during the 1970's because of an expansion of their R&D programs. In 1968, Ph. D. scientists and engineers represented roughly 10 percent of private industry's scientists and engineers in R&D activities.

Between 1968 and 1980, private industry's requirements for scientists and engineers holding a doctor's degree are projected to increase by more than 50 percent—from 35,800 to 55,000. These illustrative projections were developed within the framework of the Bureau's 1980 model of the economy¹ and, therefore, are consistent with other 1980 projections developed by the Bureau (table 1). □

—FOOTNOTE—

¹ See "The U.S. economy in 1980: a preview of BLS projections," *Monthly Labor Review*, April 1970, pp. 3-34.

COURT RULINGS ON QUALIFICATIONS FOR UNION OFFICE

THE LABOR-MANAGEMENT REPORTING AND DISCLOSURE ACT of 1959 sets standards for conducting trade union elections. Under section 401(e) of Title IV, "every member in good standing shall be eligible to be a candidate and to hold office . . . subject to reasonable qualifications . . ."

A new study by the Department of Labor's Office of Labor-Management Policy Development analyzes the issue of "reasonable qualifications" for union office as it has developed in each of the 15 cases involving "reasonableness" in which there has been a decision by at least a district court. One involved national union office, the other 14 local union offices. Only one case has so far reached the Supreme Court.

The study points to the particular qualifications the Secretary of Labor found to be "unreasonable," the arguments and data presented in support of his position, the lines of defense of the union, the decisions made by the court and the basis therefor.

The new publication takes on additional value to researchers in that it includes numerous tabulations of union constitutional provisions made by the Office of Labor-Management Policy Development and entered into court records as exhibits. These cover such subjects as

Prior office-holding as a qualification for local union office;

Method of nomination in national unions which elect national officers through referendum; and

Attendance at union meetings as a requirement for nomination or election to local union office.

Qualifications for Union Office: The Issue of Reasonableness in Court Cases Under the LMRDA will be available in early fall from the U.S. Department of Labor, Washington, D.C. 20210. □

Foreign Labor Briefs



Mexico

A basic labor law, the country's first since 1931, was enacted last December and went into effect on May 1 this year. It is probably one of the most important pieces of legislation adopted during the administration of President Díaz Ordaz. In effect a labor code of 902 articles, the enactment—the Federal Labor Law (*Ley Federal del Trabajo*)—provides for a wide range of new benefits for workers, including increased holiday and vacation pay, and a higher rate of remuneration for overtime and extra work.

Among the outstanding provisions of the new law is a requirement that, in certain situations, the employers finance their workers' housing. Companies with more than 100 employees (and those with fewer employees if located more than 1.8 miles from a town or at any distance from a town if there is no regular transportation service) are required to provide convenient and sanitary housing to permanent workers with a year of seniority. If the company does not have adequate housing and cannot acquire it, it must so inform the workers and must negotiate with them a collective agreement within 3 years of the effective date of the new law to establish means of fulfilling the housing obligation. If the company undertakes to construct living quarters for rent to the workers, the annual rental is limited to 6 percent of the assessed value of the abode; if the habitations are to be acquired by the workers, the company must contribute to the cost of construction. The houses may be single-family or multifamily.

The new law also effects changes in profit sharing, which was established as workers' right by a provision of the Mexican Constitution of 1917.

Prepared in the Division of Foreign Labor Conditions, Bureau of Labor Statistics, on the basis of material available in early June.

In 1962, a constitutional amendment implemented this provision and made profit sharing compulsory, with certain exemptions. The present enactment reduces the period of exemption from the profit-sharing obligation of newly established firms from 2 years to 1 year, and of firms making a new product, to 2 years from 4. Managerial employees may participate in profit sharing to the extent of the highest wage paid to nonmanagerial workers in the plant plus 20 percent of that pay. If the employer fails to comply with the legal requirements as regards profit sharing, the workers may legally declare a strike.

One provision stipulates that a worker partially disabled by an accident on the job and no longer capable of performing his duties must be offered another job—if available—with the company, one he is able to hold, in keeping with the terms of a collective contract. The law also specifies that at least 90 percent of the workers in each area of specialization in an establishment must be Mexican. Previously, this limitation on non-Mexicans had been interpreted as applicable to all the workers of an establishment as a group. The enactment also states what kind of confidential employees (persons in a position of trust) and nonunion workers a company can have on its payroll. Confidential employees are not allowed to join regular labor unions but may form their own union if they wish to do so. Many labor regulations are codified, such as those relating to continuous work shifts, overtime and Sunday work, day of rest, Christmas bonuses, and protection of salesmen. Premium pay of 25 percent of normal wages must be paid for work on Sunday if another day is agreed on as a weekly day of rest. For work done on a weekly day of rest the employer must pay triple wages.

The Ministry of Labor plans to establish a National Labor Institute in Mexico City, to provide information on the new law and the

workers' rights under it. The institute will serve also as a clearinghouse for study of the application of the new law and its effect on labor costs, industrial relations, and labor unions. Ultimately, it is expected to become the Ministry's permanent agency for investigation of labor-management relations, but not limited to the operation of the new law.

Guyana

The Ministry of Economic Development has announced a new Ten-Year Development Plan, 1971-80, with full employment and development of natural resources in the interior of the country as its major objective. It calls for a more rapid Guyanization of the economy and decreased reliance on aid and private investment from abroad. The new program will replace the current Seven-Year Plan, 1966-72.

The Ministry adopted the different approach in order to overcome the stalemate of the traditional emphasis on evaluation of economic growth in terms of output and the corollary increase in employment. In other countries, rising employment has been seen as an aftereffect of rising output.

Wilfred David of the University of Guyana, head of a team of experts appointed by the Ministry to draw the new plan, believes that reduction by one-half of the present unemployment rate of about 20 percent is a feasible goal.

Panama

Workmen's compensation insurance was placed under the Social Security Fund by a decree approved March 31, 1970, by the Provisional Junta Government, to become effective within 3 months. This decree also increased the compensation for industrial accidents, in some cases making them 10 times greater than previously. The decree provides unlimited medical assistance and continuing measures for physical rehabilitation, lifetime pensions for widows and invalid children, increased pensions for permanent or temporary disability, and cost-of-living adjustments in pensions.

The decree makes it mandatory for all public and private enterprises to take insurance against occupational hazards, to be issued through the Fund. This will necessitate changing the present contract arrangements made by private insurance companies with employers. Private insurers chal-

lenged the capability of the Fund to take over coverage of workmen's compensation. In the 25 years that social security has been provided in Panama, the insurers pointed out, only a small portion of the country's workers had been covered by the system. Also, there are complaints among the insured of delays in social security services, particularly in the delivery of medicines.

According to Director General Damian Castillo Duran of the fund, the cost of this insurance to employers would not exceed 7 percent of payrolls as compared with the 16-percent premium charged by private companies. The Communist-dominated Union Federation of Workers of the Republic of Panama, an affiliate of the World Federation of Trade Unions, and the Federation of Christian Workers, an affiliate of the Latin American Confederation of Trade Unions, praised the Government's initiative in nationalizing the workmen's compensation function.

Poland

The Politburo of the ruling party has adopted draft documents setting forth the basic principles of (1) a bonus system for white-collar workers and (2) an incentive wage system, to be introduced during the 1971-75 period. The two drafts were transmitted to all labor and management bodies for discussion. Reductions in production costs were declared to be the primary source of funds for the proposed bonus and wages. To obtain higher wages, all workers are being exhorted to organize their work better, operate their machines uninterrupted, and improve the quality of products thus eliminating rejects.

U.S.S.R.

Despite the perennial Soviet claim that unemployment has been eliminated in the U.S.S.R., there are continuing indications of hidden unemployment due to scarcity of job opportunities in the smaller cities and in rural areas. The Soviet economic monthly *Voprosy Ekonomiki* (Problems of Economics) reported in its November 1969 issue (p. 151) that a government survey of 778 small and medium-sized cities in the Russian Republic (the largest of the 15 Soviet republics) uncovered over 100,000 persons in need of jobs. This fact was brought out at an interuniversity conference of social scientists, held in Moscow during the second

quarter of 1969, to discuss the problems incidental to a more efficient utilization of labor reserves.

The monthly stated that Soviet labor force experts had recommended that employment for the persons in need of jobs be provided in new workshops to be established, in second and third shifts to be introduced into existing factories, and in expanded cottage industries. Also recommended was the more efficient use of the agricultural labor force. The journal pointed out that in 1967, over 600,000 collective farmers did not participate in harvesting at peak harvest time, so that city dwellers had to be assigned to this work.

Sweden

In April 1970, workers at the Luossavaara-Kiirunavaara AB iron mines voted to accept a management-proposed wage package, thus restoring labor peace at the government-owned mines after nearly 4 months of troublesome conflict. Labor difficulties at the mines erupted in December 1969 when workers repudiated their local union leadership and began a sitdown strike protesting wage rates.¹ Although the strikers returned to work in February after receiving assurances from management that an agreement satisfactory to both sides would be worked out, negotiations between the company and representatives of the strike committee dragged on for another 2 months. Finally, in April, the miners accepted management's proposal by a 2,397-983 vote in which 80 percent of the eligible miners participated. The most striking feature of the agreement was the introduction of a monthly wage payment for a 6-month trial period.

Luossavaara-Kiirunavaara AB is the largest

company in Sweden to have replaced piece rate payment with a monthly wage system, and its experience is being observed with interest throughout the country. A spokesman of the company has described the changeover as a bold and significant step, while the workers hope that the firm's piecework wages have been consigned to history.

The strikers were less successful in achieving their other goals. The final settlement provided for an 11-percent wage increase plus \$620,000 in social and recreational benefits (for the entire group), figures that were considerably below those the workers had initially demanded.

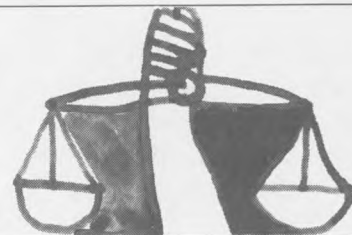
Singapore

The island is faced with labor shortages in occupations ranging from engineers to semiskilled craftsmen. The shortages are due primarily to economic growth, particularly during the past 2 years, that far exceeded expectations. In an effort to alleviate the shortages, the Government has revamped the Education Ministry, established more technical training institutions, provided technical training to teachers with liberal arts college background, and popularized technological vocations for students. It has also encouraged foreign investors to import their own technicians, and has eased immigration restrictions to allow employment of foreign workers. □

—FOOTNOTE—

¹ See the brief on Sweden in *Monthly Labor Review*, May 1970, pp. 68-69. That report inadvertently omitted the statement that negotiations had continued following the miners' return to work on February 3, 1970.

Significant Decisions in Labor Cases



Injunctive relief

The Norris-LaGuardia Act is not the impregnable citadel of labor's immunity from court injunctions it is often considered to be; it can be overridden by the demands of the current labor policy of voluntary but enforceable settlement of labor disputes. In the words of the U.S. Supreme Court, ". . . Norris-LaGuardia [Act's] policy of nonintervention by the Federal courts should yield to the overriding interest in the successful implementation of the arbitration process. . . . [T]he unavailability of equitable relief in the arbitration context presents a serious impediment to the congressional policy favoring the voluntary establishment of a mechanism for the peaceful resolution of labor disputes, [and] the core purpose of the Norris-LaGuardia Act is not sacrificed by the limited use of equitable remedies to further this important policy. [Therefore] the Norris-LaGuardia Act does not bar the granting of injunctive relief in the circumstances of the instant case."

The circumstances of the instant case (*Boys Markets*¹) were a strike called in violation of a no-strike agreement and the union's refusal to arbitrate the dispute as provided by the agreement.

After appraising the vexatious conflict between an old labor law and the current congressional policy expressed in the National Labor Relations Act, the Court reversed its 1962 decision in *Sinclair*,² based on a strict construction of that old statute, and spelled out principles for granting injunctions in labor litigation. It thus abandoned the rule it had pronounced in *Sinclair*—that the Norris-LaGuardia Act deprives Federal courts of power to enjoin a strike in breach of a no-strike obligation and of a promise to arbitrate.

The above citations are actually restatements of

some of the salient arguments Justice Brennan presented in his dissent opinion at the time of the *Sinclair* decision. (Justices Douglas and Harlan had joined in the dissent.) The Court now recognized them as "the correct principles concerning the accommodation necessary between the seemingly absolute terms of the Norris-LaGuardia Act and the policy considerations underlying section 301 (a)" of the National Labor Relations Act.

Other pertinent circumstances of the present case were: The employer, having sustained business injury as a result of the strike, was willing to arbitrate but the union refused; the union removed the case to a Federal district court after the employer obtained a State court's injunction against it; and the Federal court also enjoined the strike despite the union's claim of protection under the *Sinclair* rule.

In a discourse that brought out what might be described as anachronistic features of the Norris-LaGuardia Act,³ Justice Brennan, who now delivered the Court's judgment, traced the development of the act's conflict with the later policy of peaceful but legally enforceable⁴ settlement of labor disputes. The Norris-LaGuardia law, the justice said, was a product of an era with problems different from today's. Here are some of his remarks on the evolution of the Nation's labor policy:

In 1932 Congress attempted to bring some order out of the industrial chaos that had developed and to correct the abuses which had resulted from the interjection of the Federal judiciary into union-management disputes on . . . behalf of management. Congress, therefore, determined initially to limit severely the power of the Federal courts to issue injunctions "in any case involving or growing out of any labor disputes. . . ." Even as initially enacted, however, the prohibition against Federal injunctions was by no means absolute. Shortly thereafter Congress passed the Wagner Act, designed to curb various management activities which tended to discourage employee participation in collective action.

As labor organizations grew in strength and developed toward maturity, congressional emphasis shifted

Prepared by Eugene Skotzko of the Office of Publications, Bureau of Labor Statistics, in consultation with the Office of the Solicitor of Labor.

from protection of the nascent labor movement to the encouragement of collective bargaining and to administrative techniques for the peaceful resolution of industrial disputes. This shift of emphasis was accomplished, however, without extensive revision of many of the older enactments, including the anti-injunction section of the Norris-LaGuardia Act. Thus it became the task of the courts to accommodate, to reconcile the older statutes with the more recent ones.

On the path of this judicial "accommodation," the conflict in law did not fail to produce a conflict in court opinion. The landmark decisions of the Supreme Court in 1957—*Chicago River & Ind. Railroad* and *Lincoln Mills*⁵—emphasized voluntary but legally enforceable settlement of disputes, especially through arbitration, without resort to self-help. In *Lincoln Mills* the Court ruled that under section 301(a) of the NLRA, "a union can obtain specific performance of an employer's promise to arbitrate grievances [and] rejected the contention that anti-injunction proscriptions of the Norris-LaGuardia Act prohibited this type of relief. . . ." (Justice Brennan's restatement.) But in 1962 in the *Sinclair* case it resorted to a strict construction of the 1932 law.

The 1962 decision was not well received in the country. "Shortly after *Sinclair* was decided," said Justice Brennan, "an erosive process began to weaken its underpinnings. Various authorities suggested methods of mitigating the absolute rigor of the *Sinclair* rule. . . ."

"Scholastic criticism of *Sinclair* has been sharp and it appears to be almost universally recognized that *Sinclair* . . . has produced an untenable situation. The commentators are divided, however, with respect to proposed solutions some favoring reconsideration of *Sinclair*, others suggesting [its] extension . . . to the States, and still others recommending that any action in this area be left to Congress."

The widespread criticism and undesirable effects of the *Sinclair* decision brought about reconsideration. The Court was deeply concerned about the anomalous situation where arbitration, "the very purpose of [which] is to provide a mechanism for the expeditious settlement of industrial disputes without resort to strikes, lockouts, or other self-help measures"—arbitration, the "instrument of Federal policy"—cannot fulfill its purpose because of *Sinclair* ban on injunctive relief.

Particularly disturbing to the Court was the erosion of the State courts' power in actions over

collective bargaining agreements, a process deepened by the union's routine practice of removing such suits from State to Federal courts "in order to gain advantage of the strictures upon injunctive relief which *Sinclair* imposes on Federal courts." The Court admitted that this practice was facilitated by its decision (subsequent on *Sinclair*) in the *Arco*⁶ case sanctioning such removal of suits, and said, "The principal practical effect of *Arco* and *Sinclair* taken together is nothing less than to oust State courts of jurisdiction in section 310(a) suits where injunctive relief is sought for breach of no-strike obligation."

Hence, reconsideration of *Sinclair*. But in what direction?

Facing the question of whether, for the sake of uniformity of Federal labor law, to extend the *Sinclair* rule to the State court or to abandon it, the Court held that extension of the rule to the States would amount to depriving State courts of powers through an action that even Congress had not taken, either in the Norris-LaGuardia enactment or in section 301 of the NLRA. Furthermore, "a no-strike obligation . . . is the quid pro quo for an undertaking by the employer to submit grievance disputes to the process of arbitration." Retention of *Sinclair* would remove the incentive for employers to accept arbitration arrangements.

Sinclair was overruled: it "[did] not make a viable contribution to Federal labor policy." The Court replaced that rule with a body of principles, proposed by Justice Brennan in his dissent in 1962, for the guidance of Federal district courts in determining whether an injunction should be granted. These read:

A district court entertaining an action under section 301 may not grant injunctive relief against concerted activity unless and until it decides that the case is one in which an injunction would be appropriate despite the Norris-LaGuardia Act. When a strike is sought to be enjoined because it is over a grievance which both parties are contractually bound to arbitrate, the district court may issue no injunctive order until it first holds that the contract *does* have that effect; and the employer should be ordered to arbitrate, as a condition of his obtaining an injunction against the strike. Beyond this, the district court must, of course, consider whether issuance of an injunction would be warranted under ordinary principles of equity—whether breaches are occurring and will continue, or have been threatened and will be committed; whether they have caused or will cause irreparable injury to the employer; and whether the employer will suffer more from the denial of an injunction than will the union from its issuance." (370 U.S. 228).

But the Court warned, "Our holding [here] is a narrow one. We do not undermine the vitality of the Norris-LaGuardia Act. We deal only with the situation in which a collective bargaining contract contains a mandatory grievance adjustment or arbitration procedure. Nor does it follow from what we have said that injunctive relief is appropriate as a matter of course in every case of a strike over an arbitrable grievance. . . ."

The union contended that the *Sinclair* decision could not be reconsidered because it had become a precedent: it concerned a question of statutory construction which Congress can change at will. Yet Congress had not modified the Court's conclusion in *Sinclair*, even though it had been urged to do so (for instance, by the Atkinson-Sinclair Committee of the American Bar Association in 1963,⁷ in fact by the Court itself in the *Sinclair* opinion). Congress' silence, the union said, signified acceptance of the *Sinclair* rule as a valid rule of law. Under these circumstances, the union maintained, the doctrine of *stare decisis*—recognition of the precedent for the sake of continuity and predictability of law—barred reconsideration of the present case.

Justice Brennan responded by citing the words of the late Justice Frankfurter that "stare decisis is a principle of policy and not a mechanical formula of adherence to the latest decision, however recent and questionable, when such adherence involves collision with a prior doctrine more embracing in its scope, intrinsically sounder, and verified by experience."⁸

As for Congress' silence regarding the *Sinclair* rule, Justice Brennan repeated the Court's previous warning⁹ that it is "at best treacherous to find in congressional silence alone the adoption of a controlling rule of law."

Justice Black's firm dissent rested on the essential proposition that the Supreme Court must not engage in legislating. Abandoning the *Sinclair* rule, which was a strict interpretation of the Norris-LaGuardia Act's anti-injunction clause, was in effect legislating. No events have taken place since *Sinclair* that would justify the departure from that rule, and the principle of "continuity and predictability in the law" brings *stare decisis* into play here: "When the Court changes its mind years later, simply because the judges have changed, in my judgment, it takes upon itself the function of the legislature."

"I believe," the dissenting justice said, "that

both the making and the changing of the laws which affect the substantial rights of the people are primarily for Congress, not this Court. Most especially is this so when the law involved is the focus of strongly held views of powerful but antagonistic political and economic interests."

Congress had been urged by various authorities to repudiate the strict construction of the Norris-LaGuardia Act's anti-injunction provision by modifying the act, and bills had been introduced in Congress to effect the change. But Congress had refused to act, "thus indicating at least a willingness to leave the law as *Sinclair* had construed it. . . ."

To Justice Black, "[t]he correct interpretation of the Taft-Hartley Act, and even the goals of 'our national labor policy,' are less important than the proper division of functions between the branches of our Federal Government."

The other dissenting member of the Court was Justice White, who adhered to his position as a member of the majority in the *Sinclair* opinion. Justice Marshall did not participate in the deliberations.

Bargaining of successor employers

The National Labor Relations Board recently reaffirmed (in *Burns International Detective Agency*¹⁰) the principle that employees' rights under a collective bargaining agreement survive a change of ownership despite the fact that the successor employer is not a party to the contract. But the Board also stressed that this is true only if the change of ownership has not been accompanied by a change in the nature of the establishment's business.

These conclusions emerged from the Board's review, in *Burns* and three companion decisions in which the same principles were applied, of legal obligations resting with new owners of businesses having collective bargaining agreements.

Involved in *Burns* were employees (guards) of a detective agency which had lost its bid for the renewal of services for a large industrial corporation. The successful bidder rehired most of the predecessor's employees but refused to recognize the validity of the old agency's 3-year contract with a union, in effect only 2 months at the time of the change, or to arbitrate the dispute under that contract's arbitration provision.

Was the successor employer obligated to honor

an agreement to which he had never been a party?

The NLRB repeated the Supreme Court's ruling in *Wiley*¹¹ that "a collective bargaining agreement is not an ordinary contract [but one that] covers the whole employment relationship." (Supreme Court's language.) Such a contract must be "construed in the context of a national labor policy that accords a central role to arbitration as 'the substitute for industrial strife' and as 'part and parcel of collective bargaining itself.'" Hence, a mere absence of a successor employer's signature from a bargaining agreement is no excuse for nonrecognition of the contract's validity.

However, the Board said, "The concept of substantial continuity in the employing industry enunciated [by the Supreme Court in *Wiley*] as a necessary condition for the survival of the duty to arbitrate when the ownership of a business changes hands is at the heart of our determination that a purchasing employer is a successor employer within the meaning of the [National Labor Relations] Act." If the nature of business has remained the same after the change, the successor employer is obligated "to recognize and bargain with the union duly selected by the employees," even if the selection took place under the old management.

In one of the companion decisions (*Kota Division*), the Board found the union's—rather than the employer's—action to have been contrary to the principle of contract survival in a change of ownership. The union there demanded a new agreement from the purchaser even before its contract with the predecessor expired. In another of the decisions (*Travelodge Corp.*), the successor employer's refusal to recognize the union

which represented the employees under the old ownership was upheld because he had changed the nature of the purchased business.

Challenging Government contracts

The validity of the Federal Government's awards of service contracts may now be challenged in court by civil service workers whose job rights have suffered as a result of such contracts. This was the effect of a recent ruling by the U.S. Court of Appeals for the District of Columbia in a suit (*American Federation of Government Employees v. Payne*¹²) brought by a union on behalf of Federal workers displaced by a private contractor's personnel doing the same kind of work.

More than a year ago, a Federal district court had dismissed the suit on the ground that the plaintiffs and their union "had no legal interest in support service contracts"—that is, had no legal right to challenge these awards. But recent Supreme Court decisions¹³ eliminated the "legal interest" test in favor of "zone of interest" and "case or controversy" test, under which the "riffed" civil service employees are entitled to court action in defense of their job interests. In line with these decisions, the appeals court ruled that the interest of such Federal employees and of their union "is sufficient to insure 'that the questions will be framed with the necessary specificity, that the issues will be contested with the necessary vigor.' Both the civil service employees and their union have the right to a judicial hearing on the question of whether they have job retention rights superior to those of competing non-Federal employees." □

—FOOTNOTES—

¹ *Boys Markets, Inc. v. Retail Clerks' Union, Local 770* (U.S. Sup. Ct., June 1, 1970).

² *Sinclair Refining Co. v. Atkinson*, 370 U.S. 195 (1962); see *Monthly Labor Review*, August 1962, pp. 903-904.

³ The Norris-LaGuardia Act provides in part: "No court of the United States shall have jurisdiction to issue any restraining order or temporary or permanent injunction in any case involving or growing out of any labor dispute to prohibit any person or persons participating or interested in such dispute . . . from doing, whether singly or in concert, any of the following acts: (a) Ceasing or refusing to

perform any work or to remain in any relation of employment; . . . (f) assembling peaceably to act or to organize to act in promotion of their interest in a labor dispute. . . ." (29 U.S.C. section 104.)

⁴ Section 301(a) of the National Labor Relations Act, as amended, reads: "Suits for violation of contracts between an employer and a labor organization representing employees in an industry affecting commerce . . ., or between any such labor organizations, may be brought in any district court of the United States having jurisdiction of the parties, without respect to the amount in controversy or

without regard to the citizenship of the parties." (29 U.S.C. section 185(a).)

⁵ *Brotherhood of Railroad Trainmen v. Chicago River & Ind. Railroad*, 353 U.S. 30 (1957); *Textile Workers Union v. Lincoln Mills*, 353 U.S. 448 (1957)—see *Monthly Labor Review*, August 1957, pp. 976-977.

⁶ *Avco Corp. v. Aero Lodge No. 735*, 390 U.S. 557; see *Monthly Labor Review*, July 1968, pp. 58-59. This decision permitted removal (under the Federal question removal authority—28 U.S.C. section 1441) of suits initially brought in State courts to a "Federal forum." On this practice of removal, Justice Brennan said, in the present case, it is "wholly inconsistent with . . . the congressional purpose [that] section 301(a) . . . supplement, and not . . . encroach upon, the pre-existing jurisdiction of the State courts." And he added, ". . . It is ironic that the very provision which Congress clearly intended to provide additional remedies for breach of collective bargaining agreements has been employed to displace previously existing State remedies. . . ."

⁷ Reports of the Special Atkinson-Sinclair Committee, American Bar Association, Labor Relations Law Section, *Proceedings*, 1963, p. 226.

⁸ In *Holwering v. Hallock*, 309 U.S. 106 (1940).

⁹ In *Girouard v. United States*, 328 U.S. 61, 69 (1947).

¹⁰ *William J. Burns International Detective Agency, Inc. and United Plant Guard Workers*, 182 NLRB No. 50, May 12, 1970. The companion decisions delivered the same day were: *Hackney Iron & Steel Co. and International Chemical Workers*, 182 NLRB No. 53; *Kota Division of Dura Corp. and Sheetmetal Workers Local 496*, 182 NLRB No. 51; and *Travelodge Corp. and Culinary Alliance and Hotel Service Employees Local 402*, 182 NLRB No. 52.

¹¹ *John Wiley & Sons v. Livingston*, 375 U.S. 543 (1964); see *Monthly Labor Review*, May 1964, p. 564.

¹² C.A.—D.C., April 21, 1970.

¹³ *Data Processing Service Organizations v. Camp* (1970); and *Barlow v. Collins* (1970).

Environmental pollution and economic growth

Nearly all of the programs for abating pollution, and most of the research that underlies them, have been directed toward some particular part of the environment—air, water, or land. In some instances this compartmented approach works well. By now, however, there is a growing realization that all, or nearly all, forms of environmental pollution are parts of one large problem: how to manage the residuals generated by the production and consumption activities of the U.S. population.

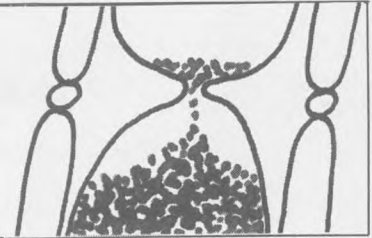
The overall problem is something like an almost-filled toy balloon: if you punch it in at one point, it fills out somewhere else. Suppose, for example, the people of an area were bent on improving the quality of their air. They could accomplish this by using electric space heating, wet-scrubbing stack gases from factories and steam generation plants, and grinding up their garbage to be discharged as raw sewage. But this success would be at the expense of water quality, though some of the damage to water could be averted if part of the wastes were dumped on the land in solid form. If, on the other hand, the area concentrated on protecting its water quality by letting stack gases escape

to the air and incinerating sludge and solid wastes, both air and land quality would suffer. Thus if the people of an area want to maintain, or if possible improve, the quality of their entire physical environment, they will have to consider all kinds of residuals together and develop the processes and procedures that will result in the smallest overall damage at costs that can be borne.

What the country faces, then, is a tremendously broad problem of how to deal simultaneously with the waste products of industry, commerce, agriculture, and domestic living. It would be fatuous to suggest that pollution could be curbed by stopping this or that activity. The engendering of wastes is the reverse side of the medal of economic growth. Without much better methods of handling wastes, environmental pollution will continue to rise or fall with that highly prized index of material prosperity, gross national product.

—From "Wastes Management and Environmental Quality," in *Annual Report of Resources for the Future, Inc.*, 1969.

Major Agreements Expiring Next Month



This list of collective bargaining agreements expiring in September 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 in all industries except government.

Company and location	Industry	Union ¹	Number of workers
AFL-CIO and National and International Trade Unions (Washington, D.C.)	Services	Office Employees	2,650
Air West, Inc., agents and clerical (Interstate)	Air transportation	Air Line Pilots	1,400
Ametek, Inc., U.S. Gauge Division (Sellersville, Pa.)	Instruments	Machinists	1,300
Association of Hospitals of Santa Clara County (Santa Clara County, Calif.)	Hospitals	Nurses' Association (Ind.)	1,500
Bronx Realty Advisory Board, Inc. (Bronx, N.Y.)	Real estate	Service Employees	3,000
Campbell Soup Co. (Fayetteville, Ark.)	Food products	Meat Cutters	1,050
Chicago Residential Hotel Association, Inc. (Chicago, Ill.)	Hotels	Hotel and Restaurant Employees	1,200
Chrysler Corp., 5 contracts	Transportation equipment	Auto Workers (Ind.)	116,200
Chrysler Corp. (Interstate)	Transportation equipment	Plant Guard Workers (Ind.)	1,000
Corrugated Box Cos. ² (New York)	Wholesale trade	Teamsters (Ind.)	2,100
Corrugated Box Container Plants ² (New Jersey)	Paper	Pulp, Sulphite Workers	1,000
Deere and Co. (Iowa and Illinois)	Machinery	Auto Workers (Ind.)	18,150
E. I. du Pont de Nemours & Co., Spruce Film Plant (Amphill, Va.)	Chemicals	Transparent Film Workers, Inc. (Ind.)	1,100
E. I. du Pont de Nemours & Co. (Louisville, Ky.)	Chemicals	Neoprene Craftsmen (Ind.)	1,200
FMC Corp., Link-Belt Division (Indianapolis, Ind.)	Machinery	Steelworkers	3,000
Food Employers Council, Inc., Retail Produce Drivers and Warehousemen's Agreement (California)	Wholesale trade	Teamsters (Ind.)	1,000
Food Employers Council, Inc., Wholesale Delivery Drivers Agreement (California)	Wholesale trade	Teamsters (Ind.)	1,000
Food Employers Council, Inc., Food Industry Warehouse (Los Angeles and vicinity, Calif.)	Wholesale trade	Teamsters (Ind.)	2,500
Ford Motor Co., Master Agreement, production and maintenance employees (Interstate)	Transportation equipment	Auto Workers (Ind.)	165,000
General Motors Corp., Master Agreement, production and maintenance employees (Interstate)	Transportation equipment	Auto Workers (Ind.)	390,000
General Motors Corp., covering 5 Divisions (Ohio, New York, and New Jersey)	Electrical products	Electrical Workers (IUE)	29,000
General Motors Corp., Inland Manufacturing Division (Dayton, Ohio)	Rubber	Rubber Workers	7,050
Greater New York Folding Box and Display Manufacturers Association, Inc., and Independent Folding Box Manufacturers (New York, N.Y.)	Paper	Pulp, Sulphite Workers	2,000
Gulf Coast Piping Contractors Association and 2 other Associations (Texas)	Construction	Plumbers	2,000
Hooker Chemical Corp. (Niagara Falls, N.Y.)	Chemicals	Niagara Hooker Employees Union (Ind.)	1,600
Hygrade Food Products Corp. (Interstate)	Food products	Meat Cutters	2,500
Interco Inc., International Shoe Co., Division (St. Louis and Perryville, Mo.)	Leather	Boot and Shoe Workers	3,650
Interco Inc., Chemical Department, International Shoe Co., Division (St. Louis, Mo.)	Leather	Boot and Shoe Workers	6,400
International Harvester Co., 2 contracts	Machinery	Auto Workers (Ind.)	36,200
International Harvester Co., Main Labor Contract—Depot and Transfer Agreement (Interstate)	Wholesale trade	Auto Workers (Ind.)	1,250
Laundry Workers' Agreement ² (Seattle, Wash.)	Services	Laundry, Dry Cleaning, and Dyehouse Workers (Ind.)	1,100
Loblaws Inc. (New York and Pennsylvania)	Retail trade	Meat Cutters	1,600
Midland-Ross Corp., I-R-C Fibers Division (Painesville, Ohio)	Textiles	Textile Workers	1,700
Midland-Ross Corp., Cleveland Frame Division (Cleveland, Ohio)	Transportation equipment	Auto Workers (Ind.)	1,500
Miles Laboratories Inc. (Elkhart, Ill.)	Chemicals	District 50, Allied and Technical (Ind.)	1,100
Motor Wheel Corp., and the Motor Wheel Branch (Lansing, Mich.)	Transportation equipment	Allied Industrial Workers	2,950
National Acme Co. (Cleveland, Ohio)	Machinery	Mechanics Educational Society	1,700
National Steel and Shipbuilding Co. (San Diego, Calif.)	Transportation equipment	Iron Workers	1,450
New Jersey Linen Suppliers, Linen Laundry Division ² (New Jersey)	Services	Laundry and Dry Cleaning Union Workers	2,500
North American Rockwell Corp., Draper Division (Hopedale, Mass.)	Machinery	Steel Workers	1,000
North Electric Co. (Galion, Ohio)	Electrical products	Steel Workers	1,350
Northeastern States Boilermaker Employers ² (Interstate)	Construction	Boilermakers	1,000
Ohio Steel Foundry Co. (Lima and Springfield, Ohio)	Primary Metals	Auto Workers (Ind.)	1,000
Olin Mathieson Chemical Corp., Energy Systems Division, Indiana Army Ammunition Plant (Charleston, Ind.)	Ordnance	Firemen and Oilers; and Chemical Workers (Ind.)	14,550
Picture & Mirror Frame Manufacturers Association, Inc. (New York, N.Y.)	Lumber	Carpenters	1,000
Schludberg-Kurdle Co., Inc. (Baltimore, Md.)	Food products	Meat Cutters	1,100
Seattle-King County Pharmaceutical Society and The Greater Seattle Retail Drug Association, Inc. (Seattle and King County, Wash.)	Retail trade	Retail Clerks	2,200
Seiberling Tire & Rubber Co. (Barberton, Ohio)	Rubber	Rubber Workers	1,000
Shipyard Industry of San Diego ² (San Diego, Calif.)	Transportation equipment	Machinists; Carpenters; and Painters	1,300
Sperry Rand Corp., Vickers Inc., Division (Omaha, Nebr.)	Machinery	Allied Industrial Workers	1,000
Structural Steel and Ornamental Iron Association of New Jersey, Inc. (Newark, N.J.)	Fabricated metal products	Iron Workers	1,000
Washington Publishers Association covering the Washington Post, Evening Star, and Daily News (Washington, D.C.)	Printing and publishing	Typographers	1,050
Waukesha Motor Co. (Waukesha, Wis.)	Machinery	Machinists	1,200

¹ Union affiliated with AFL-CIO except where noted as Independent (Ind.)

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

Developments in Industrial Relations



Inflation address

President Richard Nixon addressed the Nation on the economy June 17, and announced three specific steps to supplement his basic reliance on "continued moderation in general fiscal and monetary policies."

The first step consists of the appointment of a National Commission on Productivity, whose principal function is finding ways to restore productivity growth, which has "increased far less than usual" in the past 2 years. The committee will be comprised of representatives from business, labor, the public, and Government. Second, the Council of Economic Advisers will prepare periodic "inflation alerts" spotlighting "the significant areas of wage and price increases and objectively analyze their impact on the price level." The Productivity Commission will then publish information on these increases. Third, a Federal Purchasing Review Board will review all Government actions "to determine where Federal purchasing and regulations drive up costs and prices."

Presidential appointments

On June 10, President Nixon named Secretary of Labor George P. Shultz as director of the new Office of Management and Budget, effective July 1. The President also announced that he was nominating Under Secretary of Labor James D. Hodgson, to succeed Mr. Shultz as Secretary. The Senate approved the nomination on June 17. Later in the month, the President nominated Laurence H. Silberman to become Under Secretary of Labor. Mr. Silberman had been the Department's solicitor since May 1, 1969.

Prepared by Leon Bornstein and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and based on information from secondary sources available in June.

Shortly before being named to his new post, Secretary Shultz, in a speech at the National Press Club, said that "we cannot allow labor peace to become the overriding objective in our collective bargaining." He encouraged companies to take "strong positions" at the bargaining table as a means of overcoming the current inflation and pointed out that "union leaders cannot take the position that their members should not be asking for high wage increases. That's got to come from management." Secretary Shultz added that although he didn't "want to be classified as pro-strike by any means," he believed that "the peaceful strike is probably one of the least worst forms of protest we have."

Minority hiring

Secretary Shultz announced the implementation of a "Washington Plan," setting equal employment opportunity standards for construction work in the national capital area,¹ on June 1. Under the plan, contractors must make "good faith" efforts to increase minority hiring on all their projects in the area during the period they are working on Federal projects. This is significantly different from the Philadelphia Plan,² which requires contractors to meet minority employment goals only on their Federal projects.

Mr. Shultz indicated that the Washington Plan was put into effect because local contractors, unions, and minority groups had failed to reach a satisfactory agreement on minority hiring practices. (The Department of Labor had set a June 1 deadline on an agreement after conducting hearings in April on minority hiring practices in the area.) He added that the plan was aimed at achieving a minimum increase of 3,500 jobs for minority members in 11 skilled construction trades over the next 4 years.

Minority hiring goal ranges include 10-16 percent for electricians until May 31, 1971, rising to

28-34 percent by the fourth year of the plan; iron workers, 11-19 percent, rising to 35-43 percent; lathers, 16-22 percent, rising to 34-40 percent; and boilermakers, 6-12 percent, increasing to 24-30 percent by the fourth year. A contractor may meet his commitment in one of three ways: By hiring sufficient minority group workers on his own projects; by establishing that the total minority hiring of all members of the contractors' association to which he belongs meets the percentage goal of the contractor himself; or by establishing that aggregate minority worker referrals by the union he works with meet his hiring goals, if the contractor relies on a union for 80 percent or more of his manpower needs.

The Labor Department disclosed that all of the 11 trades covered by the Washington Plan have "10 percent or less minority utilization" in the area, while minority members make up about 26 percent of the area's work force. Although minority groups currently have a 50-percent representation in the area's construction industry, the Department asserted that "very few of these [minority workers] are located in the skilled trades." Similar to the Philadelphia Plan, the Washington Plan applies to contracts of \$500,000 or more. Both plans require the contractors to make a "good faith effort" to meet the hiring goals or risk losing their Federal contracts. (A Federal district court in Pennsylvania upheld the legality of the Philadelphia Plan in March. The decision is being appealed by the Contractors Association of Eastern Pennsylvania.)

The Washington, D.C., Building & Construction Trades Council termed the plan totally unworkable. The Council said the capital area has "the highest percentage of minority workers of any large urban area in the Nation" employed in skilled trades, and noted that through its Project Build, it will train and place more than 500 minority workers in the construction industry over the next year. Reasons cited for possible difficulties in meeting the Plan's quota were the cutback in projects and growing unemployment in the construction industry.

R. H. Booker, spokesman for the Washington Area Construction Industry Task Force, termed the Washington Plan "weak-kneed" and a "slavery document, right off the Plantation." The Task Force, a militant black organization, called the plan an inadequate response to the black community's demand for 70 to 80 percent representa-

tion in federally funded construction work in order to parallel the percentage of blacks in the population of the District of Columbia. Following the Task Force's statement, Assistant Secretary of Labor Arthur Fletcher said that the Department believed the courts would uphold the plan. He also said that if the Task Force could get the contractors and unions to agree to a 70-percent Negro employment figure, the Labor Department would approve it as a "hometown solution."

Three weeks later, on June 19, Labor Secretary-designate James D. Hodgson announced that two more cities, Boston and Denver, have developed areawide agreements to increase minority hiring in construction trades. Noting that the addition brought to four the number of cities where contractors, unions, and minority coalitions have worked out "hometown" agreements for achieving equal employment opportunity in the construction industry, Mr. Hodgson stated that he was especially encouraged "that the interested local parties themselves worked out their own solution to a pressing local problem." (Boston and Denver were among 19 cities named by Secretary of Labor George P. Shultz in a national program for achieving equal employment opportunities in federally funded construction work; the first two cities achieving "hometown" solutions were Chicago and Pittsburgh.)³

In Boston, the parties agreed to attempt to hire at least 2,000 minority employees and to provide them with continuing job opportunities over a 5-year period. The number of minority members to be hired and trained under the agreement will depend on the number of men in the craft working in the geographic area, the proportion of minority employees in the craft, and the availability of work.

A nine-member Administrative Board, comprised equally of representatives of contractors, involved unions, and minority groups, will establish a nonprofit corporation to receive funds to carry out the purposes of the agreement. The plan will run for 1 year and be renewed automatically annually, unless one or more of the parties serves notice of intent to modify or terminate the plan.

The 5-year Denver plan will attempt to bring minority representation to 17 percent of the work force (an increase of 400 minority workers) over the next 18 months. In the remaining period, the unions will attempt to increase minority representation to equal their percentage of the population

in the Denver metropolitan area. The Denver area is unusual in that "Hispanos" (persons of Spanish descent) constitute the largest minority group, followed by blacks, Indians, and Orientals.

Equal opportunity

The Department of Labor issued guidelines implementing Executive Order 11375 (1968), which prohibits sex discrimination in employment by Government contractors. The guidelines, announced on June 9 by Mrs. Elizabeth Duncan Koontz, Director of the Department's Women's Bureau, call for employers to include women in management training programs and forbid the following practices:

Advertising for workers in newspaper columns headed "male" or "female" unless sex is a "bona fide occupational qualification."

Distinguishing between married and unmarried persons of one sex unless the same distinctions apply to the opposite sex.

Denying employment to women with young children unless the same policy exists for men.

Maintaining seniority lines based solely on sex.

Specifying any difference for male and female employees on the basis of sex in either mandatory or optional retirement age.

Rubber

Goodyear Tire & Rubber Co. and the Rubber Workers negotiated an agreement on June 7, ending a strike by 23,000 workers that began April 20. A week later, B. F. Goodrich Co. agreed to similar terms, ending a strike by 11,000 workers that began May 6. Also following the pattern were Firestone Tire & Rubber Co., settling on June 15 for 19,000 workers, and Uniroyal, settling July 1 for 18,000 workers.

The 3-year Goodyear contract provided for general wage increases totaling 82 cents an hour—30 cents effective immediately and 26 cents effective July 5, 1971, and July 3, 1972. Skilled tradesmen received an additional 15-cent hike effective immediately and 10 cents on July 5, 1971. All workers at plants in Danville, Va., and Union City, Tenn., received additional hikes (10 cents immediately and 10 cents on July 5, 1971) because of a pay differential.

The employees gained a 10th paid holiday and they will receive 5 weeks of vacation after 20 instead of 22 years of service. The pension rate for future retirees was increased to \$7.75, from \$5.50, a month for each year of service and current retirees will receive an additional \$1.25 a month for each year of service. Dependents of workers who die before retirement will now receive \$150 a month for 24 months. This is in addition to an existing \$150 a month benefit paid to a widow or widower, beginning with the death of an employee and continuing until the survivor remarries, or attains age 62, or eligibility for unreduced Social Security, whichever occurs first. Life insurance was increased \$1,000 (to \$8,500), and accidental death and dismemberment coverage was increased by \$4,750 (to \$8,500). The sickness and accident benefit was increased to a flat \$85 a week for 52 weeks, from the previous \$60 or \$70 for 39 weeks. Health insurance changes included adoption of a drug plan under which the employee pays the first \$1 of a prescription charge for himself or his dependents and the company pays the balance. The parties also agreed to adopt an occupational health program under which the School of Hygiene and Public Health at Johns Hopkins University will

Earnings index

The Bureau's index of manufacturing production workers average hourly earnings (excluding overtime premium pay and the effects of interindustry employment shifts) rose 1.0 in March, to 154.4.

Data for prior periods are shown below.

1969	Index (1967-69=100)	1970	Index (1967-69=100)
March.....	145.2	January.....	152.9
April.....	146.0	February.....	153.4
May.....	146.6	March.....	154.4
June.....	146.9		
July.....	147.8		
August.....	148.4		
September.....	149.5		
October.....	150.2		
November.....	151.0		
December.....	152.0		

Annual averages:

1968.....	139.5
1969.....	147.7

Monthly data from 1947-68 and data for selected periods from 1939 to 1947 are contained in *Summary of Manufacturing Production Workers Earnings Series, 1939-68* (BLS Bulletin 1616, 1969).

study worker health and safety problems. The results will be used in developing preventive medicine plans at all plants.

Electrical equipment

RCA Corp. and the International Brotherhood of Electrical Workers (IBEW) reached agreement on a 42-month national contract in May, but the International Union of Electrical Workers (IUE) rejected a similar offer, leading to a June 2 walkout by 12,000 workers in seven States. The offer was accepted by the Radio Communications Assemblers Union for 4,000 workers in northern New Jersey and the Carpenters for 1,000 workers in Monticello, Ind.

The IBEW pact, which covered 20,000 workers in seven States, provided for an immediate wage increase of 20 to 49 cents an hour and 15-cent increases in 1971 and 1972, adoption of a cost-of-living escalator clause permitting up to 21 cents in increases during the contract term, company assumption of the employees' pension contribution (ranging from 5 to 11 cents an hour), and improvements in other supplementary benefits.

Sylvania Electric Products, Inc., and five AFL-CIO unions⁴ tentatively agreed in May on 3-year pacts for over 10,000 workers. The unions' bargaining was coordinated by the AFL-CIO Industrial Union Department. The new agreements, effective immediately, replace contracts scheduled to expire at various times during the second half of 1970. They provide for a 23-cent general wage increase effective June 15 and for 15-cent increases in 1971 and 1972. Other terms include a 5- to 25-cent additional adjustment for skilled trades, revision of the cost-of-living escalator clause to provide for up to 8-cent adjustments in 1971 and 1972, a fifth week of paid vacation after 25 years of service, and improvements in pension and insurance provisions.

In Lake Success, N.Y., Sperry Rand Corp. and the Electrical Workers (IUE) reached agreement June 8 on 3-year contracts for 4,500 workers, including 1,300 recently organized engineers. Wages and salaries were increased 5 percent effective immediately, 4.5 percent in June 1971 and 4.3 percent in June 1972. A cost-of-living escalator clause was established (the previous clause was dropped under the 1964 settlement) and pension, insurance, and sick pay provisions were improved. The operations involved were the

Sperry Gyroscope and Sperry Systems Management divisions.

Food

The Bakery and Confectionery Workers' union recently announced that it had negotiated 2-year contracts expected to set patterns in coming contract negotiations for a total of 40,000 workers. One of the agreements was with ITR Continental Baking Co. of Paterson, N.J. Terms for the 150 workers included labor cost increases of 40 cents an hour on May 3, 1970, 9 cents on January 1, 1971, 35 cents on May 2, 1971, and 6 cents on January 1, 1972. The union will decide how the increases will be allocated between wages and benefits.

On the West Coast, the settlement involved ITR Continental Baking, Interstate Bakeries, and American Bakeries. Terms for 2,000 workers included wage increases of \$14 a week effective immediately, \$10.50 in May 1971, a \$3-a-week increase in employer funding to provide for improvement in welfare benefits, and a \$4.80-a-week increase in pension funding.

Construction

Recent construction settlements include the following:

The Laborers and the Associated General Contractors (AGC) negotiated a \$3.40-wage and benefit package for 4 years covering 35,000 workers in Southern California. The previous journeyman scale was \$4.145 plus 85 cents in benefits.

The Plumbers and Pipe Fitters and the Pipe Line Contractors Association agreed on a 3-year national agreement providing for a \$3-package over 3 years for 5,000 workers. The previous scale ranged from \$5.95 to \$6.65 plus 65 cents in benefits.

The Carpenters and the Master Builders Association of Western Pennsylvania negotiated a \$2.76-package spread over 3 years for 5,000 workers in Pittsburgh and nine Western Pennsylvania counties. The previous scale was \$6.45 plus benefits.

The Laborers and the AGC agreed on a \$3.55-package over 3 years for 3,000 workers in Rhode Island. The previous scale was \$4.30 plus 30 cents in benefits.

The Carpenters and the Madison (Wisconsin) Employers Council agreed to a \$3-package over 3 years for 2,000 workers. The previous scale was \$5.05 plus 30 cents in benefits.

The Carpenters and the Laborers agreed with the AGC on \$2-packages for 2 years for workers in Toledo, Ohio. The previous scales were \$6.78 plus 52 cents in benefits for the Carpenters and \$5.24 plus 37 cents in benefits for the Laborers.

Apartment houses

After long and heated negotiations, the Realty Advisory Board and Local 32 B of the Building Service Employees union concluded a new 3-year pact for 25,000 employees of 5,000 New York City apartment buildings. The agreement was retroactive to April 20, the expiration date of the previous contract. The settlement, reached on June 17, provided for an \$18-a-week wage increase retroactive to April 20 (including a \$13 interim increase that resulted from a 1-month pact negotiated on April 20), a \$12 increase in the second year, and \$10 in the third. Improved fringe benefits completed the package.

The agreement did not require ratification by the union members, but they were free to strike any apartment owners who did not approve the terms by June 26. On July 6, members of the local struck landlords of 2,500 rent-controlled buildings because the landlords had refused to sign the contract. These landlords contended that rent increases pending in a city council bill were not adequate to meet the cost of the contract.

Government

On June 3, Governor Linwood Holton of Virginia announced a 10-percent wage increase effective July 1 for the State's 46,000 employees. The employees received 5-percent increases in both 1968 and 1969.

About 25,000 employees of the State of Wisconsin received a \$16-a-month cost-of-living increase in July, based on the increase in the Consumer Price Index between April 1969 and April 1970. They received a \$13 a month increase in July 1969. Wisconsin is the only State which has a law providing for such automatic adjustments. These employees, who are represented by the State, County and Municipal Employees union, also

received negotiated increases of 4 percent, minimum \$25-a-month, in July of 1969 and 1970 under a contract signed in late 1969.

The Tennessee Valley Authority and five unions signed agreements in June providing wage increases ranging from 6 to 8 percent effective July 1, for 6,000 white collar, custodial, and public safety employees. An increase in TVA's contribution to health insurance premiums, a 10-percent differential for Sunday work, and improved overtime were also provided.

Baseball

A new basic 3-year agreement⁵ was ratified by major league baseball players and club owners in June. The pact, retroactive to January 1, 1970, raised minimum major league salaries to \$12,000 in 1970, \$12,750 next year, and \$13,500 in 1972. The prior minimum was \$10,000. Other provisions included termination pay for players cut during spring training and, beginning in 1972, players cut after May 15 will be paid for the full season. During spring training, when no salaries are paid, players will receive \$50 a week for incidentals (instead of \$40) and a daily meal allowance of \$13, rising to \$14 in 1971. During the regular season, they will receive a meal allowance of \$16 a day while traveling (instead of \$15), increasing to \$17 in 1971. The incidentals allowance and the meal allowances are also subject to cost-of-living adjustments in 1971 and 1972.

A revised World Series and playoff pool will add an estimated \$250,000 each year to be distributed to participants. Moving expenses were provided for players traded during spring training or the regular season. The agreement also provides for arbitration procedures bypassing the baseball commissioner's office when the issue does not involve the "integrity of the game."

Railroads

The Firemen and Oilers reached a 2-year agreement with Class I Railroads on June 12, completing the current round of negotiations for railroad shopcraft employees.⁶ The settlement, which affected 18,000 workers, provided wage increases of 2 percent retroactive to January 1, 1969, 3 percent (plus 5 cents an hour to certain skilled employees) retroactive to July 1, 1969, 5 cents retroactive to September 1, 1969, 5 percent (plus 5

cents for the skilled employees) retroactive to January 1, 1970, and 4 cents effective both April 1, and August 1, 1970.

The Illinois Central Railroad and the United Transportation Union, agreed to a landmark accord under which a joint commission will decide on experimental work practices and new operating methods aimed at securing new business for the railroad. The six-member joint commission will recommend experiments to recapture short-haul business lost to trucks. Decisions must be unanimous to be implemented and will be subject to a joint veto by the presidents of the union and railroad. At the end of 18 months, the parties will review the commission's effectiveness and decide whether it should be continued.

The new body is expected to consider allowing trains to cross divisional lines without a change in crews, in order to speed shipments currently delayed by the required crew changes. It will study the use of "minitrains" of five cars using smaller crews than the present 4 or 5 men. United Transportation Union President Charles Luna said that any changes will apply only to new business and that existing contract provisions governing crew size, division line crew changes, and other matters would remain in effect on other trains. Mr. Luna expressed the hope that, with the new agreement, "we have begun to turn some of the energy spent in the past in fighting between labor and management toward a more productive direction." William B. Johnson, Board Chairman of the Illinois Central, said that pacts similar to the one signed between the railroad and the UTU could help "rejuvenate" the railroad industry, warning that nearly one-third of the Nation's railroads are "on the verge of bankruptcy".

Layoffs

The increasing layoffs of aerospace workers was dramatized in June, as McDonnell Douglas Corp. announced the suspension of Supplementary Unemployment Benefits payments to workers laid off from its Long Beach, Calif., plants. The action was taken because the fund had dropped below its minimum required level of \$18 for each active employee. The SUB plan, adopted under the 1965 settlement with the United Auto Workers, provided for maximum weekly benefits (including the maximum \$65-a-week State unemployment benefit) equal to 75 percent of the laid-off workers'

gross earnings while employed. The maximum duration of benefits was 52 weeks and company funding was at the rate of 5 cents for each hour worked. The union currently represents 13,000 workers at the facilities, compared with 30,000 in July 1968.

In March unemployment increases forced North American Rockwell Corp. to terminate Extended Layoff Benefits for its laid-off aerospace workers.⁷

NLRB decision

The National Labor Relations Board has extended its jurisdiction to cover private, nonprofit colleges and universities, stating that, with operating budgets of roughly \$6 billion a year, such institutions have a clear impact on interstate commerce and consequently should operate under the labor-management rules that govern other big businesses. The decision reversed a 1951 precedent involving Columbia University that exempted most charitable and educational institutions from the National Labor Relations Act. The Board noted that since the 1951 decision college enrollment has doubled; nonprofessional employment has reached 263,000; union organization has reached most campuses; and "labor disputes have already erupted at a number of universities," with the expectation that they will recur in the future.

The NLRB decision came in a case involving Cornell University. The Board ordered a representation election among the university's nonprofessional employees because the school's "size and \$142.5 million-a-year operation plainly evidenced that it is engaged in commerce." The unanimous decision is expected to spur the growth of unions at colleges and universities by facilitating their attempts to gain recognition.

Union developments

On June 2, the International Union of District 50, Allied and Technical Workers of the United States and Canada, announced that Elwood Moffett had been reelected to a second 5-year term as president of the 185,000-member union. Mr. Moffett defeated Angelo J. Cefalo, District 50's former vice-president. Marlin L. Brennan was the winner in a three-way contest for the union's vice-presidency. The election was held in May, following an April convention,⁸ during which the union changed its name. Previously,

it was International Union of District 50, United Mine Workers of America.

The American Association of Securities Representatives, a national trade group of securities salesmen claiming 5,000 members, announced that it had concluded an "agreement of affiliation" with the National Maritime Union. The association's president, Sam Cordova, stated that "our association with NMU will substantially enhance our ability to . . . help [our members] maintain their individual security, their stature and their dignity." He also disclosed that the association plans an organizing campaign in major financial centers and use of "appropriate legal action for the protection of their members to halt any abusive practices by brokerage firms or government agencies."

William J. Pachler, 65, president of the Utility Workers Union since 1960, died in May after an extended illness. Mr. Pachler was a member of the executive board of the AFL-CIO Industrial Union Department at the time of his death. William R. Munger, a vice president, was named to succeed Mr. Pachler.

Alexander J. Rohan, Secretary-Treasurer of the Printing Pressmen since 1961, was elected president of the union, succeeding Anthony J. De Andrade, who died on January 20. J. Frazier Moore, interim president of the union, succeeded Mr. Rohan until another election is held for the post of secretary-treasurer. (Mr. Moore was a vice president of the union.) Mr. Rohan, who will serve until 1972, defeated Walter Turner, a former vice president of the union, by a vote of 39,583 to 20,592.

Gilbert Jewell was elected president of the Allied Industrial Workers by its International Executive Board, succeeding Carl W. Griepentrog, who retired on June 1. Mr. Jewell, 62, has been Secretary-Treasurer of the union for 13 years. Dominick D'Ambrosio was elected to succeed Mr. Jewell as secretary-treasurer. Both will serve until the union's next convention in the fall of 1971.

Conventions

The Communications Workers, at their 32d annual convention in Cincinnati, focused attention on the 408,000-member union's upcoming negotiations. (The union was already bargaining with the General Telephone system and is scheduled to begin contract talks in several months with the

Bell system on agreements that expire in 1971.) Union president Joseph A. Beirne set the convention's tone by asserting that "We are serving notice on the communications industry that the cwa will be bargaining for wage and benefit increases that will make the largest package ever won before look like small potatoes." The delegates approved a 50-cent increase in the \$2.50-a-month per capita payment. They also adopted a resolution calling for members to support efforts to improve the environment and for locals to participate in a cwa "Environment Day" program.

Delegates to the Retail, Wholesale and Department Store Union's eleventh convention in Bal Harbour, Fla., reelected Max Greenberg to his fifth 4-year term as president of the union. Secretary-Treasurer Alvin E. Heaps was reelected to the post he has held since 1948. In addition, seven new members were elected to fill vacancies in the union's 32-man executive board. The delegates approved a \$1-a-month dues increase for all locals except those which have had an increase in the past year. Also approved was a minimum dues structure of \$5 a month and a 50-cent-a-month increase in per capita payments.

In Miami Beach, delegates to the Textile Workers Union's 16th biennial convention reelected William Pollock to his eighth 2-year term as president. Sol Stetin was elected to his second term as secretary-treasurer. The delegates also called on the textile industry to "enter the world of the '70's by raising wages and other benefits of textile workers to a par with those in other industries." □

FOOTNOTES

¹ The District of Columbia, Montgomery and Prince Georges counties in Maryland, and Arlington, Fairfax, Loudoun, and Prince William counties in Virginia.

² See *Monthly Labor Review*, November 1969, pp. 72-73.

³ See *Monthly Labor Review*, April 1970, p. 80.

⁴ The International Brotherhood of Electrical Workers (IBEW), International Union of Electrical Workers (IUE), Machinists, Communications Workers, and Steelworkers.

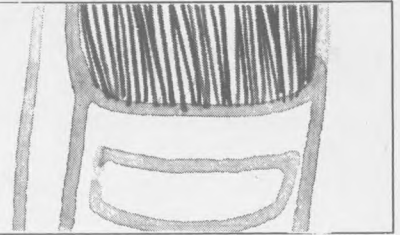
⁵ See *Monthly Labor Review*, May 1969, p. 76, for terms of the current pension agreement.

⁶ See *Monthly Labor Review*, July 1970, pp. 77-78, and June 1970, p. 79.

⁷ See *Monthly Labor Review*, May 1970, p. 83.

⁸ See *Monthly Labor Review*, June 1970, p. 81.

Book Reviews and Notes



Cross-section study

Technological Advance in an Expanding Economy: Its Impact on a Cross-Section of the Labor Force. By Eva Mueller and others. Ann Arbor, University of Michigan, Institute for Social Research, 1969. 254 pp. \$7, cloth-bound; \$5, paperback.

Most statements purporting to tell what is happening to workers as a consequence of technological change come from some general theory or ideology. Some rely on statistical study or case history of specific, localized events. None, to our knowledge, was based on a cross-section sample such as this study. The authors disclaim any effort to predict what would happen under any but the specific conditions. Still some critics will probably find fault that the study claims too much on the basis of too little evidence. Those conducting the study were quite apparently aware that many factors influence the way technological change will affect the lives of specific workers in specific industries at particular times and places. They do not offer this study as a substitute for the kinds of research that would deal with all of them. What they do offer is a set of generalizations that in some degree support, and frequently refute, other generalizations that have been made on less defensible grounds than those that they have used here. Much policy has been based on such propositions. So the study performs a real service in putting up a caution against these easy assertions.

The authors of this study, supported by the Labor Department's Office of Manpower Research, used the resources of the Survey Research Center at the University of Michigan to draw the sample and conduct interviews. The research instrument seems adequate to get at the facts sought and the

summaries are well supported by the data.

In this short review it will not be possible to indicate many of the findings. However, a few deserve mention here for the benefit of those who will not read the book. These include the fact that technological change affected only a few jobs (1 to 3 percent a year); that the general level of demand is a far more significant factor affecting employment than is technological change; most workers like to see change in the machines they work with; nearly all workers enjoy what they are doing; the change was more frequent change in tools and small scale equipment than in the large production equipment; workers experiencing change are younger and better educated than those not facing technological change; these persons work in expanding industries that are able to relocate workers within their own systems; unemployment among workers who had experienced machine change in the last 5 years was almost equal to that of workers experiencing no machine change; about 60 percent of the workers felt their work was more interesting after machine change than before; attitudes favorable to automation increase with increased education of the worker; and the more educated worker does not feel denigrated by his new job. We have obviously selected items that tend to weaken rather than support the traditional wisdom. But the ideas that are supported here certainly cast a much more favorable light on the future than have many of those who criticize the direction to which our civilization seems committed. They deserve further investigation and dissemination.

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Life across the border

La Raza: The Mexican Americans. By Stan Steiner. New York, Harper & Row, Publishers, 1970. 418 pp., bibliography. \$8.95.

Sal Si Puedes: Cesar Chavez and the New American Revolution. By Peter Matthiessen. New York, Random House, Inc., 1969. 372 pp. \$6.95.

Nowhere else in the world is there a political border separating two nations with as wide a gulf in economic development as that between Mexico and the United States. In such a situation, one would expect migration from the less developed country toward the advanced economy. This pressure for migration has occurred, but the whole history of the process has hardly served as a guide to effective immigration and manpower policies in the receiving nation.

This Nation has permitted virtually uncontrolled entry by a group of people whose peasant backgrounds, Spanish language, and deficiencies in education did not handicap them at a particular stage of U.S. economic development—in the building of the railroads in the Southwest and in the development of agriculture—but when the need for “hoe labor” passed, their ability to mesh with the economy faded. The Mexicans still come, however, generally ill prepared for life in an industrial economy. They move into the barrios of the Southwest and attempt to compete for the too few unskilled jobs available, reinforce the cultural and social factors of the old country, and in general add to the woes of already overburdened unskilled labor markets in the region. Stan Steiner and Peter Matthiessen present their commentaries on this way of life in the two books under review.

Stan Steiner's work uses the term *La Raza* as its focal point. Traditionally, *La Raza* (literally *The Race*) is regarded as a cultural and spiritual bond uniting all Spanish-speaking peoples and it is in this context that Steiner uses the term. His book is neither a study nor a survey. Rather, according to the author, “It is about real people, who have been recreated in their own image. Like every work of literature it attempts the impossible; the creation of life through the use of words . . . by depicting the joys, pains, fears, angers, hopes, and fantasies of people.”

A sense of injustice threads its way through *La Raza*. Some of it is justified, a lot of it questionable. Steiner begins with the “atrocities” of the U.S.–Mexican conflict, and concludes that what could not be done by war alone, “was at last won in the violent peace that came in the war's wake. The cowboys were to conquer the land where the soldiers had only occupied it.”

Steiner chronicles the exodus of Mexicans to the United States where, at the border, the exile, the refugee, a pilgrim, a seeker, becomes merely an alien, a wetback, another “dirty Mexican.” They come voluntarily, of course, but it can also be said that the United States grants citizenship to these people and then often denies them their due advantages by sanctioning continued entry of unskilled competitors.

The lack of political consciousness of *La Raza* has made it difficult for the group to deal with their social problems effectively. “Man is the wheel upon which the philosophy of *La Raza* politics turns,” Steiner writes. “The leader does not talk to the people about their problems, nor do they judge him simply by his programs. He is a man first of all. People listen to him or not, depending on how they feel about him as a man.” But new leaders are arising, from the veterans of recent wars, and from the ranks of professionals.

Whether the political culmination of the youth movements becomes a reality or not, there is a movement toward a more immediate culmination of a struggle between growers and harvest workers in the great agricultural valleys of the Southwest. Nowhere has the rise of expectations among Mexican-Americans caught the public eye to the extent that it has in the strike of grape workers in California's great Central Valley. Peter Matthiessen captures the details of the operation of the grape workers union in his *Sal Si Puedes* (*Escape If You Can*), which focuses on Cesar Chavez, the leader of the United Farm Workers Organization Committee (UFWOC). To Matthiessen, Chavez is “an idealist, an activist with a near mystic vision, a militant with a dedication to nonviolence,” who “stands free of the political machinery that the election year of 1968 made not only disreputable but irrelevant.” This is a bit too much, and it is unfair to Chavez. Fortunately, the reader can draw a less pretentious picture of Chavez from the narrative where he emerges as

a hard-working, intelligent organizer, who understands the psychology of the farm workers.

Aside from the extraordinary details of Cesar Chavez's life, there is little in *Sal Si Puedes* that is not available in Steiner's book. Each work depicts farm work as a rough way to make a living, which often it is. The abuses of child labor, inadequate protection against chemical sprays, dilapidated worker housing facilities or many farms, low pay, exemption from collective bargaining laws, are presented, but there is nothing about farm workers' conditions in either book that has not been said before. In fact, John Steinbeck's *The Grapes of Wrath* did a good descriptive job on the nadir of farm labor work. What Steiner and Matthiessen show, through their descriptions, is that we have not made very much improvement in the life of the harvest laborers since the nineteen-thirties.

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Social responsibility

Challenge to Labor: New Roles for American Trade Unions. By Joseph A. Beirne. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1969. 224 pp. \$6.95.

This is an interesting, informative, and somewhat challenging appraisal of labor's role in our society. As one would expect from so forthright and thoughtful a labor leader as Joe Beirne, the focus on the role of American labor in our society is not so much on "what it was and is," but on "what it should and will be." This is especially pertinent since the observations, in addition to being convincingly enthusiastic, represent the views of one who is in a position to do much about seeing that they are carried out.

Joe Beirne's main thesis is that ours is a "pluralistic society" and that labor can, and does, provide a balance and a force for the advancement of social goals and society's general well-being. In fact, one might say that throughout the book, Joe Beirne serves as a "prick of the conscience" to encourage, stimulate, and urge a more general acceptance of this social responsibility of labor.

In this regard, one might have reservations about the somewhat personalized interpretation

of labor history embodied in his chapters on the "The Evolution of the American Labor Movement" and "Labor and the Political Process," to cite but two of the author's areas of concentration. These, and other historical analyses of American labor and labor legislation as well, are admittedly colored by Joe Beirne's unbounded faith in, and enthusiasm for, the broad social goals, the labor objectives, and the type of trade unionism that initially gave rise to the Congress of Industrial Organization. But this is pardonable, indeed, since few will deny that without such dedication and forthrightness on the part of those who espoused the CIO, there was little likelihood that labor's role as the social conscience in a pluralistic society could even be hoped for, let alone achieved.

Joe Beirne not only tells it as he sees it but pointedly, effectively, and dramatically tells it as it should be. For example, to paraphrase and summarize some of his observations:

—Labor has provided a reservoir of talent for government but it need be more active and forceful in its role.

—American labor has properly avoided the "pitfalls" of promoting a "labor party" and it must continue to serve as a balance to both major parties in developing policy and programs for the benefit of "working people" and the general social good.

—Urban America demands community leadership and labor can and should be more active in providing and developing it.

—Labor has long been active on the international scene but the challenges of the misery of our neighbors to the south and in the newly emerging and developing nations provide new horizons and need for even greater and more coordinated efforts among the world's working people.

And so it goes—keen, penetrating and thought-provoking on every facet of labor's role in our society. However one may differ with Joe Beirne's personalized observations and whatever may be the reservations to his historical vignettes and evaluations of past developments in the growth of American trade unionism and of public policy and labor legislation, his plea for ever more vigorous and forthright efforts "to cope with the problems of the cities, of minorities, of education, of pollution, of transportation, of recreation, of housing, [and] of medical care . . ." will be fairly generally endorsed. And as he defines it, most will agree with the concluding observation that "management

must become a partner in pluralism"; it must share with labor the concern and drive to enable "pluralism [to meet] . . . its most serious challenge"; it must make certain equally with labor that "the fifth of the nation [who] is still, by the standards of the rest, ill-fed, ill-clothed and ill-housed . . . [will be] brought fully into the mainstream of American life as it is enjoyed by the other four-fifths."

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In support of a program

Alliance for Progress. A Social Invention in the Making. By Harvey S. Perloff. Baltimore, Johns Hopkins Press, 1969. 253 pp. \$8.50.

The Alliance for Progress, launched amidst high hopes by the Kennedy Administration to offer a reasonable and acceptable alternative to Castro-type social revolutions in the Western Hemisphere, will soon pass its first decade of existence. Generally, there has been serious disappointment in the accomplishments of this ambitious program—rates of economic growth and advances in education and health have been of such low or inconsistent quality to raise grave misgivings of the efficacy in continuing to support the endeavor.

Professor Harvey S. Perloff, with his long experience in planning and development, warns that nonsupport could cause the United States to "lose one of the truly great opportunities for forward movement in modern times." Since World War II the great moves forward have been accomplished through social inventions, such as the Marshall Plan, the Full Employment Act of 1946 and, of course, the Alliance for Progress. All have their imperfections and none has completely succeeded in fulfilling its stated objectives, he concedes. Of the three, the Alliance represents the most ambitious program and has treaded the most unknown areas.

The author begins his analysis with a brief survey of the historical changes in the relations between the United States and the nations of Hispanic America; then moves quickly to the signing of the Charter of Punta del Este. In

essence, that document was designed to provide solutions for both immediate and long range improvement of economic and social conditions within the context of multilateral cooperation that went beyond the mere formalism of previous interhemispheric efforts or the bilateral dominance of traditional United States aid programs. But this desire led into areas that some nations, including, unfortunately, the United States, were reluctant to travel.

Problems arose from the beginning: a lack of consensus on definitions of priorities, an unwillingness to give the necessary freedom of action and authority to a coordinating body, and confusion over whether existing commitments by the United States to particular aid agreements or subsidiary programs were to be considered part of the annual appropriation to the program or simply outside its scope and context. There were also major physical difficulties in providing the transportation and communication necessary for realizing the proposed economic integration, and operational problems in preparation and evaluation of workable national developmental plans.

Inexperience, the lack of sustained and undivided commitment both by the United States and some Latin American countries, overambition in goals and frequent timidity in implementation ultimately led to discouragement with the program itself. From the beginning, moreover, critics had pointed up its shortcomings. Leftists saw it merely as another prop for continued American domination. Rightists resented the proposed changes of the traditional social, economic, and political fabric of society, and even the emerging business community felt threatened by feared future competition. While acknowledging these functional drawbacks and the failure of the program to "electrify" the entire hemisphere, Perloff concludes that even in those countries that have least been affected there is an increasing interest in development which cannot help but be intensified if basic economic integration becomes a reality.

In the second half of the book, Professor Perloff carries the Alliance to the present and hopefully into the future beginning with a plea for patience, followed by a systematic series of proposals for making the Alliance for Progress more workable and useful. There has been, the author finds, a greater realization of the essentials

necessary to stimulate development and the necessity to make distinctions between national levels and accomplished reform in assessing progress. Also there is emerging a more sophisticated attitude toward broadened participation, multilateral programming, and flexible financing that will aid in avoiding past difficulties and failures. Certainly, Perloff concludes, the continued effort on behalf of the wealthy nations to find a solution to the poverty that afflicts a majority of the people of the world is prerequisite if future security and peace are to be possible.

Most readers will find this book an eloquent and impassioned plea in support of the continuation of the Alliance for Progress. It is mandatory both for scholars and a concerned general reader. Highly technical and statistical throughout, those sections can be "skimmed" without seriously damaging the substance of the argument. While Professor Perloff has a stake in the continuation of the program, this does not detract from the intrinsic value of the book; plus it provides a needed balance to the Alliance's detractors.

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The state of the welfare state

The Welfare State: U.S.A.—An Exploration in and Beyond the New Economics. By Melville J. Ulmer. Boston, Houghton Mifflin Co., 1969. 203 pp. \$4.95.

This is an interesting and challenging examination of the weaknesses and strengths of the modern welfare state. It is the author's contention that some form of a welfare state is a fact of life that will not be eliminated by either Democrats or Republicans; he proposes, therefore, that we move toward such a society that is workable and meaningful.

Professor Ulmer tells us the main failure of the modern welfare state is its unacceptably high rate of both inflation and unemployment. His explanation for the persistence of these twin evils is rather persuasive: Long before excess demand causes inflation, other forces, specifically "bottle-neck, structural and psychological" inflation, take their deadly toll. The inflationary spiral therefore begins before full employment is reached and almost in-

stinctively the government puts on the monetary/fiscal brakes. The resulting "substantial unemployment" has been our only effective cure for inflation and we are, therefore, stuck with both.

What Ulmer proposes to do about these twin evils is the weakest part of the book. The first of a three-part proposal is rather simplistic: The establishment of a public agency to which all unemployed would report, either for job location, suitable retraining, or employment by this agency.

The second proposal is for a surtax to be implemented by the President when needed to fight inflation. The proceeds would be frozen in a stabilization fund and refunded to the taxpayer during a downswing in the economy at some later time to bolster consumer and corporate spending and slow the rate of decline.

The third proposal is to provide training, and thus more productive workers, and minimize structural inflation. Since it would now be the avowed intent of the government to stop inflation, the psychological factor would no longer be an important inflationary force.

This three-point proposal fortunately takes but two short chapters in an otherwise good work. One of the better chapters describes various income maintenance plans currently under discussion. Two other chapters summarize the details of how Ulmer visualizes the good life in a meaningful welfare state. It would include, for example, a department of consumer affairs with cabinet rank, a tax on excessive advertising, a national planning authority to regulate new technological innovations, more leisure, cleaner air and streams, a cure for cancer, etc. Professor Ulmer would clearly prefer a society where more attention could be given to leisure, to gentleness and kindness, as distinguished from the current hustle-and-bustle drive for more and ever more.

It is difficult to pin a label on Professor Ulmer. Clearly, in contemporary terms, he is a liberal on welfare, government spending, monetary and fiscal policy, etc.; but throughout there is an almost nostalgic desire to return to some simpler, more pleasant, quieter, idyllic era. The Puritan ethic pervades the entire book: the author takes great pride in his job of teaching, writing, doing research, enjoying the prestige and esteem of his colleagues, and he sees no reason why janitors, cleaning women, and garbage collectors should not also take equally great pride in their work.

The book is thoughtful and a welcome addition to the examination of the weaknesses of the welfare state. This reviewer only wishes that Ulmer could have expanded more on the quality of the good life, and less on the specific details of how to achieve a balanced growth in the modern economy.

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A look at two new journals

The Journal of Economic Education. New York, Joint Council on Economic Education in cooperation with the Advisory Committee of the American Economic Association. Issued semiannually. Annual subscription rate, \$3; single issues, \$2.

With bookshelves already sagging under the weight of specialized publications, one greets the advent of a new journal with some reservations, if not misgivings: Who needs it? Is it worth the trouble? Will it be first-rate or merely passable?

On the basis of its first two issues, the *Journal of Economic Education* has gone a long way toward countering such skepticism. The need for the new publication has been clearly established. A standard of high quality has been set. On the criteria of contents, readability, and editorial leadership, the journal has to be regarded as a professional publication of emerging importance. Whether the high level can be sustained has still to be proved, and it remains to be seen whether those teaching economics in the secondary schools will be as well served as those teaching in the colleges, for though the journal purports to serve both groups, the first two issues are avowedly addressed to college teachers. Part of the answer should become apparent in the third issue which will be directed toward teachers in the high schools and community colleges.

The journal is a major milestone in a movement to increase economic literacy that began 25 years ago with the organization of the Joint Council of Economic Education. In the early years, the educators, businessmen, and labor and farm representatives took the lead in building up the Joint Council and local councils throughout the country. Academic economists were indifferent or hostile—with a few exceptions, notably Edwin G. Nourse and Ben Lewis. But in the 1960's, a num-

ber of academic economists began to face up to the lamentable reputation of economics courses among students and to the problems of teaching the subject in a more interesting and effective fashion. They reasoned that people will learn other economics from someone; better from economists. Recent annual meetings of the American Economic Association have accorded an important place to discussions of economic education.

Much has been achieved during the past decade by the profession and the Joint Council in determining what should be taught (through the Task Force on Economic Education), in providing a nationwide unified measure of the effectiveness of teaching (through standardized tests of economic understanding), in developing alternative instructional approaches (through the National Television Course on Economics and experiments in programmed instruction). These developments are summarized by Henry H. Villard in the first issue, dated fall 1969. Villard, professor of economics at City College of New York, is also the editor, and in his introduction to the same issue provides a clear and persuasive policy statement for the publication.

G. L. Bach, chairman of the Committee on Economic Education of the American Economic Association and one of the early and most articulate converts to the cause of improving economic education, is also a contributor to the first issue, describing the results of an experiment with three different teaching techniques at Stanford University. (One group of students studied a programmed learning text only for a week, another studied a conventional text and saw a television program, and the third read the text and attended conventional lectures.) The results of this experiment, along with the results of other recent tests to compare the efficiency of lectures, television, and programmed instructional materials, present a good overview of the progress made during the decade in understanding the ways in which instruction can be improved.

The journal's policy, as set forth by Villard, is to focus on a particular topic in each issue—to bring together related material bearing on a central theme rather than merely presenting a random collection of articles that come in over the transom. Thus the second issue dated spring 1970 contains several articles on games and simulation and another group on the evaluation of teaching effectiveness, which was also the

major theme of the first issue. These reports might well be of interest to other teachers in the social sciences as well as to economists.

In the lead article to the second issue, George J. Stigler provides, in a sense, the rationale for the new journal by questioning whether there is indeed a special case for economic literacy. In brief, Stigler finds some reasons for singling out economic education for special attention in the schools. But he adds, only if it is taught much better than it has been taught in the past, which in Stigler's view has been disastrously bad.

The 16 articles appearing in the first two issues, contributed by leading figures in economics and by young, experimentally minded economists from institutions throughout the country, make it abundantly clear that teachers of economics have a lot to say to each other that is indeed worth communicating. And much of it makes good reading, for those who don't teach but who are interested in raising the level of economic discourse and policymaking in the future.

—HCM

Growth and Change: A Journal of Regional Development. Lexington, Ky., University of Kentucky, College of Business and Economics. Issued quarterly. Annual subscription rate, \$5; single issues, \$1.25.

Perhaps no existing journal covers precisely the area that this new journal has claimed for itself, although several overlap its scope. In the first issue, January 1970, executive editor Lawrence R. Klein (former editor-in-chief of the *Monthly Labor Review*) states that the journal will cover the field of regional development and the editor intends to cover the subject "broadly and to stress, where possible, the public policy significance of research findings." To assist in achieving this goal, Klein has a distinguished editorial board selected from at least six different disciplines, thus giving weight to his promise of broad coverage.

This sounds promising, but the new journal should be judged on the basis of the material it publishes, not the intentions of its editor. There are seven papers in the first issue. Two of these are straight-forward historical accounts, one dealing with Swedish manpower policy and the other with Tanzania's manpower training program. An addi-

tional two papers might be somewhat loosely called theoretical papers; they treat fiscal equity and federalism, and the possible contributions of economic theory to regional development policy. A fifth paper describes a highly subjective method of delineating a region.

A sixth paper is a review article of regional economics in the United States. Clearly this is an appropriate and useful type of paper for the journal to publish. The coverage of the article is broad and up to date and some attempt is made to organize the subject and to list contributions in logical categories. The paper includes a bibliography of 137 items. At points the authors seem not to have grasped the material they are reviewing. For example they appear to say that the old base-service multiplier is a "Keynesian-type multiplier." If this is their belief, they have missed the point of the controversy which surrounded the base theory.

All the above articles are interesting and in a limited sense significant for regional development. Yet none of them represent research on regional development *per se*. They do not advance and test hypotheses about regional development. The journal contains no regression equations; there is no statistical analysis worthy of the name. With the possible exception of the paper on fiscal federalism there is no rigorous theoretical thinking in the journal.

The remaining article deals with Federal spending for human resource development. The authors conclude that economic development of poor regions will be hastened by Federal expenditures for human capital development. They support the conclusion with some readily available data, but with only primitive analysis. This article does represent research, although of a limited type, on regional development and in this way is different from the other six.

A book review section is a part of the journal. The coverage of this section is broad including books of a type not usually reviewed in social science journals. The first issue includes a review of a novel about building dams in India.

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Separate tabulations

Economic Growth in Japan and the USSR. By Angus Maddison. New York, W. W. Norton and Co., Inc., 1969. 174 pp. \$6.

The title of this book suggests that the reader beware of the theme of capitalism's greatness and Communism's failings, or a comparison between the model of one economic system versus the muddle of the other. No such theme develops even though in the introduction there are statements that can be interpreted as hurrahs for free enterprise. It turns out that there is very little comparison of the USSR with Japan, so that the book is almost two separate subjects within one binding. Perhaps if there were one more chapter that brought together the significant aspects of economic performances in the two countries it would unify the book.

Maddison alludes to the measurement problems, which is an essential caveat in works of this type, but he offers no new methodological approaches, which may be wise, for anyone who has worked through the comparative growth measurement literature usually comes out with epistemological agnosticism. It is refreshing to see that he adjusts Soviet growth figures upward while there is almost unanimity that such figures are overstated and should be adjusted downward. There are many and large lacunae in the Soviet statistics, particularly when it comes to investment, that still remain in spite of the much larger flow of statistical information being released in recent years by the Soviets. Knowing this leaves the reader in a quite skeptical frame of mind when he gets to the passages dealing with investment in chapter 10.

There are many footnotes which may interest serious scholars; however, nonspecialists may consider them unnecessary interruptions. A similar comment applies to the 45 tables and seven appendices. However, the appendices should prove helpful for methodological problems inherent in developing indices for other researchers. Likewise, the bibliography is meaty and a good source for graduate students looking for a thesis topic.

For people educated in a system that is so overwhelmingly western-oriented, the Japanese experience is a breath of fresh air. The different life style, the different values, the different psychological and sociological aspects augur well for all

who are wont to see a pluralistic world. There are also big differences between the Soviet system and Japan and between both Japan and the Soviets and other western countries. These differences underscore the author's conclusion that not much is transferable from Soviet and Japanese experience to other countries facing development problems.

The writing is lucid and not the convoluted jargon common in too many economics books. This should make it a worthwhile addition to the library of many nonspecialists.

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Job motivation

Participation, Achievement, and Involvement on the Job. By Martin Patchen. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1970. 285 pp. \$8.50, clothbound; \$5.95, paperback.

This book, a report on a questionnaire-based study of 834 nonsupervisory employees in two engineering design divisions and three power plants of the TVA, is concerned with: (1) achievement and job motivation (chapters 3-7) and (2) factors, notably participation, contributing to organizational identification (chapters 8-11).

To the extent that achievement-related variables affect it, job motivation (measured by indexes of general job interest, interest in innovation, pride in job accomplishment, attendance, and physiological and psychological stress symptoms), is viewed as a result of opportunities for achievement on the job, "achievement incentive," and rewards for achievement, "achievement motive." Four job characteristics—work difficulty, control over work methods, feedback on the degree of success in performance, and standards of excellence against which to evaluate success—are said to affect achievement incentive. The motive for achievement, it is contended, is influenced by such things as need for achievement, occupational identification, and rewards in the form of peer and supervisory approval and promotion. Though innovative and potentially quite useful, the relevance of this rather elaborate framework for the present study

is undermined by the author's admission that the prediction of job motivation, not achievement incentive or achievement motive, is the primary focus. Patchen's dismissal of the two intervening variables, partly on the grounds that he has no measures of them, leads to the conclusion that they are not really necessary to this study, that basically he is examining the effects of selected personal and job characteristics on job motivation.

Fuller utility of Patchen's framework requires measures of the intervening variables, otherwise we must simply take him at his word that the selected personal and job characteristics affect job motivation through achievement incentives and achievement motive. In short, a test of the theoretical framework is lacking.

Because so many findings are presented, only the flavor of the results can be imparted. Of the numerous statistical relationships, most are not new. Positive relationships between work motivation and control over work methods, chance to learn new things, moderate degree of job difficulty, occupational identification, chance to use one's best abilities, and influence over work goals have been reported by others. Others too have found that worker participation (in this case through the TVA Cooperative Program), co-worker solidarity, and opportunities to utilize one's abilities promote identification with the work organization.

Confirmation of findings is more important than the credit normally given to it. Moreover, Patchen's use of multiple correlation and analysis of variance statistical techniques adds depth to the analysis. To cite one example, Patchen examined the joint contribution as well as the individual of each personal and job characteristic thought to affect job motivation through achievement incentive. He found that the factors contribute somewhat but not greatly to an increase in job motivation beyond each characteristic considered singly. Due to the absence of a strong interaction effect among the variables, it may be sufficient, in cases when increased job motivation is sought, to introduce changes in only one or two of the more important factors. From a practical viewpoint, Patchen points out, job motivation may be enhanced, for example, by permitting control over work methods where technological or organizational factors prohibit changes in the degree of job difficulty or the chance to learn new things on the job. This book is replete with such multi-

variate analysis, much more of which is needed in the study of organizational behavior.

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Other recent publications

Education and training

Altbach, Philip G. and Bradley Nystrom, *Higher Education in Developing Countries: A Select Bibliography*. Cambridge, Mass., Harvard University, Center for International Affairs, 1970, 118 pp. (Occasional Papers in International Affairs 24.) \$3.75.

Blau, Lucie R., "Up With Education," *Conference Board Record*, June 1970, pp. 20-24.

Carter, Thomas P., *Mexican Americans in School: A History of Educational Neglect*. New York, College Entrance Examination Board, 1970, 235 pp., bibliography. \$4.

Coons, John E., William H. Clune III, Stephen D. Sugarman, *Private Wealth and Public Education*. Cambridge, Mass., Belnap Press of Harvard University Press, 1970, xxvi, 520 pp., bibliography. \$12.50.

Noone, Donald J., *Teachers vs. School Board*. New Brunswick, N.J., Rutgers—The State University, Institute of Management and Labor Relations, 1970, 120 pp. \$3.50, paperback.

Silverman, Leslie J. and Stafford Metz, *Selected Statistics of Educational Personnel*. Washington, U.S. Department of Health, Education, and Welfare, Office of Education, 1970, 59 pp. (OE-58041.) 65 cents, Superintendent of Documents, Washington.

U.S. Bureau of Labor Statistics, *Occupational Outlook Handbook, 1970-1971 Edition*. Washington, 1970, xiv, 859 pp. (Bulletin 1650; revision of Bulletin 1550.) \$6.25, Superintendent of Documents, Washington.

Employee benefits

Kolodrubetz, Walter W., "Employee-Benefit Plans in 1968," *Social Security Bulletin*, April 1970, pp. 35-47, 49.

Oswald, Rudolph and J. Douglas Smith, "Fringe Benefits—On the Move," *The American Federationist*, June 1970, pp. 18-23.

Health and safety

Public Health Service, *Persons Injured and Disability Days Due to Injury, United States, July 1965-July 1967*.

Washington, U.S. Department of Health, Education, and Welfare, 1970, 72 pp. (PHS Publication No. 1000-Series 10-No. 58.) 70 cents, Superintendent of Documents, Washington.

Reinhard, Karl R. and others, "Time Loss and Indirect Economic Costs Caused by Disease Among Indians and Alaska Natives," Public Health Reports, U.S. Department of Health, Education, and Welfare, May 1970, pp. 397-411.

U.S. Bureau of Labor Standards, "Bureau of Labor Standards Remodels for Safety Tasks," *Safety Standards*, May-June, 1970, pp. 9-11, 31.

Industrial relations

Canada Department of Labor, Legislation Branch, *Labor Relations Legislation in Canada*. Ottawa, 1970, 180 pp. \$3.50, Queen's Printer, Ottawa.

Derber, Milton, *Collective Bargaining in the Quasi-Public Sector: A Survey of Policies and Practices in the United States*. Urbana, University of Illinois, 1970, 20 pp. (Reprint Series, 210; from Canadian CIRIEC Review, June-December 1970.)

Flanders, Allan, editor, *Collective Bargaining—Selected Readings*. Baltimore, Penguin Books, 1969, 431 pp. \$2.45, paperback.

Heneman, Herbert G., Jr., *Toward a General Conceptual System of Industrial Relations: How Do We Get There?* Minneapolis, University of Minnesota, Industrial Relations Center, 1970, 22 pp. (Reprint 65; from *Essays in Industrial Relations Theory*.)

Moskow, Michael H., *Labor Relations in the Performing Arts—An Introductory Survey*. New York, Associated Councils of the Arts, 1970, 218 pp. \$2.50, paperback.

Seide, Katherine, editor, *A Dictionary of Arbitration and Its Terms—Labor, Commercial, International: A Concise Encyclopedia of Peaceful Dispute Settlement*. Dobbs Ferry, N.Y., Oceana Publications, Inc., 1970, 334 pp. \$15.

U.S. Bureau of Labor Statistics, *Major Collective Bargaining Agreements: Administration of Negotiated Pension, Health, and Insurance Plans*. Washington, 1970, 52 pp. (Bulletin 1425-12.) 60 cents, Superintendent of Documents, Washington.

Zack, Arnold M., "Improving Mediation and Fact-Finding in the Public Sector," *Labor Law Journal*, May 1970, pp. 259-273.

Labor force

Brooks, Thomas R., *Labor and Migration: An Annotated Bibliography*. Brooklyn, N.Y., Brooklyn College Center for Migration Studies, 1970, 38 pp. \$5.

Davey, Patrick J. and James K. Brown, "The Corporate Reaction to 'Moonlighting,'" *Conference Board Record*, June 1970, pp. 31-35.

Department of Employment and Productivity, *Printing and Publishing*. London, 1970, 115 pp. (Manpower Studies 9.) 12s., H.M. Stationery Office, London.

Downs, Harry, "Equal Employment Opportunity: Opportunity for Whom," *Labor Law Journal*, May 1970, pp. 274-282.

Fletcher, Linda P., *The Negro in the Insurance Industry*. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Industrial Research Unit, 1970, 177 pp. (Racial Policies of American Industry, Report 11.) \$5.95, University of Pennsylvania Press, Philadelphia.

Gupta, M. L., "Patterns of Economic Activity in the Philippines and Some Methodological Issues Involved," *International Labor Review*, April 1970, pp. 377-397.

Mead, Margaret, "Working Mothers and Their Children," *Manpower*, U.S. Department of Labor, Manpower Administration, June 1970, pp. 3-6.

Nixon, R.A., *Legislative Dimensions of the New Careers Program: 1970*. New York, New York University, Center for Study of the Unemployed, 1970, 34 pp.

Northrup, Herbert R. and Robert I. Ash, *The Negro in the Tobacco Industry*. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Industrial Research Unit, 1970, 107 pp. (Racial Policies of American Industry, Report 13.) \$4.50, University of Pennsylvania Press, Philadelphia.

Pencavel, John H., *An Analysis of the Quit Rate in American Manufacturing Industry*. Princeton, N.J., Princeton University, Industrial Relations Section, 1970, 65 pp. (Research Report Series, 114.)

Reubens, Beatrice G., *The Hard-to-Employ: European Programs*. New York, Columbia University Press, 1970, 420 pp. \$12.

Richardson, James F., *The New York Police—Colonial Times to 1901*. New York, Oxford University Press, 1970, 332 pp. (Urban Life in America Series.) \$8.50.

Schmidt, Reynold T., M.D., "A Profile of Hard-Core Personnel Employed in Heavy Industry," *Journal of Occupational Medicine*, April 1970, pp. 120-127.

Schnitzer, Martin, *Regional Unemployment and the Relocation of Workers: The Experience of Western Europe, Canada, and the United States*. New York, Praeger Publishers, 1970, 253 pp. (Praeger Special Studies in International Economics and Development.) \$15.

Spencer, Carlie, "Employee Attitudes to Shift Work," *Personnel Practice Bulletin*, Australia Department of Labor and National Service, March 1970, pp. 25-33.

U.S. Bureau of Labor Statistics, *Ph. D. Scientists and Engineers in Private Industry, 1968-80*. Washington, 1970, 20 pp. (Bulletin 1648.) 30 cents, Superintendent of Documents, Washington.

U.S. Manpower Administration, *Special Job Creation for the Hard-to-Employ in Western Europe*. Washington, 1970, 44 pp. (Manpower Research Monograph 14.) 50 cents, Superintendent of Documents, Washington.

Personnel management

Beach, Dale S., *Personnel: The Management of People at Work*. New York, Macmillan Co., 1970, 844 pp. 2d ed. \$10.95.

Mundel, Marvin E., *Motion and Time Study: Principles and Practices*. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1970, 674 pp. \$13.50.

Zeyher, Lewis R., "Improving your Three-Dimensional Communications," *Personnel Journal*, May 1970, pp. 414-418, 434.

Prices and consumption economics

National Industrial Conference Board, "Current Trends in Consumer Markets," a sampling of forecasts excerpted from the N.I.C.B. March conference on the consumer market, *Conference Board Record*, May 1970, pp. 23-26.

Troelstrup, Arch W., *The Consumer in American Society: Personal and Family Finance*. New York, McGraw-Hill Book Co., 1970, 668 pp. 4th ed. \$9.95.

U.S. Bureau of Labor Statistics, *Three Budgets for a Retired Couple in Urban Areas of the United States, 1967-68*. Washington, 1970, 74 pp. (Bulletin 1570-6.) 70 cents, Superintendent of Documents, Washington.

Productivity and technological change

Burack, Elmer H. and Gopal C. Pati, "Technology and Managerial Obsolescence," *MSU Business Topics*, Michigan State University, Graduate School of Business Administration, Spring 1970, pp. 49-56.

De Gregori, Thomas R., *Technology and the Economic Development of the Tropical African Frontier*. Cleveland, Press of Case Western Reserve University, 1969, 531 pp. \$15.

Social security

Moynihan, Daniel P. and others, "Welfare: A Time for Reform," (a group of four articles), *Saturday Review*, May 23, 1970, pp. 2-32, 60-61.

Price, Daniel N. and Robert O. Brunner, "Automatic Adjustment of OASDHI Cash Benefits," *Social Security Bulletin*, May 1970, pp. 3-11.

Wages and hours

Bixby, Lenore E., "Income of People Aged 65 and Older: Overview From 1968 Survey of the Aged," *Social Security Bulletin*, April 1970, pp. 3-27.

Gunzberg, D., "Wage Incentives in Australia: 2, Operation," *Personnel Practice Bulletin*, Australia Department of Labor and National Service, March 1970, pp. 10-24.

Hirsch, Paul M., "Instructional Responsibility and Teacher Pay," *Public Personnel Review*, April 1970, pp. 81-85.

U.S. Bureau of Labor Statistics, *Area Wage Survey: Salt Lake City, Utah, Metropolitan Area, November 1969*. Washington, 1970, 28 pp. (Bulletin 1660-30.) 35 cents, Superintendent of Documents, Washington. Other recent bulletins in this series include the metropolitan areas of Midland and Odessa, Tex.; Waterloo, Iowa; Minneapolis-St. Paul, Minn. (Bulletins 1660-44 through 1660-46.) Philadelphia, Pa.-N.J.; Cincinnati, Ohio-Ky.-Ind.; Lubbock, Tex.; Albany-Schnectady-Troy, N.Y. (Bulletins 1660-48 through 1660-51.) Various pagings and prices.

McConnell, Campbell R., *Perspectives on Wage Determination—A Book of Readings*. New York, McGraw-Hill Book Co., 1970, 234 pp. \$7.95.

Organization for Economic Cooperation and Development, *Forms of Wage and Salary Payment for High Productivity*. Final report. Paris, 1970, 165 pp. (International Seminars, 1967-3.) \$3. Distributed by OECD Publications Center, Washington.

Zeisel, Rose N., "Wages Under Collective Bargaining in 1970," *Survey of Current Business*, U.S. Department of Commerce, May 1970, pp. 15-17.

Miscellaneous

Commons, John R., *The Economics of Collective Action*. Edited by Kenneth H. Parsons. Madison, University of Wisconsin Press, 1970, 382 pp. \$6.50.

Chorafas, D. N., *The Knowledge Revolution: An Analysis of the International Brain Market*. New York, McGraw-Hill Book Co., 1970, 142 pp. \$4.95.

Fleisher, Belton M., *Labor Economics: Theory and Evidence*. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1970, 304 pp., bibliography. \$4.50.

Gilpatrick, Eleanor G. and Paul K. Corliss, *The Occupational Structure of New York City Municipal Hospitals*. New York, Praeger Publishers, 1970, 190 pp., bibliography. (Praeger Special Studies in U.S. Economic and Social Development.) \$12.50.

Industrial Relations Counselors, *New Dimensions in Organization*. New York, 1970, 160 pp. (Industrial Relations Monograph 30.)

- International Labor Office, *Record of Proceedings of the International Labor Conference, Fifty-Third Session, Geneva, 1969*. Geneva, 1970, lxviii, 798 pp. \$12.
- *Report of the Director-General to the International Labor Conference, Fifty-Fourth Session, Geneva, 1970: Part 1, Poverty and Minimum Living Standards—The Role of the ILO* (122 pp., \$1.25); *Part 2, Activities of the ILO, 1969* (77 pp., \$1). Geneva, 1970. Distributed in United States by Washington Branch of ILO.
- Keiser, Norman F., *Readings in Macroeconomics: Theory, Evidence, and Policy*. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1970, 595 pp. \$6.95.
- Kindleberger, Charles P., editor, *The International Corporation: A Symposium*. Cambridge, Mass., M.I.T. Press, 1970, 415 pp. \$15.
- Levine, Robert A., *The Poor Ye Need Not Have With You: Lessons From the War on Poverty*. Cambridge, Mass., M.I.T. Press, 1970, 262 pp. \$7.95.
- Mishan, E. J., *21 Popular Economic Fallacies*. New York, Praeger Publishers, 1970, 245 pp. \$7.95.
- Mitchell, John G. and Constance L. Stallings, editors, *Ecotactics: The Sierra Club Handbook for Environmental Activists*. New York, Pocket Books, 1970, 287 pp. 95 cents.
- Ney, John, *The European Surrender: A Descriptive Study of the American Social and Economic Conquest*. Boston, Little, Brown and Co., 1970, 500 pp. \$10.
- Robinson, Joan, *Freedom and Necessity: An Introduction to the Study of Society*. New York, Pantheon Books, 1970, 128 pp. \$4.95.
- Sansom, Robert L., *The Economics of Insurgency in the Mekong Delta of Vietnam*. Cambridge, Mass., M.I.T. Press, 1970, 283 pp., bibliography. \$12.50.
- Schultze, Charles L. with Edward K. Hamilton and Allen Schick, *Setting National Priorities: The 1971 Budget*. Washington, Brookings Institution, 1970, 191 pp. \$6.50, cloth; \$2.95, paperback.
- Seyfarth, Shaw, Fairweather & Geraldson, *Labor Relations and the Law in West Germany and the United States*. Ann Arbor, University of Michigan, Graduate School of Business Administration, 1969, xxx, 606 pp., bibliography. (Michigan International Labor Studies, Vol. III.) \$15.
- Somers, Gerald E., editor, *Proceedings of the Twenty-Second Annual Winter Meeting of the Industrial Relations Research Association, New York City, December 29-30, 1969*. Madison, Wis., Industrial Relations Research Association, 1970, 356 pp. \$5.
- Terkel, Studs, *Hard Times: An Oral History of the Great Depression*. New York, Pantheon Books, 1970, 462 pp. \$8.95.
- Tuttle, Frank W. and Joseph M. Perry, *An Economic History of the United States*. Cincinnati, South-Western Publishing Co., 1970, 826 pp.
- U.S. Department of Health, Education, and Welfare, *1969 Annual Report*. Washington, 1970, xiii, 147 pp. \$1.75, Superintendent of Documents, Washington.
- U.S. President's Task Force on Women's Rights and Responsibilities, *A Matter of Simple Justice*. Washington, 1970, 33 pp. 30 cents, Superintendent of Documents, Washington.
- Zwerman, William L., *New Perspectives on Organization Theory: An Empirical Reconsideration of the Marxian and Classical Analyses*. Westport, Conn., Greenwood Publishing Corp., 1970, 219 pp., bibliography. (Contributions in Sociology 1.) \$11.50.

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1. Employment status of the noninstitutional population, 16 years and over, 1947 to date

[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	Nonagri-cultural industries	Number	Percent of labor force	
1947	103,418	60,941	58.9	59,350	57,039	7,891	49,148	2,311	3.9	42,477
1948	104,527	62,080	59.4	60,621	58,344	7,629	50,713	2,276	3.8	42,447
1949	105,611	62,903	59.6	61,286	57,649	7,656	49,990	3,637	5.9	42,708
1950	106,645	63,858	59.9	62,208	58,920	7,160	51,760	3,288	5.3	42,787
1951	107,721	65,117	60.4	62,017	59,962	6,726	53,239	2,055	3.3	42,604
1952	108,823	65,730	60.4	62,138	60,254	6,501	53,753	1,883	3.0	43,093
1953	110,601	66,560	60.2	63,015	61,181	6,261	54,922	1,834	2.9	44,041
1954	111,671	66,993	60.0	63,643	60,110	6,206	53,903	3,532	5.5	44,678
1955	112,732	68,072	60.4	65,023	62,171	6,449	55,724	2,852	4.4	44,660
1956	113,811	69,409	61.0	66,552	63,802	6,283	57,517	2,750	4.1	44,402
1957	115,065	69,729	60.6	66,929	64,071	5,947	58,123	2,859	4.3	45,336
1958	116,363	70,275	60.4	67,639	63,036	5,586	57,450	4,602	6.8	46,088
1959	117,881	70,921	60.2	68,369	64,630	5,565	59,065	3,740	5.5	46,960
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1961	121,343	73,031	60.2	70,459	65,746	5,200	60,546	4,714	6.7	48,312
1962	122,981	73,442	59.7	70,614	66,702	4,944	61,759	3,911	5.5	49,539
1963	125,154	74,571	59.6	71,833	67,762	4,687	63,076	4,070	5.7	50,583
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,239	61.1	80,733	77,902	3,606	74,296	2,831	3.5	53,602

2. Employment status, by color, sex and age, seasonally adjusted,¹ quarterly averages

[In thousands]

Characteristic	1970		1969				1968				1967			Annual average	
	2d	1st	4th	3d	2d	1st	4th	3d	2d	1st	4th	3d	2d	1969	1968
WHITE															
Civilian labor force	73,263	73,316	72,475	71,942	71,466	71,285	70,392	70,045	69,851	69,587	69,440	68,944	68,210	71,778	69,975
Men, 20 years and over	42,463	42,245	41,956	41,842	41,639	41,656	41,423	41,373	41,235	41,230	41,175	40,972	40,673	41,772	41,317
Women, 20 years and over	24,378	24,513	24,156	23,949	23,684	23,566	23,122	22,843	22,741	22,565	22,632	22,276	21,775	23,838	22,820
Both sexes, 16-19 years	6,422	6,558	6,363	6,151	6,143	6,036	5,847	5,829	5,875	5,792	5,633	5,696	5,762	6,168	5,838
Employed	70,059	70,527	70,096	69,575	69,260	69,135	68,267	67,804	67,617	67,311	67,032	66,576	65,888	69,518	67,750
Men, 20 years and over	41,131	41,180	41,091	40,995	40,871	40,926	40,677	40,553	40,405	40,376	40,300	40,101	39,772	40,978	40,503
Women, 20 years and over	23,347	23,587	23,327	23,120	22,891	22,794	22,372	22,066	21,987	21,777	21,766	21,416	20,963	23,032	22,052
Both sexes, 16-19 years	5,581	5,760	5,678	5,460	5,498	5,415	5,218	5,185	5,225	5,158	4,966	5,059	5,153	5,508	5,195
Unemployed	3,204	2,789	2,379	2,367	2,206	2,150	2,125	2,241	2,234	2,276	2,408	2,368	2,322	2,260	2,225
Men, 20 years and over	1,332	1,065	865	847	768	730	746	820	830	854	875	871	901	794	814
Women, 20 years and over	1,032	926	829	829	793	772	750	777	754	788	866	860	812	806	768
Both sexes, 16-19 years	841	798	685	691	645	648	629	644	650	634	667	637	609	660	643
Unemployment rate	4.4	3.8	3.3	3.3	3.1	3.0	3.0	3.2	3.2	3.3	3.5	3.4	3.4	3.1	3.2
Men, 20 years and over	3.1	2.5	2.1	2.0	1.8	1.8	1.8	2.0	2.0	2.1	2.1	2.1	2.2	1.9	2.0
Women, 20 years and over	4.2	3.8	3.4	3.5	3.3	3.3	3.2	3.4	3.3	3.5	3.8	3.9	3.7	3.4	3.4
Both sexes, 16-19 years	13.1	12.2	10.8	11.2	10.5	10.7	10.8	11.0	11.1	10.9	11.8	11.2	10.6	10.7	11.0
NEGRO AND OTHER															
Civilian labor force	9,226	9,224	9,056	8,979	8,867	8,914	8,737	8,700	8,828	8,762	8,733	8,632	8,632	8,954	8,759
Men, 20 years and over	4,706	4,700	4,622	4,593	4,549	4,554	4,513	4,517	4,562	4,543	4,496	4,507	4,505	4,579	4,535
Women, 20 years and over	3,688	3,682	3,616	3,595	3,535	3,550	3,468	3,414	3,467	3,433	3,444	3,348	3,347	3,574	3,446
Both sexes, 16-19 years	832	842	818	791	783	810	756	769	799	786	793	777	780	801	778
Employed	8,447	8,598	8,500	8,394	8,271	8,371	8,164	8,132	8,233	8,147	8,073	8,006	7,986	8,384	8,169
Men, 20 years and over	4,434	4,498	4,445	4,416	4,382	4,397	4,335	4,349	4,388	4,351	4,305	4,328	4,303	4,410	4,356
Women, 20 years and over	3,416	3,468	3,429	3,372	3,307	3,352	3,264	3,205	3,246	3,200	3,191	3,112	3,115	3,365	3,229
Both sexes, 16-19 years	597	632	626	606	582	622	565	578	599	596	577	566	568	609	584
Unemployed	779	626	556	585	596	543	573	568	595	615	660	626	646	570	590
Men, 20 years and over	272	201	177	177	167	157	178	168	174	192	191	179	202	169	179
Women, 20 years and over	272	215	187	223	228	198	204	209	221	233	253	236	232	209	217
Both sexes, 16-19 years	235	210	192	185	201	188	191	191	200	190	216	211	212	192	194
Unemployment rate	8.4	6.8	6.1	6.5	6.7	6.1	6.6	6.5	6.7	7.0	7.6	7.3	7.5	6.4	6.7
Men, 20 years and over	5.8	4.3	3.8	3.9	3.7	3.4	3.9	3.7	3.8	4.2	4.0	4.0	4.5	3.7	3.9
Women, 20 years and over	7.4	5.8	5.2	6.2	6.4	5.6	5.9	6.1	6.4	6.8	7.3	7.0	6.9	5.8	6.3
Both sexes, 16-19 years	28.2	24.9	23.5	23.4	25.7	23.2	25.3	24.8	25.0	24.2	27.2	27.2	27.2	24.0	24.9

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1970 issue of *Employment and Earnings*.

3. Full- and part-time status of the civilian labor force

[In thousands—not seasonally adjusted]

Employment status	1970						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
FULL TIME															
Civilian labor force.....	73,555	69,383	69,255	69,116	69,018	68,869	69,204	69,296	69,491	70,350	73,713	73,514	72,365	69,700	68,332
Employed:															
Full-time schedules ¹	66,779	64,413	64,166	64,108	63,997	64,155	65,302	65,517	65,594	66,206	68,854	68,471	67,011	65,503	64,225
Part-time for economic reasons.....	2,831	2,128	2,301	2,139	2,117	2,135	1,998	1,916	1,955	2,069	2,607	2,456	2,522	2,055	1,970
Unemployed, looking for full-time work.....	3,945	2,842	2,787	2,869	2,904	2,579	1,904	1,864	1,942	2,075	2,251	2,587	2,831	2,142	2,138
Unemployment rate.....	5.4	4.1	4.0	4.2	4.2	3.7	2.8	2.7	2.8	2.9	3.1	3.5	3.9	3.1	3.1
PART TIME															
Civilian labor force.....	10,496	12,358	12,706	12,574	12,266	11,850	12,212	12,131	12,019	10,634	8,803	9,283	9,991	11,032	10,405
Employed (voluntary part-time).....	9,772	11,816	11,940	11,711	11,375	11,023	11,488	11,284	11,122	9,751	8,185	8,688	9,422	10,343	9,726
Unemployed, looking for part-time work.....	724	542	765	863	890	827	724	847	898	883	618	594	568	689	679
Unemployment rate.....	6.9	4.4	6.0	6.9	7.3	7.0	5.9	7.0	7.5	8.3	7.0	6.4	5.7	6.2	6.5

¹ Employed persons with a job but not at work are distributed proportionately among the full- and part-time employed categories.4. Employment and unemployment, by age and sex, seasonally adjusted ¹

[In thousands]

Employment status	1970						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL															
Total labor force.....	85,304	85,783	86,143	86,087	85,590	85,599	85,023	84,872	85,051	84,868	84,517	84,310	84,028	84,239	82,272
Civilian labor force.....	82,125	82,555	82,872	82,769	82,249	82,213	81,583	81,379	81,523	81,325	80,987	80,789	80,504	80,733	78,737
Employed.....	78,225	78,449	78,924	79,112	78,822	79,041	78,737	78,528	78,445	78,194	78,142	77,931	77,741	77,902	75,920
Agriculture.....	3,554	3,613	3,586	3,550	3,499	3,426	3,435	3,434	3,446	3,498	3,614	3,561	3,683	3,606	3,817
Nonagriculture.....	74,671	74,836	75,338	75,562	75,323	75,615	75,302	75,094	74,999	74,696	74,528	74,370	74,058	74,296	72,103
Unemployed.....	3,900	4,106	3,948	3,657	3,427	3,172	2,846	2,851	3,078	3,131	2,845	2,858	2,763	2,831	2,817
MEN, 20 YEARS AND OVER															
Total labor force.....	49,906	50,020	50,032	49,920	49,707	49,736	49,534	49,544	49,642	49,642	49,488	49,405	49,334	49,406	48,834
Civilian labor force.....	47,154	47,226	47,199	47,060	46,836	46,826	46,578	46,531	46,599	46,586	46,443	46,338	46,236	46,351	45,852
Employed.....	45,521	45,593	45,667	45,709	45,534	45,674	45,553	45,533	45,511	45,465	45,485	45,335	45,303	45,388	44,859
Agriculture.....	2,603	2,625	2,602	2,537	2,479	2,473	2,499	2,482	2,575	2,593	2,670	2,646	2,676	2,636	2,816
Nonagriculture.....	42,918	42,968	43,065	43,172	43,055	43,201	43,054	43,051	42,936	42,872	42,815	42,689	42,627	42,752	42,043
Unemployed.....	1,633	1,633	1,532	1,351	1,302	1,152	1,025	998	1,088	1,121	958	1,003	933	963	993
WOMEN, 20 YEARS AND OVER															
Civilian labor force.....	28,026	27,885	28,274	28,295	28,066	28,073	27,875	27,671	27,767	27,634	27,664	27,524	27,341	27,413	26,266
Employed.....	26,772	26,476	27,022	27,016	26,925	27,060	26,897	26,663	26,699	26,543	26,626	26,512	26,322	26,397	25,281
Agriculture.....	573	567	571	583	630	586	585	555	554	535	582	547	610	593	606
Nonagriculture.....	26,199	25,909	26,451	26,433	26,295	26,474	26,312	26,108	26,145	26,008	26,044	25,965	25,712	25,804	24,675
Unemployed.....	1,254	1,409	1,252	1,279	1,141	1,013	978	1,008	1,068	1,091	1,038	1,012	1,019	1,015	985
BOTH SEXES, 16-19 YEARS															
Civilian labor force.....	6,945	7,444	7,399	7,414	7,347	7,314	7,130	7,177	7,157	7,105	6,880	6,927	6,927	6,970	6,618
Employed.....	5,932	6,380	6,235	6,387	6,363	6,307	6,287	6,332	6,235	6,186	6,031	6,084	6,116	6,117	5,780
Agriculture.....	378	421	413	430	390	367	351	397	317	370	362	368	397	377	394
Nonagriculture.....	5,554	5,959	5,822	5,957	5,973	5,940	5,936	5,935	5,918	5,816	5,669	5,716	5,719	5,739	5,385
Unemployed.....	1,013	1,064	1,164	1,027	984	1,007	843	845	922	919	849	843	811	853	839

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of seasonal adjustment procedures and the historical seasonallyadjusted series, see the February 1970 issue of *Employment and Earnings*.

5. Employment totals, by occupation, with unemployment rates, seasonally adjusted,¹ quarterly averages

Characteristic	1970		1969				1968				1967			Annual average	
	2d	1st	4th	3d	2d	1st	4th	3d	2d	1st	4th	3d	2d	1969	1968
EMPLOYMENT (in thousands)	78,533	78,992	78,570	78,090	77,550	77,418	76,409	76,017	75,898	75,392	75,121	74,630	73,911	77,902	75,921
White-collar workers	37,981	37,938	37,509	36,923	36,677	36,264	35,906	35,732	35,419	35,140	34,888	34,456	33,943	36,845	35,551
Professional and technical	11,129	11,026	10,936	10,764	10,740	10,638	10,473	10,392	10,295	10,142	10,067	9,952	9,761	10,769	10,325
Managers, officials, and proprietors	8,290	8,215	8,141	7,970	7,993	7,841	7,897	7,827	7,661	7,716	7,633	7,630	7,453	7,987	7,776
Clerical workers	13,748	13,906	13,655	13,478	13,281	13,171	12,876	12,823	12,816	12,694	12,624	12,343	12,250	13,397	12,803
Sales workers	4,815	4,791	4,777	4,711	4,663	4,614	4,660	4,690	4,647	4,588	4,564	4,531	4,479	4,692	4,647
Blue-collar workers	27,663	28,236	28,389	28,425	27,931	28,202	27,774	27,491	27,513	27,297	27,279	27,343	27,175	28,237	27,525
Craftsmen and foremen	10,109	10,264	10,265	10,174	10,044	10,298	10,147	9,972	10,003	9,936	9,827	9,790	9,853	10,193	10,015
Operatives	13,891	14,168	14,412	14,589	14,208	14,264	14,051	13,911	13,956	13,896	13,918	13,999	13,787	14,372	13,955
Nonfarm laborers	3,663	3,804	3,712	3,662	3,679	3,640	3,576	3,608	3,554	3,465	3,534	3,554	3,535	3,672	3,555
Service workers	9,589	9,673	9,589	9,493	9,467	9,558	9,411	9,385	9,395	9,337	9,330	9,277	9,276	9,528	9,381
Farmworkers	3,234	3,153	3,089	3,231	3,417	3,438	3,346	3,400	3,507	3,649	3,654	3,556	3,448	3,292	3,464
Unemployment rate	4.8	4.1	3.6	3.6	3.5	3.4	3.4	3.6	3.6	3.7	3.9	3.9	3.9	3.5	3.6
White-collar workers	2.8	2.4	2.2	2.2	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.2	2.0	2.1	2.0
Professional and technical	1.9	1.9	1.5	1.4	1.3	1.1	1.2	1.3	1.2	1.2	1.3	1.3	1.4	1.3	1.2
Managers, officials, and proprietors	1.3	1.0	.9	1.0	.9	.9	1.0	1.1	.9	.9	1.0	.9	.9	.9	1.0
Clerical workers	4.0	3.3	3.2	3.2	2.8	2.9	2.8	2.9	3.0	3.1	3.4	3.3	2.8	3.0	3.0
Sales workers	4.0	3.2	2.8	3.0	2.9	2.9	2.8	2.6	2.7	3.0	3.2	3.6	2.9	2.9	2.8
Blue-collar workers	6.0	4.9	4.3	4.0	3.8	3.7	3.8	4.2	4.0	4.4	4.5	4.5	4.6	3.9	4.1
Craftsmen and foremen	3.9	2.6	2.2	2.2	2.1	2.1	2.2	2.4	2.4	2.5	2.5	2.3	2.8	2.2	2.4
Operatives	6.6	5.7	5.0	4.4	4.3	4.1	4.3	4.5	4.3	4.8	5.1	5.1	5.0	4.4	4.5
Nonfarm laborers	9.4	7.9	6.9	7.2	6.5	6.4	6.7	7.4	7.0	7.7	7.8	7.6	8.0	6.7	7.2
Service workers	5.0	4.7	3.9	4.5	4.4	4.0	4.3	4.5	4.6	4.3	4.9	4.5	4.2	4.2	4.5
Farmworkers	2.5	2.1	1.8	2.2	1.9	1.6	1.6	2.4	2.3	1.9	2.3	2.4	2.4	1.9	2.1

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of a seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1970 issue of *Employment and Earnings*.

6. Unemployed persons, by reason for unemployment

[In thousands—not seasonally adjusted]

Reason for unemployment, age, and sex	1970						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
Total, 16 years and over	4,669	3,384	3,552	3,733	3,794	3,406	2,628	2,710	2,839	2,958	2,869	3,182	3,400	2,831	2,817
Lost last job	1,598	1,658	1,669	1,797	1,787	1,595	1,133	939	882	823	894	979	875	1,017	1,070
Left last job	565	447	507	441	473	485	378	421	451	586	507	459	448	436	431
Reentered labor force	1,567	944	1,001	1,143	1,158	999	825	1,011	1,093	1,105	997	1,010	1,275	965	909
Never worked before	939	333	375	351	377	328	292	339	414	445	471	734	802	413	407
Male, 20 years and over	1,584	1,403	1,498	1,606	1,678	1,456	1,052	909	906	914	888	945	905	963	993
Lost last job	911	942	988	1,059	1,144	997	693	524	458	440	469	534	427	556	599
Left last job	206	170	214	200	185	197	150	141	141	209	192	170	183	164	167
Reentered labor force	413	251	261	312	310	230	188	226	267	235	200	195	262	216	205
Never worked before	55	40	34	35	39	32	20	18	40	30	24	46	33	27	22
Female, 20 years and over	1,302	1,205	1,171	1,264	1,238	1,086	840	994	1,097	1,202	1,119	987	1,058	1,015	985
Lost last job	540	562	497	542	451	418	303	309	314	288	310	307	336	335	341
Left last job	192	174	188	156	200	177	138	183	209	237	196	184	172	171	167
Reentered labor force	473	435	439	530	529	437	354	457	501	596	549	434	480	455	422
Never worked before	97	34	47	36	58	54	46	45	72	81	64	62	69	55	55
Both sexes, 16 to 19 years	1,783	776	883	863	878	864	736	807	836	842	865	1,250	1,437	853	839
Lost last job	147	155	184	196	192	180	137	106	110	95	115	138	112	126	130
Left last job	167	103	104	85	88	111	90	97	101	140	119	105	93	101	97
Reentered labor force	682	259	301	302	319	331	283	328	324	274	248	380	533	294	281
Never worked before	786	259	293	280	280	241	226	276	301	334	383	627	699	331	330

7. Unemployment rates, by age and sex, seasonally adjusted ¹

Age and sex	1970						1969							Annual average	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL															
16 years and over.....	4.7	5.0	4.8	4.4	4.2	3.9	3.5	3.5	3.8	3.8	3.5	3.5	3.4	3.5	3.6
16 to 19 years.....	14.6	14.3	15.7	13.9	13.4	13.8	11.8	11.8	12.9	12.9	12.3	12.2	11.7	12.2	12.7
16 and 17 years.....	16.0	15.6	18.7	15.7	16.3	17.2	13.7	14.3	16.5	16.1	15.8	14.6	13.5	14.5	14.7
18 and 19 years.....	13.3	13.8	13.8	12.4	11.7	11.6	10.2	9.2	10.4	10.6	9.8	10.3	10.1	10.5	11.2
20 to 24 years.....	7.4	8.1	7.7	6.8	7.3	6.1	5.8	5.8	6.4	6.5	5.4	5.8	5.4	5.7	5.8
25 years and over.....	3.2	3.3	3.1	3.0	2.6	2.4	2.2	2.2	2.4	2.4	2.3	2.3	2.2	2.2	2.3
25 to 54 years.....	3.3	3.4	3.2	3.1	2.7	2.5	2.3	2.1	2.4	2.5	2.3	2.3	2.3	2.3	2.3
55 years and over.....	3.0	3.3	2.8	2.7	2.4	2.0	2.1	1.9	2.3	2.2	2.0	2.0	2.0	2.0	2.2
MALE															
16 years and over.....	4.3	4.4	4.2	3.6	3.6	3.3	2.9	2.9	3.1	3.2	2.8	2.9	2.7	2.8	2.9
16 to 19 years.....	14.8	15.0	15.2	12.5	13.0	12.6	11.0	11.7	11.8	12.0	11.3	11.8	10.7	11.4	11.6
16 and 17 years.....	16.6	16.4	17.2	14.6	15.4	14.9	13.1	13.7	14.4	15.0	15.5	14.4	13.0	13.7	13.9
18 and 19 years.....	13.2	14.6	13.9	10.8	11.0	10.8	9.3	8.9	9.6	9.4	7.8	9.7	8.5	9.3	9.6
20 to 24 years.....	7.2	7.7	7.9	6.4	6.9	6.1	5.5	5.3	6.3	6.4	4.5	5.3	4.8	5.1	5.1
25 years and over.....	2.9	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.9	1.8	1.7	1.7	1.6	1.7	1.8
25 to 54 years.....	2.9	2.8	2.6	2.3	2.1	2.0	1.7	1.4	1.8	1.8	1.6	1.7	1.5	1.6	1.7
55 years and over.....	2.8	3.1	2.8	2.8	2.4	2.1	2.2	1.9	2.2	2.0	2.0	1.9	1.8	1.9	2.1
FEMALE															
16 years and over.....	5.5	5.9	5.7	5.7	5.1	4.8	4.5	4.5	4.9	5.0	4.8	4.6	4.7	4.7	4.8
16 to 19 years.....	14.3	13.4	16.4	15.6	13.9	15.2	12.8	11.9	14.2	14.2	13.6	12.7	13.0	13.3	14.0
16 and 17 years.....	15.3	14.6	20.6	17.0	17.3	20.3	14.7	15.0	19.2	17.7	16.2	14.8	14.3	15.5	15.9
18 and 19 years.....	13.4	12.9	13.7	14.3	12.7	12.4	11.2	9.6	11.3	12.0	12.0	11.0	11.9	11.8	12.8
20 to 24 years.....	7.7	8.7	7.5	7.2	7.6	6.2	6.1	6.5	6.5	6.6	6.3	6.3	6.0	6.3	6.7
25 years and over.....	3.8	4.2	3.8	4.0	3.3	3.0	3.0	3.1	3.4	3.4	3.3	3.2	3.3	3.2	3.2
25 to 54 years.....	4.1	4.3	4.2	4.4	3.6	3.3	3.3	3.4	3.6	3.7	3.6	3.5	3.6	3.5	3.4
55 years and over.....	3.2	3.6	2.7	2.5	2.3	1.7	1.9	2.0	2.5	2.5	2.1	2.3	2.3	2.2	2.3

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1970 issue of *Employment and Earnings*.

8. Unemployment indicators, seasonally adjusted ¹

[In percent]

Selected categories	1970						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
Total (all civilian workers).....	4.7	5.0	4.8	4.4	4.2	3.9	3.5	3.5	3.8	3.8	3.5	3.5	3.4	3.5	3.6
Men, 20 years and over.....	3.5	3.5	3.2	2.9	2.8	2.5	2.2	2.1	2.3	2.4	2.1	2.2	2.0	2.1	2.2
Women, 20 years and over.....	4.5	5.1	4.4	4.5	4.1	3.6	3.5	3.6	3.8	3.9	3.8	3.7	3.7	3.7	3.8
Both sexes, 16-19 years.....	14.6	14.3	15.7	13.9	13.4	13.8	11.8	11.8	12.9	12.9	12.3	12.2	11.7	12.2	12.7
White.....	4.2	4.6	4.3	4.1	3.8	3.6	3.2	3.2	3.5	3.5	3.2	3.2	3.0	3.1	3.2
Negro and other.....	8.7	8.0	8.7	7.1	7.0	6.3	5.7	6.2	6.6	6.7	6.4	6.5	6.8	6.4	6.7
Married men.....	2.5	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.6	1.7	1.5	1.6	1.5	1.5	1.6
Full-time workers.....	4.3	4.7	4.4	4.0	3.7	3.4	3.2	3.1	3.1	3.3	3.1	3.1	3.1	3.1	3.1
Unemployed 15 weeks and over ².....	.8	.7	.7	.7	.6	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5
State insured ³	3.7	3.6	3.1	2.7	2.7	2.5	2.4	2.4	2.2	2.2	2.1	2.2	2.1	2.1	2.2
Labor force time lost ⁴	4.9	5.4	5.1	4.8	4.5	4.2	3.9	4.0	4.3	4.3	4.0	4.0	3.8	3.9	4.0
OCCUPATION															
White-collar workers.....	2.6	2.8	2.9	2.7	2.3	2.1	2.1	2.1	2.4	2.2	2.2	2.2	2.1	2.1	2.0
Professional and managerial.....	1.5	1.7	1.7	1.8	1.4	1.3	1.5	1.1	1.3	1.3	1.2	1.2	1.2	1.2	1.1
Clerical workers.....	4.0	3.9	4.0	3.6	3.2	3.1	2.8	3.5	3.4	3.2	3.2	3.2	3.0	3.0	3.0
Sales workers.....	3.4	4.4	4.1	3.5	3.4	2.8	2.6	2.2	3.5	2.8	2.9	3.2	2.8	2.9	2.8
Blue-collar workers.....	6.3	6.2	5.7	5.2	5.0	4.6	4.3	4.2	4.2	4.4	3.8	3.8	3.7	3.9	4.1
Craftsmen and foremen.....	4.0	4.2	3.5	3.1	2.5	2.3	2.3	2.1	2.4	2.6	2.1	1.9	1.9	2.2	2.4
Operatives.....	6.8	6.7	6.3	6.2	6.0	5.1	5.0	4.9	4.9	4.7	4.2	4.2	4.3	4.5	4.4
Nonfarm laborers.....	10.4	9.1	8.8	7.4	7.7	8.5	7.4	6.9	6.5	7.6	6.8	7.1	6.1	6.7	7.2
Service workers.....	5.0	4.9	5.0	4.9	4.8	4.5	3.6	4.0	4.2	4.8	4.5	4.3	4.4	4.2	4.5
INDUSTRY															
Nonagricultural private wage and salary workers ⁵	5.2	5.2	4.8	4.6	4.3	3.9	3.6	3.6	3.8	3.9	3.5	3.5	3.5	3.5	3.6
Construction.....	10.9	11.9	8.1	8.1	7.9	7.1	6.0	5.4	7.3	7.4	7.0	5.9	5.1	6.0	6.9
Manufacturing.....	5.3	5.2	4.7	4.7	4.6	3.8	3.8	3.7	3.6	3.7	2.9	3.2	3.3	3.3	3.3
Durable goods.....	5.1	4.9	4.9	4.8	4.7	3.8	3.7	3.6	3.2	3.2	2.3	3.1	3.2	3.0	3.0
Nondurable goods.....	5.6	5.7	4.5	4.6	4.4	3.8	3.9	3.9	4.2	4.3	3.7	3.3	3.4	3.7	3.7
Transportation and public utilities.....	3.3	3.3	3.9	3.1	2.4	2.9	2.4	2.4	2.9	2.0	2.0	2.0	1.9	2.2	2.0
Wholesale and retail trade.....	5.4	5.1	5.5	4.7	4.7	4.3	3.9	3.9	4.2	4.5	4.3	4.1	4.2	4.1	4.0
Finance and service industries.....	4.1	4.2	3.9	4.0	3.2	3.1	2.7	3.2	3.1	3.4	3.4	3.6	3.2	3.2	3.4
Government wage and salary workers.....	1.9	2.2	2.2	2.1	2.0	2.2	2.0	2.1	2.4	1.9	1.9	1.8	1.7	1.9	1.8
Agricultural wage and salary workers.....	5.5	9.3	5.9	6.4	5.8	6.2	6.5	5.2	6.3	6.5	6.5	8.9	5.6	6.1	6.3

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1970 issue of *Employment and Earnings*.

² Unemployment rate calculated as a percent of civilian labor force.

³ Insured unemployment under State programs as a percent of average covered employment.

⁴ Man-hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force man-hours.

⁵ Includes mining, not shown separately.

9. Duration of unemployment, seasonally adjusted ¹

[In thousands]

Period	1970						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
Less than 5 weeks.....	1,961	2,219	2,295	1,995	1,973	1,756	1,515	1,558	1,882	1,756	1,646	1,656	1,578	1,629	1,594
5 to 14 weeks.....	1,303	1,214	1,075	1,154	1,016	914	893	912	882	995	854	824	812	827	810
15 weeks and over.....	685	612	569	545	465	409	392	389	363	392	385	400	385	375	412
15 to 26 weeks.....	450	352	372	363	306	276	272	249	233	240	250	233	255	242	256
27 weeks and over.....	235	260	197	182	159	133	120	140	130	152	135	167	130	133	156
15 weeks and over as a percent of civilian labor force.....	.8	.7	.7	.7	.6	.5	.4	.4	.4	.4	.4	.4	.4	.5	.5
Average (mean) duration, in weeks.....	9.5	9.0	8.2	8.4	8.1	7.8	8.1	8.0	7.3	7.9	7.8	8.2	8.4	8.0	8.5

¹ These data have been adjusted to reflect the experience through December 1969. For a discussion of seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1970 issue of *Employment and Earnings*.

10. Unemployment insurance and employment service operations ¹

[All items except average benefits amounts are in thousands]

Item	1970					1969								
	May.	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.
Employment service: ²														
New applications for work-----	854	857	828	765	950	658	711	762	801	750	874	1,237	850	822
Nonfarm placements-----	339	352	328	295	326	311	372	463	503	471	469	512	437	454
State unemployment insurance programs:														
Initial claims ^{3,4} -----	1,010	1,333	1,078	1,169	1,529	1,363	866	745	655	731	1,105	710	613	756
Insured unemployment ⁵ (average weekly volume)-----	1,667	1,770	1,798	1,874	1,847	1,375	1,030	864	840	948	1,021	852	906	1,090
Rate of insured unemployment ⁷ -----	3.2	3.4	3.5	3.6	3.6	2.7	2.0	1.6	1.6	1.8	2.0	1.7	1.8	2.2
Weeks of unemployment compensated-----	6,142	6,743	6,956	6,517	6,418	4,692	3,054	3,156	3,104	3,496	3,626	3,123	3,519	4,496
Average weekly benefit amount for total unemployment-----	\$49.30	\$49.00	\$48.93	\$49.11	\$48.49	\$47.42	\$46.47	\$46.25	\$45.70	\$46.16	\$45.30	\$44.88	\$45.14	\$46.03
Total benefits paid-----	\$292,854	\$320,224	\$331,067	\$310,800	\$299,352	\$214,260	\$136,585	\$139,536	\$136,182	\$156,707	\$159,161	\$135,004	\$152,966	\$200,052
Unemployment compensation for ex-servicemen: ^{8,9}														
Initial claims ^{3,6} -----	38	47	42	38	44	39	30	29	26	27	32	26	20	22
Insured unemployment ⁶ (average weekly volume)-----	70	70	69	66	61	48	38	32	32	37	36	30	29	35
Weeks of unemployment compensated-----	280	294	289	244	242	193	126	127	133	148	143	114	122	155
Total benefits paid-----	\$13,972	\$14,564	\$14,200	\$12,028	\$11,957	\$9,517	\$6,240	\$6,256	\$6,514	\$7,156	\$6,946	\$5,511	\$5,847	\$7,425
Unemployment compensation for Federal civilian employees: ^{9,10}														
Initial claims ³ -----	10	13	11	11	15	12	13	11	10	8	11	10	8	8
Insured unemployment ⁶ (average weekly volume)-----	26	27	29	30	28	24	22	18	17	18	19	18	17	20
Weeks of unemployment compensated-----	107	118	128	109	110	101	75	76	74	77	78	69	73	88
Total benefits paid-----	\$5,323	\$5,824	\$6,192	\$5,239	\$5,194	\$4,748	\$3,465	\$3,494	\$3,163	\$3,497	\$3,597	\$3,155	\$3,318	\$4,038
Railroad unemployment insurance:														
Applications ¹¹ -----	4	8	9	4	9	5	5	10	6	7	17	11	11	5
Insured unemployment (average weekly volume)-----	15	16	19	18	21	17	14	15	13	13	13	10	18	17
Number of payments ¹² -----	30	43	42	38	47	35	28	36	28	28	26	25	39	41
Average amount of benefit payment ³ -----	\$84.87	\$81.50	\$92.00	\$96.76	\$94.78	\$96.02	\$96.28	\$89.31	\$93.64	\$94.12	\$91.74	\$90.69	\$75.65	\$88.32
Total benefits paid ⁴ -----	\$2,439	\$3,565	\$3,668	\$3,374	\$4,091	\$3,241	\$2,513	\$2,918	\$2,478	\$2,375	\$2,113	\$2,043	\$2,804	\$3,386
All programs: ¹⁵														
Insured unemployment ⁶ -----	1,778	1,885	1,916	1,987	1,957	1,464	1,105	929	902	1,015	1,088	911	970	1,162

¹ Includes data for Puerto Rico.² Includes Guam and the Virgin Islands.³ Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transition claims under State programs.⁴ Includes interstate claims for the Virgin Islands.⁵ Number of workers reporting the completion of at least 1 week of unemployment.⁶ Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.⁷ The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.⁸ Excludes data on claims and payments made jointly with other programs.⁹ Includes the Virgin Islands.¹⁰ Excludes data on claims and payments made jointly with State programs.¹¹ 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.¹² Payments are for unemployment in 14-day registration periods.¹³ The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.¹⁴ Adjusted for recovery of overpayments and settlement of underpayments.¹⁵ Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs and the Railroad Unemployment Insurance Act. Includes claims filed under Extended Duration (ED) provisions of regular State laws.

SOURCE: U.S. Department of Labor, Office of Manpower Management Data Systems for all items except railroad unemployment insurance which is prepared by the U.S. Railroad Retirement Board. Data for latest month are subject to revision.

11. Employees on nonagricultural payrolls, by industry division, 1947 to date¹

[In thousands]

Year	TOTAL	Mining	Contract construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
						Total	Wholesale trade	Retail trade			Total	Federal	State and local
1947	43,881	955	1,982	15,545	4,166	8,955	2,361	6,595	1,754	5,050	5,474	1,892	3,582
1948	44,891	994	2,169	15,582	4,189	9,272	2,489	6,783	1,829	5,206	5,650	1,863	3,787
1949	43,778	930	2,165	14,441	4,001	9,264	2,487	6,778	1,857	5,264	5,856	1,908	3,948
1950	45,222	901	2,333	15,241	4,034	9,386	2,518	6,868	1,919	5,382	6,026	1,928	4,098
1951	47,849	929	2,603	16,393	4,226	9,742	2,606	7,136	1,991	5,576	6,389	2,302	4,087
1952	48,825	898	2,634	16,632	4,248	10,004	2,687	7,317	2,069	5,730	6,609	2,420	4,188
1953	50,232	866	2,623	17,549	4,290	10,247	2,727	7,520	2,146	5,867	6,645	2,305	4,340
1954	49,022	791	2,612	16,314	4,084	10,235	2,739	7,496	2,234	6,002	6,751	2,188	4,563
1955	50,675	792	2,802	16,882	4,141	10,535	2,796	7,740	2,335	6,274	6,914	2,187	4,727
1956	52,408	822	2,999	17,243	4,244	10,858	2,884	7,974	2,429	6,536	7,277	2,209	5,069
1957	52,894	828	2,923	17,174	4,241	10,886	2,893	7,992	2,477	6,749	7,616	2,217	5,399
1958	51,363	751	2,778	15,945	3,976	10,750	2,848	7,902	2,519	6,806	7,839	2,191	5,648
1959 ²	53,313	732	2,960	16,675	4,011	11,127	2,946	8,182	2,594	7,130	8,083	2,233	5,850
1960	54,234	712	2,885	16,796	4,004	11,391	3,004	8,388	2,669	7,423	8,353	2,270	6,083
1961	54,042	672	2,816	16,326	3,903	11,337	2,993	8,344	2,731	7,664	8,594	2,279	6,315
1962	55,596	650	2,902	16,853	3,906	11,566	3,056	8,511	2,800	8,028	8,890	2,340	6,550
1963	56,702	635	2,963	16,995	3,903	11,778	3,104	8,675	2,877	8,325	9,225	2,358	6,868
1964	58,331	634	3,050	17,274	3,951	12,160	3,189	8,971	2,957	8,709	9,596	2,348	7,248
1965	60,815	632	3,186	18,062	4,036	12,716	3,312	9,404	3,023	9,087	10,074	2,378	7,696
1966	63,955	627	3,275	19,214	4,151	13,245	3,437	9,808	3,100	9,551	10,792	2,564	8,227
1967	65,857	613	3,208	19,447	4,261	13,606	3,525	10,081	3,225	10,099	11,398	2,719	8,679
1968	67,915	606	3,285	19,781	4,310	14,084	3,611	10,473	3,382	10,623	11,845	2,737	9,109
1969	70,274	619	3,437	20,169	4,431	14,645	3,738	10,907	3,557	11,211	12,204	2,758	9,446

¹ The industry series have been adjusted to March 1969 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to July 1970. For comparable back data, see *Employment and Earnings, United States, 1909-70* (BLS Bulletin 1312-7) to be released this fall.

These series are based upon establishment reports which cover all full- and part-time employees in nonagricultural establishments who worked during, or received pay for any part of the pay period which includes the 12th of the month. Therefore, persons who

worked in more than one establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

² Data include Alaska and Hawaii beginning 1959. This inclusion has resulted in an increase of 212,000 (0.4 percent) in the nonagricultural total for the March 1959 benchmark month.

12. Employees on nonagricultural payrolls, by State

[In thousands]

State	May 1970 ^a	Apr. 1970	May 1969	State	May 1970 ^a	Apr. 1970	May 1970
Alabama	1,003.1	1,003.9	1,000.0	Montana	196.6	192.9	196.4
Alaska	88.5	84.5	85.4	Nebraska	482.2	482.8	472.8
Arizona	547.4	549.3	507.5	Nevada	195.9	194.1	186.0
Arkansas	532.5	530.9	531.8	New Hampshire	256.0	252.7	255.4
California	6,990.9	6,960.1	6,878.2	New Jersey	2,614.4	2,599.4	2,576.7
Colorado	721.3	718.2	700.5	New Mexico	289.6	289.7	283.5
Connecticut	1,199.3	1,202.5	1,198.7	New York	7,258.9	7,221.8	7,206.7
Delaware	211.6	210.3	206.4	North Carolina	1,742.0	1,742.6	1,721.7
District of Columbia	686.5	685.2	676.5	North Dakota	160.9	158.3	158.2
Florida	2,145.6	2,172.0	2,063.0	Ohio	3,906.3	3,915.3	3,883.8
Georgia	1,528.0	1,528.7	1,508.2	Oklahoma	761.0	759.5	753.5
Hawaii	284.6	284.1	271.2	Oregon	696.8	695.9	700.3
Idaho	203.4	199.7	197.9	Pennsylvania	4,374.8	4,370.5	4,381.3
Illinois	4,325.8	4,331.2	4,351.2	Rhode Island	332.3	333.5	345.6
Indiana	1,859.9	1,858.3	1,874.2	South Carolina	815.9	814.9	813.1
Iowa	886.6	885.6	879.6	South Dakota	175.2	172.7	170.2
Kansas	676.7	675.7	686.5	Tennessee	1,315.9	1,322.1	1,311.3
Kentucky	908.8	901.5	897.4	Texas	3,720.9	3,719.9	3,595.7
Louisiana	1,040.0	1,042.1	1,041.9	Utah	358.0	354.2	349.7
Maine	327.8	326.1	328.8	Vermont	144.5	146.8	143.2
Maryland	1,302.8	1,295.5	1,266.8	Virginia	1,450.3	1,446.8	1,429.0
Massachusetts ¹	2,255.1	2,239.2	2,237.1	Washington	1,097.9	1,096.3	1,128.7
Michigan	3,019.1	3,013.1	3,070.6	West Virginia	511.2	507.3	515.4
Minnesota	1,304.5	1,300.9	1,293.6	Wisconsin	1,526.5	1,516.4	1,509.1
Mississippi	580.0	576.6	566.9	Wyoming	106.6	104.5	106.9
Missouri	1,651.3	1,653.0	1,657.4				

¹ Revised series; not strictly comparable with previously published data.

^a = preliminary.

SOURCE: State agencies in cooperation with U.S. Department of Labor, Bureau of Labor Statistics. More detailed industry data are available from the State agencies. For addresses, see inside back cover of *Employment and Earnings*.

13. Employees on nonagricultural payrolls, by industry division and major manufacturing group¹

[In thousands]

Industry division and group	1970						1969						Annual average		
	June ^p	May ^p	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL	71,445	70,805	70,758	70,460	70,029	69,933	71,760	71,354	71,333	70,964	70,758	70,481	71,116	70,274	67,915
MINING	627	619	616	610	608	611	623	622	623	630	638	635	629	619	606
CONTRACT CONSTRUCTION	3,505	3,352	3,286	3,161	3,071	3,048	3,398	3,553	3,648	3,687	3,731	3,707	3,628	3,437	3,285
MANUFACTURING	19,607	19,436	19,627	19,794	19,770	19,824	20,110	20,194	20,395	20,482	20,497	20,164	20,387	20,169	19,781
Production workers ²	14,220	14,069	14,240	14,385	14,346	14,402	14,680	14,763	14,953	15,041	15,014	14,700	14,958	14,768	14,514
Durable goods.....	11,383	11,352	11,488	11,607	11,573	11,623	11,802	11,832	12,008	12,030	11,992	11,889	12,051	11,893	11,626
Production workers ²	8,201	8,166	8,282	8,379	8,327	8,377	8,556	8,580	8,744	8,767	8,701	8,612	8,794	8,648	8,457
Ordnance and accessories.....	250.8	254.0	260.1	271.0	277.6	282.8	291.3	297.1	298.3	305.8	313.9	322.1	325.2	318.8	338.0
Lumber and wood products.....	594.3	579.3	574.5	578.6	579.2	583.8	597.0	600.1	604.4	616.7	629.3	627.5	634.7	609.2	600.1
Furniture and fixtures.....	451.1	451.9	462.9	468.6	470.3	475.6	482.2	485.2	488.1	486.8	488.4	476.2	487.1	483.5	471.6
Stone, clay, and glass products.....	648.7	636.7	639.8	635.1	632.9	632.0	650.9	661.9	664.7	669.0	674.0	670.9	670.8	656.3	635.5
Primary metal industries.....	1,336.4	1,318.1	1,329.5	1,338.1	1,346.6	1,351.4	1,367.6	1,364.7	1,364.0	1,373.9	1,375.5	1,374.3	1,383.4	1,358.0	1,315.5
Fabricated metal products.....	1,397.1	1,387.5	1,402.5	1,416.1	1,421.1	1,433.1	1,456.6	1,456.7	1,454.6	1,459.6	1,449.2	1,428.9	1,456.9	1,442.1	1,390.4
Machinery, except electrical.....	1,998.1	2,004.9	2,040.4	2,058.3	2,055.9	2,044.6	2,043.2	2,028.6	2,036.0	2,032.9	2,022.2	2,032.1	2,048.1	2,027.7	1,965.9
Electrical equipment.....	1,926.3	1,931.8	1,959.1	1,983.2	1,995.2	1,928.2	1,948.9	1,955.4	2,069.7	2,057.4	2,049.0	2,022.7	2,033.5	2,013.0	1,974.5
Transportation equipment.....	1,888.7	1,899.5	1,928.9	1,963.4	1,901.1	1,999.4	2,042.9	2,049.2	2,088.2	2,096.5	2,056.0	2,022.9	2,086.8	2,067.1	2,038.6
Instruments and related products.....	464.1	465.4	469.1	471.3	471.3	472.6	477.7	476.9	476.2	476.8	482.1	477.4	480.5	476.5	461.9
Miscellaneous manufacturing.....	427.3	422.6	421.3	423.0	421.4	419.0	443.7	456.4	463.4	454.9	452.0	433.7	444.0	440.2	433.4
Nondurable goods.....	8,224	8,084	8,139	8,178	8,197	8,201	8,308	8,362	8,387	8,452	8,505	8,275	8,336	8,277	8,155
Production workers ²	6,019	5,903	5,958	6,006	6,019	6,025	6,124	6,183	6,209	6,274	6,313	6,088	6,164	6,120	6,056
Food and kindred products.....	1,790.0	1,737.5	1,722.2	1,735.6	1,739.9	1,744.3	1,790.7	1,831.7	1,862.0	1,928.8	1,941.9	1,832.6	1,788.1	1,795.9	1,781.5
Tobacco manufactures.....	70.7	70.6	71.4	73.8	77.4	79.9	84.0	87.1	94.5	97.6	93.0	71.9	72.0	82.0	84.6
Textile mill products.....	974.4	968.2	974.6	977.3	979.9	987.6	995.3	997.6	994.8	997.2	1,000.1	992.0	1,012.5	998.7	993.9
Apparel and other textile products.....	1,397.8	1,376.6	1,382.4	1,402.8	1,404.0	1,388.8	1,407.6	1,417.6	1,423.0	1,421.4	1,427.1	1,369.2	1,434.5	1,412.3	1,405.8
Paper and allied products.....	718.2	707.7	714.2	714.9	714.2	716.0	722.7	720.4	716.4	718.0	722.6	715.7	720.8	712.1	691.2
Printing and publishing.....	1,102.8	1,102.0	1,109.9	1,112.3	1,110.0	1,107.7	1,116.2	1,113.4	1,107.7	1,098.5	1,098.0	1,092.5	1,092.3	1,093.3	1,065.1
Chemicals and allied products.....	1,058.4	1,057.4	1,063.8	1,064.1	1,060.8	1,058.5	1,062.1	1,059.9	1,058.1	1,063.9	1,076.5	1,076.1	1,072.9	1,060.7	1,029.9
Petroleum and coal products.....	197.0	191.6	190.4	189.7	188.4	188.0	188.9	191.0	191.8	191.9	195.0	195.3	192.9	182.9	186.8
Rubber and plastics products, nec.....	576.4	543.5	580.8	585.0	588.2	593.4	599.6	601.6	600.5	599.0	599.4	588.8	599.4	593.9	561.3
Leather and leather products.....	338.4	329.3	329.1	331.6	334.6	336.7	341.3	341.2	338.2	336.1	351.0	341.2	350.2	345.1	355.2
TRANSPORTATION AND PUBLIC UTILITIES	4,548	4,470	4,432	4,443	4,420	4,435	4,478	4,486	4,481	4,508	4,510	4,507	4,494	4,431	4,310
WHOLESALE AND RETAIL TRADE	15,035	14,886	14,818	14,700	14,606	14,707	15,638	15,092	14,850	14,714	14,670	14,663	14,713	14,645	14,084
Wholesale trade.....	3,883	3,814	3,803	3,797	3,788	3,797	3,841	3,816	3,801	3,781	3,796	3,787	3,758	3,738	3,611
Retail trade.....	11,152	11,072	11,015	10,903	10,818	10,910	11,797	11,276	11,049	10,933	10,874	10,876	10,955	10,907	10,473
FINANCE, INSURANCE, AND REAL ESTATE	3,692	3,672	3,658	3,639	3,615	3,604	3,608	3,597	3,589	3,595	3,641	3,628	3,584	3,557	3,382
SERVICES	11,756	11,646	11,564	11,433	11,357	11,254	11,351	11,349	11,372	11,300	11,372	11,384	11,353	11,211	10,623
Hotels and other lodging places.....	-----	-----	-----	727.3	717.5	709.6	713.3	714.5	738.4	764.8	852.3	856.5	784.2	750.3	722.2
Personal services.....	-----	-----	-----	1,006.2	1,003.0	1,005.1	1,022.0	1,025.4	1,028.0	1,022.1	1,023.8	1,036.9	1,043.2	1,025.8	1,031.4
Medical and other health services.....	-----	-----	-----	3,019.4	3,000.7	2,979.8	2,961.4	2,950.0	2,927.8	2,907.8	2,905.1	2,903.3	2,880.4	2,868.8	2,638.6
Educational services.....	-----	-----	-----	1,197.8	1,196.1	1,163.6	1,179.9	1,184.5	1,164.3	1,061.6	958.4	974.7	1,070.7	1,116.9	1,067.3
GOVERNMENT	12,675	12,724	12,757	12,680	12,582	12,450	12,554	12,461	12,375	12,048	11,699	11,793	12,328	12,204	11,845
Federal.....	2,750	2,765	2,838	2,758	2,694	2,690	2,760	2,705	2,717	2,733	2,804	2,842	2,832	2,758	2,737
State and Local.....	9,925	9,959	9,919	9,922	9,888	9,760	9,794	9,756	9,658	9,315	8,895	8,951	9,496	9,446	9,109

¹ For comparability of data with those published in issues prior to July 1970, and coverage of these series, see footnote 1, table 11.

² Production workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance,

repair, janitorial, and watchman services, product development, auxiliary production for plant's own use (e.g., powerplant), and recordkeeping and other services closely associated with the above production operations.

^p = preliminary.

14. Employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted ¹

[In thousands]

Industry division and group	1970						1969						
	June ^p	May ^p	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June
TOTAL	70,666	70,881	71,163	71,256	71,135	70,992	70,842	70,808	70,836	70,567	70,497	70,400	70,347
MINING	612	619	622	626	626	625	627	624	622	623	621	618	614
CONTRACT CONSTRUCTION	3,325	3,359	3,426	3,481	3,466	3,394	3,496	3,473	3,445	3,436	3,420	3,439	3,442
MANUFACTURING	19,460	19,580	19,795	19,944	19,937	20,018	20,082	20,082	20,233	20,252	20,246	20,247	20,248
Production workers ²	14,101	14,188	14,389	14,512	14,489	14,573	14,638	14,638	14,794	14,826	14,826	14,839	14,844
Durable goods.....	11,278	11,388	11,529	11,648	11,625	11,679	11,773	11,782	11,965	11,968	11,950	11,955	11,957
Production workers ²	8,108	8,187	8,318	8,409	8,367	8,425	8,516	8,522	8,703	8,713	8,698	8,706	8,707
Ordnance and accessories.....	251	256	261	271	277	281	290	296	298	306	316	322	326
Lumber and wood products.....	573	582	585	593	598	605	606	603	601	606	607	608	612
Furniture and fixtures.....	450	457	468	471	472	477	478	479	483	483	484	484	486
Stone, clay, and glass products.....	635	637	644	651	657	653	659	659	658	657	655	655	656
Primary metal industries.....	1,310	1,308	1,323	1,337	1,349	1,360	1,380	1,384	1,386	1,381	1,367	1,358	1,356
Fabricated metal products.....	1,385	1,396	1,411	1,425	1,428	1,436	1,447	1,444	1,445	1,452	1,451	1,446	1,444
Machinery, except electrical.....	1,982	2,003	2,032	2,046	2,048	2,043	2,051	2,043	2,050	2,041	2,028	2,032	2,032
Electrical equipment.....	1,930	1,955	1,979	1,995	1,993	1,922	1,930	1,934	2,051	2,049	2,043	2,045	2,038
Transportation equipment.....	1,876	1,900	1,925	1,950	1,890	1,988	2,009	2,028	2,078	2,078	2,081	2,086	2,087
Instruments and related products.....	462	468	471	472	472	474	476	476	476	477	479	478	479
Miscellaneous manufacturing.....	424	426	430	437	441	440	447	436	439	438	439	441	441
Nondurable goods.....	8,182	8,192	8,266	8,296	8,312	8,339	8,309	8,300	8,268	8,284	8,296	8,292	8,291
Production workers ²	5,993	6,001	6,071	6,103	6,122	6,148	6,122	6,116	6,091	6,113	6,128	6,133	6,137
Food and kindred products.....	1,794	1,806	1,805	1,823	1,830	1,817	1,805	1,806	1,780	1,799	1,801	1,795	1,792
Tobacco manufactures.....	80	81	81	81	80	80	77	80	81	83	86	81	82
Textile mill products.....	962	972	979	980	987	999	995	993	991	992	992	999	1,000
Apparel and other textile products.....	1,383	1,379	1,394	1,396	1,398	1,416	1,410	1,405	1,406	1,409	1,410	1,416	1,419
Paper and allied products.....	709	714	721	721	720	721	720	718	716	715	714	712	712
Printing and publishing.....	1,101	1,108	1,111	1,113	1,113	1,113	1,110	1,109	1,106	1,100	1,097	1,093	1,090
Chemicals and allied products.....	1,050	1,060	1,063	1,066	1,067	1,068	1,067	1,064	1,062	1,064	1,064	1,064	1,064
Petroleum and coal products.....	193	192	193	194	193	193	192	191	191	189	190	189	189
Rubber and plastics products, nec.....	574	548	585	589	591	595	594	596	596	596	597	597	596
Leather and leather products.....	336	332	334	333	333	337	339	338	339	337	345	346	347
TRANSPORTATION AND PUBLIC UTILITIES	4,499	4,479	4,468	4,502	4,496	4,507	4,469	4,464	4,463	4,459	4,457	4,454	4,445
WHOLESALE AND RETAIL TRADE	14,968	14,976	14,991	14,984	14,987	14,938	14,750	14,848	14,824	14,739	14,713	14,673	14,647
Wholesale trade.....	3,860	3,860	3,853	3,847	3,834	3,828	3,807	3,782	3,775	3,762	3,751	3,742	3,736
Retail trade.....	11,108	11,116	11,138	11,137	11,153	11,110	10,943	11,066	11,049	10,977	10,962	10,931	10,911
FINANCE, INSURANCE, AND REAL ESTATE	3,663	3,679	3,673	3,665	3,652	3,648	3,626	3,611	3,596	3,584	3,580	3,567	3,556
SERVICES	11,571	11,577	11,564	11,537	11,530	11,472	11,431	11,383	11,361	11,289	11,248	11,205	11,174
Hotels and other lodging places.....	-----	-----	-----	772	770	775	770	760	761	748	730	734	745
Personal services.....	-----	-----	-----	1,015	1,018	1,016	1,021	1,025	1,025	1,026	1,026	1,030	1,027
Medical and other health services.....	-----	-----	-----	3,025	3,007	2,992	2,973	2,950	2,931	2,914	2,891	2,875	2,860
Educational services.....	-----	-----	-----	1,143	1,145	1,125	1,129	1,125	1,122	1,105	1,117	1,113	1,114
GOVERNMENT	12,568	12,612	12,624	12,517	12,441	12,390	12,361	12,323	12,292	12,185	12,212	12,197	12,221
Federal ³	2,702	2,781	2,852	2,780	2,718	2,717	2,721	2,730	2,739	2,747	2,749	2,765	2,782
State and local.....	9,866	9,831	9,772	9,737	9,723	9,673	9,640	9,593	9,553	9,438	9,463	9,432	9,439

¹ For comparability of data with those published in issues prior to July 1970, and coverage of these series, see footnote 1, table 11.

² For definition of production workers, see footnote 2, table 13.

NOTE: These data have been seasonally adjusted to reflect experience through February 1970. For additional detail see June 1970 issue of *Employment and Earnings*.
^p = preliminary.

15. Labor turnover rates in manufacturing, 1959 to date ¹

[Per 100 employees]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
Total accessions													
1959	3.8	3.7	4.1	4.1	4.2	5.4	4.4	5.2	5.1	3.9	3.4	3.6	4.2
1960	4.0	3.5	3.3	3.4	3.9	4.7	3.9	4.9	4.8	3.5	2.9	2.3	3.8
1961	3.7	3.2	4.0	4.0	4.3	5.0	4.4	5.3	4.7	4.3	3.4	2.6	4.1
1962	4.1	3.6	3.8	4.0	4.3	5.0	4.6	5.1	4.9	3.9	3.0	2.4	4.1
1963	3.6	3.3	3.5	3.9	3.9	4.8	4.3	4.8	4.8	3.9	2.9	2.5	3.9
1964	3.6	3.4	3.7	3.8	3.9	5.1	4.4	5.1	4.8	4.0	3.2	2.6	4.0
1965	3.8	3.5	4.0	3.8	4.1	5.6	4.5	5.4	5.5	4.5	3.9	3.1	4.3
1966	4.6	4.2	4.9	4.6	5.1	6.7	5.1	6.4	6.1	5.1	3.9	2.9	5.0
1967	4.3	3.6	3.9	3.9	4.6	5.9	4.7	5.5	5.3	4.7	3.7	2.8	4.4
1968	4.2	3.8	4.0	4.3	4.7	5.9	5.0	5.8	5.7	5.1	3.9	3.1	4.6
1969	4.6	3.9	4.4	4.5	4.8	6.6	5.1	5.6	5.9	5.0	3.6	2.9	4.7
1970	4.0	3.6	3.7	3.7	4.2								
New hires													
1959	2.0	2.1	2.4	2.5	3.7	2.7	3.0	3.5	3.5	2.6	1.9	1.5	2.6
1960	2.2	2.2	2.0	2.0	2.3	3.0	2.4	2.9	2.8	2.1	1.5	1.0	2.2
1961	1.5	1.4	1.6	1.8	2.1	2.9	2.5	3.1	3.0	2.7	2.0	1.4	2.2
1962	2.2	2.1	2.2	2.4	2.8	3.5	2.9	3.2	3.1	2.5	1.8	1.2	2.5
1963	1.9	1.8	2.0	2.3	2.5	3.3	2.7	3.2	3.2	2.6	1.8	1.4	2.4
1964	2.0	2.0	2.2	2.4	2.5	3.6	2.9	3.4	3.5	2.8	2.2	1.6	2.6
1965	2.4	2.4	2.8	2.6	3.0	4.3	3.2	3.9	4.0	3.5	2.9	2.2	3.1
1966	3.2	3.1	3.7	3.6	4.1	5.6	3.9	4.8	4.7	4.2	3.1	2.1	3.8
1967	3.0	2.7	2.8	2.8	3.3	4.6	3.3	4.0	4.1	3.7	2.8	2.0	3.3
1968	3.0	2.7	2.9	3.2	3.6	4.7	3.7	4.3	4.6	4.0	2.9	2.2	3.5
1969	3.3	3.0	3.4	3.5	3.8	5.4	3.9	4.3	4.8	4.0	2.8	2.1	3.7
1970	2.9	2.5	2.6	2.6	2.9								
Total separations													
1959	3.7	3.1	3.3	3.6	3.5	3.6	4.0	4.6	5.3	5.5	4.7	3.9	4.1
1960	3.6	3.5	4.0	4.2	3.9	4.0	4.4	4.8	5.3	4.7	4.5	4.8	4.3
1961	4.7	3.9	3.8	3.4	3.5	3.6	4.1	4.2	5.1	4.2	4.0	4.0	4.0
1962	3.9	3.4	3.6	3.6	3.8	3.8	4.4	5.1	5.0	4.4	4.0	3.8	4.1
1963	4.0	3.2	3.5	3.6	3.6	3.4	4.1	4.8	4.9	4.1	3.9	3.7	3.9
1964	4.0	3.3	3.5	3.5	3.6	3.5	4.4	4.3	5.1	4.2	3.6	3.7	3.9
1965	3.7	3.1	3.4	3.7	3.6	3.6	4.3	5.1	5.6	4.5	3.9	4.1	4.1
1966	4.0	3.6	4.1	4.3	4.3	4.4	5.3	5.8	6.6	4.8	4.3	4.2	4.6
1967	4.5	4.0	4.6	4.3	4.2	4.3	4.8	5.3	6.2	4.7	4.0	3.9	4.6
1968	4.4	3.9	4.1	4.1	4.3	4.1	5.0	6.0	6.3	5.0	4.1	3.8	4.6
1969	4.5	4.0	4.4	4.5	4.6	4.6	5.3	6.2	6.6	5.3	4.3	4.2	4.9
1970	4.8	4.3	4.5	4.8	4.7								
Quits													
1959	1.1	1.0	1.2	1.4	1.5	1.5	1.6	2.1	2.6	1.7	1.2	1.0	1.5
1960	1.2	1.2	1.2	1.4	1.3	1.4	1.4	1.8	2.3	1.3	.9	.7	1.3
1961	.9	.8	.9	1.0	1.1	1.2	1.2	1.7	2.3	1.4	1.1	.9	1.2
1962	1.1	1.1	1.2	1.3	1.5	1.5	1.4	2.1	2.4	1.5	1.1	.8	1.4
1963	1.1	1.0	1.2	1.3	1.4	1.4	1.4	2.1	2.4	1.5	1.1	.8	1.4
1964	1.2	1.1	1.2	1.3	1.5	1.4	1.5	2.1	2.7	1.7	1.2	1.0	1.5
1965	1.4	1.3	1.5	1.7	1.7	1.7	1.8	2.6	3.5	2.2	1.7	1.4	1.9
1966	1.9	1.8	2.3	2.5	2.5	2.5	2.5	3.6	4.5	2.8	2.1	1.7	2.6
1967	2.1	1.9	2.1	2.2	2.2	2.3	2.1	3.2	4.0	2.5	1.9	1.5	2.3
1968	2.0	1.9	2.1	2.2	2.4	2.3	2.4	3.8	4.2	2.8	2.1	1.6	2.5
1969	2.3	2.1	2.4	2.6	2.7	2.6	2.6	4.0	4.4	2.9	2.1	1.6	2.7
1970	2.1	1.9	1.9	2.1	2.2								
Layoffs													
1959	2.1	1.5	1.6	1.6	1.4	1.4	1.8	1.8	2.0	3.2	2.9	2.4	2.0
1960	1.8	1.7	2.2	2.2	1.9	2.0	2.4	2.4	2.4	2.8	3.1	3.6	2.4
1961	3.2	2.6	2.3	1.9	1.8	1.8	2.3	1.8	2.1	2.0	2.2	2.6	2.2
1962	2.1	1.7	1.6	1.6	1.6	1.6	2.2	2.2	1.9	2.2	2.3	2.5	2.0
1963	2.2	1.6	1.7	1.6	1.5	1.4	2.0	1.9	1.8	1.9	2.1	2.3	1.8
1964	2.0	1.6	1.6	1.4	1.4	1.3	2.1	1.4	1.5	1.8	1.7	2.1	1.7
1965	1.6	1.2	1.2	1.3	1.1	1.1	1.8	1.6	1.3	1.4	1.5	1.9	1.4
1966	1.3	1.0	1.0	1.0	.9	1.0	2.0	1.1	1.0	1.1	1.3	1.7	1.2
1967	1.5	1.3	1.5	1.3	1.1	1.1	1.9	1.2	1.2	1.3	1.3	1.6	1.4
1968	1.5	1.2	1.1	1.0	1.0	.9	1.8	1.3	1.1	1.2	1.2	1.4	1.2
1969	1.2	1.0	1.0	.9	.9	1.0	1.6	1.1	1.1	1.3	1.3	1.8	1.2
1970	1.7	1.6	1.6	1.7	1.5								

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11.

Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series for the following reasons: (1) The

labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

p=preliminary.

16. Labor turnover rates in manufacturing, by major industry group ¹

[Per 100 employees]

Major industry group	Accession rates						Separation rates								
	Total			New hires			Total			Quits			Layoffs		
	May 1970 ^p	Apr. 1970	May 1969	May 1970 ^p	Apr. 1970	May 1969	May 1970 ^p	Apr. 1970	May 1969	May 1970 ^p	Apr. 1970	May 1969	May 1970 ^p	Apr. 1970	May 1969
MANUFACTURING	4.2	3.7	4.8	2.9	2.6	3.8	4.7	4.8	4.6	2.2	2.1	2.7	1.5	1.7	0.9
Seasonally adjusted ²	4.2	4.0	4.8	2.8	2.8	3.7	5.1	5.2	5.0	2.3	2.2	2.8	1.9	2.0	1.1
Durable goods	3.7	3.4	4.6	2.5	2.2	3.6	4.5	4.7	4.5	1.9	1.8	2.5	1.6	1.9	.8
Ordnance and accessories.....	1.7	1.5	2.3	.8	.7	1.8	3.5	4.2	3.3	1.0	1.0	1.9	1.8	2.5	.6
Lumber and wood products.....	5.8	5.5	7.5	4.8	4.2	6.3	5.4	6.1	6.8	3.5	3.6	5.2	.9	1.6	.5
Furniture and fixtures.....	4.4	4.6	6.4	3.7	3.6	5.8	5.8	6.2	6.5	3.4	3.5	4.8	1.1	1.5	.4
Stone, clay, and glass products.....	4.9	4.7	5.5	3.8	3.3	4.6	4.8	4.5	4.9	2.6	2.4	3.1	1.1	1.2	.7
Primary metal industries.....	3.5	3.1	4.2	2.3	1.9	3.4	3.5	3.9	3.6	1.5	1.5	1.9	.9	1.4	.4
Fabricated metal products.....	4.8	4.2	5.3	3.4	2.9	4.5	5.2	5.5	5.4	2.4	2.2	3.1	1.5	2.1	1.1
Machinery, except electrical.....	2.7	2.5	3.5	1.8	1.8	2.9	4.1	4.0	3.5	1.6	1.4	1.9	1.7	1.6	.6
Electrical equipment.....	3.1	2.9	4.2	2.0	1.9	3.3	4.5	4.1	4.1	1.8	1.7	2.3	1.6	1.4	.6
Transportation equipment.....	3.6	3.2	4.4	1.7	1.4	2.8	4.9	5.1	4.7	1.3	1.2	1.9	2.7	3.1	1.8
Instruments and related products.....	2.7	2.5	3.1	2.0	1.9	2.6	3.6	3.5	3.4	1.5	1.5	2.0	1.2	1.1	.5
Miscellaneous manufacturing.....	5.5	6.1	6.6	4.1	3.7	5.4	5.8	6.1	5.6	2.9	2.9	3.5	1.9	2.2	.9
Nondurable goods	4.8	4.1	5.2	3.5	3.0	4.0	4.9	4.9	4.9	2.7	2.5	3.0	1.3	1.6	1.0
Food and kindred products.....	6.8	5.2	7.2	4.8	3.7	5.2	6.1	5.8	6.2	3.1	2.8	3.5	2.2	2.3	1.9
Tobacco manufactures.....	3.5	3.2	3.1	2.6	2.3	1.9	3.3	3.7	3.8	2.0	2.1	1.7	.6	.8	1.3
Textile mill products.....	5.0	5.0	5.8	3.9	3.9	4.8	5.4	5.6	5.7	3.8	3.7	4.3	.6	.8	.5
Apparel and other textile products.....	5.9	5.3	6.0	3.8	3.3	3.8	6.1	6.6	5.5	3.1	2.8	3.2	2.1	3.0	1.5
Paper and allied products.....	3.5	3.0	4.5	2.8	2.4	3.9	3.5	3.8	4.2	2.0	2.0	2.8	.7	.8	.4
Printing and publishing.....	3.1	2.8	3.6	2.5	2.4	3.1	3.5	3.4	3.4	2.1	1.9	2.3	.8	.8	.4
Chemicals and allied products.....	2.6	2.2	2.7	2.0	1.8	2.3	2.7	2.6	2.8	1.4	1.3	1.7	.6	.6	.5
Petroleum and coal products.....	2.5	2.4	2.5	2.0	2.0	2.2	2.2	2.6	2.2	1.0	1.0	1.1	.3	.7	.4
Rubber and plastics products, n.e.c.....	5.2	4.3	5.5	3.7	3.3	4.7	5.6	5.8	5.8	2.9	2.8	3.6	1.4	1.8	.9
Leather and leather products.....	5.9	5.5	6.6	4.3	4.1	5.0	6.2	6.1	6.5	3.5	3.4	4.2	1.5	1.6	1.2

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For relationship to employment series see footnote 1, table 15.
² These data have been seasonally adjusted to reflect experience through February 1970. For additional detail see June 1970 issue of *Employment and Earnings*.

NOTE: For additional detail see *Employment and Earnings*, table D-2.^p=preliminary.

17. Gross hours and earnings of production and nonsupervisory workers¹ on private nonagricultural payrolls by industry division, 1947 to date

Year	Averages			Averages			Averages			Averages		
	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings
	Total private			Mining			Contract construction			Manufacturing		
1947	\$45.58	40.3	\$1.131	\$59.94	40.8	\$1.469	\$58.87	38.2	\$1.541	\$49.17	40.4	\$1.217
1948	49.00	40.0	1.225	65.56	39.4	1.664	65.27	38.1	1.713	53.12	40.0	1.328
1949	50.24	39.4	1.275	62.33	36.3	1.717	67.56	37.7	1.792	53.88	39.1	1.378
1950	53.13	39.8	1.335	67.16	37.9	1.772	69.68	37.4	1.863	58.32	40.5	1.440
1951	57.86	39.9	1.45	74.11	38.4	1.93	76.96	38.1	2.02	63.34	40.6	1.56
1952	60.65	39.9	1.52	77.59	38.6	2.01	82.86	38.9	2.13	67.16	40.7	1.65
1953	63.76	39.6	1.61	83.03	38.8	2.14	86.41	37.9	2.28	70.47	40.5	1.74
1954	64.52	39.1	1.65	82.60	38.6	2.14	88.91	37.2	2.39	70.49	39.6	1.78
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.70	40.7	1.86
1956	70.74	39.3	1.80	95.06	40.8	2.33	96.38	37.5	2.57	78.78	40.4	1.95
1957	73.33	38.8	1.89	98.65	40.1	2.46	100.27	37.0	2.71	81.59	39.8	2.05
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.71	39.2	2.11
1959 ²	78.78	39.0	2.02	103.68	40.5	2.56	108.41	37.0	2.93	88.26	40.3	2.19
1960	80.67	38.6	2.09	105.44	40.4	2.61	113.04	36.7	3.08	89.72	39.7	2.26
1961	82.60	38.6	2.14	106.92	40.5	2.64	118.08	36.9	3.20	92.34	39.8	2.32
1962	85.91	38.7	2.22	110.43	40.9	2.70	122.47	37.0	3.31	96.56	40.4	2.39
1963	88.46	38.8	2.28	114.40	41.6	2.75	127.19	37.3	3.41	99.63	40.5	2.46
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.06	38.8	2.45	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.34	41.3	2.72
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.90	40.6	2.83
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.93	37.4	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.16	37.9	4.78	129.51	40.6	3.19
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1947				\$38.07	40.5	\$0.940	\$43.21	37.9	\$1.140			
1948				40.80	40.4	1.010	45.48	37.9	1.200			
1949				42.93	40.5	1.060	47.63	37.8	1.260			
1950				44.55	40.5	1.100	50.52	37.7	1.340			
1951				47.79	40.5	1.18	54.67	37.7	1.45			
1952				49.20	40.0	1.23	57.08	37.8	1.51			
1953				51.35	39.5	1.30	59.57	37.7	1.58			
1954				53.33	39.5	1.35	62.04	37.6	1.65			
1955				55.16	39.4	1.40	63.92	37.6	1.70			
1956				57.48	39.1	1.47	65.68	36.9	1.78			
1957				59.60	38.7	1.54	67.53	36.7	1.84			
1958				61.76	38.6	1.60	70.12	37.1	1.89			
1959 ²				64.41	38.8	1.66	72.74	37.3	1.95			
1960				66.01	38.6	1.71	75.14	37.2	2.02			
1961				67.41	38.3	1.76	77.12	36.9	2.09			
1962				69.91	38.2	1.83	80.94	37.3	2.17			
1963				72.01	38.1	1.89	84.38	37.5	2.25			
1964	\$118.37	41.1	\$2.88	74.28	37.9	1.96	85.79	37.3	2.30	\$69.84	36.0	\$1.94
1965	125.14	41.3	3.03	76.53	37.7	2.03	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.02	37.1	2.13	92.13	37.3	2.47	77.04	35.5	2.17
1967	131.22	40.5	3.24	81.76	36.5	2.24	95.46	37.0	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	86.40	36.0	2.40	101.75	37.0	2.75	84.32	34.7	2.43
1969	147.74	40.7	3.63	91.14	35.6	2.56	108.33	37.1	2.92	91.26	34.7	2.63

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11.

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and

services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

² Data include Alaska and Hawaii beginning 1959.

NOTE: For additional detail see *Employment and Earnings*, table C-1.

18. Gross average weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	1970						1969							Annual average	
	June 1970 ^p	May 1970 ^p	Apr. 1970	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL PRIVATE	37.4	37.0	36.9	37.2	37.0	37.1	37.7	37.5	37.6	37.9	38.1	38.0	37.9	37.7	37.8
MINING	42.5	42.7	43.1	42.4	42.6	42.3	43.3	43.3	43.3	43.4	43.6	43.0	42.3	43.0	42.6
CONTRACT CONSTRUCTION	38.5	38.1	37.9	37.2	36.8	35.7	37.6	37.1	38.3	39.3	39.1	38.7	38.4	37.9	37.4
MANUFACTURING	40.0	39.8	39.7	40.0	39.8	40.1	41.0	40.6	40.7	41.0	40.6	40.4	40.9	40.6	40.7
Overtime hours.....	3.0	2.9	2.8	3.0	3.0	3.2	3.6	3.6	3.7	4.0	3.7	3.5	3.7	3.6	3.6
Durable Goods	40.6	40.4	40.2	40.6	40.3	40.7	41.7	41.2	41.4	41.7	41.1	40.9	41.5	41.3	41.4
Overtime hours.....	3.1	3.0	2.8	3.1	3.0	3.3	3.8	3.7	3.9	4.2	3.8	3.6	3.9	3.8	3.8
Ordnance and accessories....	40.9	40.8	40.8	40.8	40.8	41.0	41.0	40.6	40.3	40.6	40.2	39.8	40.8	40.4	41.5
Lumber and wood products....	40.1	40.2	39.8	39.5	39.4	39.1	40.1	39.9	40.3	40.3	40.2	39.7	40.6	40.2	40.6
Furniture and fixtures.....	38.8	38.5	38.7	39.1	38.7	38.9	40.8	40.3	40.6	40.7	40.8	39.7	40.8	40.4	40.6
Stone, clay, and glass products.....	41.7	41.5	41.5	41.3	40.9	40.9	42.9	41.9	42.1	42.4	42.4	41.8	42.3	42.0	41.8
Primary metal industries....	39.9	40.4	40.4	40.8	40.8	41.3	41.7	41.4	41.7	42.1	41.8	41.6	42.0	41.8	41.6
Fabricated metal products....	41.0	40.7	40.6	40.9	40.6	41.0	41.8	41.6	41.7	42.1	41.7	41.2	42.0	41.6	41.7
Machinery, except electrical..	41.1	41.1	41.4	42.1	41.9	42.2	43.1	42.2	42.4	42.7	42.9	41.8	42.6	42.5	42.1
Electrical equipment and supplies.....	39.8	39.8	39.6	40.1	39.7	40.3	40.9	40.5	40.4	40.7	40.3	39.8	40.7	40.4	40.3
Transportation equipment....	41.7	40.5	39.2	40.0	39.6	40.1	42.2	41.5	41.9	42.3	40.5	41.6	41.6	41.5	42.2
Instruments and related products.....	40.1	40.1	40.3	40.7	40.2	40.5	41.3	41.1	40.9	41.2	40.7	40.5	41.0	40.7	40.5
Miscellaneous manufacturing industries	38.7	38.6	38.8	39.0	38.8	38.8	39.5	39.3	39.3	39.2	39.1	38.5	39.2	39.0	39.4
Nondurable goods	39.2	39.0	39.0	39.2	39.1	39.2	40.0	39.8	39.7	40.0	39.9	39.8	39.9	39.7	39.8
Overtime hours.....	3.0	2.9	2.8	3.0	3.0	3.1	3.4	3.4	3.5	3.7	3.5	3.4	3.4	3.4	3.3
Food and kindred products....	40.7	40.5	39.9	40.0	40.0	40.5	41.0	41.0	40.7	41.8	41.4	41.2	40.9	40.8	40.8
Tobacco manufactures.....	37.9	36.8	37.1	36.4	36.9	37.2	36.8	37.3	38.6	39.0	37.5	37.6	39.9	37.4	37.9
Textile mill products.....	40.2	39.7	39.9	40.1	40.0	40.0	41.3	41.1	40.9	41.0	41.0	40.7	41.4	40.8	41.2
Apparel and other textile products.....	35.3	35.1	35.4	35.8	35.5	35.2	35.9	35.8	35.8	35.8	36.3	35.9	36.3	35.9	36.1
Paper and allied products....	41.6	41.9	41.7	42.0	41.9	42.4	43.2	42.9	43.1	43.3	43.1	43.0	43.1	43.0	42.9
Printing and publishing....	37.6	37.6	37.7	38.0	37.8	37.7	39.0	38.4	38.4	38.6	38.6	38.4	38.4	38.4	38.3
Chemicals and allied products..	41.2	41.6	41.6	41.8	41.6	41.7	42.9	42.0	41.7	41.8	41.7	41.7	41.8	41.8	41.8
Petroleum and coal products..	42.9	42.7	42.2	41.8	41.8	41.9	41.7	42.7	42.9	42.6	42.9	43.6	42.5	42.6	42.5
Rubber and plastics products, nec.....	40.2	40.0	40.3	40.4	40.6	40.7	41.5	41.1	41.3	41.5	41.0	40.8	41.3	41.1	41.5
Leather and leather products..	37.6	37.4	36.3	37.1	37.4	37.7	38.3	37.4	37.0	36.8	37.1	37.4	37.8	37.2	38.3
TRANSPORTATION AND PUBLIC UTILITIES	40.5	40.2	39.8	40.2	40.5	40.5	40.8	40.9	41.0	41.0	40.8	41.1	40.7	40.7	40.6
WHOLESALE AND RETAIL TRADE	35.7	35.0	34.9	35.0	35.0	35.1	35.7	35.2	35.3	35.7	36.6	36.5	35.9	35.6	36.0
Wholesale trade.....	40.3	39.9	39.9	40.0	40.0	40.2	40.7	40.2	40.3	40.3	40.5	40.3	40.1	40.2	40.1
Retail trade.....	34.2	33.4	33.3	33.4	33.3	33.4	34.1	33.6	33.7	34.2	35.3	35.2	34.6	34.2	34.7
FINANCE, INSURANCE, AND REAL ESTATE	36.8	36.7	36.9	37.0	37.0	36.9	37.0	37.2	37.1	37.0	37.0	37.1	37.1	37.1	37.0
SERVICES	34.5	34.2	34.3	34.7	34.3	34.3	34.6	34.6	34.5	34.6	35.3	35.3	34.8	34.7	34.7

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: For additional detail, see Employment and Earnings, table C-2.

^p = preliminary.

19. Gross average weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

Industry division and group	1970					1969							
	June ^p	May ^p	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June
TOTAL PRIVATE	37.2	37.1	37.2	37.4	37.3	37.5	37.6	37.6	37.5	37.7	37.7	37.7	37.7
MINING	42.0	42.6	43.1	43.2	43.4	42.7	43.2	43.5	43.0	43.1	43.1	42.6	41.8
CONTRACT CONSTRUCTION	37.7	38.1	38.3	38.0	38.2	36.7	38.2	38.1	37.6	38.1	37.9	37.6	37.6
MANUFACTURING	39.8	39.8	40.0	40.2	39.9	40.3	40.7	40.5	40.5	40.7	40.6	40.6	40.7
Overtime hours.....	3.0	2.9	3.0	3.2	3.2	3.3	3.5	3.5	3.5	3.6	3.6	3.6	3.7
Durable Goods	40.4	40.4	40.4	40.7	40.5	41.0	41.3	41.1	41.2	41.4	41.2	41.3	41.3
Overtime hours.....	3.1	3.1	3.0	3.2	3.2	3.4	3.6	3.5	3.6	3.8	3.8	3.8	3.9
Ordnance and accessories.....	40.8	40.8	41.1	41.1	41.3	40.6	40.5	40.3	40.2	40.3	40.4	40.3	40.7
Lumber and wood products.....	39.6	39.8	39.8	39.5	40.1	39.6	40.3	40.2	39.9	40.0	39.9	39.8	40.1
Furniture and fixtures.....	38.6	38.8	39.3	39.4	39.3	39.5	40.0	40.0	39.9	40.1	40.3	40.2	40.6
Stone, clay, and glass products.....	41.3	41.3	41.6	41.8	41.7	41.7	42.1	41.8	41.7	41.9	41.9	41.7	41.9
Primary metal industries.....	39.6	40.2	40.1	40.7	40.9	41.2	41.7	41.6	42.1	42.1	41.9	41.7	41.7
Fabricated metal products.....	40.8	40.6	40.9	41.2	41.1	41.4	41.5	41.4	41.4	41.5	41.6	41.6	41.7
Machinery, except electrical.....	41.0	41.1	41.4	41.8	41.9	42.2	42.6	42.2	42.4	42.6	42.5	42.4	42.5
Electrical equipment and supplies.....	39.7	39.9	40.0	40.2	39.7	40.5	40.3	40.1	40.2	40.4	40.4	40.4	40.6
Transportation equipment.....	41.7	40.4	39.7	40.4	40.3	40.2	41.4	40.7	41.2	41.6	41.2	42.1	41.6
Instruments and related products.....	40.0	40.2	40.5	40.7	40.2	40.7	40.9	40.9	40.7	41.0	40.9	40.9	40.9
Miscellaneous manufacturing industries.....	38.6	38.7	39.0	39.0	38.6	39.3	39.3	39.3	38.9	39.0	39.1	39.2	39.1
Nondurable Goods	39.0	39.1	39.4	39.4	39.3	39.6	39.8	39.6	39.6	39.7	39.7	39.8	39.7
Overtime hours.....	3.0	3.0	3.0	3.2	3.2	3.4	3.3	3.3	3.3	3.3	3.4	3.4	3.4
Food and kindred products.....	40.5	40.7	40.6	40.5	40.7	41.0	40.8	40.8	40.6	40.9	40.9	40.7	40.7
Tobacco manufactures.....	37.3	37.1	38.3	37.5	37.3	38.3	36.2	37.2	37.3	37.4	37.2	38.0	39.3
Textile mill products.....	39.9	39.8	40.6	40.2	46.1	40.4	40.9	40.7	40.6	40.7	40.9	41.1	41.1
Apparel and other textile products.....	35.1	35.1	35.5	35.6	35.5	35.6	36.0	35.8	35.8	35.8	35.9	36.0	36.1
Paper and allied products.....	41.5	41.9	42.1	42.2	42.3	42.8	42.8	42.7	42.8	42.9	42.9	43.0	43.0
Printing and publishing.....	37.6	37.7	37.9	38.0	38.0	38.2	38.6	38.4	38.2	38.3	38.4	38.5	38.4
Chemicals and allied products.....	41.2	41.5	41.4	41.8	41.8	42.0	41.8	41.8	41.7	41.8	41.8	41.8	41.8
Petroleum and coal products.....	42.7	42.4	41.9	42.2	42.7	42.5	42.3	42.6	42.6	42.2	42.8	42.8	42.3
Rubber and plastics products, nec.....	40.2	40.1	40.7	46.7	41.0	46.9	41.1	40.8	40.9	41.0	40.9	41.2	41.3
Leather and leather products.....	37.2	37.6	37.4	37.4	37.1	37.5	37.7	37.3	37.2	37.1	36.9	37.1	37.4
TRANSPORTATION AND PUBLIC UTILITIES	40.4	40.4	40.2	46.6	40.7	40.7	40.8	40.7	40.9	40.8	40.5	40.7	40.6
WHOLESALE AND RETAIL TRADE	35.5	35.4	35.3	35.3	35.4	35.4	35.5	35.5	35.5	35.6	35.7	35.7	35.7
Wholesale Trade.....	40.2	40.1	40.1	40.1	40.2	40.3	40.5	40.3	40.3	40.3	40.3	40.0	40.0
Retail trade.....	33.9	33.8	33.7	33.8	33.7	33.8	33.8	34.0	34.0	34.1	34.2	34.2	34.3
FINANCE, INSURANCE, AND REAL ESTATE	36.8	36.8	36.9	37.0	37.0	36.9	36.9	37.2	37.0	37.1	37.0	37.1	37.1
SERVICES	34.4	34.4	34.4	34.7	34.4	34.4	34.6	34.7	34.6	34.7	35.0	35.0	34.7

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For employees covered, see footnote 1, table 17.
p=preliminary.

NOTE: These data have been seasonally adjusted to reflect experience through February 1970. For additional detail see June 1970 issue of *Employment and Earnings*.

20. Gross average hourly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry and division group	1970						1969							Annual average	
	June ^p	May ^p	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL PRIVATE	\$3.21	\$3.20	\$3.18	\$3.17	\$3.15	\$3.13	\$3.12	\$3.13	\$3.12	\$3.11	\$3.06	\$3.05	\$3.04	\$3.04	\$2.85
MINING	3.83	3.79	3.79	3.78	3.77	3.76	3.71	3.72	3.69	3.65	3.60	3.59	3.56	3.60	3.35
CONTRACT CONSTRUCTION	5.12	5.10	5.09	5.06	5.06	5.07	5.03	4.97	4.96	4.92	4.80	4.76	4.70	4.78	4.41
MANUFACTURING	3.36	3.34	3.32	3.31	3.29	3.29	3.29	3.26	3.25	3.24	3.20	3.19	3.18	3.19	3.01
Durable Goods	3.58	3.55	3.52	3.51	3.48	3.49	3.49	3.46	3.45	3.44	3.39	3.38	3.37	3.39	3.19
Ordnance and accessories.....	3.58	3.59	3.58	3.57	3.54	3.53	3.51	3.53	3.48	3.46	3.43	3.41	3.43	3.42	3.26
Lumber and wood products.....	2.98	2.92	2.88	2.86	2.84	2.83	2.84	2.86	2.83	2.84	2.79	2.75	2.72	2.74	2.57
Furniture and fixtures.....	2.75	2.74	2.73	2.71	2.70	2.71	2.71	2.70	2.68	2.68	2.64	2.62	2.62	2.62	2.47
Stone, clay, and glass products.....	3.39	3.37	3.35	3.32	3.28	3.28	3.28	3.29	3.27	3.25	3.22	3.19	3.18	3.19	2.99
Primary metal industries.....	3.93	3.90	3.87	3.86	3.85	3.86	3.87	3.85	3.85	3.87	3.84	3.79	3.77	3.79	3.55
Fabricated metal products.....	3.54	3.52	3.50	3.48	3.46	3.45	3.44	3.41	3.39	3.40	3.34	3.33	3.33	3.34	3.16
Machinery, except electrical.....	3.77	3.76	3.75	3.75	3.72	3.70	3.72	3.67	3.67	3.63	3.57	3.56	3.57	3.58	3.36
Electrical equipment and supplies.....	3.32	3.28	3.24	3.24	3.20	3.18	3.17	3.13	3.13	3.13	3.10	3.09	3.08	3.09	2.93
Transportation equipment.....	4.13	4.06	4.00	4.01	3.97	4.02	4.04	3.98	3.95	3.94	3.92	3.90	3.86	3.90	3.69
Instruments and related products.....	3.31	3.30	3.29	3.28	3.27	3.26	3.25	3.23	3.21	3.19	3.15	3.13	3.14	3.15	2.98
Miscellaneous manufacturing industries.....	2.81	2.80	2.80	2.80	2.80	2.79	2.76	2.72	2.69	2.68	2.64	2.64	2.65	2.66	2.50
Nondurable Goods	3.06	3.05	3.04	3.03	3.01	3.01	2.99	2.97	2.96	2.95	2.92	2.92	2.89	2.91	2.74
Food and kindred products.....	3.15	3.16	3.12	3.10	3.08	3.08	3.04	3.01	2.98	2.97	2.94	2.97	2.95	2.96	2.80
Tobacco manufactures.....	3.04	2.99	2.98	2.90	2.89	2.86	2.67	2.62	2.49	2.51	2.49	2.77	2.80	2.62	2.48
Textile mill products.....	2.44	2.43	2.42	2.42	2.42	2.42	2.42	2.42	2.41	2.41	2.38	2.35	2.31	2.34	2.21
Apparel and other textile products.....	2.38	2.37	2.37	2.37	2.36	2.36	2.35	2.34	2.34	2.34	2.31	2.28	2.30	2.31	2.21
Paper and allied products.....	3.42	3.40	3.37	3.35	3.35	3.35	3.34	3.32	3.31	3.31	3.28	3.27	3.23	3.24	3.05
Printing and publishing.....	3.90	3.88	3.85	3.84	3.81	3.80	3.81	3.78	3.77	3.75	3.70	3.68	3.68	3.69	3.48
Chemicals and allied products.....	3.66	3.64	3.61	3.60	3.60	3.60	3.58	3.56	3.55	3.52	3.50	3.49	3.46	3.47	3.26
Petroleum and coal products.....	4.26	4.25	4.26	4.23	4.23	4.21	4.10	4.10	4.06	4.04	3.99	4.03	3.99	4.00	3.75
Rubber and plastics products, nec.....	3.10	3.10	3.16	3.15	3.14	3.15	3.14	3.13	3.12	3.13	3.08	3.09	3.05	3.07	2.92
Leather and leather products.....	2.49	2.49	2.48	2.47	2.47	2.46	2.44	2.42	2.40	2.38	2.35	2.34	2.35	2.36	2.23
TRANSPORTATION AND PUBLIC UTILITIES	3.80	3.78	3.75	3.75	3.75	3.73	3.72	3.72	3.70	3.71	3.67	3.65	3.62	3.63	3.42
WHOLESALE AND RETAIL TRADE	2.70	2.70	2.69	2.68	2.68	2.65	2.61	2.63	2.61	2.59	2.56	2.55	2.55	2.56	2.40
Wholesale trade.....	3.41	3.42	3.40	3.40	3.38	3.35	3.34	3.33	3.29	3.28	3.24	3.23	3.24	3.23	3.05
Retail trade.....	2.43	2.43	2.41	2.41	2.40	2.38	2.35	2.36	2.35	2.33	2.30	2.30	2.30	2.30	2.16
FINANCE, INSURANCE, AND REAL ESTATE	3.03	3.04	3.03	3.05	3.04	3.02	2.98	2.99	2.95	2.93	2.92	2.91	2.93	2.92	2.75
SERVICES	2.81	2.81	2.79	2.79	2.77	2.74	2.72	2.72	2.69	2.67	2.62	2.63	2.61	2.63	2.43

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: For additional detail see Employment and Earnings, table C-2.
^p=preliminary.

21. Gross average weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	1970						1969						Annual average		
	June ^p	May ^p	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
TOTAL PRIVATE	\$120.05	\$118.40	\$117.34	\$117.92	\$116.55	\$116.12	\$117.62	\$117.38	\$117.31	\$117.87	\$116.59	\$115.90	\$115.22	\$114.61	\$107.73
MINING	162.78	161.83	163.35	160.27	160.60	159.05	160.64	161.08	159.78	158.41	156.96	154.37	150.59	154.80	142.71
CONTRACT CONSTRUCTION	197.12	194.31	192.91	188.23	186.21	181.00	189.13	184.39	189.97	193.36	187.68	184.21	180.48	181.16	164.93
MANUFACTURING	134.40	132.93	131.80	132.40	130.94	131.93	134.89	132.36	132.28	132.84	129.92	128.88	130.06	129.51	122.51
Durable goods.....	145.35	143.42	141.50	142.51	140.24	142.04	145.53	142.55	142.83	143.45	139.33	138.24	139.86	140.01	132.07
Ordnance and accessories.....	146.42	146.47	146.06	145.66	144.43	144.73	143.91	143.32	140.24	140.48	137.89	135.72	139.94	138.17	135.29
Lumber and wood products.....	119.50	117.38	114.62	112.97	111.90	110.65	113.88	114.11	114.05	114.45	112.16	109.18	110.43	110.15	104.34
Furniture and fixtures.....	106.70	105.49	105.65	105.96	104.49	105.42	110.57	108.81	109.08	107.71	104.01	106.90	106.90	105.85	100.28
Stone, clay, and glass products.....	141.36	139.86	139.03	137.12	134.15	134.15	137.76	137.85	137.67	137.80	136.53	133.34	134.51	133.98	124.98
Primary metal industries.....	156.81	157.56	156.35	157.49	157.08	159.42	161.38	159.39	160.55	162.93	160.51	157.66	158.34	158.42	147.68
Fabricated metal products.....	145.14	143.26	142.10	142.33	140.48	141.45	143.79	141.86	141.36	143.14	139.28	137.20	139.86	138.94	131.77
Machinery, except electrical.....	154.95	154.54	155.25	157.88	155.87	156.14	160.33	154.87	155.61	155.00	149.94	148.81	152.08	152.15	141.46
Electrical equipment and supplies.....	132.14	130.54	128.30	129.92	127.04	128.15	129.65	126.77	126.45	127.39	124.93	122.98	125.36	124.84	118.08
Transportation equipment.....	172.22	164.43	156.80	160.40	157.21	161.20	170.49	165.17	165.51	166.66	158.76	162.24	160.58	161.85	155.72
Instruments and related products.....	132.73	132.33	132.59	133.50	131.45	132.03	134.23	132.75	131.29	131.43	128.21	126.77	128.74	128.21	120.69
Miscellaneous manufacturing industries.....	108.75	108.08	108.64	109.20	108.64	108.25	109.02	106.90	105.72	105.06	103.22	101.64	103.88	103.74	98.50
Nondurable goods.....	119.95	118.95	118.56	118.78	117.69	117.99	119.60	118.21	117.51	118.00	116.51	116.22	115.31	115.53	109.05
Food and kindred products.....	128.21	127.98	124.49	124.00	123.20	124.74	124.64	123.41	121.29	124.15	121.72	122.36	120.66	120.77	114.24
Tobacco manufactures.....	115.22	110.03	110.56	105.56	106.64	106.39	98.26	97.73	96.11	97.89	93.38	104.15	111.72	97.99	93.99
Textile mill products.....	98.09	96.47	96.56	97.04	96.80	96.80	99.95	99.46	98.57	98.81	97.58	95.65	95.63	95.47	91.05
Apparel and other textile products.....	84.01	83.19	83.90	84.85	83.78	83.07	84.37	83.77	83.77	83.77	83.85	81.85	83.49	82.93	79.78
Paper and allied products.....	142.27	142.46	140.43	140.70	140.37	142.04	144.29	142.43	142.66	143.32	141.37	140.61	139.21	139.32	130.85
Printing and publishing.....	146.64	145.89	145.15	145.92	144.02	143.26	148.59	145.15	144.77	144.75	142.82	141.31	141.31	141.70	133.28
Chemicals and allied products.....	150.79	151.42	150.18	150.48	149.76	150.12	150.36	149.52	148.04	147.14	145.95	145.53	144.63	145.05	136.27
Petroleum and coal products.....	182.75	181.48	179.77	176.81	176.81	176.40	170.97	175.07	173.77	172.10	171.17	175.71	169.58	170.40	159.38
Rubber and plastics products, n e c.....	124.62	124.00	127.35	127.26	127.48	128.21	130.31	128.64	128.86	129.90	126.28	126.07	125.97	126.18	121.18
Leather and leather products.....	93.62	93.13	90.02	91.64	92.38	92.74	93.45	90.51	88.80	87.58	87.19	87.52	88.83	87.79	85.41
TRANSPORTATION AND PUBLIC UTILITIES	153.90	151.96	149.25	150.75	151.88	151.07	151.78	152.15	151.70	152.11	149.74	150.02	147.33	147.74	138.85
WHOLESALE AND RETAIL TRADE	96.39	94.50	93.88	93.80	93.80	93.02	93.18	92.58	92.13	92.46	93.70	93.08	91.55	91.14	86.40
Wholesale trade.....	137.42	136.46	135.66	136.00	135.20	134.67	135.94	133.87	132.59	132.18	131.22	130.17	129.92	129.85	122.31
Retail trade.....	83.11	81.16	80.25	80.49	79.92	79.49	80.14	79.30	79.20	79.69	81.19	80.96	79.58	78.66	74.95
FINANCE, INSURANCE, AND REAL ESTATE	111.50	111.57	111.81	112.85	112.48	111.44	110.26	111.23	109.45	108.41	108.04	107.96	108.70	108.33	101.75
SERVICES	96.95	96.10	95.70	96.81	95.01	93.98	94.11	94.11	92.81	92.38	92.49	92.84	90.83	91.26	84.32

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: For additional detail see Employment and Earnings, table C-2.

^p=preliminary.

22. Gross and spendable average weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, in current and 1957-59 dollars, 1960 to date

Year and month	Total private						Manufacturing					
	Gross average weekly earnings		Spendable average weekly earnings				Gross average weekly earnings		Spendable average weekly earnings			
			Worker with no dependents		Worker with 3 dependents				Worker with no dependents		Worker with 3 dependents	
	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars
1960	\$80.67	\$78.24	\$65.95	\$63.62	\$72.96	\$70.77	\$89.72	\$87.02	\$72.57	\$70.39	\$80.11	\$77.70
1961	82.60	79.27	67.08	64.38	74.48	71.48	92.34	88.62	74.60	71.59	82.18	78.87
1962	85.91	81.55	69.56	66.00	76.99	73.05	96.56	91.61	77.86	73.87	85.53	81.15
1963	88.46	82.91	71.05	66.59	78.56	73.63	99.63	93.37	79.82	74.81	87.58	82.08
1964	91.33	84.49	75.04	69.42	82.57	76.38	102.97	95.25	84.40	78.08	92.18	85.27
1965	95.06	86.50	78.99	71.87	86.30	78.53	107.53	97.84	89.08	81.06	96.78	88.06
1966	98.82	87.37	81.29	71.87	88.66	78.39	112.34	99.33	91.57	80.96	99.45	87.93
1967	101.84	87.57	83.38	71.69	90.86	78.13	114.90	98.80	93.28	80.21	101.26	87.07
1968	107.73	88.89	86.71	71.54	95.28	78.61	122.51	101.08	97.70	80.61	106.75	88.08
1969	114.61	89.75	90.96	71.23	99.99	78.30	129.51	101.42	101.90	79.80	111.44	87.27
1969:												
May	113.55	89.55	90.18	71.12	99.19	78.23	128.61	101.43	101.34	79.84	110.74	87.33
June	115.22	90.30	91.40	71.63	100.46	78.73	130.06	101.93	102.30	80.17	111.86	87.66
July	115.90	90.41	91.90	71.68	100.98	78.77	128.88	100.53	101.43	79.12	110.95	86.54
August	116.59	90.59	92.41	71.80	101.51	78.87	129.92	100.95	102.20	79.41	111.75	86.83
September	117.87	91.16	93.35	72.20	102.49	79.27	132.84	102.74	104.34	80.70	114.01	88.17
October	117.31	90.38	92.94	71.60	102.06	78.63	132.28	101.91	103.93	80.07	113.57	87.50
November	117.38	89.95	92.99	71.26	102.11	78.25	132.36	101.43	103.99	79.69	113.63	87.07
December	117.62	89.58	93.17	70.96	102.30	77.91	134.89	102.73	105.85	80.62	115.61	88.05
1970:												
January	116.12	88.10	93.43	70.89	101.97	77.37	131.93	100.10	105.28	79.88	114.48	86.86
February	116.55	87.96	93.76	70.76	102.32	77.22	130.94	98.82	104.53	78.89	113.69	85.80
March	117.92	88.53	94.78	71.16	103.39	77.62	132.40	99.40	105.63	79.30	114.85	86.22
April	117.34	87.57	94.35	70.41	102.95	76.83	131.80	98.36	105.18	78.49	114.37	85.35
May	118.40	87.96	95.14	70.68	103.77	77.10	132.93	98.76	106.02	78.77	115.27	85.64

¹ For comparability of data with those published in issues prior to July 1970, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

Spendable average weekly earnings are based on gross average weekly earnings as published in table 21 less the estimated amount of the workers' Federal social security and income tax liability. Since the amount of tax liability depends on the number of dependents supported by the worker as well as on the level of his gross income, spendable earnings have been computed for 2 types of income receivers: (1) A worker with no dependents and (2) a married worker with 3 dependents.

The earnings expressed in 1957-59 dollars have been adjusted for changes in purchasing power as measured by the Bureau's Consumer Price Index.

These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation," in *Employment and Earnings and Monthly Report on the Labor Force*, February 1969, pp. 6-13.

NOTE: For additional detail see *Employment and Earnings*, table C-5.

p=preliminary.

23. Consumer and Wholesale Price Indexes, annual averages and changes, 1949 to date¹

[Indexes: 1957-59=100]

Year	Consumer prices						Wholesale prices					
	All items		Commodities		Services		All commodities		Farm products, processed foods, and feeds		Industrial commodities	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1949	83.0	-1.0	87.1	-2.6	72.6	4.6	83.5	-5.0	94.3	-11.7	80.0	-2.1
1950	83.8	1.0	87.6	0.6	75.0	3.3	86.8	4.0	98.8	4.8	82.9	3.6
1951	90.5	8.0	95.5	9.0	78.9	5.2	96.7	11.4	112.5	13.9	91.5	10.4
1952	92.5	2.2	96.7	1.3	82.4	4.4	94.0	-2.8	108.0	-4.0	89.4	-2.3
1953	93.2	0.8	96.4	-3	86.0	4.4	92.7	-1.4	101.0	-6.5	90.1	.8
1954	93.6	0.4	95.5	-9	88.7	3.1	92.9	.2	100.7	-3	90.4	.3
1955	93.3	-3	94.6	-9	90.5	2.0	93.2	.3	95.9	-4.8	92.4	2.2
1956	94.7	1.5	95.5	1.0	92.8	2.5	96.2	3.2	95.3	-6	96.5	4.4
1957	98.0	3.5	98.5	3.1	96.6	4.1	99.0	2.9	98.6	3.5	99.2	2.8
1958	100.7	2.8	100.8	2.3	100.3	3.8	100.4	1.4	103.2	4.7	99.5	.3
1959	101.5	.8	100.9	.1	103.2	2.9	100.6	.2	98.4	-4.7	101.3	1.8
1960	103.1	1.6	101.7	.8	106.6	3.3	100.7	.1	98.6	.2	101.3	-----
1961	104.2	1.1	102.3	.6	108.8	2.1	100.3	-4	98.6	-----	100.8	-0.5
1962	105.4	1.2	103.2	.9	110.9	1.9	100.6	.3	99.6	1.0	100.8	-----
1963	106.7	1.2	104.1	.9	113.0	1.9	100.3	-3	98.7	-9	100.7	-1
1964	108.1	1.3	105.2	1.1	115.2	1.9	100.5	.2	98.0	-7	101.2	.5
1965	109.9	1.7	106.4	1.1	117.8	2.3	102.5	2.0	102.1	4.2	102.5	1.3
1966	113.1	2.9	109.2	2.6	122.3	3.8	105.9	3.3	108.9	6.7	104.7	2.1
1967	116.3	2.8	111.2	1.8	127.7	4.4	106.1	.2	105.2	-3.4	106.3	1.5
1968	121.2	4.2	115.3	3.7	134.3	5.2	108.7	2.5	107.6	2.3	109.0	2.5
1969	127.7	5.4	120.5	4.5	143.7	7.0	113.0	4.0	113.5	5.5	112.7	3.4

¹ Historical price changes are shown in greater detail and for earlier years in the Bureau's *Handbook of Labor Statistics*, 1969 (BLS Bulletin 1630), in tables 108-120.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items

[The official name of the index is, "Consumer Price Index for Urban Wage Earners and Clerical Workers." It measures the average change in prices of goods and services purchased by families and single workers. The indexes shown below represent the average of price changes in 56 metropolitan areas, selected to represent all U.S. urban places having populations of more than 2500.]

[1957-59=100 unless otherwise specified]

Item and group	General summary													Annual average 1969
	1970						1969							
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	
All items	135.2	134.6	134.0	133.2	132.5	131.8	131.3	130.5	129.8	129.3	128.7	128.2	127.6	127.7
All items (1947-49=100)	165.9	165.2	164.4	163.4	162.5	161.7	161.1	160.1	159.3	158.6	157.9	157.3	156.6	156.7
Food	132.7	132.4	132.0	131.6	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	125.5
Food at home	128.0	127.8	127.4	127.4	127.4	126.6	125.8	123.8	122.9	123.6	123.6	123.0	121.8	121.5
Food away from home	155.3	154.7	154.0	152.4	151.5	150.6	149.9	149.0	148.1	146.7	145.8	144.8	143.7	144.6
Housing	135.6	135.1	134.4	133.6	132.2	131.1	130.5	129.8	129.2	128.6	127.8	127.0	126.3	126.7
Rent	123.4	123.0	122.6	122.3	121.8	121.3	121.0	120.5	120.1	119.7	119.3	118.8	118.5	118.8
Homeownership	154.4	153.3	152.1	150.9	148.5	146.8	145.4	144.5	143.6	142.6	141.3	140.0	138.7	139.4
Apparel and upkeep	132.2	131.9	131.1	130.6	130.0	129.3	130.8	130.7	129.8	128.7	126.6	126.8	127.0	127.1
Transportation	130.6	129.9	128.9	127.1	127.3	127.3	126.4	125.6	125.7	123.6	124.2	124.3	124.6	124.2
Health and recreation	143.7	142.9	142.3	141.4	140.7	140.1	139.6	139.1	138.6	138.4	137.7	137.0	136.3	136.6
Medical care	164.7	163.6	162.8	161.6	160.1	159.0	158.1	157.4	156.9	157.6	156.8	155.9	155.2	155.0
Special groups:														
All items less shelter	132.6	132.1	131.5	130.7	130.3	129.8	129.5	128.6	128.1	127.6	127.1	126.7	126.3	126.3
All items less food	136.1	135.5	134.8	133.8	133.0	132.3	131.9	131.4	130.8	130.0	129.3	128.8	128.4	128.6
All items less medical care	133.4	132.9	132.2	131.5	130.8	130.1	129.7	128.9	128.2	127.6	127.0	126.5	126.0	126.1
Commodities	126.2	125.8	125.2	124.5	124.2	123.7	123.6	122.9	122.4	121.7	121.4	121.0	120.5	120.5
Nondurables	130.0	129.8	129.3	128.7	128.4	127.8	127.7	126.7	126.1	125.8	125.2	124.7	124.1	124.1
Durables	116.7	115.9	114.8	114.1	113.7	113.7	113.6	113.5	113.2	111.6	111.9	111.9	111.7	111.6
Services	155.0	154.1	153.4	152.3	150.7	149.6	148.3	147.2	146.5	146.0	145.0	144.0	143.3	143.7
Commodities less food	122.8	122.3	121.6	120.8	120.4	120.1	120.3	120.2	119.8	118.7	118.2	118.1	118.0	118.0
Nondurables less food	127.7	127.5	127.0	126.1	125.8	125.2	125.7	125.5	125.1	124.4	123.3	123.1	123.0	123.0
Apparel commodities	131.4	131.2	130.4	129.9	129.3	128.6	130.3	130.4	129.3	128.1	125.9	126.2	126.4	126.5
Apparel commodities less foot-wear	128.3	128.0	127.1	126.7	126.2	125.5	127.5	127.7	126.6	125.3	122.8	123.5	123.7	123.7
Nondurables less food and apparel	125.5	125.3	125.0	123.9	123.7	123.2	123.0	122.6	122.6	122.2	121.7	121.3	121.0	121.0
Household durables	108.2	108.0	107.8	107.4	106.9	106.2	106.5	106.5	106.4	106.2	106.0	106.0	105.8	105.5
Housefurnishings	112.4	112.2	112.0	111.7	111.1	110.5	110.6	110.4	110.2	109.9	109.4	109.3	109.0	109.0
Service less rent	161.9	161.0	160.1	158.9	157.1	155.8	154.3	153.1	152.3	151.7	150.7	149.6	148.8	149.2
Household services less rent	160.6	160.0	159.1	157.7	155.0	153.2	152.4	151.4	150.4	149.5	148.2	146.9	145.7	146.4
Transportation services	157.1	156.1	155.5	154.5	154.1	152.9	148.4	145.8	145.1	144.0	143.1	142.5	142.3	142.9
Medical care services	180.6	179.3	178.4	177.0	175.2	173.8	172.8	171.8	171.2	172.2	171.1	170.1	169.1	168.9
Other services	153.4	152.3	151.4	150.3	149.8	149.4	148.9	148.2	147.6	147.2	146.5	145.7	145.2	145.5

Item and group	Other index bases	U.S. average for groups, subgroups, and selected items													
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	
FOOD		132.7	132.4	132.0	131.6	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	125.5
Food away from home		155.3	154.7	154.0	152.4	151.5	150.6	149.9	149.0	148.1	146.7	145.8	144.8	143.7	144.6
Restaurant meals	Dec. 63	155.4	154.8	154.2	152.5	151.6	150.7	150.2	149.3	148.3	147.2	146.2	145.1	144.0	144.9
Snacks		135.2	134.6	134.0	132.4	132.0	131.4	129.9	129.2	128.8	126.2	125.6	125.1	124.4	125.4
Food at home		128.0	127.8	127.4	127.4	127.4	126.6	125.8	123.8	122.9	123.6	123.6	123.0	121.8	121.5
Cereals and bakery products		128.2	128.0	127.6	127.0	126.3	125.5	124.9	124.1	123.7	123.0	122.6	122.6	122.0	122.4
Flour		113.3	113.2	114.2	113.1	112.1	111.9	110.9	111.2	111.6	111.2	111.4	111.6	112.1	111.5
Cracker meal	Dec. 63	136.4	135.7	134.3	132.9	130.2	127.8	127.9	127.2	126.9	125.8	124.7	123.3	122.1	122.3
Corn flakes		130.4	130.5	130.0	130.4	130.2	130.2	130.0	129.7	129.6	129.4	129.4	129.0	129.0	129.2
Rice		115.1	115.0	114.8	114.4	114.2	113.8	113.4	113.0	113.0	112.9	112.6	112.3	112.1	112.3
Bread, white		133.4	134.1	133.3	133.4	132.6	132.2	131.1	129.7	129.1	128.8	128.1	128.2	127.2	128.1
Bread, whole wheat	Dec. 63	125.7	125.3	125.7	125.6	125.5	124.4	124.1	123.4	122.5	121.6	120.3	120.9	119.6	120.5
Cookies		105.7	104.7	103.4	102.4	101.7	101.3	100.9	99.8	99.8	101.0	100.9	100.9	100.1	100.6
Layer cake	Dec. 63	121.8	121.5	121.7	121.3	119.9	118.1	118.0	117.1	115.4	113.2	113.8	113.6	114.1	113.7
Cinnamon rolls	Dec. 63	118.8	118.5	118.2	116.4	116.7	116.3	115.8	115.1	115.2	113.2	112.8	113.4	113.2	113.1
Meats, poultry, and fish		130.2	130.5	130.9	130.2	129.7	128.8	127.2	127.2	127.6	129.0	127.9	127.6	125.3	123.2
Meats		134.5	135.0	135.6	134.7	133.9	132.9	131.3	131.1	132.0	133.1	131.9	131.7	129.5	126.8
Beef and veal		135.3	135.9	136.5	133.6	133.0	132.2	130.6	131.5	132.9	135.0	135.4	136.8	134.6	129.5
Steak, round		127.6	129.0	131.1	126.9	126.4	126.2	123.2	125.2	126.8	128.1	129.9	132.5	131.0	124.4
Steak, sirloin	Apr. 60	124.3	124.3	124.5	121.8	120.4	121.4	119.0	121.1	123.4	128.3	127.4	131.1	129.6	121.7
Steak, porterhouse	Dec. 63	130.1	129.2	130.5	126.8	126.4	126.6	123.9	125.9	129.0	132.9	132.7	135.5	133.0	126.4
Rump roast	Dec. 63	123.1	124.2	125.1	121.1	120.1	120.7	118.8	119.5	121.1	122.1	123.4	125.0	123.0	118.4
Rib roast		140.6	142.7	142.8	141.2	141.8	141.6	140.5	140.9	140.8	145.9	146.5	150.1	147.1	139.7
Chuck roast		125.8	128.0	130.0	126.9	126.7	122.1	123.2	122.7	125.3	127.2	128.7	131.0	127.9	122.3
Hamburger		142.7	142.8	142.4	140.8	140.5	138.7	137.8	138.4	139.1	140.9	140.5	140.0	137.9	134.0
Beef liver	Dec. 63	121.2	121.8	121.1	120.5	119.9	118.7	118.6	117.9	117.8	117.8	117.8	117.8	112.1	113.2
Veal cutlets		173.1	171.8	171.1	168.1	166.0	164.0	162.0	162.1	162.8	162.8	162.1	161.1	159.8	156.4

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
FOOD—Continued															
Meats, poultry, and fish—Continued															
Meats—Continued															
Pork.....		134.4	134.8	135.9	137.9	137.2	135.6	133.3	132.0	132.7	133.7	130.2	129.0	126.1	125.2
Chops.....		135.5	135.1	135.6	139.7	139.5	136.9	135.7	134.1	134.0	137.6	135.7	136.4	134.8	129.6
Loin roast.....	Apr. 60	142.6	143.6	143.5	146.1	146.2	143.7	143.4	140.4	141.8	143.0	141.3	141.9	139.7	135.8
Pork sausage.....	Dec. 63	150.5	150.4	150.6	150.6	148.6	146.7	146.8	148.3	149.1	149.6	146.0	143.6	137.2	137.8
Ham, whole.....		126.5	129.0	133.5	135.3	134.0	136.9	130.7	124.8	123.9	121.8	117.0	114.2	114.2	117.1
Picnics.....	Dec. 63	137.5	138.5	139.9	142.1	139.9	137.7	134.7	136.0	136.5	135.5	134.5	130.9	124.8	127.5
Bacon.....		137.4	137.1	138.2	138.7	138.8	136.7	133.1	132.4	134.9	135.6	128.7	126.8	124.1	124.3
Other meats.....	Dec. 63	137.4	137.9	138.0	137.3	136.0	135.3	134.4	133.6	133.3	132.6	131.2	128.8	127.2	127.7
Lamb chops.....		141.0	141.2	142.0	142.2	140.8	140.9	140.4	139.4	139.9	139.7	139.3	140.9	139.1	137.0
Frankfurters.....		137.1	138.2	137.4	136.1	134.2	134.2	134.6	134.7	134.7	135.4	133.7	129.4	127.6	127.4
Ham, canned.....	Dec. 63	134.4	136.7	138.3	138.3	136.6	134.8	130.4	127.8	125.1	122.6	120.6	115.6	117.6	120.0
Bologna sausage.....	Dec. 63	139.7	139.5	139.7	138.4	137.7	137.2	136.6	136.1	136.2	136.2	134.5	132.0	128.8	129.3
Salami sausage.....	Dec. 63	131.9	132.0	131.8	130.4	128.6	128.0	127.9	127.1	127.2	127.0	126.0	123.7	121.5	122.1
Liverwurst.....	Dec. 63	133.2	132.9	131.9	131.6	131.4	130.1	129.9	129.8	129.9	128.0	126.3	125.0	122.2	123.7
Poultry.....		97.4	97.1	97.1	97.9	99.1	99.5	97.9	99.1	98.2	102.0	101.4	100.4	97.3	96.9
Frying chicken.....		95.9	95.3	95.4	96.7	98.5	99.4	97.9	99.5	98.6	103.8	103.3	103.1	99.2	98.1
Chicken breasts.....	Dec. 63	108.2	109.2	109.4	110.4	110.4	110.1	110.4	110.8	112.0	113.8	113.0	109.4	107.6	108.4
Turkey.....	Dec. 63	119.2	119.5	119.0	116.9	115.9	114.4	110.3	110.0	107.2	105.9	104.7	101.8	101.1	102.8
Fish.....		143.2	142.3	141.1	139.8	138.3	137.0	135.4	134.0	133.4	132.2	131.5	130.6	129.8	130.6
Shrimp, frozen.....	Dec. 63	128.2	127.8	126.8	127.4	126.2	125.4	124.4	122.9	122.5	121.0	120.8	119.7	118.3	119.3
Fish, fresh or frozen.....		154.4	153.0	152.5	150.9	148.1	145.2	143.4	141.1	139.9	138.6	137.2	134.5	133.1	134.6
Tuna, fish, canned.....		126.6	126.0	124.5	123.1	121.6	120.5	117.9	116.7	116.2	114.9	114.4	113.6	113.8	114.4
Sardines, canned.....	Dec. 63	131.9	130.8	129.3	126.9	126.5	126.0	125.4	125.0	124.9	124.2	123.5	124.4	124.0	124.2
Dairy products.....		130.2	129.9	129.5	129.4	128.8	128.4	127.6	126.3	125.8	125.5	125.0	124.4	124.0	124.5
Milk, fresh, grocery.....		126.3	126.6	126.5	126.8	126.2	126.1	125.0	123.4	122.8	122.8	122.3	121.7	121.3	121.8
Milk, fresh, delivered.....	Dec. 63	134.2	134.0	133.9	133.5	133.1	132.7	132.3	130.4	130.1	129.4	128.7	128.0	127.6	128.4
Milk, fresh, skim.....		129.4	129.2	128.3	128.4	127.3	127.4	126.0	125.0	124.3	124.3	124.3	122.9	122.3	123.0
Milk, evaporated.....		131.5	129.7	127.9	127.7	127.4	126.4	125.0	124.3	123.8	124.1	124.1	123.9	124.0	123.5
Ice cream.....		103.8	103.4	102.7	102.7	102.1	102.1	102.0	100.7	99.9	100.1	99.5	99.0	99.8	99.5
Cheese, American process.....		157.4	157.2	157.3	156.4	154.8	153.1	152.4	151.0	149.9	148.9	148.9	147.7	146.6	146.8
Butter.....		121.1	121.0	120.2	119.5	119.5	119.9	119.6	119.4	119.9	118.3	118.0	118.0	117.8	118.3
Fruits and vegetables.....		139.4	136.8	134.7	133.1	132.4	130.9	132.1	127.0	124.0	126.8	130.2	132.3	130.8	128.4
Fresh fruits and vegetables.....		155.9	151.5	148.0	145.7	144.5	141.9	144.1	135.4	130.1	134.9	141.0	145.0	142.4	138.1
Apples.....		166.0	149.7	141.3	139.6	135.8	134.0	129.3	125.7	131.7	174.6	190.5	192.9	185.3	162.5
Bananas.....		102.4	101.6	101.4	101.9	96.5	94.5	93.3	93.9	100.7	99.6	97.4	97.7	94.5	95.3
Oranges.....		129.1	123.7	122.4	125.4	124.5	121.5	125.0	132.4	131.9	132.1	132.7	127.9	125.4	128.4
Orange juice, fresh.....	Dec. 63	89.5	90.1	89.9	90.6	90.7	90.5	91.5	91.8	92.0	92.1	92.0	91.4	91.8	90.9
Grapefruit.....		189.7	160.1	152.4	150.6	151.7	143.7	142.0	144.1	184.0	205.9	194.6	156.6	143.5	155.1
Grapes.....		(1)	(1)	162.7	(1)	(1)	(1)	(1)	154.3	144.0	137.8	147.4	188.3	(1)	154.4
Strawberries.....		133.2	128.1	134.9	(1)	(1)	(1)	(1)	(1)	(1)	(1)	116.1	119.6	126.8	131.9
Watermelon.....		180.7	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	119.6	159.9	131.9
Potatoes.....		177.2	166.9	159.9	153.3	151.1	144.3	142.0	140.1	137.6	144.5	159.0	165.2	154.5	144.8
Onions.....		173.0	180.0	180.8	171.0	166.9	140.5	136.4	133.2	134.2	139.0	152.2	141.5	135.0	134.1
Asparagus.....	Dec. 63	132.1	138.9	119.3	176.6	(1)	141.6	(1)	(1)	(1)	(1)	(1)	129.6	121.1	138.7
Cabbage.....		219.6	194.3	202.1	204.5	211.3	188.7	173.4	150.6	145.9	135.6	138.3	145.7	155.6	152.0
Carrots.....		121.0	117.3	115.3	122.1	145.3	139.2	146.6	127.1	129.6	128.3	139.6	129.5	119.8	123.8
Celery.....		175.6	160.5	128.7	136.2	143.6	140.5	132.2	131.2	115.5	120.1	130.2	151.8	139.2	125.6
Cucumbers.....	Dec. 63	139.4	154.6	214.0	209.1	208.5	203.4	176.5	122.5	118.5	111.7	122.5	123.0	124.6	148.1
Lettuce.....		126.1	138.9	125.2	123.0	122.7	137.6	189.5	177.9	133.3	130.8	124.2	126.8	120.2	144.4
Peppers, green.....	Dec. 63	244.1	344.4	299.7	265.5	283.9	231.2	217.2	160.9	145.7	147.8	146.4	165.6	180.7	172.4
Spinach.....	Dec. 63	117.3	117.5	119.9	118.3	122.0	120.3	121.8	116.5	120.1	118.0	117.2	118.8	111.1	114.8
Tomatoes.....		154.5	145.2	159.0	136.1	134.8	168.1	177.5	146.7	119.0	103.2	116.3	131.0	158.0	138.1
Processed fruits and vegetables.....		118.6	118.3	118.0	117.3	117.3	117.1	117.1	116.8	116.6	116.9	116.7	116.4	116.3	116.3
Fruit cocktail, canned.....		106.3	106.3	106.2	105.3	104.9	105.3	106.2	105.4	105.6	106.6	106.3	107.1	106.3	106.4
Pears, canned.....	Dec. 63	105.9	105.6	104.9	104.9	105.4	106.0	106.4	106.9	107.6	108.2	108.8	108.6	108.9	108.7
Grapefruit-pineapple juice, canned.....	Dec. 63	105.4	105.5	105.2	104.1	103.7	103.0	102.4	102.6	102.2	101.8	101.0	100.4	99.9	100.5
Orange juice concentrate, frozen.....		92.4	92.4	92.6	93.5	96.5	96.4	97.4	97.2	98.2	99.4	100.0	100.0	101.0	98.9
Lemonade concentrate, frozen.....	Apr. 60	95.4	97.0	96.5	95.9	94.8	95.1	94.7	94.1	93.8	93.3	92.5	90.6	92.3	92.5
Beets, canned.....	Dec. 63	117.2	115.9	116.2	115.0	114.1	113.9	113.6	113.3	112.8	113.1	112.8	113.3	112.7	113.2
Peas, green, canned.....		123.0	122.0	123.1	121.8	122.2	122.4	122.4	123.1	122.9	122.9	122.7	121.7	121.0	121.7
Tomatoes, canned.....		135.1	133.3	130.7	128.0	127.2	126.7	126.6	125.5	124.8	124.1	124.6	124.5	124.1	124.7
Dried beans.....		120.9	121.3	121.5	122.0	123.4	123.1	123.3	123.6	124.3	125.0	125.0	124.7	124.9	124.7
Broccoli, frozen.....	Dec. 63	113.4	112.9	113.0	112.7	111.8	110.8	109.6	108.0	106.7	107.5	106.7	105.4	104.9	104.7
Other food at home.....		113.3	113.7	113.8	116.0	118.1	117.7	116.6	112.9	111.0	110.5	110.5	107.2	106.6	109.9
Eggs.....		91.9	97.7	103.6	122.6	141.0	143.0	140.6	122.3	114.5	113.8	114.4	95.6	92.5	112.1
Fats and oils.....		112.0	111.4	108.8	106.1	105.6	105.6	105.0	103.7	102.7	102.2	102.4	103.1	103.5	103.0
Margarine.....	Dec. 63	103.6	103.2	102.3	102.2	101.9	102.5	102.6	102.5	102.8	102.3	102.3	102.4	103.4	102.6
Salad dressing, Italian.....															

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Item or group	Other index bases	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
FOOD—Continued															
Other food at home—Continued															
Nonalcoholic beverages		116.5	115.2	114.0	112.4	110.7	109.1	107.4	106.1	104.3	103.7	103.8	103.3	103.4	103.7
Coffee, can and bag		105.4	103.6	102.2	99.7	97.4	94.9	92.3	90.0	87.0	86.6	85.7	86.3	86.8	87.5
Coffee, instant	July 61	115.7	114.7	114.1	113.1	111.0	109.6	108.0	106.0	104.2	103.8	103.9	103.6	103.7	103.2
Tea		105.9	104.8	103.6	103.1	103.6	103.1	102.9	102.2	102.1	102.0	102.2	102.0	102.0	101.8
Cola drink		164.2	163.0	162.0	161.9	160.3	159.3	158.4	158.7	158.0	156.8	156.6	155.3	155.1	155.3
Carbonated fruit drink	Dec. 63	130.5	130.0	128.5	127.4	126.0	125.5	124.8	124.7	124.5	123.4	123.1	122.7	121.9	121.9
Prepared and partially prepared foods															
Bean soup, canned	Dec. 63	110.1	110.1	109.8	109.5	109.0	108.5	108.2	107.6	107.4	106.9	106.7	106.2	105.9	106.2
Chicken soup, canned	Dec. 63	111.3	111.1	110.5	110.4	110.9	109.7	108.8	107.2	106.3	105.6	105.4	105.1	105.1	105.0
Spaghetti, canned	Dec. 63	102.3	102.3	102.0	101.8	101.1	100.8	100.3	99.5	98.3	98.1	98.3	98.0	97.8	98.0
Mashed potatoes, instant	Dec. 63	123.4	123.2	122.7	121.8	121.1	120.8	120.4	119.8	118.9	117.2	117.3	117.0	116.4	117.1
Potatoes, french fried, frozen	Apr. 60	110.8	110.7	110.6	110.5	110.3	109.7	109.6	110.0	109.6	108.9	108.5	108.1	107.7	107.2
Baby foods, canned	Dec. 63	93.4	93.5	93.2	93.2	92.8	92.7	92.5	92.1	92.8	92.7	92.5	91.8	90.8	91.4
Sweet pickle relish	Dec. 63	112.6	112.5	112.9	112.0	112.0	111.1	111.4	111.1	111.7	112.7	112.1	111.7	110.7	111.6
Pretzels	Dec. 63	117.0	117.6	118.0	117.2	116.0	115.6	115.0	114.3	114.2	112.6	112.0	111.0	111.8	112.8
	Dec. 63	110.3	110.1	110.0	109.1	108.3	107.1	107.5	107.0	107.6	107.6	107.6	107.4	107.0	107.1
HOUSING															
Shelter		135.6	135.1	134.4	133.6	132.2	131.1	130.5	129.8	129.2	128.6	127.8	127.0	126.3	126.7
Rent		145.6	144.7	143.7	142.8	140.9	139.6	138.5	137.7	137.0	136.1	135.1	134.0	133.0	133.6
Homeownership		123.4	123.0	122.6	122.3	121.8	121.3	121.0	120.5	120.1	119.7	119.3	118.8	118.5	118.8
Mortgage interest rates	Dec. 63	154.4	153.3	152.1	150.9	148.5	146.8	145.4	144.5	143.6	142.6	141.3	140.0	138.7	139.4
Property taxes		149.1	149.2	149.1	148.9	143.5	139.9	139.6	139.3	138.8	138.2	137.1	135.8	134.9	134.4
Property insurance rates		139.8	139.4	138.2	134.7	133.6	133.0	132.0	131.5	130.5	130.4	129.9	128.7	128.2	129.0
Maintenance and repairs		153.5	153.2	153.6	153.2	152.8	152.5	153.3	152.3	150.7	149.5	150.3	149.6	147.4	148.7
		151.4	149.9	148.8	148.3	146.9	146.4	145.8	144.9	144.5	143.8	142.4	141.5	140.8	140.7
Commodities	Dec. 63	119.6	118.4	117.8	117.2	116.5	116.1	115.9	116.0	116.2	116.7	117.2	117.5	117.8	116.1
Exterior house paint		120.7	119.9	119.9	121.0	119.8	119.3	119.1	118.7	118.0	117.6	116.5	115.7	115.6	116.5
Interior house paint	Dec. 63	115.6	115.0	114.6	114.7	114.8	114.1	114.3	113.6	113.8	113.1	113.1	112.3	112.2	112.4
Services	Dec. 63	149.3	147.9	146.7	146.2	144.7	144.1	143.5	142.2	141.6	140.4	138.2	136.9	135.7	136.4
Repainting living and dining rooms		196.3	191.7	187.9	186.8	185.4	184.6	183.6	182.6	181.8	179.7	178.3	176.1	174.0	174.6
Reshingling roofs		168.0	167.1	165.6	166.1	165.4	164.9	164.1	163.0	162.3	161.4	157.6	155.4	154.2	155.8
Residing houses	Dec. 63	138.3	137.4	137.1	136.7	135.0	134.6	134.0	134.2	133.7	133.0	130.0	129.3	128.6	129.0
Replacing sinks	Dec. 63	151.6	150.4	149.1	148.2	145.6	145.2	144.5	142.6	142.0	140.4	139.0	137.8	137.2	137.4
Repairing furnaces	Dec. 63	154.3	153.7	152.9	152.4	151.3	150.0	149.7	145.2	144.1	142.8	141.2	139.7	137.7	139.1
Fuel and utilities		116.2	116.4	116.3	115.6	114.9	114.6	114.6	114.2	113.5	113.3	113.0	112.6	112.7	112.9
Fuel oil and coal		121.2	121.0	120.9	120.8	120.6	119.7	119.2	118.9	118.4	118.1	117.7	117.4	117.5	117.8
Fuel oil, #2		118.3	118.0	117.8	117.8	117.5	116.6	116.2	116.0	115.5	115.4	115.2	115.0	115.0	115.1
Gas and electricity		115.3	115.8	115.7	114.8	114.6	114.1	113.7	113.2	112.2	112.0	111.5	110.9	111.3	111.5
Gas		122.0	123.2	123.1	121.9	121.5	120.5	119.8	118.8	116.9	116.7	116.1	115.7	116.4	116.8
Electricity		108.3	108.2	108.0	107.5	107.4	107.4	107.2	107.2	106.9	106.8	106.4	105.6	105.7	105.8
Other utilities:															
Residential telephone services		104.9	104.9	104.8	103.9	102.8	103.0	103.8	103.7	103.6	103.6	103.6	103.6	103.6	103.5
Residential water and sewerage		151.0	151.0	151.0	151.0	147.5	147.5	147.5	147.5	145.3	145.3	145.3	145.3	143.4	144.4
Household furnishings and operation		122.8	122.5	122.0	121.6	120.8	120.1	120.0	119.6	119.3	119.0	118.5	118.2	117.9	117.9
Housefurnishings		112.4	112.2	112.0	111.7	111.1	110.5	110.6	110.4	110.2	109.9	109.9	109.3	109.0	109.0
Textiles		116.7	116.2	116.7	116.4	115.7	114.2	116.1	115.7	115.0	115.2	113.8	114.8	114.8	114.4
Sheets, percale or muslin		122.0	121.8	123.6	122.7	120.8	117.3	122.2	121.7	120.1	119.8	116.2	118.7	120.2	119.6
Curtains, tailored, polyester mar- quisette		113.1	113.2	113.3	113.7	112.7	111.6	112.3	112.1	112.0	112.0	112.0	111.6	111.5	110.9
Bedsprings, chiefly cotton, tufted		117.5	116.8	117.8	117.1	116.6	115.0	117.6	117.7	117.1	116.9	115.7	116.5	116.9	116.2
Drapery fabric, cotton or rayon/ acetate		126.6	127.3	127.0	126.5	125.8	125.0	126.6	126.0	124.1	124.5	125.0	124.8	122.2	123.1
Slipcovers, ready made, chiefly cotton	Dec. 63	114.3	112.7	111.8	112.1	112.3	111.0	110.4	110.0	111.1	110.0	110.3	110.1	109.6	109.6
Furniture and bedding		126.7	126.6	126.0	125.4	124.6	124.1	123.9	123.7	123.6	122.9	122.4	122.1	121.8	121.5
Bedroom furniture chest and dresser ³	Mar. 70	100.6	100.5	100.4											
Living room suites, good and inex- pensive quality		128.3	128.1	127.9	127.3	126.1	126.0	126.3	125.8	125.9	124.9	124.8	123.9	123.4	123.7
Lounge chairs, upholstered	Dec. 63	122.1	122.5	121.9	121.0	120.0	120.0	118.8	118.6	118.9	119.0	117.9	116.5	116.2	115.8
Dining room chairs ⁴	Mar. 70	100.6	100.2	100.2											
Sofas, upholstered	Dec. 63	120.0	119.1	118.7	118.0	116.5	116.3	116.5	115.7	115.9	114.8	115.1	114.3	113.8	114.2
Sofas, dual purpose		123.9	123.3	122.6	120.6	120.0	120.5	120.0	120.2	118.9	118.8	118.6	117.9	117.1	117.2
Box springs	Dec. 63	(9)	(9)	(9)	124.2	122.5	122.4	122.6	122.5	124.1	123.7	123.2	123.0	123.0	122.0
Cribs	Dec. 63	121.4	121.4	120.0	120.6	119.9	119.6	119.8	119.5	119.2	117.1	118.0	117.7	117.5	117.0
Floor coverings		107.2	107.4	106.9	106.9	106.9	106.8	107.1	107.1	107.1	107.0	106.3	106.4	106.2	106.5
Rugs, soft surface		103.9	104.2	103.8	103.9	104.0	104.0	104.7	104.8	104.9	104.9	104.1	104.4	104.1	104.5
Rugs, hard surface		114.0	113.7	113.7	113.7	113.6	113.2	112.5	112.5	112.1	111.8	111.6	111.5	111.2	111.2
Tile, vinyl	Dec. 63	113.1	113.1	111.8	111.7	111.3	110.3	110.3	110.1	109.6	109.3	108.5	108.2	108.0	108.4
Appliances		87.2	87.1	87.1	86.8	86.6	86.5	86.4	86.3	86.2	86.0	86.0	85.9	85.8	85.8
Washing machines, electric, auto- matic		93.0	92.9	92.9	92.4	92.3	91.8	91.5	91.2	90.9	91.0	90.8	90.5	90.5	90.6
Vacuum cleaners, canister type		81.2	81.5	81.6	81.3	81.5	81.8	81.4	81.4	81.5	81.3	82.1	82.0	81.8	81.5

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
HOUSING—Continued															
Household furnishings and operation—Con.															
Appliances—Continued															
Refrigerators or refrigerator-freezers, electric		87.5	87.3	87.5	87.2	86.8	86.1	86.0	85.8	85.8	85.8	85.7	85.4	85.2	85.3
Ranges, free standing, gas or electric		100.7	100.2	100.7	100.1	99.3	99.0	99.0	98.8	98.5	98.1	98.2	97.6	97.4	97.7
Clothes dryers, electric, automatic	Dec. 63	102.6	101.9	102.1	101.8	101.3	100.8	100.6	100.5	99.8	99.6	99.7	99.5	99.5	99.4
Air conditioners, demountable	June 64	101.5	101.3	101.3	(2)	(1)	(1)	(1)	(1)	(1)	(1)	99.8	99.7	99.5	99.5
Room heaters, electric, portable	Dec. 63	(1)	(1)	(1)	100.5	100.6	100.6	100.4	99.8	99.6	(2)	(1)	(1)	(1)	98.8
Garbage disposal units	Dec. 63	108.2	107.4	107.2	106.6	105.9	105.5	105.0	105.0	104.7	104.3	103.9	103.9	103.9	103.9
Other house furnishings:															
Dinnerware, earthenware		139.3	138.3	138.1	138.1	137.1	136.2	135.6	135.2	134.8	134.3	133.5	133.6	132.7	133.3
Flatware, stainless steel	Dec. 63	121.0	120.8	120.7	120.4	120.1	119.2	119.0	119.6	119.6	119.8	119.6	119.5	118.9	118.7
Table lamps, with shade	Dec. 63	121.6	121.4	121.2	119.9	118.6	118.3	118.7	118.3	117.8	116.0	115.4	115.3	114.0	114.6
Housekeeping supplies:															
Laundry soaps and detergents		110.0	110.0	109.8	110.0	108.8	108.1	107.1	106.2	106.8	107.4	107.4	106.4	106.5	106.3
Paper napkins		139.5	138.5	136.4	134.7	131.3	129.8	131.0	130.0	129.0	128.6	128.0	127.2	128.1	128.2
Toilet tissue		129.7	129.4	127.8	126.8	123.5	121.9	120.3	121.2	121.2	120.7	119.1	119.5	119.8	118.9
Housekeeping services:															
Domestic service, general housework		186.6	185.5	184.8	182.5	182.0	180.5	179.9	178.7	177.6	175.1	173.9	172.9	172.2	173.5
Baby sitter service	Dec. 63	141.8	141.5	140.9	140.0	138.6	137.6	137.4	136.6	135.7	135.6	134.9	134.5	133.7	133.7
Postal charges		165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5
Laundry, flatwork, finished service	Dec. 63	150.2	150.0	149.8	149.1	147.9	147.5	146.8	144.3	143.2	142.7	141.4	140.6	140.2	140.6
Licensed day care service, preschool child	Dec. 63	132.7	132.5	132.1	132.0	132.0	132.0	131.8	131.8	130.7	130.3	129.7	128.4	128.1	127.9
Washing machine repairs	Dec. 63	140.2	140.4	139.8	139.6	138.3	136.6	135.4	135.1	135.2	134.4	133.5	133.0	131.6	131.7
APPAREL AND UPKEEP															
Men's and boys'															
Men's:															
Topcoats, wool		(1)	(1)	(1)	144.1	141.0	143.7	147.4	148.5	145.9	144.0	(1)	(1)	(1)	142.9
Suits, year round weight		160.5	160.2	159.8	157.3	153.9	154.2	158.2	158.2	156.4	154.5	150.7	149.6	150.0	150.9
Suits, tropical weight	June 64	140.5	138.4	137.4	136.6	(1)	(1)	(1)	(1)	(1)	(1)	127.7	130.8	128.6	
Jackets, lightweight	Dec. 63	125.2	125.1	125.3	125.3	125.6	125.5	125.7	125.6	125.4	125.2	125.0	125.1	125.6	124.6
Slacks, wool or wool blend		132.8	132.7	131.8	131.0	129.6	130.0	131.2	131.7	130.4	128.9	127.1	126.1	126.6	127.4
Slacks, cotton or manmade blend		123.7	123.4	123.0	120.9	119.4	117.6	117.1	117.1	115.6	115.2	114.5	112.1	114.3	113.9
Trousers, work, cotton		117.8	117.1	117.2	116.6	116.4	116.0	117.2	117.0	116.9	116.9	116.8	116.9	116.7	116.4
Shirts, work, cotton		126.8	126.5	126.4	126.0	124.9	124.4	124.2	124.7	124.2	123.2	123.3	123.1	123.4	122.9
Shirts, business, cotton		124.6	124.2	124.1	123.7	123.2	122.5	122.2	122.2	122.2	121.8	121.6	121.5	121.7	121.3
T-shirts, chiefly cotton		134.7	134.6	134.1	132.9	133.3	132.4	131.9	131.8	131.5	130.6	130.6	130.1	129.4	130.0
Socks, cotton		123.1	122.6	122.6	121.5	121.3	120.9	120.9	120.4	121.1	121.6	121.6	121.1	120.5	119.8
Handkerchiefs, cotton	Dec. 63	115.3	115.1	114.4	114.2	113.9	113.8	113.8	113.3	112.9	112.7	112.4	112.3	112.3	112.1
Boys':															
Coats, all purpose, cotton or cotton blend	Dec. 63	(1)	(1)	(1)	114.6	114.3	114.2	116.1	115.9	115.2	113.5	(1)	(1)	(1)	112.4
Sport coats, wool or wool blend	Dec. 63	(1)	(1)	(1)	(1)	(1)	127.8	130.3	131.0	126.4	122.5	(1)	(1)	(1)	125.6
Dungarees, cotton or cotton blend		130.1	130.1	129.5	129.5	129.4	128.9	127.1	127.9	126.9	127.4	127.2	127.0	126.3	126.3
Undershorts, cotton		131.5	131.6	130.9	130.5	129.9	130.1	130.3	130.3	129.0	128.9	128.4	127.9	126.6	127.1
Women's and girls'															
Women's:															
Coats, heavyweight, wool or wool blend		(1)	(1)	(1)	(1)	(1)	124.9	136.2	139.9	139.9	136.0	(1)	(1)	(1)	134.4
Skirts, wool or wool blend	Sept. 61	(1)	(1)	(1)	(1)	121.0	135.6	144.6	145.3	133.9	129.4	(1)	(1)	(1)	129.3
Skirts, cotton or cotton blend	Mar. 62	136.3	136.3	135.2	(2)	(1)	(1)	(1)	(1)	(1)	(1)	121.8	130.7	135.0	129.3
Blouses, cotton		130.6	129.7	127.1	125.3	124.9	126.9	127.6	127.2	125.4	122.7	122.2	122.4	122.7	123.6
Dresses, street, chiefly manmade fiber		155.8	156.5	158.9	158.5	158.7	155.9	158.3	158.8	155.9	152.5	147.3	147.6	147.3	150.2
Dresses, street, wool or wool blend		(1)	(1)	(1)	(1)	(1)	144.2	145.7	144.8	145.7	140.8	(1)	(1)	(1)	141.0
Dresses, street, cotton		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	136.6	149.9	150.6	147.2
House dresses, cotton		(1)	(1)	(1)	(1)	153.5	152.3	153.0	152.1	150.7	149.0	150.0	148.8	149.6	147.9
Slips, nylon		115.8	115.6	114.7	114.2	114.6	113.4	112.3	112.2	111.9	111.9	111.6	109.7	110.5	110.8
Panties, acetate		113.5	113.3	112.7	113.2	112.7	112.0	111.2	111.4	110.5	109.9	109.1	108.6	108.4	109.2
Girdles, manmade blend		121.4	121.4	121.3	121.4	120.9	120.5	120.8	120.5	120.2	119.5	119.4	119.0	118.7	119.1
Brasieres, cotton	Dec. 63	128.9	129.2	128.4	127.4	125.6	124.4	124.9	123.8	123.1	122.9	122.5	122.2	122.0	121.7
Hose, nylon, seamless		98.8	99.1	98.9	99.0	98.3	98.5	99.8	99.8	99.4	99.2	98.8	99.6	99.0	99.1
Anklets, cotton	Dec. 63	118.9	120.1	120.5	120.5	122.5	121.0	121.5	118.5	118.5	118.4	118.2	118.1	117.6	117.2
Gloves, fabric, nylon or cotton	Dec. 63	111.4	111.2	110.6	110.9	111.0	110.7	110.5	109.8	109.2	109.0	109.3	108.9	108.9	108.6
Handbags, rayon faille or plastic	Dec. 63	120.3	119.3	118.8	118.2	118.5	116.4	117.3	117.2	115.5	114.8	114.1	113.8	113.7	113.6
Girls':															
Raincoats, vinyl plastic or chiefly cotton	Dec. 63	(1)	(1)	(1)	114.8	118.9	118.1	125.6	124.4	121.7	120.8	(1)	(1)	(1)	120.9
Skirts, wool or wool blend		(1)	(1)	(1)	(1)	(1)	117.4	123.2	123.4	124.0	(2)	(1)	(1)	(1)	121.4

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
APPAREL AND UPKEEP—Continued															
Women's and girls'—Continued															
Girls' Continued															
Dresses, cotton.....	Dec. 63	133.2	129.4	135.1	134.0	132.3	129.8	133.6	136.3	137.4	136.9	135.4	134.2	133.9	134.4
Slacks, cotton.....		(1)	(1)	(1)	125.5	125.4	128.4	131.8	131.7	127.9	(2)	(1)	(1)	(1)	125.8
Slips, cotton blend.....	Dec. 63	108.0	107.3	107.5	108.1	107.8	108.0	108.0	108.6	108.5	107.7	108.0	108.1	107.2	107.5
Handbags.....	Dec. 63	118.3	117.4	115.7	115.1	114.9	113.7	114.2	114.7	111.1	108.9	108.3	108.2	106.5	109.3
Footwear.....															
Men's:															
Shoes, street, oxford.....		147.7	147.6	147.2	146.3	145.0	144.4	144.4	143.9	143.3	142.3	141.5	139.9	140.1	140.3
Shoes, work, high.....		145.6	145.3	144.7	143.8	142.3	141.3	142.6	142.1	141.5	140.1	138.7	137.5	138.6	138.4
		143.4	142.9	142.6	142.1	141.4	140.9	139.8	139.5	139.0	138.4	138.1	137.3	136.8	136.7
Women's:															
Shoes, street, pump.....		156.8	157.3	157.3	155.5	151.6	151.8	152.7	152.5	152.0	150.8	149.9	147.3	147.9	148.6
Shoes, evening, pump.....	Dec. 63	126.6	126.7	125.8	125.0	124.8	124.2	123.2	122.9	122.9	122.3	121.8	121.0	120.0	120.3
Shoes, casual, pump.....	Dec. 63	138.3	138.7	138.3	136.3	135.7	134.2	134.0	133.4	132.0	129.6	128.9	126.8	128.2	127.7
Houseslippers, scuff.....	Dec. 63	128.1	127.7	127.7	128.2	127.8	128.0	127.5	127.1	126.6	126.4	125.4	123.9	124.0	124.7
Children's:															
Shoes, oxford.....		147.2	146.6	146.3	146.6	145.9	144.3	144.3	143.3	142.3	141.4	140.7	140.2	139.8	140.1
Sneakers, boys', oxford type.....	Dec. 63	123.2	122.6	122.0	120.7	120.0	119.6	119.5	119.3	119.1	118.9	118.1	116.9	116.2	117.2
Dress shoes, girls', strap.....	Dec. 63	138.3	138.3	137.5	138.0	136.6	136.6	136.4	135.7	134.6	134.1	133.1	130.6	131.9	131.5
Miscellaneous apparel:															
Diapers, cotton gauze.....		105.0	104.9	104.8	104.9	104.3	104.0	104.0	104.1	103.8	103.9	104.0	103.5	103.2	103.0
Yard goods, cotton.....		127.1	127.6	126.8	125.9	124.6	123.3	123.5	123.1	123.5	123.2	123.2	122.1	123.2	120.9
Apparel services:															
Drycleaning, men's suits and women's dresses.....	Dec. 63	136.3	136.0	135.7	135.2	134.6	133.8	133.3	132.9	132.2	132.0	131.7	130.5	130.2	130.8
Automatic laundry service.....	Dec. 63	114.0	113.2	113.1	113.2	112.3	112.0	112.0	111.8	111.4	111.3	111.0	111.0	110.4	110.1
Laundry, men's shirts.....	Dec. 63	130.0	129.0	128.8	128.5	128.0	126.8	126.7	124.3	123.8	123.4	123.2	123.0	122.5	122.9
Tailoring charges, hem adjustment.....	Dec. 63	133.3	128.8	128.4	127.7	127.4	127.0	127.4	127.6	127.5	126.5	125.4	125.2	125.1	124.5
Shoe repairs, women's heel lift.....		126.8	126.5	126.3	125.5	125.0	124.6	123.7	123.6	122.7	123.1	121.3	121.1	120.4	121.3
TRANSPORTATION.....															
Private.....															
Automobiles, new.....		126.7	125.9	124.9	123.0	123.3	123.3	123.4	122.7	122.8	120.5	121.3	121.4	121.8	121.3
Automobiles, used.....		103.8	104.1	104.3	104.4	104.6	104.7	104.9	105.1	104.2	99.5	101.0	101.6	101.8	102.4
Gasoline, regular and premium.....		132.0	127.5	121.1	117.6	117.8	120.7	123.9	124.9	125.8	121.4	125.4	127.0	128.2	125.3
Motor oil, premium.....		117.6	118.6	119.1	115.3	116.7	116.6	116.9	116.3	118.0	117.7	118.0	117.7	118.6	117.0
		143.0	142.8	142.6	142.3	141.4	140.7	140.2	140.1	139.6	139.1	138.7	138.1	137.4	137.5
Tires, new, tubeless.....		118.0	118.6	118.6	119.4	118.5	118.2	118.2	118.0	117.4	117.0	116.0	116.3	115.5	116.2
Auto repairs and maintenance.....		143.5	142.9	142.1	141.5	140.2	139.2	137.3	136.6	137.5	135.2	134.5	133.8	133.3	133.8
Auto insurance rates.....		181.9	179.5	175.6	176.4	176.0	173.4	171.5	164.6	163.7	163.2	160.3	159.0	158.7	160.2
Auto registration.....		140.9	140.9	140.9	140.3	140.3	140.3	134.2	134.2	134.2	134.2	134.2	134.2	134.2	133.6
Public.....															
Local transit fares.....		167.8	166.6	165.8	165.8	165.4	165.1	153.0	151.1	150.3	150.3	149.7	149.5	149.1	148.9
Taxicab fares.....	Dec. 63	185.8	185.2	183.9	183.8	183.8	183.3	163.2	163.0	161.7	161.7	160.8	160.5	159.9	160.4
Railroad fares, coach.....		135.9	131.5	131.5	131.5	131.5	131.5	127.5	127.5	127.5	127.5	127.5	127.5	127.5	126.7
Airplane fares, chiefly coach.....	Dec. 63	121.5	121.1	121.1	121.1	117.2	117.2	117.2	115.5	115.1	115.1	114.9	114.9	114.9	114.0
Bus fares, intercity.....	Dec. 63	117.9	117.8	117.8	117.8	117.4	117.4	117.4	111.6	111.6	111.6	111.2	112.1	112.1	110.6
		130.1	128.6	128.6	128.6	127.9	127.9	127.9	127.0	127.0	127.0	122.9	122.9	122.9	122.4
HEALTH AND RECREATION.....															
Medical care.....															
Drugs and prescriptions.....		164.7	163.6	162.8	161.6	160.1	159.0	158.1	157.4	156.9	157.6	156.8	155.9	155.2	155.0
Over-the-counter items.....	Dec. 63	101.6	101.4	100.9	100.3	100.0	99.7	99.6	99.6	99.4	99.3	99.3	99.2	99.3	99.2
Multiple vitamin concentrates.....	Dec. 63	109.7	109.2	108.6	107.8	107.2	107.2	107.1	107.1	106.9	106.9	107.0	106.9	107.1	106.9
Aspirin compounds.....	Dec. 63	92.6	92.7	92.0	91.7	90.8	92.3	92.8	92.4	92.5	92.4	92.4	92.1	92.2	92.4
		109.8	109.2	108.1	107.3	107.4	106.2	106.6	106.2	106.1	105.5	106.8	106.4	106.6	106.2
Liquid tonics.....	Dec. 63	101.8	101.9	101.9	101.5	101.2	101.3	101.3	101.3	100.8	100.9	100.9	100.8	100.9	101.0
Adhesive bandages, package.....	Dec. 63	122.7	121.4	119.8	119.7	118.2	117.8	117.7	117.1	117.4	117.0	116.5	116.7	117.0	116.9
Cold tablets or capsules.....	Dec. 63	112.7	112.7	112.6	112.2	111.5	111.0	110.5	110.0	109.6	109.1	109.2	109.1	109.5	109.2
Cough syrup.....	Dec. 63	117.2	116.4	116.0	113.5	113.0	113.4	112.9	114.7	113.7	115.1	114.8	114.8	115.2	114.5
Prescriptions.....		90.6	90.5	90.3	89.7	89.7	89.3	89.1	89.0	89.0	88.8	88.7	88.6	88.6	88.6
Anti-infectives.....	Mar. 60	63.2	63.1	63.0	62.8	63.0	62.8	62.8	62.8	62.8	62.9	62.9	62.8	63.1	62.8
Sedatives and hypnotics.....	Mar. 60	114.0	114.2	113.7	112.1	112.0	110.6	110.4	109.6	108.7	107.8	107.6	107.1	106.9	107.2
Ataractics.....	Mar. 60	90.8	90.7	90.7	90.0	90.0	89.8	89.8	89.8	89.8	89.8	89.7	89.9	90.0	89.8
Anti-spasmodics.....	Mar. 60	102.6	102.4	102.2	101.7	101.6	101.5	101.3	101.3	101.3	101.2	101.0	101.0	101.2	101.1
Cough preparations.....	Mar. 60	118.1	118.0	118.1	117.1	115.2	112.7	112.0	111.7	111.4	111.1	110.8	110.2	109.7	109.4
Cardiovasculars and antihypertensives.....	Mar. 60	100.4	100.4	100.0	99.0	98.8	98.3	98.0	98.0	97.9	97.7	97.6	97.1	97.0	97.1
Analgesics, internal.....	Mar. 67	105.4	105.2	105.3	104.7	105.0	104.3	103.3	103.2	103.1	103.1	103.1	102.9	102.8	102.8
Anti-obesity.....	Mar. 67	107.2	107.2	106.0	105.8	105.5	104.8	104.3	104.3	104.2	103.6	103.3	102.9	102.6	103.1
Hormones.....	Mar. 67	94.2	94.2	93.6	93.9	93.6	93.6	94.2	93.9	94.3	93.9	93.9	93.8	93.9	94.3
Professional services:															
Physicians' fees.....		167.3	165.6	164.3	163.7	161.6	160.7	160.0	159.0	158.3	158.0	156.8	156.0	155.5	155.4
Family doctor, office visits.....		170.8	168.3	167.3	166.6	164.0	163.1	162.4	161.0	160.6	160.3	158.7	158.3	157.6	157.2
Family doctor, house visits.....		175.6	173.6	172.5	171.7	169.0	167.9	167.6	166.2	165.9	165.6	163.9	163.8	163.4	163.3
Obstetrical cases.....		161.8	161.1	159.2	159.0	157.6	155.9	155.0	154.9	153.9	153.2	152.8	150.1	149.4	150.2
Pediatric care, office visits.....	Dec. 63	151.4	151.3	148.7	148.5	147.7	146.5	145.9	145.5	144.2	144.1	142.8	140.9	140.3	141.4
Psychiatrist, office visits.....	Dec. 63	135.0	135.0	134.7	134.6	133.7	133.0	132.6	132.6	131.7	131.7	130.9	129.3	129.6	129.1

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
HEALTH AND RECREATION—Continued															
Medical care—Continued															
Professional services—Continued															
Physicians' fees—Continued															
Herniorrhaphy, adult.....	Dec. 63	130.6	129.6	128.7	127.5	126.7	126.3	125.4	125.2	124.6	124.6	124.3	124.3	124.1	123.9
Tonsillectomy and adenoidectomy.....		156.7	156.1	154.2	153.8	152.6	152.3	151.6	151.3	149.3	149.1	149.0	148.1	147.8	148.2
Dentists' fees.....		151.9	151.2	150.7	148.7	148.4	148.0	147.6	147.2	146.9	146.0	145.5	144.9	144.2	143.9
Fillings, adult, amalgam, one surface.....		154.1	153.3	152.5	150.6	150.3	149.8	148.7	148.3	148.3	147.1	146.4	145.7	145.1	144.9
Extractions, adult.....		149.7	148.9	148.9	146.1	145.9	146.0	147.0	146.7	145.9	145.3	144.7	144.5	143.4	143.1
Dentures, full upper.....	Dec. 63	133.6	133.2	132.7	131.7	131.3	130.6	130.2	129.7	129.5	128.9	128.8	128.3	127.7	127.4
Other professional services:															
Examination, prescription, and dispensing of eyeglasses.....		137.8	136.9	136.7	136.3	135.7	134.6	133.9	133.8	132.8	132.4	132.2	131.7	131.2	131.1
Routine laboratory tests.....	Dec. 63	121.7	121.3	121.2	120.8	119.8	119.6	119.5	119.4	118.5	118.5	118.6	118.0	117.9	117.4
Hospital service charges:															
Daily service charges.....		284.4	283.1	282.3	279.0	275.6	271.6	267.9	265.4	263.8	261.9	259.9	256.7	253.8	256.0
Semiprivate rooms.....		281.1	279.8	279.1	268.7	271.9	268.0	264.1	261.7	260.1	258.4	255.3	253.0	250.0	252.1
Private rooms.....		273.5	272.3	271.4	268.7	265.9	261.8	258.7	256.1	254.7	252.6	250.8	247.9	245.5	247.5
Operating room charges.....	Dec. 63	181.7	180.9	180.3	177.7	175.4	172.8	170.9	170.6	168.7	167.6	166.4	165.6	165.2	165.2
X-ray, diagnostic series, upper G.I.....	Dec. 63	131.4	129.4	128.1	127.7	125.4	124.7	124.7	124.5	124.8	124.6	123.2	122.7	122.3	122.7
Personal care:															
Toilet goods:															
Toothpaste, standard dentifrice.....		113.3	113.3	113.0	112.9	112.4	112.0	111.6	111.8	111.6	111.7	111.4	111.2	110.9	110.7
Toilet soap, hard milled.....		114.4	114.4	114.7	113.9	114.3	114.1	114.6	114.7	114.4	113.8	113.4	112.9	113.6	113.7
Hand lotions, liquid.....	Dec. 63	127.0	126.2	124.3	125.6	124.3	123.0	123.4	124.8	125.1	126.3	123.3	125.1	123.6	124.1
Shaving cream, aerosol.....		101.3	102.1	102.3	102.2	102.1	102.1	101.9	101.6	102.0	102.1	102.1	101.4	102.3	102.0
Face powder, pressed.....		131.4	131.6	131.0	130.8	129.1	128.1	127.6	127.5	127.2	126.8	126.6	126.1	125.0	125.0
Deodorants, cream or roll-on.....	Dec. 63	95.9	95.8	95.9	96.1	96.1	96.0	94.5	95.0	95.1	95.3	95.5	95.0	94.9	94.9
Cleansing tissues.....		116.4	116.4	116.0	115.5	114.4	113.8	112.5	111.8	109.2	108.4	109.3	109.3	108.7	108.8
Home permanent refills.....		98.3	98.4	98.3	98.6	98.6	98.6	98.7	98.6	98.5	99.2	99.1	98.8	99.3	98.0
Personal care services:															
Men's haircuts.....		151.2	151.3	150.5	150.1	149.5	148.9	148.5	147.5	146.7	146.5	145.8	145.5	144.9	145.2
Beauty shop services.....		161.0	161.0	159.7	159.1	158.7	158.0	157.8	156.4	155.2	154.8	154.5	154.7	153.8	153.7
Women's haircuts.....	Dec. 63	141.0	141.2	140.9	140.6	140.0	139.2	138.8	138.0	137.7	137.5	136.6	136.0	135.6	136.1
Shampoo and wave sets, plain.....		125.4	126.4	126.3	126.1	125.4	125.3	125.2	124.0	123.4	123.2	121.9	121.2	120.9	122.0
Permanent waves, cold.....		159.0	159.0	158.6	158.3	157.5	156.8	156.3	155.3	154.9	154.6	153.6	152.8	152.3	152.7
Reading and recreation:		110.0	109.6	109.4	109.0	108.9	107.5	107.2	107.2	107.1	107.0	106.9	106.7	106.5	106.4
Recreational goods.....	Dec. 63	136.1	135.2	134.4	133.6	133.2	133.1	132.7	132.3	132.0	131.6	131.2	130.7	130.4	130.5
TV sets, portable and console.....		100.0	99.9	99.6	99.4	99.2	99.1	99.1	99.2	99.1	99.0	98.7	98.7	98.6	98.6
TV replacement tubes.....	Dec. 63	80.1	80.1	80.0	79.9	79.9	80.0	80.2	80.3	80.2	80.0	79.7	79.8	80.0	80.1
Radios, portable and table model.....		119.3	118.3	117.5	117.3	117.3	116.6	116.3	116.3	115.9	115.7	115.4	115.6	115.8	115.5
Tape recorders, portable.....		76.6	76.6	76.5	76.0	76.1	76.4	76.5	76.5	76.6	76.9	76.5	76.5	76.6	76.5
Phonograph records, stereophonic.....	Dec. 63	89.9	90.4	90.3	90.2	90.2	90.0	90.1	91.2	91.4	91.5	91.4	91.5	91.9	91.3
Movie cameras, Super 8, zoom lens.....	Dec. 63	98.2	98.3	97.8	98.1	97.9	98.0	98.0	98.0	98.1	97.6	97.7	97.9	97.5	97.2
Film, 35mm, color.....	Dec. 63	82.3	82.0	81.4	81.3	81.6	82.1	82.3	83.4	83.1	83.5	83.4	83.5	84.1	84.0
Bicycle, boys'.....	Dec. 63	100.1	100.0	99.7	99.7	99.7	99.1	99.1	99.1	99.4	99.6	99.2	99.1	99.0	99.0
Tricycles.....	Dec. 63	110.4	110.5	110.8	111.4	111.2	110.7	110.4	110.0	109.7	109.9	109.5	109.7	109.1	109.0
Recreational services.....	Dec. 63	113.7	113.1	111.6	111.2	112.0	112.0	111.6	111.4	111.9	111.6	111.2	109.4	109.2	109.6
Indoor movie admissions.....	Dec. 63	136.9	135.9	135.0	134.1	133.7	133.9	133.2	132.6	132.1	131.7	131.1	130.1	129.7	129.9
Adult.....		220.0	217.9	215.4	212.0	210.5	211.7	210.3	208.3	207.0	206.5	204.2	200.2	198.3	200.6
Children's.....		215.6	212.8	210.9	207.7	206.1	207.3	205.4	203.2	201.9	201.6	198.8	194.4	192.9	195.5
Drive-in movie admissions, adult.....	Dec. 63	235.0	234.8	230.6	226.7	225.4	226.9	227.1	225.4	224.5	223.2	222.1	219.6	216.7	217.6
Bowling fees, evening.....	Dec. 63	171.6	168.9	168.1	167.5	167.0	165.6	165.5	165.0	164.5	164.1	163.5	161.9	160.1	159.9
Golf greens fees.....	Dec. 63	115.7	115.2	115.2	114.8	115.0	115.3	113.7	113.6	112.1	110.9	110.3	110.4	110.6	111.1
TV repairs, picture tube replacement.....		145.1	141.5	139.3	(?)	(?)	(?)	(?)	(?)	(?)	135.5	135.9	135.8	134.7	131.8
Film developing, black and white.....	Dec. 63	97.6	98.6	98.7	98.9	99.5	100.2	100.2	100.0	101.4	101.0	101.0	101.0	102.2	101.7
Reading and education:		116.4	117.7	117.6	117.3	117.7	117.4	117.7	117.9	117.9	118.3	118.4	118.9	119.2	119.1
Newspapers, street sale and delivery.....		162.0	161.5	160.4	160.4	159.8	160.2	158.2	156.7	156.4	155.9	155.8	155.2	154.3	154.7
Piano lessons, beginner.....	Dec. 63	128.4	128.2	128.2	127.8	127.7	127.6	127.3	126.7	126.5	126.1	123.8	122.8	122.3	123.7
Other goods and services:															
Tobacco products:															
Cigarettes, nonfilter tip, regular size.....		136.7	136.1	135.6	134.8	134.3	133.9	133.5	133.1	132.2	131.3	130.1	129.1	127.9	129.0
Cigarettes, filter tip, king size.....		158.1	156.7	156.4	155.0	154.9	154.1	153.8	153.1	151.5	150.6	148.7	146.7	144.0	146.5
Cigars, domestic, regular size.....	Mar. 59	166.0	164.4	164.1	162.8	162.7	161.8	161.4	160.7	158.9	158.0	155.8	153.7	150.8	153.6
Alcoholic beverages.....		158.5	157.2	156.8	154.9	154.8	154.0	153.5	152.6	151.0	150.0	148.1	146.2	143.4	145.7
Beer.....		108.6	108.6	108.6	108.7	108.7	109.0	110.0	109.9	109.4	109.6	108.7	107.1	106.5	107.6
Whiskey, spirit blended and straight bourbon.....		123.2	123.1	122.5	122.0	121.4	121.0	120.6	120.4	120.0	119.1	118.2	117.7	117.4	117.8
Wine, dessert and table.....	Dec. 63	118.3	118.5	118.2	117.7	116.9	116.5	116.5	116.6	116.3	116.4	115.3	114.8	114.5	114.8
Beer, away from home.....	Dec. 63	112.7	112.5	111.8	111.6	111.3	111.2	111.5	111.4	111.3	110.4	110.1	109.8	109.4	109.9
Financial and miscellaneous personal expenses:		119.6	119.4	118.9	117.4	116.8	116.5	115.2	114.5	113.6	112.0	110.6	110.2	109.5	110.5
Funeral services, adult.....	Dec. 63	129.6	129.3	128.4	128.0	127.6	127.1	125.9	125.6	125.0	123.0	122.3	121.8	121.5	121.8
Bank service charges, checking accounts.....	Dec. 63	119.6	119.3	119.0	118.6	118.1	117.7	117.4	117.3	116.9	116.5	115.9	115.5	115.2	115.2
Legal services, short form will.....	Dec. 63	110.3	110.0	110.0	110.1	110.0	110.2	110.3	109.9	109.1	108.3	103.4	108.2	108.2	108.3
	Dec. 63	149.0	146.1	145.6	145.1	142.7	142.3	141.2	139.5	139.5	138.8	137.8	135.0	134.5	134.7

1 Priced only in season.

2 Not available.

3 This item is a replacement for bedroom suites, good or inexpensive quality, which was discontinued after March 1970.

4 This item is a replacement for dining room suites, which was discontinued after March 1970.

5 Item discontinued.

NOTE: Monthly data for individual nonfood items not available for 1968.

25. Consumer Price Index¹—U.S. city average, and selected areas

[1957-59=100 unless otherwise specified]

Area ²	1970						1969						Annual avg.	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969
All items														
U.S. city average ³	135.2	134.6	134.0	133.2	132.5	131.8	131.3	130.5	129.8	129.3	128.7	128.2	127.6	127.7
Atlanta, Ga.	133.6	(4)	(4)	131.9	(4)	(4)	129.9	(4)	(4)	128.6	(4)	(4)	126.1	126.7
Baltimore, Md.	135.2	(4)	(4)	133.5	(4)	(4)	131.9	(4)	(4)	130.4	(4)	(4)	127.9	128.3
Boston, Mass.	137.9	(4)	137.9	(4)	(4)	136.1	(4)	(4)	134.7	(4)	(4)	132.1	(4)	131.8
Buffalo, N.Y. (Nov. 1963=100)	(4)	127.0	(4)	(4)	125.3	(4)	(4)	123.2	(4)	(4)	121.2	(4)	(4)	120.5
Chicago, Ill.—Northwestern Ind.	131.5	131.1	130.2	129.9	129.3	129.1	128.3	127.7	126.9	127.2	126.1	125.3	124.6	124.9
Cincinnati, Ohio—Kentucky	131.2	(4)	(4)	129.2	(4)	(4)	127.7	(4)	(4)	125.5	(4)	(4)	124.6	124.6
Cleveland, Ohio	134.3	134.3	(4)	(4)	132.3	(4)	(4)	129.5	(4)	(4)	127.3	(4)	(4)	126.3
Dallas, Tex. (Nov. 1963=100)	(4)	127.1	(4)	(4)	125.6	(4)	(4)	123.7	(4)	(4)	121.2	(4)	(4)	120.3
Detroit, Mich.	135.2	134.9	133.8	133.1	132.2	131.1	130.8	129.8	129.2	128.6	128.5	127.6	127.3	127.1
Honolulu, Hawaii (Dec. 1963=100)	(4)	(4)	(4)	122.0	(4)	(4)	119.7	(4)	(4)	118.1	(4)	(4)	116.6	117.0
Houston, Tex.	132.9	(4)	132.9	(4)	(4)	130.9	(4)	(4)	129.8	(4)	(4)	127.0	(4)	127.0
Kansas City, Mo.—Kansas	137.9	(4)	(4)	134.6	(4)	(4)	133.2	(4)	(4)	131.4	(4)	(4)	130.4	130.1
Los Angeles—Long Beach, Calif.	133.9	133.8	133.5	132.2	131.6	131.2	131.1	130.0	130.1	129.6	128.9	128.6	127.9	128.0
Milwaukee, Wis.	130.0	130.0	(4)	(4)	128.5	(4)	(4)	127.0	(4)	(4)	123.9	(4)	(4)	123.6
Minneapolis—St. Paul, Minn.	135.1	(4)	135.1	(4)	(4)	132.8	(4)	(4)	130.3	(4)	(4)	128.0	(4)	127.4
New York, N.Y.—Northeastern N.J.	141.6	140.7	140.1	139.1	138.1	137.0	136.0	134.6	134.1	133.5	132.5	132.1	131.6	131.8
Philadelphia, Pa.—N.J.	137.0	136.5	135.7	135.4	134.1	132.9	132.2	131.7	131.2	131.0	130.2	129.2	128.2	128.9
Pittsburgh, Pa.	132.4	(4)	132.4	(4)	(4)	129.4	(4)	(4)	128.5	(4)	(4)	127.7	(4)	127.0
Portland, Ore.—Wash. ⁵	(4)	(4)	133.4	(4)	(4)	130.7	(4)	(4)	130.1	(4)	(4)	128.4	(4)	128.4
St. Louis, Mo.—Ill.	134.1	(4)	(4)	132.4	(4)	(4)	130.7	(4)	(4)	129.2	(4)	(4)	127.0	127.5
San Diego, Calif. (Feb. 1965=100)	(4)	120.9	(4)	(4)	118.6	(4)	(4)	117.0	(4)	(4)	116.0	(4)	(4)	115.1
San Francisco—Oakland, Calif.	137.5	(4)	(4)	136.1	(4)	(4)	134.5	(4)	(4)	132.8	(4)	(4)	130.8	131.1
Scranton, Pa. ⁵	(4)	136.9	(4)	(4)	134.4	(4)	(4)	127.3	(4)	(4)	130.5	(4)	(4)	129.2
Seattle, Wash.	133.9	133.9	(4)	(4)	132.2	(4)	(4)	130.0	(4)	(4)	129.5	(4)	(4)	128.3
Washington, D.C.—Md.—Va.	136.7	136.7	(4)	(4)	134.6	(4)	(4)	132.0	(4)	(4)	130.8	(4)	(4)	129.5
Food														
U.S. city average ³	132.7	132.4	132.0	131.6	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	125.5
Atlanta, Ga.	131.1	130.0	130.6	130.5	130.7	129.0	128.4	126.9	126.5	126.7	126.3	124.4	122.8	123.8
Baltimore, Md.	136.7	136.5	135.9	136.2	135.4	134.9	134.1	132.3	131.5	131.8	130.8	130.1	127.9	128.8
Boston, Mass.	137.0	136.6	135.9	135.4	135.0	134.3	133.1	131.6	131.2	131.4	131.8	130.2	129.5	129.3
Buffalo, N.Y. (Nov. 1963=100)	128.6	128.1	128.4	127.3	127.0	125.4	125.1	122.8	121.9	121.8	122.5	122.4	121.2	120.6
Chicago, Ill.—Northwestern Ind.	133.6	133.1	132.6	133.0	133.2	132.8	131.3	129.4	128.3	130.2	130.5	129.0	127.5	127.2
Cincinnati, Ohio—Kentucky	129.7	129.1	128.6	127.9	127.8	127.2	126.6	125.1	124.1	123.6	123.2	123.3	121.9	122.1
Cleveland, Ohio	131.2	130.8	129.7	129.3	128.4	129.0	128.5	125.7	125.0	125.1	125.2	123.3	123.2	123.2
Dallas, Tex. (Nov. 1963=100)	125.8	126.0	125.5	125.5	125.9	125.0	124.2	122.8	121.7	122.0	121.9	120.6	120.1	119.8
Detroit, Mich.	132.2	132.1	131.2	130.9	130.2	129.8	129.3	126.8	126.1	126.5	127.3	126.5	124.5	124.3
Honolulu, Hawaii (Dec. 1963=100)	123.8	123.2	123.4	123.4	122.9	123.0	120.8	119.5	119.7	119.1	118.0	116.9	116.3	117.4
Houston, Tex.	133.3	133.4	133.8	132.7	133.3	132.3	131.2	129.2	128.7	129.2	129.0	127.7	126.8	126.9
Kansas City, Mo.—Kansas	136.9	136.8	136.4	135.9	135.8	135.1	134.4	132.9	131.2	131.9	131.3	130.7	129.8	129.4
Los Angeles—Long Beach, Calif.	127.8	128.1	127.4	126.7	127.2	126.2	125.8	124.7	124.0	124.0	123.9	124.0	123.0	122.6
Milwaukee, Wis.	129.4	129.4	129.3	130.2	130.1	129.5	128.4	127.8	127.6	127.9	127.6	126.5	125.1	125.2
Minneapolis—St. Paul, Minn.	131.4	131.3	131.2	131.2	130.6	129.5	128.2	127.2	126.5	125.9	126.4	125.4	122.8	123.7
New York, N.Y.—Northeastern N.J.	136.8	136.0	135.7	135.1	134.7	133.8	132.9	130.6	129.6	129.1	128.7	128.1	126.6	127.1
Philadelphia, Pa.—N.J.	132.4	132.3	131.5	132.0	132.0	130.7	129.7	128.0	127.0	127.2	127.2	126.0	124.5	125.5
Pittsburgh, Pa.	128.7	128.8	128.3	128.2	128.0	127.5	127.1	125.7	123.3	123.2	123.9	124.2	123.2	122.4
Portland, Ore.—Wash. ⁵			128.5			126.7			124.4			125.2		124.0
St. Louis, Mo.—Ill.	136.7	136.3	136.5	136.6	137.4	136.6	135.5	133.5	132.4	132.6	131.2	129.8	128.6	129.5
San Diego, Calif. (Feb. 1965=100)	122.0	122.3	121.3	120.8	121.3	120.6	120.0	119.1	117.8	118.3	118.6	118.7	118.1	117.0
San Francisco—Oakland, Calif.	129.1	129.0	128.8	128.2	128.7	128.2	127.2	126.2	125.6	124.9	124.9	125.9	124.3	123.8
Scranton, Pa.		131.3			131.3			131.9			127.5			125.0
Seattle, Wash.	130.3	130.6	130.1	128.5	129.2	127.8	127.6	126.2	125.2	125.9	126.2	125.8	125.0	124.5
Washington, D.C.—Md.—Va.	137.1	136.2	136.6	135.7	136.2	134.8	133.5	131.2	130.5	131.6	132.5	131.3	129.1	129.5

¹ See table 23. Indexes measure time-to-time changes in prices. They do not indicate whether it costs more to live in one area than in another.

² The areas listed include not only the central city but the entire urban portion of the Standard Metropolitan Statistical Area, as defined for the 1960 Census of Population; except that the Standard Consolidated Area is used for New York and Chicago.

³ Average of 56 "cities" (metropolitan areas and nonmetropolitan urban places beginning January 1966).

⁴ All items indexes are computed monthly for 5 areas and once every 3 months on a rotating cycle for other areas.

⁵ Old series.

26. Wholesale price indexes,¹ by group and subgroup of commodities[1957-59=100 unless otherwise specified]²

Code	Commodity Group	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
	ALL COMMODITIES	117.0	116.8	116.6	116.6	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	113.0
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS	117.5	117.0	117.6	118.8	118.7	118.2	116.4	115.7	114.3	114.3	114.6	115.5	115.5	113.5
	INDUSTRIAL COMMODITIES	116.7	116.6	116.2	115.8	115.5	115.1	114.6	114.2	113.8	113.2	112.8	112.4	112.2	112.7
	FARM PRODUCTS, AND PROCESSED FOODS AND FEEDS														
	Farm products	111.3	111.0	111.3	114.3	113.7	112.5	111.7	111.1	107.9	108.4	108.9	110.5	111.2	108.5
01-1	Fresh and dried fruits and vegetables.....	122.2	123.5	112.7	118.2	117.2	116.6	112.4	125.3	101.3	103.4	106.7	103.1	112.9	111.0
01-2	Grains.....	89.2	88.4	87.8	85.5	85.9	85.9	82.9	81.7	84.8	83.4	81.9	83.7	85.6	83.3
01-3	Livestock.....	123.0	122.2	124.8	129.6	124.9	117.3	120.2	116.6	118.7	119.2	123.6	126.8	130.4	118.3
01-4	Live poultry.....	77.9	83.7	82.8	90.8	87.1	94.8	86.9	86.3	85.3	89.0	92.3	90.2	89.8	89.8
01-5	Plant and animal fibers.....	65.7	65.6	65.4	64.9	65.4	65.3	65.7	66.0	66.1	66.4	66.9	67.7	67.1	67.1
01-6	Fluid milk.....	139.6	139.5	141.1	139.7	140.8	140.5	138.3	137.6	136.8	135.6	135.1	134.9	134.6	134.8
01-7	Eggs.....	85.3	79.7	94.9	120.1	136.9	152.2	155.8	139.8	113.8	122.5	100.5	117.0	85.9	112.9
01-8	Hay, hayseeds, and oilseeds.....	112.6	111.1	109.8	106.3	106.3	107.7	105.1	103.4	101.2	105.7	107.3	111.3	110.6	109.2
01-9	Other farm products.....	114.9	115.0	114.7	114.8	115.2	116.3	113.1	115.9	116.7	110.6	109.3	106.9	106.2	109.1
02	Processed foods and feeds	124.8	124.1	124.9	124.9	125.2	125.1	122.6	121.8	121.6	121.3	121.5	122.0	121.4	119.8
02-1	Cereal and bakery products.....	124.6	124.6	124.6	123.7	123.3	122.3	122.0	121.9	121.2	120.4	120.1	119.9	119.7	120.2
02-2	Meats, poultry, and fish.....	123.7	122.5	124.9	127.1	124.9	125.8	121.9	120.5	120.2	122.9	124.5	127.5	126.5	119.5
02-3	Dairy products.....	135.4	135.4	135.1	133.1	134.1	133.9	133.9	131.2	130.7	133.4	133.0	133.0	133.0	131.9
02-4	Processed fruits and vegetables.....	118.5	118.1	117.5	116.5	117.3	116.9	116.4	116.3	116.0	116.6	116.8	116.6	115.6	115.7
02-5	Sugar and confectionery.....	130.4	129.4	128.7	127.4	127.7	129.1	127.1	127.9	127.7	127.2	127.2	122.3	123.0	123.6
02-6	Beverages and beverage materials.....	120.3	120.3	118.8	118.4	118.3	117.4	116.1	116.0	115.0	113.1	112.6	112.6	112.4	112.9
02-7	Animal fats and oils.....	111.5	116.8	118.8	133.7	115.7	111.0	115.6	123.0	118.3	104.0	105.0	96.4	91.2	100.3
02-72	Crude vegetable oils.....	105.3	106.6	114.7	110.7	99.5	86.4	86.1	97.0	88.4	79.8	80.0	80.0	81.9	83.5
02-73	Refined vegetable oils.....	102.8	106.4	107.7	111.9	99.8	97.8	97.9	91.1	88.9	85.0	84.7	89.4	89.4	90.3
02-74	Vegetable oil end products.....	113.2	113.1	113.6	112.4	107.5	107.5	108.0	106.5	104.7	102.1	102.1	102.1	103.3	103.5
02-8	Miscellaneous processed foods.....	126.7	124.1	125.8	127.1	127.4	126.5	126.4	127.2	131.6	121.2	119.8	119.5	118.6	121.5
02-9	Manufactured animal feeds.....	120.8	119.4	121.4	119.0	131.3	131.7	121.8	119.5	119.9	119.3	118.2	118.7	116.9	118.2
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	109.3	109.3	109.3	109.5	109.4	109.5	109.2	109.2	109.1	109.0	108.7	107.7	107.2	108.0
03-1	Cotton products.....	105.9	105.8	105.8	105.8	106.1	106.1	106.1	106.0	105.8	105.9	105.7	105.3	104.5	105.2
03-2	Wool products.....	102.8	103.8	104.0	104.4	104.3	104.3	104.3	104.6	104.5	105.0	104.8	105.0	105.0	104.6
03-3	Manmade fiber textile products.....	89.0	89.5	89.9	90.4	91.0	91.5	91.1	91.5	91.6	92.1	92.7	92.6	92.7	92.2
03-41	Silk yarns.....	199.5	204.8	201.3	194.2	196.3	193.5	191.1	184.6	183.9	181.2	177.1	168.2	164.6	169.7
03-5	Apparel.....	118.4	118.0	117.9	117.9	117.5	117.2	116.9	116.7	116.5	116.2	115.8	113.9	113.3	114.5
03-6	Textile housefurnishings.....	109.7	108.7	108.6	108.6	109.0	109.1	108.1	108.0	108.0	107.3	104.7	104.2	104.2	106.7
03-7	Miscellaneous textile products.....	124.3	125.6	121.4	126.5	124.3	129.0	127.8	129.6	127.2	121.4	119.6	120.3	118.0	122.8
04	Hides, skins, leather, and related products	127.3	127.9	128.5	126.8	126.7	126.6	126.5	126.8	127.4	128.2	126.4	126.4	125.7	125.8
04-1	Hides and skins.....	93.8	101.8	106.6	99.4	101.1	102.8	108.9	110.4	118.0	128.7	123.1	123.0	117.4	116.9
04-2	Leather.....	119.8	120.4	120.4	118.2	117.3	119.6	119.7	119.6	120.3	121.7	121.0	121.2	121.5	119.9
04-3	Footwear.....	137.9	137.8	138.4	136.9	136.9	135.9	135.0	135.5	132.5	134.9	132.7	132.7	132.3	133.2
04-4	Other leather and related products.....	120.9	120.4	120.0	119.9	119.8	119.2	118.5	118.6	118.4	117.9	117.6	117.5	117.2	116.9
05	Fuels and related products and power	108.6	109.1	107.5	106.3	106.4	105.6	106.1	105.5	105.4	104.7	104.7	105.0	105.0	104.6
05-1	Coal.....	152.8	146.9	145.9	133.4	131.7	125.4	124.6	123.5	120.6	115.9	115.5	115.4	114.2	116.2
05-2	Coke.....	139.6	139.6	139.6	126.9	126.9	126.9	126.9	126.9	126.9	120.3	120.3	120.3	120.3	122.0
05-3	Gas fuels (Jan. 1958=100).....	136.3	136.1	136.2	135.0	135.2	132.4	131.8	128.8	128.7	123.0	121.8	121.6	121.6	124.5
05-4	Electric power (Jan. 1958=100).....	104.3	104.2	103.7	103.6	103.6	103.4	103.4	103.4	103.7	103.5	102.4	102.5	102.6	102.7
05-61	Crude petroleum.....	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	103.7
05-7	Petroleum products, refined.....	102.2	104.2	101.3	100.8	101.2	101.0	102.2	101.6	101.6	101.8	102.5	103.2	103.3	101.8
06	Chemicals and allied products	100.5	100.6	100.4	100.0	99.5	99.1	98.8	98.9	98.6	98.9	98.7	98.2	98.3	98.3
06-1	Industrial chemicals.....	98.0	98.2	97.9	97.3	97.7	97.9	97.8	97.8	97.6	98.2	98.2	97.7	97.0	97.7
06-21	Prepared paint.....	122.8	122.8	122.8	122.8	122.0	121.7	120.3	120.3	120.3	119.2	119.2	119.2	119.2	119.2
06-22	Paint materials.....	91.8	93.2	92.6	92.6	92.8	93.4	93.4	93.1	93.9	93.3	93.3	93.2	92.8	92.8
06-3	Drugs and pharmaceuticals.....	94.8	94.7	94.7	95.0	94.6	94.5	94.6	94.2	94.0	94.0	93.8	93.8	93.8	93.8
06-4	Fats and oils, inedible.....	108.1	106.8	107.6	102.2	94.3	95.0	92.8	100.5	98.9	102.1	99.3	90.5	86.8	88.7
06-5	Agricultural chemicals and chem. products.....	91.8	91.7	92.4	92.0	91.4	87.6	86.7	86.7	86.3	87.4	88.4	88.6	92.1	89.8
06-6	Plastic resins and materials.....	80.2	80.6	81.1	81.2	80.3	80.0	80.1	79.6	80.2	81.0	80.7	80.2	80.8	80.7
06-7	Other chemicals and allied products.....	117.8	117.7	116.8	116.5	115.7	115.5	115.1	114.9	114.3	113.9	112.9	112.8	112.8	112.9
07	Rubber and plastic products	104.1	104.2	104.2	104.4	104.6	104.7	104.5	104.4	103.5	102.7	103.0	102.5	101.2	102.1
07-11	Crude rubber.....	86.8	87.1	87.5	87.6	89.4	89.3	88.1	88.7	89.7	90.6	92.5	90.7	89.7	89.4
07-12	Tires and tubes.....	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	100.6	99.2	99.2	98.4	98.2
07-13	Miscellaneous rubber products.....	115.7	115.7	114.3	114.3	114.3	114.0	113.4	113.0	111.7	110.7	110.8	111.0	110.2	110.8
07-21	Plastic construction products (Dec. 1969=100).....	97.4	97.6	98.7	99.1	99.1	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
08	Lumber and wood products	120.2	121.0	120.1	119.5	120.2	121.6	122.5	123.9	122.6	123.2	124.0	125.3	129.8	132.0
08-1	Lumber.....	123.0	124.3	123.5	123.3	124.1	126.9	128.2	129.3	128.0	129.5	131.1	133.4	142.3	142.6
08-2	Millwork.....	131.1	131.1	130.8	130.7	130.7	131.5	131.7	133.2	133.9	134.4	135.1	135.6	136.0	132.2
08-3	Plywood.....	98.5	99.5	97.2	94.5	96.3	95.5	96.9	99.6	95.8	94.4	93.6	93.9	94.2	109.3
08-4	Other wood products (Dec. 1966=100).....	119.3	119.3	119.3	119.5	119.5	119.5	118.4	116.7	116.7	116.5	116.8	115.6	115.1	114.8

See footnotes at end of table.

26. Wholesale price indexes,¹ by group and subgroup of commodities—Continued[1957=100 unless otherwise specified]²

Code	Commodity Group	1970						1969						Annual average 1969	
		June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
INDUSTRIAL COMMODITIES—Continued															
09	Pulp, paper, and allied products.....	112.2	112.3	112.5	112.1	111.8	111.1	109.5	109.3	109.0	108.8	108.7	108.4	108.3	108.2
09-1	Pulp, paper, and products, excluding building paper and board.....	113.0	113.0	113.2	112.9	112.5	111.8	110.1	109.9	109.6	109.3	109.2	108.9	108.6	108.6
09-11	Woodpulp.....	105.0	105.0	105.0	104.7	104.7	103.7	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
09-12	Wastepaper.....	99.0	104.2	108.5	108.5	108.2	107.5	106.7	107.0	107.2	108.4	110.3	111.2	108.8	108.3
09-13	Paper.....	121.7	121.6	121.6	121.6	121.5	120.3	117.4	117.0	116.5	116.5	117.2	117.1	117.0	116.6
09-14	Paperboard.....	95.5	96.7	97.0	97.0	97.1	96.0	96.0	96.0	95.9	95.9	95.8	93.7	93.5	94.4
09-15	Converted paper and paperboard products.....	113.6	113.4	113.5	112.9	112.2	111.9	110.7	110.6	110.3	109.8	109.2	109.0	108.7	108.8
09-2	Building paper and board.....	93.3	93.3	93.4	92.9	93.0	93.4	93.9	94.4	94.6	95.1	95.2	95.9	99.4	97.1
10	Metals and metal products.....	129.1	128.7	127.8	127.0	126.1	124.9	123.8	122.9	122.4	121.7	120.4	118.7	117.9	118.9
10-1	Iron and steel.....	120.2	118.9	117.3	117.7	117.0	114.6	113.9	113.7	113.7	113.2	112.7	111.1	110.3	111.0
10-13	Steel mill products.....	122.0	120.5	118.7	118.4	117.7	115.5	116.4	116.4	116.4	115.5	115.4	113.6	112.8	113.7
10-2	Nonferrous metals.....	155.0	157.2	157.1	153.4	152.8	152.8	150.1	146.4	144.8	143.5	139.5	136.1	135.5	137.4
10-3	Metal containers.....	125.0	125.0	125.0	125.0	125.0	120.6	120.6	120.6	120.6	120.3	119.7	119.7	119.7	119.7
10-4	Hardware.....	125.9	125.4	125.2	124.9	124.7	124.2	123.0	122.7	122.2	121.0	120.6	120.5	119.9	120.5
10-5	Plumbing fixtures and brass fittings.....	124.7	124.0	123.2	122.8	122.8	122.8	122.8	122.2	120.8	120.2	119.4	119.4	117.9	118.7
10-6	Heating equipment.....	102.4	101.7	101.3	100.5	99.9	99.7	99.7	99.3	98.7	98.0	97.7	97.7	97.2	97.6
10-7	Fabricated structural metal products.....	118.1	117.3	116.4	116.0	114.6	114.0	113.7	113.6	113.4	112.8	112.6	112.0	111.0	111.5
10-8	Miscellaneous metal products.....	130.4	128.3	127.5	127.1	125.2	124.9	124.5	124.4	124.4	124.2	123.2	121.3	120.7	122.0
11	Machinery and equipment.....	124.1	123.7	123.4	123.1	122.8	122.5	121.9	121.0	120.5	119.9	119.1	119.0	118.6	119.0
11-1	Agricultural machinery and equipment.....	137.1	137.4	137.3	137.1	137.2	136.7	136.4	135.8	133.2	133.0	132.3	132.3	132.0	132.8
11-2	Construction machinery and equipment.....	141.0	140.9	140.8	140.6	140.3	140.2	139.8	138.6	137.7	136.1	134.9	134.8	134.5	135.5
11-3	Metalworking machinery and equipment.....	141.7	141.3	140.3	139.8	139.3	138.6	138.0	136.5	134.4	134.4	133.5	133.3	132.3	133.4
11-4	General purpose machinery and equipment.....	128.2	127.9	127.6	127.1	126.5	126.1	124.8	123.7	123.4	122.6	121.8	121.5	121.2	121.4
11-6	Special industry machinery and equipment (Jan. 1961=100).....	134.3	134.0	133.6	133.6	133.4	133.3	132.8	130.6	130.2	129.6	129.2	129.2	128.1	128.7
11-7	Electrical machinery and equipment.....	108.2	107.5	107.3	107.2	106.9	106.8	106.2	106.0	105.6	105.4	104.7	104.8	104.7	104.8
11-9	Miscellaneous machinery.....	123.1	122.9	122.8	122.3	121.7	121.5	121.0	120.4	120.0	119.2	118.5	118.1	117.8	118.1
12	Furniture and household durables.....	108.6	108.3	108.3	108.1	107.9	107.5	107.2	106.9	106.5	106.4	106.2	106.1	105.9	106.1
12-1	Household furniture.....	126.0	125.9	125.6	125.3	125.1	124.3	123.6	123.6	123.3	123.0	123.0	122.8	122.3	122.3
12-2	Commercial furniture.....	127.6	125.1	125.1	124.9	124.5	124.4	124.0	124.0	122.4	121.7	119.5	119.5	119.3	120.0
12-3	Floor coverings.....	92.6	92.8	93.1	93.4	93.5	93.5	93.1	93.1	93.1	93.2	93.2	93.2	93.8	94.1
12-4	Household appliances.....	94.9	94.9	94.8	94.7	94.4	94.4	93.6	93.6	93.1	93.0	93.0	93.0	92.9	93.0
12-5	Home electronic equipment.....	77.0	77.0	77.0	77.2	77.2	77.2	77.8	77.7	77.9	77.9	77.9	77.9	78.1	78.2
12-6	Other household durable goods.....	135.5	135.3	135.6	134.6	134.8	133.0	133.3	131.1	131.2	131.4	131.4	131.2	130.2	130.6
13	Nonmetallic mineral products.....	117.9	117.9	117.8	117.3	116.9	116.5	114.5	113.9	113.8	113.5	113.0	113.0	112.8	112.8
13-11	Flat glass.....	121.6	121.1	121.5	119.9	119.0	118.4	117.8	116.2	116.2	116.2	116.2	116.2	115.2	114.6
13-2	Concrete ingredients.....	122.3	122.1	121.9	120.8	120.6	120.1	116.7	116.7	116.6	116.5	116.1	116.1	115.9	115.6
13-3	Concrete products.....	118.1	117.4	117.2	117.0	116.4	115.9	114.2	113.6	113.5	113.2	112.4	112.3	111.6	112.2
13-4	Structural clay products exc. refractories.....	121.2	121.2	120.9	119.8	119.4	119.4	118.5	118.5	117.8	117.5	117.0	116.9	116.9	117.0
13-5	Refractories.....	125.8	126.1	125.9	125.4	125.1	123.5	120.9	117.2	117.2	117.2	117.0	113.6	113.6	115.1
13-6	Asphalt roofing.....	92.7	95.1	95.1	97.8	100.8	101.8	101.2	94.0	96.7	96.7	96.7	100.9	100.2	98.3
13-7	Gypsum products.....	100.7	104.0	105.6	107.0	108.3	107.3	104.3	109.8	105.9	106.1	103.2	104.9	108.7	106.4
13-8	Glass containers.....	120.9	120.9	120.9	120.9	120.9	120.9	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1
13-9	Other nonmetallic minerals.....	113.7	113.7	113.5	112.4	111.0	111.0	110.6	110.6	109.6	109.6	109.2	109.0	109.0	109.1
14	Transportation equipment (Dec. 1968=100).....	103.3	103.2	103.1	103.2	102.9	102.9	102.7	102.7	102.3	100.0	99.9	100.4	100.3	100.7
14-1	Motor vehicles and equipment.....	109.5	109.4	109.3	109.4	109.1	109.1	109.0	109.0	108.7	106.1	106.0	106.6	106.6	107.0
14-4	Railroad equipment (Jan. 1961=100).....	119.3	119.0	118.8	118.7	117.7	117.4	115.7	115.1	114.4	114.3	114.3	111.8	112.4	
15	Miscellaneous products.....	121.0	118.2	117.8	117.8	117.5	117.4	117.0	117.0	116.7	116.4	115.9	115.5	115.1	114.7
15-1	Toys, sporting goods, small arms, ammunition.....	115.8	115.1	115.0	115.3	114.2	114.1	112.7	112.8	112.3	112.1	111.8	111.2	110.9	111.3
15-2	Tobacco products.....	132.3	124.1	124.1	124.1	124.0	124.0	124.0	124.0	123.8	123.8	123.5	123.4	123.2	120.8
15-3	Notions.....	109.4	109.0	109.0	109.0	109.0	107.2	107.2	106.7	106.7	106.7	106.7	102.0	102.0	103.6
15-4	Photographic equipment and supplies.....	116.1	116.2	116.2	115.9	115.8	115.7	115.3	115.0	114.9	113.9	111.4	111.4	112.6	113.0
15-9	Other miscellaneous products.....	116.8	116.6	115.0	114.8	114.8	115.1	114.9	114.9	114.8	114.3	114.2	114.1	112.6	113.1

¹ As of January 1967, the indexes incorporated a revised weighting structure reflecting 1963 values of shipments. Changes also were made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

² As of January 1962, the indexes were converted from the former base of 1947-49=100 to the new base of 1957-59=100. Technical details and earlier data on the 1957-59 base furnished upon request to the Bureau.

NOTE: For a description of the general method of computing the monthly Wholesale Price Index, see BLS Handbook of Methods for Surveys and Studies (BLS Bulletin 1458, October 1966), Chapter 11.

27. Wholesale price indexes for special commodity groupings¹[1957-59=100, unless otherwise specified]²

Commodity group	1970						1969						Annual average 1969	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
All commodities—less farm products.....	117.6	117.4	117.2	116.8	116.6	116.3	115.4	115.0	114.7	114.1	113.8	113.6	113.3	113.4
All foods.....	123.5	122.8	123.2	124.9	124.5	125.0	123.3	123.1	119.8	120.1	119.9	120.7	119.9	119.0
Processed foods.....	125.2	124.6	125.4	125.7	124.6	124.5	122.8	122.1	121.8	121.6	121.9	122.5	122.0	119.9
Textile products, excluding hard and bast fiber products.....	99.9	100.2	100.4	100.6	101.0	101.3	101.0	101.1	101.1	101.3	101.3	101.0	100.8	101.0
Hosiery.....	92.2	92.3	92.3	92.4	92.8	92.8	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
Underwear and nightwear.....	116.9	116.7	116.7	116.4	116.4	116.2	115.9	115.7	115.7	115.6	115.6	115.6	114.5	115.0
Refined petroleum products.....	102.2	104.2	101.3	100.8	101.2	101.0	102.2	101.6	101.6	101.8	102.5	103.2	103.3	101.8
East Coast.....	113.2	110.2	103.6	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4
Mid-Continent.....	101.4	111.7	98.5	99.2	102.2	101.2	103.9	102.5	98.7	98.0	103.9	98.8	103.9	102.0
Gulf Coast.....	97.5	99.6	98.6	99.3	99.3	98.4	100.7	99.8	101.4	101.4	101.4	104.8	103.2	100.7
Pacific Coast.....	94.8	94.8	94.0	92.2	91.2	92.5	92.5	92.5	92.3	94.9	94.9	94.9	93.6	93.0
Midwest (Jan. 1961=100).....	100.9	101.8	99.3	96.8	98.0	98.0	99.1	98.4	97.4	97.0	97.0	97.0	98.7	97.5
Pharmaceutical preparations.....	96.9	96.9	96.8	97.4	97.0	97.0	97.1	96.7	96.5	96.5	96.2	96.3	96.2	96.3
Lumber and wood products excluding millwork and other wood products ³	117.4	118.6	117.3	116.4	117.5	119.3	120.6	122.2	120.1	120.8	121.7	123.5	130.0	134.6
Special metals and metal products ⁴	123.4	123.1	122.5	122.0	121.4	120.6	119.9	119.2	118.8	117.5	116.6	115.7	115.2	116.0
Machinery and motive products.....	119.5	119.3	119.0	118.9	118.6	118.4	117.9	117.4	116.9	115.5	115.1	115.2	114.9	115.3
Machinery and equipment, except electrical.....	134.3	134.1	133.7	133.3	132.9	132.6	131.9	130.6	129.9	129.0	128.3	128.1	127.5	128.1
Agricultural machinery, including tractors.....	139.4	139.8	139.7	139.6	139.7	139.3	139.1	138.5	135.5	135.3	134.6	134.7	134.3	135.2
Metalworking machinery.....	149.0	148.3	147.1	146.6	146.0	145.2	144.6	143.6	143.4	141.7	140.9	140.9	139.2	140.5
Total tractors.....	142.6	142.8	142.8	142.9	143.0	142.8	142.5	141.3	139.4	138.4	137.1	137.0	137.0	138.1
Industrial valves.....	131.8	131.2	130.1	130.0	129.4	128.5	127.3	125.8	125.8	124.8	124.8	125.8	126.5	124.2
Industrial fittings.....	124.2	124.2	124.2	124.2	124.2	123.2	119.4	118.6	118.0	118.0	115.3	115.3	115.9	115.9
Abrasive grinding wheels.....	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.0	102.6	102.6	102.6	102.6	102.6	103.3
Construction materials.....	118.6	118.5	118.0	117.5	117.4	117.4	116.9	116.9	116.3	115.9	115.7	115.9	116.9	117.7

¹ See footnote 1, table 26.² See footnote 2, table 26.³ Formerly titled "Lumber and wood products, excluding millwork."⁴ Metals and metal products, agricultural machinery and equipment, and motor vehicles and equipment.

28. Wholesale price indexes,¹ by stage of processing[1957-59=100]²

Commodity group	1970						1969						Annual average 1969	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
ALL COMMODITIES	117.0	116.8	116.6	116.6	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	113.0
CRUDE MATERIALS FOR FURTHER PROCESSING	113.0	112.8	113.4	114.2	113.0	110.7	109.9	109.0	108.7	108.7	109.5	110.2	111.2	107.9
Foodstuffs and feedstuffs.....	114.8	114.4	115.3	117.3	115.5	112.9	112.2	111.0	110.5	110.4	112.1	113.8	115.6	110.4
Nonfood materials except fuel.....	105.9	106.9	107.0	106.6	106.9	105.3	104.2	104.0	104.0	104.8	104.1	102.6	102.1	102.0
Manufacturing.....	104.6	105.6	105.8	105.6	105.9	104.3	103.2	103.0	103.0	103.9	103.2	101.6	101.0	101.0
Construction.....	120.7	120.3	120.2	118.0	117.5	116.4	115.3	115.3	115.1	114.9	114.1	114.1	113.8	114.0
Crude fuel.....	134.4	131.8	131.5	125.2	124.7	122.2	121.5	121.1	119.9	118.1	117.2	117.1	116.8	117.6
Manufacturing industries.....	128.1	126.2	126.0	121.5	121.2	119.6	118.8	118.6	117.8	116.7	115.6	115.5	115.3	116.0
Nonmanufacturing industries.....	143.0	139.2	138.8	130.3	129.4	125.8	125.0	124.5	122.8	120.1	119.4	119.3	118.7	119.8
INTERMEDIATE MATERIALS, SUPPLIES AND COMPONENTS	115.9	115.7	115.3	114.8	114.7	114.4	113.5	113.1	112.8	112.4	111.9	111.4	111.4	111.8
Materials and Components for Manufacturing.....	115.4	115.3	115.0	114.4	113.9	113.6	112.9	112.6	112.2	111.8	111.4	110.6	110.4	110.8
Materials for food manufacturing.....	123.0	122.5	123.4	122.9	121.5	121.1	119.9	120.0	119.2	118.3	118.4	117.8	117.8	116.8
Materials for nondurable manufacturing.....	102.4	102.8	102.7	102.4	102.3	102.3	101.6	101.7	101.5	101.7	101.7	101.2	101.1	101.2
Materials for durable manufacturing.....	125.6	125.4	124.5	123.4	122.7	122.1	121.4	120.4	120.0	119.6	118.7	117.4	117.1	118.1
Components for manufacturing.....	119.7	119.0	118.7	118.3	118.0	117.7	117.0	116.7	116.1	115.1	114.3	113.9	113.4	114.0
Materials and Components for Construction.....	118.9	118.6	118.2	117.7	117.3	117.3	116.8	116.7	116.2	115.8	115.5	115.4	116.0	116.9
Processed fuels and lubricants.....	104.8	105.1	103.6	103.0	103.0	102.4	102.7	102.1	102.3	101.0	100.6	100.8	100.9	100.9
Manufacturing industries.....	107.6	107.3	106.7	106.1	106.0	105.3	105.1	104.5	104.8	103.2	102.3	102.4	102.4	103.1
Nonmanufacturing industries.....	100.4	101.6	98.8	98.3	98.3	97.8	99.0	98.4	98.4	97.6	97.8	98.4	98.5	97.4
Containers.....	118.7	118.5	118.5	118.1	117.6	116.2	114.8	114.6	114.5	114.2	113.7	113.3	113.2	113.3
Supplies.....	118.9	118.3	118.5	117.6	120.1	119.7	116.9	115.9	115.6	115.1	114.4	114.3	113.8	114.4
Manufacturing industries.....	122.1	121.9	121.7	121.1	120.9	120.5	119.4	118.7	118.0	117.8	117.4	116.8	116.7	117.0
Nonmanufacturing industries.....	116.8	116.0	116.4	115.4	119.1	118.6	115.1	113.9	113.9	113.3	112.4	112.5	111.9	112.5
Manufactured animal feeds.....	112.9	111.4	113.2	110.7	122.8	123.7	114.1	111.6	112.3	111.7	110.5	110.8	109.3	110.6
Other supplies.....	114.8	114.5	114.2	113.9	113.4	112.3	111.8	111.4	111.0	110.4	109.7	109.7	109.6	109.8
FINISHED GOODS (Including Raw Foods and Fuels)	119.0	118.7	118.6	119.0	118.8	118.8	118.0	117.6	116.5	116.0	115.7	115.9	115.4	115.3
Consumer Goods.....	117.3	117.0	116.8	117.4	117.3	117.3	116.5	116.2	115.1	114.7	114.4	114.8	114.2	114.0
Foods.....	124.2	123.6	124.1	126.0	125.9	126.4	124.5	123.9	121.2	121.6	121.2	122.3	121.3	120.3
Crude.....	115.4	115.0	114.3	123.3	128.0	131.6	129.5	131.0	114.2	116.9	112.4	114.9	111.3	117.5
Processed.....	125.8	125.2	125.9	126.4	125.4	125.3	123.5	122.5	122.4	122.4	122.8	123.7	123.1	120.7
Other nondurable goods.....	115.9	115.6	114.9	114.7	114.6	114.2	114.1	113.8	113.6	113.3	113.0	112.6	112.2	112.3
Durable goods.....	108.1	108.0	107.8	107.8	107.6	107.4	107.2	107.1	106.9	105.3	105.2	105.6	105.5	105.8
Producer Finished Goods.....	124.2	124.0	123.7	123.5	123.1	122.9	122.3	121.5	120.8	119.9	119.3	119.3	118.7	119.3
Manufacturing industries.....	129.9	129.5	129.1	128.9	128.4	128.0	127.5	126.2	125.8	125.0	124.4	124.4	123.5	124.1
Nonmanufacturing industries.....	119.0	118.8	118.7	118.5	118.2	118.0	117.4	117.0	116.1	115.0	114.4	114.5	114.2	114.7
SPECIAL GROUPINGS														
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds and leaf tobacco.....	119.5	120.0	120.3	118.5	118.5	116.0	114.5	114.1	113.7	113.9	112.5	110.7	110.2	110.5
Intermediate materials supplies and components, excluding intermediate materials for food mfg., and mfr.'d animal feeds.....	115.4	115.2	114.7	114.2	113.9	113.5	112.9	112.6	112.2	111.8	111.3	110.9	110.8	111.3
Consumer finished goods, excluding consumer foods.....	112.9	112.7	112.2	112.1	111.9	111.7	111.5	111.3	111.1	110.3	110.1	110.0	109.7	109.9

¹ See footnote 1, table 26.² See footnote 2, table 26.

NOTE: For description of the series by stage of processing, see Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final).

29. Wholesale price indexes,¹ by durability of product[1957-59=100]²

Commodity group	1970						1969						Annual average 1969	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
All commodities.....	117.0	116.8	116.6	116.6	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	113.0
Total durable goods.....	121.5	121.3	120.9	120.5	120.0	119.6	119.0	118.4	117.9	117.1	116.5	116.1	115.9	116.6
Total nondurable goods.....	113.8	113.6	113.6	113.9	113.9	113.4	112.4	111.9	111.2	111.1	111.1	111.3	111.2	110.3
Total manufactures.....	117.4	117.1	116.9	116.6	116.4	116.1	115.3	114.9	114.6	113.9	113.6	113.5	113.2	113.3
Durable.....	121.3	121.0	120.5	120.1	119.7	119.4	118.8	118.3	117.9	117.0	116.4	116.1	116.0	116.6
Nondurable.....	113.6	113.4	113.4	113.2	113.2	113.0	111.9	111.6	111.4	111.0	111.0	111.0	110.6	110.1
Total raw or slightly processed goods.....	114.7	114.5	114.7	116.3	116.0	114.8	113.9	113.1	111.0	111.6	111.5	112.2	112.6	110.9
Durable.....	128.9	131.9	131.9	134.0	133.8	128.9	125.3	124.0	122.8	123.7	119.7	114.8	114.9	115.8
Nondurable.....	113.9	113.6	113.8	115.3	115.1	114.1	113.3	112.5	110.3	110.9	111.1	112.1	112.4	110.7

¹ See footnote 1, table 26.² See footnote 2, table 26.

NOTE: For description of the series by durability of product and data beginning with 1947, see "Wholesale Price and Price Indexes, 1957" (BLS Bulletin 1235, 1958).

30. Industry-sector price indexes for the output of selected industries¹

[1957-59=100 unless otherwise indicated]

1963 SIC Code	Industry	Other bases	1969												1968 Dec.	Annual average 1969
			Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.		
MINING																
1111	Anthracite.....		118.4	114.9	111.4	111.4	108.0	108.0	104.2	104.2	106.2	107.4	107.4	107.0	107.0	109.0
1211	Bituminous coal.....		124.9	124.2	121.3	116.2	116.1	116.0	115.0	114.1	113.4	113.1	113.1	113.1	113.1	116.7
1311	Crude petroleum and natural gas.....		110.9	110.9	110.8	110.9	110.6	110.5	110.6	110.7	110.9	109.9	106.6	106.5	106.4	110.0
1421	Crushed and broken stone.....		114.5	114.5	114.2	114.2	113.6	113.6	112.6	112.6	112.5	112.5	112.5	111.3	111.3	113.4
1442	Construction sand and gravel.....		123.0	123.0	123.0	122.5	121.5	121.5	120.7	120.6	120.8	120.6	119.8	119.8	118.6	121.4
1475	Phosphate rock.....		147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4
1476	Rock salt.....		107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	100.8	100.8	100.8	100.8	100.8	105.5
1477	Sulfur.....		115.8	115.8	124.1	165.4	165.4	165.4	165.4	165.4	165.4	165.4	165.4	173.7	173.7	154.4
MANUFACTURING																
2011	Meat slaughtering plants.....	12/66	114.0	113.5	113.8	116.2	117.4	121.7	121.2	114.8	108.0	104.6	103.9	104.2	100.1	112.8
2013	Meat processing plants.....	12/66	121.3	118.5	119.1	120.3	122.0	118.7	117.0	109.7	104.8	103.4	101.7	100.3	100.7	113.1
2015	Poultry dressing plants.....		105.7	103.3	101.7	104.0	107.8	103.3	101.7	102.3	96.1	99.6	98.5	95.9	90.4	101.7
2021	Creamery butter.....	12/66	106.3	105.1	105.1	105.1	104.9	104.9	104.8	104.8	104.9	103.4	103.3	103.4	105.0	104.7
2033	Canned fruits and vegetables.....	12/66	109.8	109.7	109.5	109.0	108.7	108.7	107.7	107.7	107.8	107.7	107.6	107.4	107.3	108.4
2036	Fresh or frozen packaged fish.....		150.8	154.1	146.5	145.9	143.8	146.4	139.9	140.4	136.8	141.7	141.4	140.1	139.0	144.0
2044	Rice milling.....		94.0	94.0	94.0	93.1	92.6	92.6	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.6
2052	Biscuits, crackers and cookies.....	12/66	109.7	109.7	108.0	107.1	104.5	104.4	104.4	104.4	104.3	104.3	104.3	104.3	104.3	105.8
2061	Raw cane sugar.....	12/66	107.0	110.1	110.5	109.6	108.9	104.5	109.5	109.5	109.0	108.5	107.7	107.5	106.8	108.5
2062	Cane sugar refining.....	12/66	108.9	109.3	109.2	108.4	108.1	107.6	107.6	107.2	105.8	103.9	103.6	103.6	103.2	106.9
2063	Beet sugar.....	12/66	106.1	106.6	106.7	106.4	106.3	105.7	106.7	104.9	105.0	102.3	102.2	102.6	102.5	105.1
2073	Chewing gum.....		106.2	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2082	Malt liquors.....		107.3	107.3	107.7	107.1	107.2	107.2	106.7	106.0	104.9	104.9	104.9	104.9	104.9	106.3
2083	Malt.....	12/66	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2084	Wines and brandy.....		118.3	118.3	118.3	115.5	115.5	115.7	115.7	115.7	115.7	115.5	115.5	115.5	116.3	
2091	Cottonseed oil mills.....		99.4	95.8	91.5	97.0	97.2	98.3	92.9	92.7	93.9	93.6	93.7	95.0	94.5	95.1
2092	Soybean oil mills.....	12/66	88.6	88.0	91.0	85.7	87.4	87.1	87.0	86.3	85.6	84.8	83.1	83.3	82.2	86.5
2094	Animal and marine fats and oils.....	12/66	96.4	104.9	102.1	105.8	104.6	99.6	93.8	89.0	88.9	85.1	82.9	81.3	79.7	94.5
2096	Shortening and cooking oils.....		108.8	107.2	105.5	102.6	102.5	102.3	103.3	103.1	103.2	103.1	102.9	101.0	100.3	103.8
2098	Macaroni and noodle products.....	12/66	101.9	101.9	101.9	101.9	101.8	101.9	101.8	101.8	101.5	100.4	100.3	100.3	100.3	101.5
2111	Cigarettes.....		125.1	125.0	125.0	125.0	125.0	125.0	124.9	117.5	117.5	117.4	117.4	117.4	121.9	
2121	Cigars.....		107.3	107.3	106.8	106.8	105.2	103.8	102.7	102.7	102.7	102.1	102.0	102.0	101.7	104.3
2131	Chewing and smoking tobacco.....		141.4	140.6	138.5	138.3	138.1	138.1	137.1	137.0	136.0	134.7	134.7	132.4	132.4	137.2
2254	Knit underwear mills.....	12/66	107.8	107.7	107.7	107.7	107.7	107.7	106.3	106.4	106.3	106.3	106.3	106.3	105.7	107.0
2311	Men's and boys' suits and coats.....		142.7	142.2	140.4	139.4	138.5	137.1	135.8	134.4	134.7	134.3	134.3	134.2	133.4	137.3
2321	Men's dress shirts and nightwear.....		122.1	121.0	121.0	120.6	120.6	118.3	118.2	118.2	118.8	118.8	118.9	118.7	115.5	119.6
2322	Men's and boys' underwear.....	12/66	109.1	109.0	109.0	107.9	107.9	107.7	106.9	107.0	107.1	107.0	107.0	106.9	106.4	107.7
2327	Men's and boys' separate trousers.....	12/66	106.9	106.8	106.8	106.4	106.3	106.1	106.1	104.8	104.8	104.7	104.7	104.7	103.9	105.8
2328	Work clothing.....		119.1	119.0	119.0	118.3	117.7	117.4	117.4	116.6	116.6	116.6	116.6	116.5	115.1	117.6
2381	Fabric dress and work gloves.....		137.1	135.4	135.4	134.8	132.1	131.9	131.9	131.7	130.8	130.6	130.1	128.4	132.8	
2426	Hardwood dimension and flooring.....	12/66	116.5	116.6	116.7	117.2	117.3	117.8	119.0	120.7	121.1	120.6	118.8	116.5	114.7	118.2
2442	Wirebound boxes and crates.....	12/67	110.7	110.0	110.0	110.0	108.6	108.3	107.4	107.4	106.5	106.4	106.3	106.3	105.6	108.2
2515	Mattresses and bedspreads.....	12/66	108.2	108.7	108.5	108.5	108.5	108.3	108.2	108.2	108.3	108.2	108.2	106.7	104.3	108.2
2521	Wood office furniture.....		139.2	138.9	137.6	135.9	134.3	134.3	134.3	133.4	132.8	132.2	131.7	131.1	131.1	134.6
2647	Sanitary paper products.....	12/66	115.3	115.3	113.9	113.5	113.1	112.3	111.5	111.1	111.1	111.1	110.2	108.0	108.0	112.2
2654	Sanitary food containers.....	12/66	101.3	101.2	100.6	100.4	100.4	100.1	100.7	100.6	100.6	100.4	100.7	100.8	100.5	100.7

See footnotes at end of table.

30. Industry-sector price indexes for the output of selected industries 1—Continued

1963 SIC Code	Industry	Other bases	1969												1968	Annual Average 1969
			Dec. 2	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	
MANUFACTURING—Continued																
2822	Synthetic rubber.....		96.0	96.0	96.0	96.0	95.9	95.9	95.9	95.9	95.8	95.3	95.3	94.5	94.7	95.7
2823	Cellulosic man-made fibers.....		95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.8	95.8	95.8	95.7	95.7
2824	Organic fibers, noncellulosic.....	12/66	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
2871	Fertilizers.....	12/66	85.0	85.0	85.4	88.3	88.5	88.7	99.2	99.2	99.2	99.2	99.4	99.4	100.3	93.1
2872	Fertilizers, mixing only.....	12/66	90.6	90.6	91.2	92.7	92.6	93.1	93.3	93.3	93.3	93.9	93.7	94.1	94.8	92.7
2892	Explosives.....		117.1	117.3	117.3	117.4	117.5	117.4	117.5	116.9	115.0	114.8	114.1	114.1	114.6	116.4
2911	Petroleum refining.....		97.8	97.3	97.3	97.5	98.1	98.8	98.8	98.0	98.0	97.1	95.1	94.7	95.1	97.4
3111	Leather tanning and finishing.....		120.4	120.5	121.2	122.3	121.5	121.7	122.1	122.2	122.8	116.7	116.7	117.0	116.1	120.4
3121	Industrial leather belting.....	12/66	118.3	117.2	117.4	117.6	118.2	117.5	113.5	115.4	112.0	111.5	110.5	109.7	111.0	114.9
3221	Glass containers.....		116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	110.3	116.1
3241	Cement, hydraulic.....		114.9	114.9	114.9	114.9	114.8	114.8	114.8	114.8	114.8	114.7	111.7	108.5	105.9	114.0
3251	Brick and structural clay tile.....		125.1	125.1	124.4	124.4	123.5	123.5	123.5	123.5	123.0	121.5	121.5	121.4	121.2	123.3
3255	Clay refractories.....		126.2	122.2	122.2	122.2	122.0	117.8	117.8	117.8	117.8	116.7	116.7	116.7	116.7	119.7
3259	Structural clay products, n.e.c.....		116.4	116.4	115.9	115.1	115.0	114.4	114.8	115.3	115.3	115.3	115.1	115.0	114.1	115.3
3261	Vitreous plumbing fixtures.....		104.6	104.2	103.4	102.4	102.4	102.4	100.9	100.8	99.8	99.8	99.7	99.5	99.1	101.7
3262	Vitreous china food utensils.....		143.7	143.7	139.8	139.8	139.8	139.8	137.2	137.2	137.2	134.3	134.3	134.3	134.3	138.4
3263	Fine earthenware food utensils.....		131.2	131.2	130.9	130.9	130.9	130.9	127.0	127.0	127.0	123.3	123.3	123.3	123.3	128.1
3271	Concrete block and brick.....		115.4	115.0	114.9	114.6	114.5	114.5	113.7	114.2	114.2	114.5	113.4	112.9	111.7	114.3
3273	Ready mixed concrete.....	1958	115.7	114.9	114.7	114.4	113.7	113.5	112.7	112.6	112.3	111.8	111.7	111.7	110.3	113.3
3275	Gypsum products.....		104.7	110.1	106.2	106.4	103.6	105.2	108.9	108.9	106.5	106.5	106.5	106.5	106.5	106.7
3312	Blast furnace and steel mills.....		115.3	115.3	115.2	114.4	114.3	112.5	111.8	111.7	110.8	110.6	109.5	109.3	107.7	112.6
3315	Steel wire drawing, etc.....	12/66	108.6	108.5	108.4	107.5	107.0	106.4	106.3	105.9	105.1	105.1	105.1	104.5	103.7	106.5
3316	Cold finishing of steel shapes.....	12/66	113.6	113.7	113.7	112.1	112.1	109.0	109.0	108.7	107.5	107.4	107.4	107.2	107.0	110.1
3317	Steel pipe and tube.....	12/66	110.5	110.4	110.4	108.4	107.8	107.7	107.3	107.3	107.2	105.7	105.6	104.8	104.7	107.8
3333	Primary zinc.....	12/66	107.7	107.7	107.4	105.6	100.9	100.6	100.5	100.4	97.1	96.9	96.9	97.2	93.9	101.6
3334	Primary aluminum.....	12/66	114.0	114.0	114.0	110.0	110.0	110.0	109.0	109.0	109.0	109.0	109.0	109.0	106.1	110.3
3339	Primary nonferrous metals, n.e.c.....	12/66	134.8	138.9	133.9	131.8	123.8	120.5	120.1	120.1	120.3	119.5	119.8	122.3	119.4	125.5
3351	Copper rolling and drawing.....		171.4	166.4	166.4	165.9	162.6	154.5	152.3	151.7	147.8	144.6	142.8	142.8	134.3	155.6
3411	Metal cans.....	12/66	109.0	109.0	109.0	109.0	109.0	108.9	108.9	108.9	108.9	108.9	108.9	106.3	106.2	108.7
3423	Hand and edge tools.....	12/67	110.8	110.6	109.6	108.4	108.4	107.8	107.1	106.9	107.2	106.3	105.9	105.0	104.8	107.8
3431	Metal plumbing fixtures.....		100.4	100.3	99.8	99.4	98.8	98.7	97.3	96.6	95.8	95.8	95.7	95.3	95.0	97.8
3493	Steel springs.....	12/66	107.2	107.2	107.2	106.8	106.8	106.8	106.3	106.0	105.9	105.8	105.8	105.8	105.2	106.5
3496	Collapsible tubes.....	1958	103.8	103.7	103.7	103.7	103.6	103.6	103.5	103.2	103.2	103.1	103.0	102.9	101.5	103.4
3498	Fabricated pipe and fittings.....		130.9	130.8	130.4	130.4	130.3	130.3	129.7	129.7	129.7	123.4	123.4	123.4	122.7	128.5
3519	Internal combustion engines.....	12/66	110.9	110.8	110.1	109.7	109.1	108.0	108.3	108.3	107.9	107.5	106.9	106.7	106.6	108.7
3533	Oil field machinery.....		125.1	122.7	122.5	122.4	121.8	121.5	121.0	120.8	120.4	120.0	119.1	119.0	118.0	121.4
3534	Elevators and moving stairways.....	12/66	110.5	107.7	107.7	107.6	107.6	107.6	104.5	104.5	104.5	104.5	103.9	103.9	103.9	106.2
3537	Industrial trucks and tractors.....		134.0	133.9	133.6	132.6	131.2	131.2	130.5	129.1	128.6	128.6	128.2	128.1	127.2	130.8
3562	Ball and roller bearings.....	12/66	105.7	103.7	103.7	102.6	102.6	102.2	102.2	102.1	102.1	102.1	102.1	101.6	101.6	102.7
3572	Typewriters.....	12/66	103.9	103.8	103.7	103.1	103.1	101.5	101.4	101.3	100.5	100.6	100.6	100.6	100.6	102.0
3576	Scales and balances.....		133.4	133.2	133.0	133.0	129.9	129.9	128.6	127.0	127.0	126.9	126.9	126.3	126.4	129.6
3612	Transformers.....	12/66	100.3	99.3	100.2	101.6	101.6	101.3	101.1	100.2	100.8	102.2	102.3	104.6	104.6	101.3
3613	Switchgear and switchboards.....	12/66	107.1	106.7	105.7	105.9	103.6	104.4	104.9	104.0	103.6	104.3	104.9	104.8	104.4	105.0
3624	Carbon and graphite products.....	12/67	104.8	104.4	104.4	104.3	104.3	104.3	103.0	101.1	101.0	101.0	101.0	101.0	101.0	102.9
3635	Household vacuum cleaners.....	12/66	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.7	99.5	99.8
3641	Electric lamps.....	12/66	98.4	98.5	99.2	101.1	100.3	99.6	104.1	103.1	103.6	102.7	103.0	103.0	103.0	101.4
3652	Phonograph records.....		123.5	123.5	123.5	123.5	122.6	122.6	122.6	122.3	122.3	122.3	122.3	121.3	119.8	122.7
3671	Electron tubes, receiving type.....	12/66	121.2	121.3	121.3	121.2	117.8	117.8	117.8	117.8	117.7	109.6	105.9	105.9	117.3	
3672	Cathode ray picture tubes.....	12/66	87.5	89.7	90.0	90.0	90.0	90.0	89.9	89.9	89.9	89.9	89.9	89.9	89.7	89.7
3673	Electron tubes, transmitting.....	12/66	103.2	103.2	103.1	103.0	102.9	102.9	102.1	102.1	102.0	102.0	102.0	102.1	102.0	102.6
3674	Semiconductors.....	12/66	92.7	92.8	92.7	92.6	92.7	92.6	92.6	92.7	92.7	92.6	92.4	92.4	92.5	92.6
3692	Primary batteries, dry and wet.....		115.4	115.4	115.3	115.2	115.2	115.2	115.2	115.2	115.2	114.9	113.8	112.5	111.3	114.9
3693	X-ray apparatus and tubes.....	12/67	117.4	115.6	115.4	113.1	112.8	112.8	112.5	112.6	111.0	111.4	111.4	111.1	107.7	113.1
3941	Games and toys.....	12/66	112.1	112.2	111.4	111.4	111.4	111.1	111.1	111.1	111.2	111.1	111.2	110.3	110.1	111.3

1 For a description of the series, see BLS Handbook of Methods for Surveys and Studies (BLS Bulletin 1458), Chapter 12. See also, "Industry and Sector Price indexes," in Monthly Labor Review, August 1965, pp. 974-982.

2 Current monthly industry-sector price indexes are not available for this issue. At the beginning of each calendar year, changes in the sample for some indexes must be

made and necessary internal reweighting accomplished; this has caused the delay. Indexes beginning with January 1970 will be published in a later report.

NOTE. Beginning in January 1967, index weights and classifications are based on the 1963 Censuses of Manufactures and Minerals. They were formerly based on the 1958 Industrial Censuses.

31. Work stoppages resulting from labor-management disputes ¹

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year (thousands)	In effect during month (thousands)	Number (thousands)	Percent of estimated working time
1945	4,750		3,470		38,000	0.31
1946	4,985		4,600		116,000	1.04
1947	3,693		2,170		34,600	.30
1948	3,419		1,960		34,100	.28
1949	3,606		3,030		50,500	.44
1950	4,843		2,410		38,800	.33
1951	4,737		2,220		22,900	.18
1952	5,117		3,540		59,100	.48
1953	5,091		2,400		28,300	.22
1954	3,468		1,530		22,600	.18
1955	4,320		2,650		28,200	.22
1956	3,825		1,900		33,100	.24
1957	3,673		1,390		16,500	.12
1958	3,694		2,060		23,900	.18
1959	3,708		1,880		69,000	.50
1960	3,333		1,320		19,100	.14
1961	3,367		1,450		16,300	.11
1962	3,614		1,230		18,600	.13
1963	3,362		941		16,100	.11
1964	3,655		1,640		22,900	.15
1965	3,963		1,550		23,300	.15
1966	4,405		1,960		25,400	.15
1967	4,595		2,870		42,100	.25
1968	5,045		2,649		49,018	.28
1969	5,700		2,481		42,869	.24
1967: January	286	443	94.4	163.5	1,247.9	.09
February	292	485	104.1	159.2	1,275.8	.10
March	368	545	129.9	195.4	1,507.8	.10
April	462	638	397.6	438.8	2,544.8	.19
May	528	769	277.8	584.9	4,406.4	.30
June	472	759	211.8	405.0	4,927.4	.33
July	389	682	664.6	865.5	4,328.7	.32
August	392	689	91.3	233.1	2,859.5	.18
September	415	681	372.8	473.6	6,159.8	.45
October	449	727	178.8	458.7	7,105.6	.47
November	360	653	277.1	559.5	3,213.2	.22
December	182	445	74.4	209.5	2,546.5	.18
1968: January	314	483	187.8	275.7	2,668.5	.18
February	357	569	275.0	451.3	4,104.1	.29
March	381	618	174.5	368.7	3,682.0	.26
April	505	748	537.2	656.7	5,677.4	.38
May	610	930	307.3	736.2	7,452.2	.49
June	500	810	168.5	399.9	5,576.8	.40
July	520	880	202.0	465.1	4,611.9	.30
August	466	821	153.8	359.6	4,048.9	.26
September	448	738	169.8	349.0	3,081.1	.22
October	434	741	279.0	414.5	3,991.7	.25
November	327	617	129.9	306.1	2,430.5	.17
December	183	408	64.1	189.2	1,692.5	.11
1969: January	342	511	184.9	264.3	3,173.3	.21
February	385	578	177.1	339.9	2,565.8	.18
March	436	651	158.1	386.3	2,412.5	.16
April	578	831	309.7	462.3	3,755.0	.24
May	723	1,054	286.3	507.7	4,744.7	.32
June	565	911	214.6	500.0	4,722.7	.31
July	528	883	255.0	461.5	4,311.0	.27
August	538	915	191.2	394.8	3,634.3	.24
September	554	904	185.6	274.5	2,193.4	.15
October	531	850	337.0	420.9	3,167.5	.19
November	324	611	131.0	367.6	4,307.6	.31
December	196	446	50.8	276.0	3,881.8	.24
1970: January ^p	260	420	55	233	3,730	.25
February ^p	290	460	106	296	1,820	.13
March ^p	390	570	294	364	2,230	.14
April ^p	600	810	319	385	4,181	.26
May ^p	750	960	309	470	7,516	.52
June ^p	600	840	212	428	5,040	.31

¹ The data include all known strikes or lockouts involving 6 workers or more and lasting a full day or shift or longer. Figures on workers involved and man-days idle cover all workers made idle for as long as 1 shift in establishments directly involved in

a stoppage. They do not measure the indirect or secondary effect on other establishments or industries whose employees are made idle as a result of material or service shortages.

^p=Preliminary.

32. Output per man-hour, hourly compensation and unit labor costs, private economy, seasonally adjusted

[Indexes 1957-59 = 100]

Year and quarter	Output		Man-hours		Output per man-hour		Compensation per man-hour ¹		Real compensation per man-hour ²		Unit labor costs	
	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm
1967: 1st quarter	146.4	148.2	110.6	115.5	132.4	128.3	147.9	143.5	129.0	125.2	111.7	111.9
2d quarter	147.2	148.9	109.6	114.9	134.4	129.6	150.3	145.5	130.1	126.0	111.9	112.3
3d quarter	148.9	150.7	110.3	115.3	134.9	130.6	152.2	147.6	130.4	126.4	112.9	113.0
4th quarter	150.2	152.1	110.9	116.0	135.4	131.1	154.3	149.7	131.1	127.2	114.0	114.2
Annual average	148.2	150.0	110.4	115.4	134.3	129.9	151.2	146.6	130.1	126.2	112.6	112.9
1968: 1st quarter	152.4	154.3	111.2	116.4	137.0	132.6	158.5	153.6	133.3	129.2	115.7	115.9
2d quarter	155.2	157.5	112.2	117.5	138.3	134.1	160.8	155.7	133.7	129.4	116.3	116.1
3d quarter	156.7	159.0	112.7	118.3	139.0	134.4	163.7	158.1	134.5	129.8	117.8	117.6
4th quarter	158.1	160.6	112.6	118.3	140.4	135.8	167.8	162.0	136.3	131.5	119.6	119.4
Annual average	155.6	157.9	112.2	117.6	138.7	134.2	162.7	157.4	134.4	130.0	117.4	117.3
1969: 1st quarter	159.1	161.5	113.7	119.6	139.9	135.0	170.5	164.4	136.7	131.8	121.8	121.8
2d quarter	159.9	162.3	114.6	120.7	139.5	134.5	172.7	166.5	136.2	131.3	123.8	123.8
3d quarter	160.8	163.1	115.0	121.4	139.8	134.4	175.8	169.1	136.8	131.5	125.8	125.8
4th quarter	160.5	163.2	114.3	121.0	140.3	134.9	179.4	172.2	137.6	132.1	127.8	127.7
Annual average	160.1	162.5	114.4	120.6	139.9	134.7	174.7	168.1	136.9	131.7	124.9	124.8
1970: 1st quarter	159.7	162.2	114.0	120.6	140.1	134.5	182.7	175.2	138.0	132.3	130.4	130.3
Percent change over previous quarter at annual rate ³												
1967: 1st quarter	-1.4	-2.2	0.0	-0.3	-1.4	-1.9	3.9	4.9	3.2	4.1	5.3	6.9
2d quarter	2.3	1.9	-3.7	-2.1	6.2	4.1	6.7	5.5	3.7	2.6	0.5	1.4
3d quarter	4.5	4.8	2.9	1.7	1.5	3.0	5.2	5.8	0.9	1.6	3.6	2.7
4th quarter	3.6	3.9	2.1	2.4	1.5	1.5	5.6	5.9	2.1	2.3	4.1	4.4
1968: 1st quarter	6.0	6.0	1.0	1.2	4.9	4.8	11.3	10.9	6.8	6.5	6.0	5.9
2d quarter	7.4	8.4	3.5	3.8	3.8	4.5	6.0	5.5	1.1	0.7	2.1	1.0
3d quarter	4.1	4.0	1.9	2.8	2.1	1.1	7.5	6.4	2.3	1.3	5.3	5.3
4th quarter	3.5	4.0	-0.3	0.0	3.8	4.0	10.4	10.3	5.5	5.4	6.3	6.0
1969: 1st quarter	2.6	2.2	3.8	4.6	-1.2	-2.3	6.4	5.8	1.4	0.8	7.6	8.3
2d quarter	1.9	2.0	3.2	3.5	-1.3	-1.4	5.4	5.4	-1.4	-1.4	6.8	6.9
3d quarter	2.2	2.0	1.3	2.4	0.8	-0.4	7.4	6.2	1.5	0.4	6.5	6.6
4th quarter	-0.7	0.2	-2.3	-1.3	1.6	1.5	8.3	7.6	2.4	1.8	6.6	6.0
1970: 1st quarter	-1.9	-2.4	-1.3	-1.2	-0.6	-1.2	7.7	7.1	1.4	0.8	8.4	8.4
Percent change over previous year ⁴												
1969: 1st quarter	4.4	4.6	2.2	2.8	2.1	1.8	7.6	7.0	2.6	2.0	5.3	5.1
2d quarter	3.0	3.0	2.2	2.7	0.8	0.3	7.4	7.0	1.9	1.5	6.5	6.6
3d quarter	2.6	2.6	2.0	2.6	0.5	0.0	7.4	6.9	1.7	1.3	6.8	7.0
4th quarter	1.5	1.6	1.5	2.3	0.0	-0.7	6.9	6.2	1.0	0.4	6.9	6.9
1970: 1st quarter	0.4	0.4	0.2	0.8	0.1	-0.4	7.2	6.6	1.0	0.4	7.1	7.0

¹ Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplementary payments for the self-employed.

² Compensation per man-hour adjusted for changes in the consumer price index.

³ Percent change computed from original data.

⁴ Current quarter divided by comparable quarter a year ago.

SOURCE: Output data from the Office of Business Economics, U.S. Department of Commerce. Man-hours and compensation of all persons from the Bureau of Labor Statistics.

p = Preliminary

Scheduled release dates for major BLS statistical series, September 1970

Title	Date of release	Period covered	MLR table numbers
Employment situation	September 4	August	1-14
Wholesale Price Index, final	September 8	August	26-30
Consumer Price Index	September 19	August	24-25
Work stoppages	September 24	August	31
Factory labor turnover	September 29	August	15-16
Wholesale Price Index, preliminary	September 30	September	26-30



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